ADEQ

ARKANSAS
Department of Environmental Quality

JUL 17 2018

Jeremy Bohlen, Complex Environmental Manager
Georgia-Pacific Wood Products LLC
#1 GP Lane
Gurdon, AR 71743

Dear Mr. Bohlen:

The enclosed Permit No. 0463-AOP-R14 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 3/7/2018.

After considering the facts and requirements of A.C.A. §8-4-101 et seq. as referenced by §8-4-304, and implementing regulations, I have determined that Permit No. 0463-AOP-R14 for the construction and operation of equipment at Georgia-Pacific Wood Products LLC shall be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,

Stuart Spencer
Associate Director, Office of Air Quality

Enclosure: Final Permit

# ADEQ
# OPERATING
# AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 0463-AOP-R14

IS ISSUED TO:

Georgia-Pacific Wood Products LLC
#1 GP Lane
Gurdon, AR 71743
Clark County
AFIN: 10-00005

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

March 1, 2017 AND February 28, 2022

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

JUL 17 2018

Stuart Spencer
Associate Director, Office of Air Quality

Date

Table of Contents

**SECTION I: FACILITY INFORMATION** ..... 5
**SECTION II: INTRODUCTION** ..... 6
**Summary of Permit Activity** ..... 6
**Process Description** ..... 6
**Regulations** ..... 10
**Emission Summary** ..... 10
**SECTION III: PERMIT HISTORY** ..... 18
**SECTION IV: SPECIFIC CONDITIONS** ..... 28
SN-01 - #1 Wood Fuel Fired Boiler (135 MMBtu/hr) ..... 28
SN-02 - #2 Wood Fuel Fired Boiler (135 MMBtu/hr) ..... 28
SN-03 #1 Veneer Dryer ..... 50
SN-04 #2 Veneer Dryer ..... 50
SN-05 #3 Veneer Dryer ..... 50
SN-03 #1 Veneer Dryer ..... 50
SN-04 #2 Veneer Dryer ..... 50
SN-05 #3 Veneer Dryer ..... 50
SN-03 #1 Veneer Dryer ..... 50
SN-04 #2 Veneer Dryer ..... 50
SN-05 #3 Veneer Dryer ..... 50
SN-06 #1 Lumber Kiln SN-06a #1 Lumber Kiln Burners ..... 52
SN-08 #3 Lumber Kiln ..... 52
SN-09 #4 Lumber Kiln ..... 52
SN-06 #1 Lumber Kiln ..... 52
SN-08 #3 Lumber Kiln ..... 52
SN-06 #1 Lumber Kiln ..... 53
SN-10 Chip Fines Cyclone ..... 55
SN-11 Planer Shavings Cyclone ..... 57
SN-50 Planer Shavings Baghouse ..... 57
SN-12 Dry Wood Fuel Transfer Cyclone ..... 59
SN-13 Dry Wood Fuel Transfer Cyclone ..... 59
SN-14 Dry Wood Fuel Transfer Cyclone ..... 59
SN-15 Sander Dust Cyclone ..... 61
SN-16 Sander Dust Cyclone ..... 61
SN-17 Press Fan #1 ..... 63
SN-18 Press Fan #2 ..... 63
SN-19 Press Fan #3 ..... 63
SN-20 Press Fan #4 ..... 63
SN-21 Press Fan #5 ..... 63
SN-35 Press Fan #6 ..... 63
SN-36 Press Fan #7 ..... 63
SN-17, SN-18, SN-19, SN-20, SN-21, SN-35, and SN-36 ..... 63
SN-17, SN-18, SN-19, SN-20, SN-21, SN-35, and SN-36 ..... 63
SN-22 Veneer Dryer Regenerative Catalytic Oxidizer ..... 65
SN-23 Log Sawing ..... 72

SN-24 Log Debarking ..... 72
SN-25 By-Products Transfer Points (Fugitives) ..... 74
SN-26 Plant Haul Roads (Fugitive) ..... 74
SN-29 Sawdust & Fines Cyclone ..... 74
SN-30 Log Steaming Vats ..... 76
SN-31 Ply Trim Hog ..... 77
SN-32 Sander ..... 78
SN-33 Layup Lines Baghouse ..... 79
SN-37 Stencil, Edge Seal, Nail Line, and Logo/Trademark Application ..... 81
SN-38 Panel Oil Application ..... 83
SN-39 Panel Patch (Synthetic and Solid Wood) ..... 84
SN-40 Glue Line ..... 85
SN-42 Bark Shredder ..... 86
SN-48 and 49 ..... 87
**SECTION V: COMPLIANCE PLAN AND SCHEDULE** ..... 90
**SECTION VI: PLANTWIDE CONDITIONS** ..... 91
**Title VI Provisions** ..... 94
**SECTION VII: INSIGNIFICANT ACTIVITIES** ..... 96
**SECTION VIII: GENERAL PROVISIONS** ..... 98
Appendix A - 40 C.F.R. 60 Subpart Dc - *Standards for Small Industrial-Commercial-Institutional Steam Generating Units*
Appendix B - 40 C.F.R. Part 63 Subpart DDDD - *National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products*
Appendix C – CEMS "Continuous Emission Monitoring Systems Standards"
Appendix D - 40 C.F.R. Part 63 Subpart DDDDD - *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*
Appendix E - 40 C.F.R. Part 63, Subpart ZZZZ—*National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

List of Acronyms and Abbreviations

| | |
|---|---|
| Ark. Code Ann. | Arkansas Code Annotated |
| AFIN | ADEQ Facility Identification Number |
| C.F.R. | Code of Federal Regulations |
| CO | Carbon Monoxide |
| HAP | Hazardous Air Pollutant |
| lb/hr | Pound Per Hour |
| MVAC | Motor Vehicle Air Conditioner |
| No. | Number |
| $NO_x$ | Nitrogen Oxide |
| PM | Particulate Matter |
| $PM_{10}$ | Particulate Matter Smaller Than Ten Microns |
| SNAP | Significant New Alternatives Program (SNAP) |
| $SO_2$ | Sulfur Dioxide |
| SSM | Startup, Shutdown, and Malfunction Plan |
| Tpy | Tons Per Year |
| UTM | Universal Transverse Mercator |
| VOC | Volatile Organic Compound |

## SECTION I: FACILITY INFORMATION

| | |
|---|---|
| PERMITTEE: | Georgia-Pacific Wood Products LLC |
| AFIN: | 10-00005 |
| PERMIT NUMBER: | 0463-AOP-R14 |
| FACILITY ADDRESS: | #1 GP Lane<br>Gurdon, AR 71743 |
| MAILING ADDRESS: | #1 GP Lane<br>Gurdon, AR 71743 |
| COUNTY: | Clark County |
| CONTACT NAME: | Jeremy Bohlen |
| CONTACT POSITION: | Complex Environmental Manager |
| TELEPHONE NUMBER: | (870) 353-4474 |
| REVIEWING ENGINEER: | Derrick Brown |
| UTM North South (Y): | Zone 15: 3756663.25 m |
| UTM East West (X): | Zone 15: 486689.40 m |

## SECTION II: INTRODUCTION

### Summary of Permit Activity

Georgia-Pacific owns and operates a plywood and lumber facility in Clark County, AR located at 1 GP Lane in Gurdon. This permit modification installs two (2) direct-fired natural gas burners in the No. 1 Lumber Kiln (SN-06). The project emission increases are below PSD significant emission rates for all pollutants. This modification increases permitted emissions by 1.1 tpy of $PM_{10}$. 1.3 tpy of PM, 0.8 tpy of VOC, 0.1 tpy of $SO_2$, 11.4 tpy of CO, 8.4 tpy of $NO_x$, and 0.33 tpy of HAPs.

### Prevention of Significant Deterioration (PSD)

The affected sources for this permit are SN-10, SN-11, SN-23, SN-24, SN-25, SN-26, SN-29, SN-42, SN-50, and the Chipper/Chip Screens Insignificant Activity. The projected emission increases associated with this project are 15.3 tpy of PM, 7.3 tpy of $PM_{10}$, 3.3 tpy of $PM_{2.5}$, 10.4 tpy of VOC, 0.1 tpy of $SO_2$, 11.3 tpy of CO, 8.4 tpy of $NO_x$, 6.75E-5 tpy of lead, and 16,207 tpy of $CO_2e$. The increases are below all PSD significant emission rates.

### Process Description

Georgia-Pacific Wood Products South LLC (GP-Gurdon) owns and operates a wood products plant approximately two (2) miles north of Gurdon, Clark County, Arkansas on U.S. Highway 67 that manufactures plywood, lumber and landscaping timbers. The processes at the facility include log sawing, debarking, veneer peeling, plywood gluing and pressing and lumber drying.

**PRELIMINARY LOG PROCESSING**

Operations at the Gurdon mill begin with delivery of logs to the wood yard via truck. Logs are stored in the wood yard until they are ready to be processed. Logs are first sent to the log in feed deck and log processor (also called the mercher). Logs are cut to length with a saw, generating particulate matter (PM) emissions during the process, SN-23A. High quality cut logs are delivered to one of three ring debarkers for further processing into lumber or plywood. Low quality logs and log cutoffs are debarked via the drum/fiber debarker and then sent to the chipper. The removal of bark from debarkers results in PM emissions, SN-24. Bark from the debarkers and sawdust from the saws are transferred to the bark and sawdust conveyor. This material is passed through a disc screen with oversized material being shredded, SN-42. Screened and shredded material is then sent to the powerhouse where it may be stored in a pile prior to firing in the boiler.

**CHIP PROCESSING**

After the drum debarker, small diameter and low grade wood is transferred to the wood chipper for chipping. Chips from this chipper are screened and the acceptable chips are conveyed to a storage pile for shipment by truck/rail or via the sawdust and fines cyclone (SN-29) to bin

storage for shipment by truck. Oversized material is processed through a bottom discharge rechipper and returned to the screens. Fines from the screens are conveyed to the bark and sawdust conveyor and then to the powerhouse. Chip fines are routed to the chip fines cyclone (SN-10). Chips may also be produced as a by-product of lumber (cut-off chipper) and plywood (core mill and veneer chippers) processing. These chips are also screened, loaded, and shipped.

**LUMBER OPERATIONS**

From the ring debarkers, the logs may go into lumber or plywood production. Logs selected for lumber enter the sawmill where they are cut into green dimensional lumber, which is sorted, stacked, and stored in the open air. Log and lumber sawing results in PM emissions, SN-23B. Sawdust from the sawmill is transferred to the bark and sawdust conveyor and routed to the sawdust and fines cyclone, SN-29. Some green lumber may be shipped off-site.

**KILN OPERATINGS**

Lumber is stacked onto kiln buggies and batch-fed into the steam-heated double track Lumber Kiln No. 1, SN-06, and is continuously fed into the steam-heated Kiln No. 3, SN-08, and the direct-fired Kiln No. 4, SN-09. The existing kiln tracks from decommissioned Kiln No. 2 are used to transfer lumber to and from the continuous steam kiln. With the continuous kiln system, a pusher system on each end conveys a continuous feed of lumber on one track into the kiln and in the opposite direction out of the kiln on a second track. The heat from the dried lumber exiting the kiln preheats the green lumber entering the kiln on the second track. Steam is provided to both steam kilns by the Wood-Fuel Boilers, Natural Gas Boiler, and Veneer Dryer Incinerator/Recovery Boiler. SN-09 is heated directly by natural gas.

**PLYWOOD OPERATIONS**

After the ring debarkers, logs chosen for plywood production are sent to the ply-block heating vats (SN-30) for heating prior to the veneer peeling process. The heating vats generate emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP).

Ply-blocks are converted to veneer sheets by the lathes. A ply-block core remains after the plywood is peeled. These cores are processed into landscape timbers or other products, dependent upon the market demand (SN-23C). Green veneer sheets are cut to size, stacked, and processed through one of three steam-heated veneer dryers prior to further processing into plywood panels. The dryers are heated by steam provided by the boilers on site. Air emissions, consisting of $PM/PM_{10}$, CO, VOC, and HAP are generated by the veneer drying process; emissions from the veneer dryer “hot zones” are controlled by a regenerative catalytic oxidizer (RCO) (SN-22) which utilizes a catalyst bed in conjunction with a natural gas burner (9 MMBtu/hr) to oxidize and reduce emissions from the dryers. Flue gas from the three (3) veneer dryers “hot zones” containing VOC/HAP enter the RCO unit through an inlet manifold. A flow control valve directs this gas into an energy recovery chamber which preheats the process stream. The process gas and contaminants are progressively heated in the stoneware bed as they move toward the catalyst bed which consists of a layer of ceramic saddles coated with a catalyst

- commonly a noble metal such as platinum or rhodium, which promotes oxidation of the organics. The VOC/HAPs are then oxidized across the catalyst, releasing energy in the second stoneware bed thereby reducing any auxiliary fuel requirement. The stoneware bed is heated and the gas is cooled so that the outlet gas temperature is only slightly higher than the inlet temperature. The flow control valve switches and alternates the stoneware beds so each is in inlet and outlet mode. If the process gas contains enough VOCs, the energy released from their combustion allows self-sustained operation. Dryer "cool section" (SN-03, SN-04, SN-05) emissions are a small fraction of the total emissions and are not routed to the RCO.

Some veneer may be sold and not processed into panels. The remaining dried veneer is graded, sorted and processed into panels. The dry veneer is placed on one of the two panel assembly lines and sprayed with glue. A core veneer is then placed on the first sheet and sprayed with glue. This process is repeated until the desired thickness is attained. The panels then pass through a pre-press before being loaded into the hot presses where under pressure and heat, the glue is set and the product is formed. Emissions from the press area are exhausted through general building ventilation, primarily via Press Fans Nos. 1 through 7 (SN-17 through SN-21, SN-35 and SN-36). The presses are heated by steam from the boilers.

Prior to final shipment, a number of finishing operations may take place. This includes trimming, grading, sanding, patching, edge sealing, siding, creating tongue and groove and other operations. Sanding results in the generation of VOC and PM emissions. VOC and HAP fugitives are emitted from the sander (SN-32) and sander material is routed to the sander cyclone/baghouse (SN-15) and the sander cyclone (SN-16). VOC and HAP emissions may be generated from the application of resins, inks, oils, and glue application during finishing operations (SN-37, SN-38, SN-39, and SN-40). Material from the layup line and tongue and groove machine is routed to the layup line cyclone and baghouse (SN-33). This material is then either conveyed to the powerhouse for use in fuel firing (SN-14) or to the hogged fuel truck bin where it is transferred to trucks for shipment (SN-13).

Plywood panel trimmings from the panel saw, the tongue and groove machine and scrap dry veneer are hogged and conveyed to a cyclone (SN-12) located outside the plywood plant. This material is then either conveyed to the powerhouse for use as fuel (SN-14) or to the hogged fuel truck bin where it is transferred to trucks for shipment (SN-13). Sources SN-13 and SN-14 are both controlled by combination cyclone/baghouses. Trim generated at the siding machine is also routed in this manner. The plywood hog is also a source of fugitive VOC and HAP emissions (SN-31).

**UTILITIES**

Two wood-fired boilers and a natural gas-fired rental boiler provide steam for the indirect-fired continuous lumber dry kiln, the plyblock heating vats, the three veneer dryers, the four hot presses and the glue mixing area. These units emit criteria pollutants and HAPs as by-products of combustion.

Wood-fired Boilers (SN-01, SN-02)

Both wood-fired boilers have steaming rates of 80,000 pounds steam per hour and firing capacities of 135 MMBtu/hr. An oxygen monitor is required on each boiler as an indicator of carbon monoxide (CO) emissions. Each boiler is equipped with a multivane scrubber. Ash is handled on both a wet and dry basis. The ash transfer and handling system is enclosed and allows for the dry ash to be captured in dry ash hoppers. The ash is transferred to an off-site business or land application area where the ash is land applied, sold, beneficially used, or placed in a landfill. The ash may also be beneficially used on site at the Gurdon facility.

Fuels combusted in the wood-fired boilers include bark, wood, chips fines, plytrim, sawdust, sanderdust, and small amounts of glue residue, hydraulic oil and motor oil. Occasionally, shavings and/or chips are also burned in the boilers. The fuel is supplemented by the purchase of wood fuel.

## INSIGNIFICANT ACTIVITIES

Some activities are deemed insignificant on the basis of unit type and/or emission level. These include ancillary operations such as material storage, parts washers, emergency equipment, and maintenance activities. Emission unit SN-27, 12,000 gallon diesel tank has been re-classified as insignificant as it no longer has any applicable regulatory requirements and meets one of the insignificant source category specifications. The resin tanks on site are listed as insignificant sources with respect to Title V permitting.

## Regulations

The following table contains the regulations applicable to this permit.

| Regulations |
|---|
| Arkansas Air Pollution Control Code, Regulation 18, effective March 14, 2016 |
| Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective March 14, 2016 |
| Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective March 14, 2016 |
| 40 C.F.R. 60 Subpart Dc - *Standards for Small Industrial-Commercial-Institutional Steam Generating Units* |
| 40 C.F.R. Part 63 Subpart DDDD - *National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products* |
| 40 C.F.R. Part 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines |
| 40 C.F.R. Part 63 Subpart DDDDD - *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* |
| 40 C.F.R. 52.21 Prevention of Significant Deterioration |

## Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| Total Allowable Emissions | | PM | 90.9 | 354.1 |
| | | $PM_{10}$ | 80.3 | 322.7 |
| | | $PM_{2.5}$ | *** | *** |
| | | $SO_2$ | 9.8 | 38.5 |
| | | VOC | 311.9 | 1212.8 |
| | | CO | 424.6 | 1839.6 |
| | | $NO_X$ | 81.6 | 292.0 |
| | | Lead | 0.040 | 0.182 |
| HAPs | | Acetaldehyde | 4.62 | 17.24 |
| | | Acrolein | 0.56 | 1.91 |
| | | Benzene | 1.2700 | 5.3904 |
| | | 1,3-Butadiene | 0.02 | 0.02 |

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| | | Carbon Disulfide | 0.06 | 0.18 |
| | | Chloroform | 0.04 | 0.12 |
| | | Formaldehyde | 8.375 | 34.490 |
| | | Hexachlorobenzene | 0.000334 | 0.001462 |
| | | Hexane | 0.310 | 1.160 |
| | | Methanol | 51.13 | 172.23 |
| | | Methylene Chloride* | 0.34 | 1.48 |
| | | MIBK | 0.73 | 2.44 |
| | | Phenol | 2.76 | 10.62 |
| | | Polycyclic Organic Matter | 0.0613 | 0.1812 |
| | | Propionaldehyde | 0.16 | 0.36 |
| | | Styrene | 0.70 | 2.98 |
| | | Vinyl Chloride | 0.006 | 0.040 |
| | | Xylene | 0.352 | 0.978 |
| | | Arsenic | 0.007007 | 0.041030 |
| | | Beryllium | 0.013001 | 0.013002 |
| | | Cadmium | 0.015040 | 0.027200 |
| | | Chromium, hexavalent | 0.01 | 0.06 |
| | | Manganese | 0.601020 | 2.001060 |
| | | Mercury | 0.0109390 | 0.01424000 |
| | | Phosphorus | 0.12 | 0.46 |
| | | HAPs^ | -- | 0.31 |
| Air Contaminants ** | | Acetone | 4.59 | 15.87 |
| SN-01 | #1 Wood Fuel Fired Boiler (135 MMBTU/hr) (This source has a CEMS) (Installed 1979) | PM | 25.0 | 109.5 |
| | | $PM_{10}$ | 25.0 | 109.5 |
| | | $SO_2$ | 4.1 | 18.8 |
| | | $NO_X$ | 28.5 | 124.8 |
| | | CO | 200.0 | 876.0 |
| | | VOC | 10.0 | 43.8 |
| | | Lead | 0.019 | 0.09 |
| | | Acetone | 0.1 | 0.3 |
| | | Acetaldehyde | 0.13 | 0.56 |
| | | Acrolein | 0.10 | 0.40 |
| | | Benzene | 0.60 | 2.62 |
| | | Carbon Disulfide | 0.03 | 0.09 |
| | | Chloroform | 0.02 | 0.06 |
| | | Formaldehyde | 2.70 | 11.90 |
| | | Hexachlorobenzene | 0.000167 | 0.000731 |
| | | Hexane | 0.05 | 0.21 |

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| | | Methanol | 3.70 | 16.0 |
| | | Methylene Chloride | 0.17 | 0.74 |
| | | MIBK | 0.08 | 0.32 |
| | | Phenol | 0.06 | 0.23 |
| | | Polycyclic Organic Matter | 0.03 | 0.09 |
| | | Styrene | 0.35 | 1.49 |
| | | Vinyl Chloride | 0.003 | 0.02 |
| | | Xylene | 0.001 | 0.004 |
| | | Arsenic | 0.003 | 0.02 |
| | | Beryllium | 0.001 | 0.001 |
| | | Cadmium | 0.002 | 0.008 |
| | | Chromium, hexavalent | 0.005 | 0.03 |
| | | Manganese | 0.30 | 1.00 |
| | | Mercury | 4.80E-04 | 2.10E-03 |
| | | Phosphorus | 0.06 | 0.23 |
| SN-02 | #2 Wood Fuel Fired Boiler (135 MMBTU/hr) (This source has a CEMS) (Installed 1979) | PM | 25.0 | 109.5 |
| | | $PM_{10}$ | 25.0 | 109.5 |
| | | $SO_2$ | 4.1 | 18.8 |
| | | $NO_X$ | 28.5 | 124.8 |
| | | CO | 200.0 | 876.0 |
| | | VOC | 10.0 | 43.8 |
| | | Lead | 0.019 | 0.09 |
| | | Acetone | 0.1 | 0.3 |
| | | Acetaldehyde | 0.13 | 0.56 |
| | | Acrolein | 0.10 | 0.40 |
| | | Benzene | 0.60 | 2.62 |
| | | Carbon Disulfide | 0.03 | 0.09 |
| | | Chloroform | 0.02 | 0.06 |
| | | Formaldehyde | 2.70 | 11.90 |
| | | Hexachlorobenzene | 1.67E-04 | 7.31E-04 |
| | | Hexane | 0.05 | 0.21 |
| | | Methanol | 3.70 | 16.0 |
| | | Methylene Chloride | 0.17 | 0.74 |
| | | MIBK | 0.08 | 0.32 |
| | | Phenol | 0.06 | 0.23 |
| | | Polycyclic Organic Matter | 0.03 | 0.09 |
| | | Styrene | 0.35 | 1.49 |
| | | Vinyl Chloride | 0.003 | 0.02 |
| | | Xylene | 0.001 | 0.004 |
| | | Arsenic | 0.003 | 0.02 |

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| | | Beryllium | 0.001 | 0.001 |
| | | Cadmium | 0.002 | 0.008 |
| | | Chromium, hexavalent | 0.005 | 0.03 |
| | | Manganese | 0.30 | 1.00 |
| | | Mercury | 4.80E-04 | 2.10E-03 |
| | | Phosphorus | 0.06 | 0.23 |
| SN-03<br>SN-04<br>SN-05 | #1, #2, and #3 Veneer Dryers (Cooling vents that are not incinerated, the heated zone emissions go to SN-22, the Veneer Dryer Incinerator) | PM | 7.0 | 24.8 |
| | | $PM_{10}$ | 7.0 | 24.8 |
| | | VOC | 3.3 | 12.2 |
| | | CO | 3.0 | 11.0 |
| | | Acetone | 0.6 | 2.2 |
| | | Acetaldehyde | 0.92 | 3.40 |
| | | Formaldehyde | 0.27 | 0.98 |
| | | Methanol | 2.74 | 10.20 |
| | | MIBK | 0.37 | 1.38 |
| | | Phenol | 0.97 | 3.61 |
| | | Xylene | 0.23 | 0.84 |
| SN-06, & SN-08 | #1 Batch Lumber Kiln and #3 Continuous Lumber Kilns | PM | 0.5 | 1.9 |
| | | $PM_{10}$ | 0.5 | 1.9 |
| | | VOC | 113.5 | 494.2 |
| | | Acetone | 0.88 | 3.82 |
| | | Acetaldehyde | 0.93 | 4.06 |
| | | Acrolein | 0.14 | 0.62 |
| | | Formaldehyde | 0.75 | 3.28 |
| | | Methanol | 5.24 | 22.83 |
| | | MIBK | 0.02 | 0.10 |
| | | Phenol | 0.53 | 2.33 |
| | | Xylene | 0.01 | 0.02 |
| | | Benzene | 0.01 | 0.01 |
| | | Poly Organic Matter | 0.01 | 0.01 |
| | | Propionaldehyde | 0.06 | 0.26 |
| | | Arsenic | 0.01 | 0.01 |
| | | Beryllium | 0.01 | 0.01 |
| | | Cadmium | 0.01 | 0.01 |
| | | Manganese | 0.01 | 0.01 |
| | | Mercury | 0.01 | 0.01 |
| SN-06a | #1 Lumber Kiln Burners | PM | 0.3 | 1.3 |
| | | $PM_{10}$ | 0.3 | 1.1 |
| | | $SO_2$ | 0.1 | 0.1 |
| | | VOC | 0.2 | 0.8 |

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| | | CO | 2.6 | 11.4 |
| | | $NO_x$ | 2.0 | 8.4 |
| | | Total HAPs^ | N/A | 0.31 |
| SN-09 | #4 Continuous Lumber Kiln | PM | 0.3 | 1.3 |
| | | $PM_{10}$ | 0.7 | 2.6 |
| | | $SO_2$ | 0.1 | 0.1 |
| | | VOC | 113.5 | 494.2 |
| | | CO | 5.3 | 23 |
| | | $NO_x$ | 1.3 | 5.6 |
| | | Lead | 0.001 | 0.001 |
| | | Acetone | 0.71 | 2.9 |
| | | Acetaldehyde | 0.75 | 3.1 |
| | | Acrolein | 0.2 | 0.47 |
| | | Benzene | 0.00008 | 0.0004 |
| | | Formaldehyde | 0.61 | 2.5 |
| | | Hexane | 0.1 | 0.3 |
| | | Methanol | 5.09 | 20.7 |
| | | MIBK | 0.1 | 0.1 |
| | | Phenol | 0.52 | 2.2 |
| | | POM | 0.0003 | 0.0002 |
| | | Propionaldehyde | 0.1 | 0.1 |
| | | Xylene | 0.1 | 0.1 |
| | | Arsenic | 0.000007 | 0.00003 |
| | | Beryllium | 0.000001 | 0.000002 |
| | | Cadmium | 0.00004 | 0.0002 |
| | | Manganese | 0.00002 | 0.00006 |
| | | Mercury | 0.000009 | 0.00004 |
| SN-10 | Chip Fines Cyclone | PM | 0.5 | 2.1 |
| | | $PM_{10}$ | 0.1 | 0.1 |
| SN-11 | Planer Shavings Cyclone (Baghouse) | PM | 1.1 | 4.5 |
| | | $PM_{10}$ | 0.8 | 3.4 |
| SN-12 | Dry Wood Fuel Transfer Cyclone (Baghouse) | PM | 0.3 | 1.2 |
| | | $PM_{10}$ | 1.1 | 4.5 |
| SN-13 | Dry Wood Fuel Truck Cyclone (Baghouse) | PM | 0.1 | 0.4 |
| | | $PM_{10}$ | 0.3 | 1.3 |
| SN-14 | Dry Wood Fuel Cyclone (Baghouse) (Powerhouse) | PM | 0.1 | 0.1 |
| | | $PM_{10}$ | 0.1 | 0.4 |

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| SN-15 | Sander Dust Cyclone | PM | 0.9 | 3.7 |
| | | $PM_{10}$ | 0.3 | 1.0 |
| SN-16 | Sander Dust Cyclone (Powerhouse) | PM | 0.1 | 0.2 |
| | | $PM_{10}$ | 0.1 | 0.1 |
| SN-17 | Press Fans #1 - #7 | PM | 6.6 | 23.3 |
| SN-18 | | $PM_{10}$ | 6.6 | 23.3 |
| SN-19 | | VOC | 35.0 | 97.3 |
| SN-20 | | Acetone | 1.19 | 3.32 |
| SN-21 | | Acetaldehyde | 0.90 | 2.51 |
| SN-35 | | Formaldehyde | 0.81 | 2.25 |
| SN-36 | | Methanol | 27.94 | 77.81 |
| | | MIBK | 0.08 | 0.22 |
| | | Phenol | 0.26 | 0.71 |
| SN-22 | Veneer Dryer Regenerative Catalytic Oxidizer | PM | 3.5 | 12.3 |
| | | $PM_{10}$ | 3.8 | 13.8 |
| | | $SO_2$ | 0.2 | 0.3 |
| | | VOC | 9.6 | 35.7 |
| | | CO | 10.3 | 41.2 |
| | | NOx | 5.6 | 24.4 |
| | | Lead | 0.001 | 0.001 |
| | | Acetone | 0.13 | 0.46 |
| | | Acetaldehyde | 0.16 | 0.58 |
| | | Benzene | 0.03 | 0.11 |
| | | Formaldehyde | 0.38 | 1.33 |
| | | Hexane | 0.11 | 0.44 |
| | | Methanol | 0.15 | 0.53 |
| | | Phenol | 0.36 | 1.31 |
| | | POM | 0.001 | 0.001 |
| | | Arsenic | 0.001 | 0.001 |
| | | Beryllium | 0.001 | 0.001 |
| | | Cadmium | 0.001 | 0.001 |
| | | Manganese | 0.001 | 0.001 |
| | | Mercury | 0.01 | 0.01 |
| SN-23 | Log Sawing | PM | 0.7 | 2.7 |
| | | $PM_{10}$ | 0.4 | 1.6 |
| SN-24 | Debarking | PM | 3.8 | 6.6 |
| | | $PM_{10}$ | 2.2 | 3.9 |
| SN-25 | By-Product Transfer Points | PM | 2.8 | 4.3 |
| | | $PM_{10}$ | 0.3 | 1.2 |

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| SN-26 | Plant Haul Roads (Fugitives) | PM<br>$PM_{10}$ | 8.5<br>1.7 | 33.5<br>6.8 |
| SN-29 | Sawdust & Fines Cyclone | PM<br>$PM_{10}$ | 2.0<br>2.0 | 8.8<br>8.8 |
| SN-30 | Log Steaming Vats | VOC<br>Acetone<br>Methanol<br>Acetaldehyde | 7.9<br>0.4<br>0.75<br>0.48 | 31.2<br>1.21<br>2.96<br>1.88 |
| SN-31 | Ply Trim Hog | VOC<br>Acetone<br>Methanol<br>Acetaldehyde<br>Formaldehyde | 8.1<br>0.2<br>1.13<br>0.09<br>0.04 | 22.5<br>0.5<br>3.14<br>0.25<br>0.09 |
| SN-32 | Sander | VOC<br>Acetone<br>Formaldehyde<br>Methanol<br>Acetaldehyde | 10.7<br>0.28<br>0.08<br>0.45<br>0.11 | 33.4<br>0.86<br>0.23<br>1.40<br>0.32 |
| SN-33 | Layup Line Baghouse | PM<br>$PM_{10}$ | 0.2<br>0.5 | 0.5<br>2.0 |
| SN-37 | Stencil, Edge Seal, Nail Line, and Logo/Trademark Application | VOC | 3.4 | 4.9 |
| SN-38 | Panel Oil Application | VOC | 6.4 | 17.9 |
| SN-39 | Panel Patch (Synthetic and Solid Wood) | VOC | 0.1 | 0.2 |
| SN-40 | Glue Line | VOC<br>Benzene<br>Formaldehyde<br>Methanol<br>Xylene | 0.3<br>0.01<br>0.01<br>0.24<br>0.01 | 0.8<br>0.01<br>0.01<br>0.66<br>0.01 |
| SN-42 | Bark Shredder | PM<br>$PM_{10}$ | 0.3<br>0.2 | 1.1<br>0.6 |
| SN-44 | Natural Gas-Fired Rental Boiler (55.7 MMBtu/hr) | Removed this permit action. | | |

| EMISSION SUMMARY | | | | |
|---|---|---|---|---|
| Source Number | Description | Pollutant | Emission Rates | |
| | | | lb/hr | tpy |
| SN-48 | Fire Pump Engine | PM | 0.6 | 0.2 |
| | | $PM_{10}$ | 0.6 | 0.2 |
| | | $SO_2$ | 0.6 | 0.2 |
| | | VOC | 0.7 | 0.2 |
| | | CO | 1.7 | 0.5 |
| | | $NO_X$ | 7.9 | 2.0 |
| | | Acetaldehyde | 0.01 | 0.01 |
| | | Acrolein | 0.01 | 0.01 |
| | | 1,3 – Butadiene | 0.01 | 0.01 |
| | | Benzene | 0.01 | 0.01 |
| | | Formaldehyde | 0.01 | 0.01 |
| SN-49 | Feed Water Pump Engine | PM | 0.6 | 0.2 |
| | | $PM_{10}$ | 0.6 | 0.2 |
| | | $SO_2$ | 0.6 | 0.2 |
| | | VOC | 0.7 | 0.2 |
| | | CO | 1.7 | 0.5 |
| | | $NO_X$ | 7.8 | 2.0 |
| | | Acetaldehyde | 0.01 | 0.01 |
| | | Acrolein | 0.01 | 0.01 |
| | | 1,3 – Butadiene | 0.01 | 0.01 |
| | | Benzene | 0.01 | 0.01 |
| | | Formaldehyde | 0.01 | 0.01 |
| SN-50 | Planer Shavings Baghouse | PM | 0.1 | 0.1 |
| | | $PM_{10}$ | 0.1 | 0.1 |

*HAPs not included in the VOC totals.
**Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.
***$PM_{2.5}$ limits are source specific, if required. Not all sources have $PM_{2.5}$ limits.
^SN-06a Burner combustion.

## SECTION III: PERMIT HISTORY

In March 1975, International Paper Company (IP) purchased the Arkla Gas Company's Pineply Plywood Plant at Gurdon, Arkansas. On March 24, 1978, IP received a SIP air permit, Permit **#463-A**, for the expansion, modification, and operation of the existing facility. Because the permit was issued after March 1, 1978, the facility was also required to obtain a permit from the EPA, issued in accordance with PSD regulations promulgated on June 19, 1978. During this period, the facility also requested to modernize and expand its facility. The PSD permit was issued July 13, 1979. The BACT review and maximum allowable emission rates are summarized below:

Since carbon monoxide and particulate matter emissions from the proposed major modification increased by more than 50 tons per year, the modification was subject to BACT review. There were 13 major point sources of carbon monoxide and particular matter within the facility. These point sources along with the BACT for each are listed below:

| Source Number | Pollutant | BACT Abatement Method | Pollutant Removal Efficiency |
|---|---|---|---|
| Process Steam Generators (2) (Wood Waste-Fired) | Particulate Matter<br>Carbon Monoxide | Mechanical dust collection and wet scrubbing<br>Combustion Control | 95 |
| Misc. Working Machines (8) | Particulate Matter | Cyclones, Baghouses | 99 |
| Veneer Dryer (3) | Particulate Matter | No BACT developed; use best industrial practices | |

Carbon monoxide BACT was combustion controls utilizing an excess oxygen analyzer in the stack gas stream to permit automatic adjustment of air/fuel ratio settings. The air/fuel ratio was to be maintained in a range, determined after start-up that resulted in the lowest possible carbon monoxide emissions. Since there was no BACT applicable to veneer dryers, these emissions were controlled using best industrial practice.

The permittee was authorized to construct and operate subject to the following emission limitations which represented Best Available Control Technology (BACT) for this facility. The emissions limitations and capacity throughput limitations represented the maximum allowed for the specified process.

| Source | Size/Throughput | Particulate Matter | Carbon Monoxide | Opacity |
|---|---|---|---|---|
| No. 1 Boiler | 30,000 lb/hr of wet waste | 25 lb/hr | 35.2 lb/hr | 20% |
| No.2 Boiler | 30,000 lb/hr of wet waste | 25 lb/hr | 35.2 lb/hr | 20% |
| Transfer Cyclones (each of 8) | ----- | 2 lb/hr | ----- | 20% |
| Lumber Kilns | ----- | ----- | ----- | 20% |
| No. 1 Veneer Dryer | 9800 $ft^2$/hr | 4.4 lb/hr | ----- | 20% |
| No. 2 Veneer Dryer | 8100 $ft^2$/hr | 4.4 lb/hr | ----- | 20% |
| No. 3 Veneer Dryer | 1790 $ft^2$/hr | 1.0 lb.hr | ----- | 20% |

Permit #**463-AR-1** was issued on March 25, 1983, to change the $PM/PM_{10}$ and the CO emissions rates on the two wood fuel fired boilers (SN-01 and SN-02). Emission rates in permit #463-A were based upon estimates before the construction of the wood fuel fired boilers. During compliance testing and a subsequent two week testing period, it was determined that the actual emissions were much higher.

Permit #**463-AR-2** was issued on March 25, 1993, to allow the facility to increase plywood production 113%, establish a lumber production rate of 144 Million board feet per year, allow the installation of emission control devices on the veneer dryers, and to allow the burning of small quantities of glue, hydraulic oil, and motor oil in the wood fuel fired boilers (SN-01 and SN-02).

Permit #**463-AR-3** was issued on January 16, 1996, to permit the installation and operation of a fourth plywood press, a new pre-press, and a new layup line. This addition alleviated a bottleneck in the plywood manufacturing line. It did not constitute an increase in the potential to emit, on an annual basis.

Permit #**463-AOP-R0** was issued on December 16, 1998. This was the first permit issued to the facility under Regulation #26.

Permit #**463-AOP-R1** was issued on February 24, 2000. The purpose of this modification was to do the following:

1. The first project was the sawmill modernization project. The objective was to reconfigure the sawmill (SN-23). This project also required minor changes in the wood preparation area. There was no increase in the permitted emission rates of SN-23.

2. The second project was the sawdust project. This project affected the by-product handling operation. This project involved the installation of additional handling equipment. The new permitted emission rates for this project were as follows:

| | | | |
|---|---|---|---|
| SN-25 (existing source) | $PM/PM_{10}$ | 2.2 lb/hr | 3.3 ton/yr* |
| SN-29 (new source) | $PM/PM_{10}$ | 2.0 lb/hr | 8.8 ton/yr |

*this change was the result of a correction in the annual chip production rate

[Note: The above proposed projects increased flexibility and reduced costs but did not increase the production capacity of the facility.]

3. The new emission rates for SN-26 were as follows (this represented a decrease in permitted emissions):

| | | |
|---|---|---|
| $PM/PM_{10}$ | 9.1 lb/hr | 22.7 ton/yr* |

*this change was due to the paving of most plant roads and vacuuming for dust control

4. The regulatory citations in the permit were updated.

In permit #**463-AOP-R2**, the Gurdon Complex proposed three separate projects: the installation of a Globe siding machine (plywood operation), the modification of the existing Planer Shavings cyclone and baghouse system (lumber operation), and the conversion to a dry ash handling system (powerhouse).

The siding machine installation resulted in the following changes at the facility:

1. Increased the amount of dry trim generated.

2. Increased the inlet air flow rate of the dry wood fuel transfer cyclone (SN-12) from 38,500 dscfm to 48,500 dscfm.

3. Increased the size of the baghouse filters of the dry wood fuel transfer cyclone (SN-12).

4. Increased the amount of glue residue burned in the wood fired boilers from 824 tons per year to 1,030 tons per year.

The Planer Shavings Project resulted in the following changes at the facility:

1. Replacement of existing baghouse with a new baghouse.

2. Replacement of existing 200 hp motor on the blower with a 300 hp motor and installation of a 30 hp purge fan. As a result, the inlet air flow rate of the planer shaving cyclone (SN-11) increased from 53,165 dscfm to 60,000 dscfm.

3. Installation of an additional cyclone adjacent to the existing cyclone located over the truck bin.

The conversion of the existing wet ash handling system to a dry ash handling transfer system for the two wood fired boilers (SN-01 and SN-02) resulted in the following changes at the facility:

1. Removal of existing classifier for the rear boiler pass of each boiler.

2. Removal of 2 existing classifiers associated with the air heaters and dust collectors on each boiler. These were replaced with one rotary screen separator (per boiler) having the same classification characteristics.

3. Removal of one ash discharge point per boiler.

4. Reinjection of all ash from rear boiler pass hoppers.

5. Installation of new ash chain conveyor that feed to a sealed roll-off box, which handles all ash from both boilers. There is only one dry ash discharge point.

6. The ash will be misted before it drops into the sealed roll-off box.

Also, The Gurdon Complex requested a correction in the Frosto usage (SN-28) allowed in the permit. The permitted emission rate of 8.1 tpy was based on a Frosto usage rate of 2,411 gallons. Therefore, the facility is requesting that the Frosto usage rate be corrected from 1,728 gallons per year to 2,411 gallons per year, which is the basis of the permitted emission rate.
The resulting emissions from the installation of new equipment and replacement of old equipment did not exceed 15 tpy; therefore, the facility is not subject to PSD review.

In an *Administrative Amendment* to permit **#463-AOP-R2**, the permit was updated to account for the use of hardwood at the facility. The following sentence was added to the "Introduction" section of the permit:

> "The facility processes softwood and a small amount of hardwood (about 4% of the total volume on an annual basis) at the facility".

Although emissions decreased as a result of processing hardwood, the facility did not request any emissions decreases. There were no other changes to the permit.

In the facility's renewal permit, **463-AOP-R3**, the facility purchased and installed an additional panel assembly line. Emissions were to be controlled from the tongue and groove (T&G) and hog operations from the lay-up lines by a new baghouse. The Layup Line Baghouse (SN-33) increased the facility-wide PM/$PM_{10}$ by 3.2 tpy and 1.2 lb/hr.

In the second modification request, the facility increased the total dry kiln throughput from 144,000 to 180,000 thousand board feet (MBF, the maximum capacity of the kilns, which is accomplished by increasing hours of production. The throughput increase increased the quantity of HAPs, VOCs, and particulates released by sawmill related processes, but did not affect the boiler or veneer production related emission sources. The facility also bubbled emissions for the kilns, instead of an individual limitation. The application also corrected an emission factor of 6.5 to 3.5 lb VOC/MBF. The facility also increased its log handling capacity to 1,884,958 ton per year as a result of these changes.

In the third modification, the facility requested that the veneer dryers capacity be changed from 47 MSF/hr to 57 MSF/hr. The facility requested an increase in the lb/hr emissions limits but not annual limits.

In the fourth modification request, the facility requested to increase the veneer production from 367,044 to 405,000 thousand-square feet (MSF). The proposed throughput increase did increase the quantity of HAPs and particulates released by veneer related processes, but not the boiler or kiln/sawmill related emission sources.

Last, the facility submitted emission rate tables and calculations for the cyclones with emissions based on the capacity (dscfm) of each cyclone. This change in calculations resulted in a reduction in permitted emissions for PM and $PM_{10.}$

Permit **#0463-AOP-R4** was a minor modification done to incorporate a 97.5 MMBTU/hr natural gas boiler into the permit. The boiler had been used in the past as a backup when one of the permitted boilers was not operating due to maintenance or failure. Through this modification, the boiler was limited to no more than 4500 hours of operation per year. During periods of natural gas curtailment, propane would be used as fuel. Annual emissions accounted for approximately 30-days of propane use in addition to natural gas. The boiler, built in 1991, was subject to NSPS Subpart Dc and NESHAP DDDDD. Permitted emissions increased by 1.7 tpy $PM_{10}$, 0.2 tpy $SO_2$, 1.2 tpy VOC, 18.1 tpy CO, and 16.4 tpy $NO_x$.

Permit **#0463-AOP-R5** was issued on January 5, 2009. In this modification, Georgia Pacific (GP) requested the following changes to its Title V permit:

1. The facility requested to change its lathe ratios and conversion of the drive motors from DC to AC current. The combined changes allowed a small increase in the quantity of logs peeled by the lathe and a corresponding hourly increase in throughput at the log steaming vats (SN-30). Due to a bottleneck in the dryers, there was not an increase in the facility's annual throughput of 405,000,000 square feet. Therefore, there was no increase in annual production or annual

emissions as a result of this change even though an increase in hourly emissions resulted from the change.

2. Added a new 3,000 gallon hydraulic and lubricating oil tank to the facility's insignificant activities list under Group A-3.

3. Revised Specific Condition 11 in the current permit as follows: "The permit shall not burn any hazardous material in the wood fuel boilers. The permittee is responsible for ensuring that the residual materials burned in the boilers are not hazardous according to applicable any present or future criteria." The requested change was because G-P was uncertain how to certify compliance with this condition because future criteria cannot be predicted.

4. Updated emissions limits for the lumber kilns (SN-06, SN-07 and SN-08) and the veneer dryer incinerator and heat recovery boiler (SN-22). These updates were necessary either because new emission factors were available or emissions factors for trace pollutants were not available during previous permitting.

5. Updated the Process Description and Insignificant Activities list. The Process Description indicated that each boiler was equipped with a multivane scrubber and primary and secondary dust collectors. However, the control device for each boiler is a multivane scrubber and dust collector.

6. Incorporated the provisions of 40 C.F.R. 63 Subpart DDDD - National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products.

Permit **#0463-AOP-R6** was issued on August 18, 2011. The purpose of this modification was to renew the facility's Title V permit as required by General Provision #3. The following changes to the permit/facility were also made during this modification:

1. Due to the changes in maximum emission factor representation, a number of emission sources showed changes in maximum emissions from past applications. These changes did not represent any change to production or operating parameters.

2. Specific Condition #13 of permit #0463-AOP-R5 included a pressure differential range of 0 – 8 inches of water for the wet scrubbers on the boilers to indicate proper operation. In this permit (permit #0463-AOP-R6), the pressure differential range was removed and Specific Condition #13 was revised to require that a minimum water flow be recorded to monitor the proper operation of the wet scrubbers.

3. Lb/hr emissions for PM and $PM_{10}$ were corrected due to emissions summing errors in the previous permit.

4. The facility replaced the hot press platens, panel receiving racks, and the guide and step system on Press #1 and Press #2. Only the press platens, receiving racks, and

guide and step system were replaced. Other components of the presses including motors, hydraulic pumps, loaders, and controls remained unchanged. The repair/maintenance on the presses (SN-17, 18, 19, 20, 21, 35 and 36) did not result in any increase to potential emissions and GP Gurdon did not request any change to the permit limits.

5. Added a steam-heated heat exchanger to an existing log vat (SN-30) water storage tank. The heat exchanger is used to speed evaporation from a single tank. The heat exchanger also allows for the return of pre-heated water to the log vat to replace evaporated and log absorption losses.

6. Added a lumber pressure treating plant at the existing wood products complex through a Minor Modification to Permit #0463-AOP-R5. However, after further consideration, the facility opted not to construct the approved treatment plant and requested it not be added to the revised Title V permit.

7. Revised specific condition #12 to allow occasional overlapping blocks of averaging times during start-up and shutdown of the boilers (SN-01 and SN-02)

8. Replaced the sander at SN-32 with a new sander. In order to limit the potential emissions from the proposed new sander to less-than-significant levels, the facility proposed a separate production limit of 300,000 MSF/yr for the sander. The hourly limits will continue to be based on the capacity of the veneer dryer (57 MSF/yr).

9. Updated "used oil" conditions to allow for monthly, instead of weekly, calculations.

10. Converted Lumber Kiln #3 (SN-08) into an indirect-fired continuous-fed kiln and converted Lumber Kiln #1 (SN-06) into a direct fired continuous-fed kiln. Lumber Kiln #2 (SN-07) was removed from service.

11. Installed a steam heated kiln condensate evaporator to manage the increased amount of condensate associated with the continuous kilns.

12. Increased the throughput limit at the kilns to 190,000,000 board feet of lumber per year and increased the logs processed at the facility to 2,011,179 tons per year.

13. To improve model-predicted ambient air concentrations for facility emissions, the facility requested the following conditions requiring physical changes to the facility be added to the permit (under the facility's "Plantwide Conditions"):

    a. Within 180 days of final issuance of Permit No. 0463-AOP-R6, the permittee shall pave the log yard access road from US Highway 67 to the scale house. The permittee shall submit a written notification to the Department upon completion of this task. [§19.405(B) of ADEQ Regulation 19 and 40 C.F.R. Part 52 Subpart E]

b. Within 180 days of final issuance of Permit No. 0463-AOP-R6, the permittee shall extend the facility fenceline as indicated within the modeling report submitted to the Department of November 24, 2010. The permittee may elect to extend the fenceline farther than indicated within this report, provided that all areas indicated as fenced are enclosed within the revised fenceline. The permittee shall submit a written notification to the Department upon completion of this task. [§19.405(B) of Regulation 19 and 40 C.F.R. Part 52 Subpart E].

The continuous kiln project was to take place in two phases; therefore the permit has two operating scenarios. In the first phase of the project (Scenario 1), Lumber Kiln #2 (SN-07) was decommissioned, Lumber Kiln #3 (SN-08) was converted to an indirect –fired continuous kiln, and Lumber Kiln #1 (SN-06) continued to operate as a batch kiln. During the second phase (Scenario 2), Lumber Kiln #1 (SN-06) will be converted into a direct-fired continuous kiln. Upon the start-up of Kiln #1 (SN-06) as a direct-fired continuous kiln, Scenario 1 will be become an invalid part of the permit, and the facility will operate under the Specific Conditions stated in Scenario 2.

Both the interim phase (emission resulting from converting one kiln) and the completed project (emissions resulting from converting two kilns) were below PSD permitting thresholds. The increases in emissions as a result of the modifications to the kilns were 0.8 tpy of $PM_{10}$ and 38.4 tpy of VOC. The total facility-wide emissions increased as a result of the emission factor changes and the modifications were 33.6 tpy of PM, 11.9 tpy of $PM_{10}$, 11.0 tpy of $SO_2$, 296.3 tpy of VOC, 88.1 tpy of CO and 28.6 tpy of $NO_X$.

The modification, 0463-AOP-7, dated February 13, 2014 was to make the following changes to the facility's permit:

1. Replaced the existing incinerator and waste heat boiler, SN-22, with a Regenerative Catalytic Oxidizer (RCO) which will utilize a catalytic bed in conjunction with a much smaller natural gas burner (9 MMBtu/hr burner);
2. Replaced the three existing debarkers (included in SN-24) with a new ring debarker, and replace the existing dry waste hog (SN-31) with a new hog of similar design and capacity. There is no increase in the annual potential to emit as a result of this change; however, the new permitted PM and PM10 hourly emission rates for SN-24 have been corrected to reflect the maximum capacity of the equipment;
3. Installed a new 55.7 MMBtu/hr Natural Gas-Fired Rental Boiler (SN-44) and remove the existing 97.5 MMBtu Natural Gas-Fired Boiler (SN-34);
4. Increased the VOC emissions from the facility's plyform oiler (SN-38) to allow for the use of a new panel oil material;
5. Increased the proposed formaldehyde and methanol emissions limits for the new RCO (SN-22) based on recent stack test data;

6. Removed the testing condition for the glue line (Specific Condition #133 of permit #0463-AOP-R6). The facility provided the necessary documentation associated with the emission factors used to calculate the VOC emissions at this source;
7. Removed Kiln Operating Scenarios #2 and #3 from the permit. The #3 Continuous Kiln has been built. However, the previously proposed second continuous kiln will not be built;
8. Removed the Lumber Kiln Condensate Evaporator (SN-41). It was never constructed and will not be built;
9. Removed Plywood trim hog (SN-31) PM/$PM_{10}$ emissions because they are routed to and accounted for at SN-12, SN-13 and SN-14. There were erroneously accounted for twice in the previous permit. Only VOC emissions should be permitted at SN-31; and
10. Included the compliance date and a permit modification date for 40 C.F.R., Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

The combined changes resulted in permitted emissions decreases of 28.4 tpy of PM, 27.9 tpy of $PM_{10}$, 4.0 tpy of $SO_2$, 29.8 tpy of VOC, 150.9 tpy of CO, and 78.3 tpy of $NO_X$. There were also slight reductions to some non-criteria pollutants. However, due to installation of the new rental boiler, the facility's overall tpy emissions beryllium and cadmium each increased by 0.002 tpy.

Permit #0463-AOP-R8 was issued February 6, 2016. This modification added a new lumber kiln, SN-09, replaced the planer machine and its associated dust collection system, increased lumber production to accommodate the throughput of the new kiln, and a minor modification to rebuild the 1 and 2 Veneer Dryers (SN-03 and SN-04), with the addition of natural gas burners to replace the current steam heating configuration in the first heating zone of each dryer and rebuilt the #3 Veneer Dryer (SN-05) without natural gas burners. This modification was PSD major for VOC emissions.

Permit #0463-AOP-R8 was issued February 6, 2015. This permit added a new lumber kiln, SN-09, replaced the planer machine and its associated dust collection system, increased lumber production to accommodate the throughput of the new kiln, and rebuilt the 1 and 2 Veneer Dryers (SN-03 and SN-04), with the addition of natural gas burners to replace the steam heating configuration in the first heating zone of each dryer and rebuilt #3 Veneer Dryer (SN-05) without natural gas burners. This modification was PSD major for VOC emissions.

Permit #463-AOP-R9 was issued August 23, 2016. This permit allowed the replacement of an existing plywood sander (SN-32). This permit decreased hourly and annual VOC and HAP emission rates with no change in permitted annual emission rates.

Permit #463-AOP-R10 was issued March 1, 2017. This permit modification, prompted by the facility's renewal application, allows the following: (1) An increase in hourly production limit of the presses (SN-17 through SN-21, SN-35, and SN-36), SN-31, and SN- 37 through SN-40 from 57,000 $ft^2$ /hr to 78,103 $ft^2$ /hr, also increasing the annual production limit for these units from 425 MMsf/yr to 435 MMsf/yr; (2) Correct the emission rates for the #4 Continuous Lumber Kiln (SN-09) to match the January 2014 Continuous Kiln Application; (3) Revise emission

calculations for several cyclones and baghouses (SN-12, SN-13, SN-14, SN-15, SN-16, and SN-33) using recent stack test data from two other GP facilities; (4) Update the insignificant activities list; (5) Remove Frosto/Tanner Gas (SN-28) from the permit; (6) and finally, remove outdated Plantwide Conditions 9 and 10 which has been completed. Administrative Amendments were included which removed SN-44 (Rental Boiler), and added a New Parts Washer and Mold Inhibitor to the Insignificant Activities list. $PM_{10}$ and PM emissions were increased by 4.1, and 3.0 tons per year and $SO_2$, VOC, CO and $NO_x$ emissions were decreased 0.2, 5.8, 17.9 and 8.8 tons per year respectively.

Permit #463-AOP-R11 was issued June 1, 2017. This permit modification was to add 40 C.F.R. Part 63, Subpart DDDDD conditions for SN-01 and SN-02. There was no change in permitted emissions.

Permit #463-AOP-R12 was issued August 28, 2017. This modification replaced the existing Sander Dust Cyclone and baghouse (SN-15) with a new dust collection system, and replaced the existing Core Machine (SN-23C) with a rebuilt replacement of the same make, model, and year from an idled GP facility. This modification increased facility emissions of PM and PM10 by 0.1 and 0.6 tons per year respectively.

Permit #463-AOP-R13 was issued (Draft mailed 03/27/18, has not been issued yet).

## SECTION IV: SPECIFIC CONDITIONS

SN-01 - #1 Wood Fuel Fired Boiler (135 MMBtu/hr)
SN-02 - #2 Wood Fuel Fired Boiler (135 MMBtu/hr)

Steam Generation – Wood Fuel Fired Boilers

SN-01 and SN-02 are similar 135 MMBTU/hr wood fuel fired boilers. The boilers provide steam for the two (2) lumber drying kilns, the ply-block heating vats, the three (3) veneer dryers, the three (3) hot presses and the glue mixing area. Fuels combusted in the boiler include bark, wood fuel, chips, fines, plytrim, sawdust, shavings, glue residue and used hydraulic and motor oil.

Plytrim, the scrap from the plywood trim saws, is the primary source of glue burned in the boilers. The plytrim generated averages 8% of the plywood produced and the glue averages 4.69% of the weight of the plytrim. The facility generates approximately 625 tons of plytrim each week. The facility may ship up to 100% of the plytrim offsite to other facilities. However, the facility needs to maintain the capability to burn the permitted limit of the plytrim in its boilers if circumstances prevent shipment offsite. The plytrim burned onsite is conveyed to the fuel storage building by the dry fuel handling system. The plytrim and glue residual from other miscellaneous sources are mixed with other fuels by the random simultaneous adding of wood fuels from several sources.

In the past, on-specification used oil was mixed with wood fuel and placed on the conveyor belt feeding into the fuel storage building. It was further mixed in the same manner as the glue. At the present time, liquid on-specification used oil is shipped offsite to an oil recycling facility. The only oil burned is from spills, leaks and lubricating oil from conveyor chains. Sawdust that is used to absorb and clean up these sources is placed on the conveyor belt feeding into the fuel storage building. Estimation is the only way to quantify the oil in the sawdust used for cleanup. Liquid on-specification used oil collected in barrels or other containers is quantified and records are kept onsite.

Each boiler is subject to PSD regulations and is equipped with a continuous emission monitoring system (CEMS) for measuring the oxygen content of the flue gases as an indicator of CO emissions. Each boiler is also subject to “Best Available Control Technology” (BACT). To meet this requirement, each boiler is equipped with a multivane scrubber to control particulate matter.

The boilers are not subject to NSPS regulation Subpart Db - *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* since they were installed or last modified in 1979, before the Subpart’s promulgation date of June 19, 1984.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 7. [Reg.19.501 et *seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 01 | #1Wood Fuel Fired Boiler (135 MMBtu/hr) | $SO_2$<br>Lead | 4.1<br>0.019 | 18.8<br>0.09 |
| 02 | #2 Wood Fuel Fired Boiler (135 MMBtu/hr) | $SO_2$<br>Lead | 4.1<br>0.019 | 18.8<br>0.09 |

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 7 and 12. [Reg.19.501, Reg.19.901 and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 01 | #1Wood Fuel Fired Boiler (135 MMBtu/hr) | $PM_{10}$<br>VOC<br>CO<br>$NO_X$ | 25.0<br>10.0<br>200.0<br>28.5 | 109.5<br>43.8<br>876.0<br>124.8 |
| 02 | #2 Wood Fuel Fired Boiler (135 MMBtu/hr) | $PM_{10}$<br>VOC<br>CO<br>$NO_X$ | 25.0<br>10.0<br>200.0<br>28.5 | 109.5<br>43.8<br>876.0<br>124.8 |

3. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 7 and 12. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 01 | #1Wood Fuel Fired Boiler (135 MMBtu/hr) | PM<br>Acetone<br>Acetaldehyde<br>Acrolein<br>Benzene<br>Carbon Disulfide<br>Chloroform<br>Formaldehyde<br>Hexachlorobenzene<br>Hexane | 25.0<br>0.1<br>0.13<br>0.10<br>0.60<br>0.03<br>0.02<br>2.70<br>1.67E-04<br>0.05 | 109.5<br>0.3<br>0.56<br>0.40<br>2.62<br>0.09<br>0.06<br>11.90<br>7.31E-04<br>0.21 |

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| | | Methanol | 3.70 | 16.0 |
| | | Methylene Chloride | 0.17 | 0.74 |
| | | MIBK | 0.08 | 0.32 |
| | | Phenol | 0.06 | 0.23 |
| | | Polycyclic Organic Matter | 0.03 | 0.09 |
| | | Styrene | 0.35 | 1.49 |
| | | Vinyl Chloride | 0.003 | 0.02 |
| | | Xylene | 0.001 | 0.004 |
| | | Arsenic | 0.003 | 0.02 |
| | | Beryllium | 0.001 | 0.001 |
| | | Cadmium | 0.002 | 0.008 |
| | | Chromium, hexavalent | 0.005 | 0.03 |
| | | Manganese | 0.30 | 1.00 |
| | | Mercury | 4.80E-04 | 2.10E-03 |
| | | Phosphorus | 0.06 | 0.23 |
| 02 | #2Wood Fuel Fired Boiler (135 MMBtu/hr) | PM | 25.0 | 109.5 |
| | | Acetone | 0.1 | 0.3 |
| | | Acetaldehyde | 0.13 | 0.56 |
| | | Acrolein | 0.10 | 0.40 |
| | | Benzene | 0.60 | 2.62 |
| | | Carbon Disulfide | 0.03 | 0.09 |
| | | Chloroform | 0.02 | 0.06 |
| | | Formaldehyde | 2.70 | 11.90 |
| | | Hexachlorobenzene | 1.67E-04 | 7.31E-04 |
| | | Hexane | 0.05 | 0.21 |
| | | Methanol | 3.70 | 16.0 |
| | | Methylene Chloride | 0.17 | 0.74 |
| | | MIBK | 0.08 | 0.32 |
| | | Phenol | 0.06 | 0.23 |
| | | Polycyclic Organic Matter | 0.03 | 0.09 |
| | | Styrene | 0.35 | 1.49 |
| | | Vinyl Chloride | 0.003 | 0.02 |
| | | Xylene | 0.001 | 0.004 |
| | | Arsenic | 0.003 | 0.02 |
| | | Beryllium | 0.001 | 0.001 |
| | | Cadmium | 0.002 | 0.008 |
| | | Chromium, hexavalent | 0.005 | 0.03 |
| | | Manganese | 0.30 | 1.00 |
| | | Mercury | 4.80E-04 | 2.10E-03 |
| | | Phosphorus | 0.06 | 0.23 |

4. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 01 and 02 | 20% | 19.503 &<br>A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |

5. The permittee will conduct daily observations of the opacity from SN-01 and SN-02 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during daily observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]

6. The permittee shall measure the opacity of the gases discharged to the atmosphere from each wood fuel fired boiler (SN-01 or SN-02) in accordance with EPA Reference Method 9 as found in 40 C.F.R. Part 60, Appendix A. The opacity of the gases from either boiler shall not exceed the limit in Specific Condition 4 (20%) except as noted in sections a. and b. below. [Reg.19.503 and Reg.19.901 et seq. and 40 C.F.R. § 52 Subpart E]

   a. The opacity of the boilers may exceed 20%, up to a maximum of 40%, for no more than 135 minutes per day to allow for the raking of the boiler grates.

   b. The opacity of the boilers may exceed 20%, up to a maximum opacity of 40%, for a period not to exceed five hours following the startup of a boiler which has not been fired for eight or more hours.

7. The permittee shall not exceed the following total quantities of fuel in SN-01 and SN-02 during any consecutive twelve month period.

   a. 262,800 tons of wood fuel

   b. 46,248 gallons of “on specification” used hydraulic and motor oil

   c. 1,030 tons of glue residue

   These fuels shall be the only fuels burned in the SN-01 and SN-02 boilers. [Reg.19.705, Reg.18.1004, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

8. The permittee shall maintain monthly and annual records which demonstrate compliance with the limits listed in Specific Condition #7. A monthly report shall be prepared

containing the individual records for each of the last twelve months and the total of the twelve months. The report shall also contain the number of hours each boiler operates per month. The reports shall be updated within 15 days of the end of the month for which the data is being recorded. These records shall be kept on site and shall be made available to Department personnel upon request. A twelve consecutive month total and each month's data shall be submitted to the Department in accordance with General Provision 7. [Reg.19.705, Reg.18.1004, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

9. The permittee shall not burn free liquids in the wood fuel boilers. All free liquid "on-specification" used oils may be drummed and shipped to a recycling facility. All "on specification" used oils burned shall be thoroughly mixed with wood fuel. The permittee shall burn no more than 3.77 gallons of "on specification" used oil per hour per wood fuel fired boiler nor more than 0.0950 tons of glue residual per hour per boiler. The hourly rate shall be determined by dividing the monthly quantities of glue and "on specification used oil" burned by the month's hours of operation for each boiler. Glue residue shall include the glue in ply trim. [Reg.19.705, Reg.18.1004, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

10. The permittee shall maintain weekly records of the quantity and calculated hourly rate of "on-specification" used oil and glue burned in the boilers. These records shall be maintained and included with the records required in Specific Condition #8. [Reg.19.705, Reg.18.1004, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

11. The permittee shall not burn any hazardous waste in the wood fuel boilers. The permittee is responsible for ensuring that the residual materials burned in the boilers are not hazardous according to applicable criteria. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

12. The permittee shall conduct stack emissions tests on the two wood fuel fired boilers, SN-01 and SN-02, once every five years to measure the following pollutants by the indicated EPA test method as listed in 40 C.F.R. Part 60, Appendix A. All tests shall be conducted when the equipment being tested is operating at least 90% of its rated capacity. Each boiler shall be tested individually. Testing shall be performed in accordance with Plantwide Condition 3. [Reg.19.702, Reg.19.901 and 40 C.F.R. § 52 Subpart E]

| Pollutant | EPA Test Method |
|---|---|
| $PM/PM_{10}$ | 5 or 201a with 202 (back-half) |
| $NO_X$ | 7E |
| VOC | 25A |
| Exhaust Gas Volumetric Flow Rate | 2 |

13. The boilers (SN-01 and SN-02) are subject to 40 C.F.R., Part 63 - Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The facility must be in compliance with this subpart by no later than January 31, 2017, except as provided in § 63.6(i). [Reg.19.304 and 40 C.F.R. § 63.7495(b)]

14. The permittee shall not discharge to the atmosphere any gases from SN-01 or SN-02 that contain in excess of the following listed pollutant limits. [Reg.19.304 and 40 C.F.R. § 63.7500].

**Boiler MACT Emission Limits**

| Pollutant | Emission Limit (lb/MMBtu) |
|---|---|
| HCl | 2.20E-02 |
| Mercury | 5.7E-06 |
| Filterable PM | 4.40E-01 |
| CO | 3,500 ppmv @ 3% O2 |

15. The permittee shall maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate for the wet scrubbers on No. 1 and No. 2 Wood Fired Boilers (SN-01 and SN-02) at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the most recent performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to 40 C.F.R. Part 63, Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7500(a)(2).

16. The permittee shall maintain the 30-day rolling average oxygen content for the wet scrubbers on No. 1 and No. 2 Wood Fired Boilers (SN-01 and SN-02) at or above the lowest hourly average oxygen concentration measured during the most recent CO performance test, as specified in Table 8. [Reg.19.304 and 40 C.F.R. § 63.7500(a)(2)].

17. At all times, the permittee shall operate and maintain the boilers, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.[Reg.19.304 and 40 C.F.R. § 63.7500(a)(3)]

18. The applicable emission limits, work practice standards, and all operating limits (Tables 2 through 4 of 40 C.F.R. Part 63, Subpart DDDDD) apply at all times the affected unit is operating, except during periods of startup and shutdown during which time the permittee must comply only with items 5 and 6 of Table 3 to 40 C.F.R. Part 63, Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7500(f) and § 63.7505(a)]

**Table 3 to 40 C.F.R. Part 63, Subpart DDDDD**

| If you unit is | You must meet the following… |
|---|---|
| 5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup | a. You must operate all CMS during startup.<br>b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.<br>c. You have the option of complying using either of the following work practice standards.<br>(1) If you choose to comply using definition (1) of "startup" in § 63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR<br>(2) If you choose to comply using definition (2) of "startup" in § 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels[a]. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in § 63.7505(e).<br>d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555. |
| 6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown | You must operate all CMS during shutdown.<br>While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.<br>If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.<br>You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data |

| | |
|---|---|
| | during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555. |

19. The permittee must demonstrate compliance for HCl, mercury, and TSM using performance stack testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 of 40 C.F.R. Part 63, Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7505(c)]

20. If the permittee demonstrates compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CEMS, the permittee must develop a site-specific monitoring plan according to the requirements in 40 C.F.R. § 63.7505 (d)(1) through (4) (and listed below) for the use of any CEMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under 40 C.F.R. § 63.8(f). [Reg.19.304 and 40 C.F.R. § 63.7505(d)]

    a. For each CMS required in 40 C.F.R. § 63.7505 (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of § 63.7505. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under Appendix B to Part 60 of 40 C.F.R. and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan. [Reg.19.304 and 40 C.F.R. § 63.7505(d)(1)]

        i. Installation of the 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 control device); [40 C.F.R. § 63.7505(d)(1)(i)]

        ii. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and [40 C.F.R. § 63.7505(d)(1)(ii)]

        iii. Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift). [40 C.F.R. § 63.7505(d)(1)(iii)]

    b. In your site-specific monitoring plan, you must also address 40 C.F.R. § 63.7505 (d)(2)(i) through (iii), as listed below: [Regulation 19, §19.304 and 40 C.F.R. § 63.7505(d)(2)]

i. Ongoing operation and maintenance procedures in accordance with the general requirements of 40 C.F.R. § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii); [40 C.F.R. § 63.7505(d)(2)(i)]

ii. Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and [40 C.F.R. § 63.7505(d)(2)(ii)]

iii. Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 of 40 C.F.R. Part 63, Subpart DDDDD), (e)(1), and (e)(2)(i). [40 C.F.R. § 63.7505(d)(2)(iii)]

c. You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan. [Reg.19.304 and 40 CF.R. § 63.7505(d)(3)]

d. You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan. [Reg.19.304 and 40 C.F.R. § 63.7505(d)(4)]

21. For each boiler (SN-01 and SN-02) that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of 40 C.F.R. Part 63, Subpart DDDDD through performance (stack) testing, your initial compliance requirements include all the following: [Reg.19.304 and 40 C.F.R. § 63.7510(a)]

a. Conduct performance tests according to § 63.7520 and Table 5 to 40 C.F.R. Part 63, Subpart DDDDD.

b. Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to 40 C.F.R. Part 63, Subpart DDDDD, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

i. For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.7521 and Table 6 to this subpart.

ii. When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to § 63.7521 and Table 6 to this subpart.

iii. You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

c. Establish operating limits according to § 63.7530 and Table 7 to this subpart.

d. Conduct CMS performance evaluations according to § 63.7525.

22. SN-01 and SN-02 are subject to a carbon monoxide (CO) limit. Your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section. [Reg.19.304 and 40 C.F.R. § 63.7510(c)]

23. SN-01 and SN-02 are subject to a PM limit. Your initial compliance demonstration for PM is to conduct a performance test in accordance with specific condition #31 through #36 and Table 5 to this subpart. [Reg.19.304 and 40 C.F.R. § 63.7510(d)]

**Table 5 to 40 C.F.R. Part 63, Subpart DDDDD**

| Pollutant | You Must… | Using, as appropriate… |
|---|---|---|
| Filterable PM | a. Select sampling ports location and the number of traverse points | Method 1 at 40 C.F.R. part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 C.F.R. part 60, appendix A-1 or A-2 to part 60 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 C.F.R. part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 C.F.R. part 60, appendix A-3 of this chapter. |
| | e. Measure the PM emission concentration | Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 C.F.R. part 60, appendix A-3 or A-6 of this chapter. |
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 C.F.R. part 60, appendix A-7 of this chapter. |

24. The permittee must complete the initial compliance demonstrations, as specified in Specific Conditions #21 through #23, no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495. [Reg.19.304 and 40 C.F.R. § 63.7510(e)]

25. The initial performance tests shall be conducted no later than 180 days after the compliance date of January 31, 2017. Subsequent performance tests shall be conducted according to § 63.7515(a) on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of section 63.7515 section. Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section. [Reg.19.304, 40 C.F.R. § 63.7515(a)]

26. If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under § 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM. [Reg.19.304, 40 C.F.R. § 63.7515(b)].

27. If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart). [Reg. 19.204, 40 C.F.R. § 63.7515(b)].

28. The permittee shall conduct the subsequent annual or 5-year performance tune-ups annually. Each annual tune-up shall be no more than 13 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. [Reg.19.304, and 40 C.F.R. § 63.7515(d)]

29. The permittee completed the one-time energy assessment specified in Table 3 to this subpart on March 29, 2016. [Reg.19.304, and 40 C.F.R. § 63.7510(e)]

30. You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in § 63.7550. [Reg.19.304, and 40 C.F.R. § 63.7510(f)]

31. The permittee must conduct all performance tests according to 40 C.F.R. § 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in 40 C.F.R. § 63.7(c). You shall conduct all performance tests under such

conditions as the Administrator specifies to you based on the representative performance of each boiler for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. [Reg.19.304 and 40 C.F.R. § 63.7520(a)]

32. The permittee must conduct each performance test according to the requirements in Table 5 of 40 C.F.R. Part 63, Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7520(b)]

33. The permittee must conduct each performance test under the specific conditions listed in Tables 5 and 7 of 40 C.F.R. Part 63, Subpart DDDDD. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 of 40 C.F.R. Part 63, Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7520(c)]

34. The permittee must conduct a minimum of three separate test runs for each performance test required in 40 C.F.R. § 63.7520, as specified in § 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Table 2 of 40 C.F.R. Part 63, Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7520(d)]

35. To determine compliance with the emission limits, the permittee must use the F-Factor methodology and equations in Sections 12.2 and 12.3 of EPA Method 19 at 40 C.F.R. Part 60, Appendix A-7 to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates. [Reg.19.304 and 40 C.F.R. § 63.7520(e)]

36. Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), the permittee must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level. [Reg.19.304 and 40 C.F.R. § 63.7520(f)]

37. SN-01 and SN-02 are subject to a CO emission limit in Table 2 of 40 C.F.R. Part 63, Subpart DDDDD. Therefore, the permittee must install, operate, and maintain an oxygen analyzer system, as defined in 40 C.F.R. § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide ($CO_2$)) according to the procedures in § 63.7525(a)(1) through (6). [Reg.19.304 and 40 C.F.R. § 63.7525(a)]

38. If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the following procedures by the compliance date specified in 40 C.F.R. § 63.7495. [Reg.19.304 and 40 C.F.R. § 63.7525(d)]

    a. The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.[ 40 C.F.R. § 63.7525(d)(1)]

    b. You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c). [40 C.F.R. § 63.7525(d)(2)]

    c. Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d). [40 C.F.R. § 63.7525(d)(3)]

    d. You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c). [40 C.F.R. § 63.7525(d)(4)]

    e. You must record the results of each inspection, calibration, and validation check. [40 C.F.R. § 63.7525(d)(5)]

39. If you have an operating limit that requires the use of a flow monitoring system, you must meet the following requirements: [Reg.19.304 and 40 C.F.R. § 63.7525(e)]

    a. You must install the flow sensor and other necessary equipment in a position that provides a representative flow. [40 C.F.R. § 63.7525(e)(1)]
    b. You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate. [40 C.F.R. § 63.7525(e)(2)]
    c. You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances. [40 C.F.R. § 63.7525(e)(3)]
    d. You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually. [40 C.F.R. § 63.7525(e)(4)]

40. If you have an operating limit that requires the use of a pressure monitoring system, you must meet the following requirements in addition to the requirements of 40 C.F.R. § 63.7525(d) (Specific Condition 139). [Reg.19.304 and 40 C.F.R. § 63.7525(f)]

    a. Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop). [40 C.F.R. § 63.7525(f)(1)]

    b. Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices. [40 C.F.R. § 63.7525(f)(2)]

c. Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less. [40 C.F.R. § 63.7525(f)(3)]

d. Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily). [40 C.F.R. § 63.7525(f)(4)]

e. Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually. [40 C.F.R. § 63.7525(f)(5)]

f. If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor. [40 C.F.R. § 63.7525(f)(6)]

41. The permittee must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to 40 C.F.R. § 63.7520, § 63.7530 (b) and (c), and Tables 5 and 7 of 40 C.F.R. Part 63, Subpart DDDDD. If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to 40 C.F.R. § 63.7525. [Reg.19.304 and 40 C.F.R. § 63.7530(a)]

42. If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 of 40 C.F.R. Part 63, Subpart DDDDD that applies to you (#1, 7 & 8) according to the requirements in 40 C.F.R. § 63.7520, Table 7 of Subpart DDDDD, and 40 C.F.R. § 63.7530 (b)(4), as applicable (applicable requirements listed in the table below). You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to § 63.7530 (b)(1) through (3), as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s). [Reg.19.304 and 40 C.F.R. § 63.7530(b)]

**Table 4 to 40 C.F.R. Part 63, Subpart DDDDD**

| **When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using. . .** | **You must meet these operating limits . .** |
|---|---|
| 1. Wet PM scrubber control on a boiler or process heater not using a PM CPMS | Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test |

| When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using. . . | You must meet these operating limits . . |
|---|---|
| | demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart. |
| 7. Performance testing | For boilers and process heaters that demonstrate compliance with a performance test, maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test. |
| 8. Oxygen analyzer system | For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an $O_2$ analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a). |

43. The permittee must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of 40 C.F.R. § 63.7530. As indicated in Table 4 of 40 C.F.R. Part 63, Subpart DDDDD, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)]

44. The permittee must include with the Notification of Compliance Status, a signed certification that either the energy assessment was completed according to Table 3 of 40 C.F.R. Part 63, Subpart DDDDD, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended. [Reg.19.304 and 40 C.F.R. § 63.7530(e)]

45. The permittee must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 C.F.R. § 63.7545(e). [Reg.19.304 and 40 C.F.R. § 63.7530(f)]

46. SN-01 and SN-02 are subject to emission limits in Table 2 of 40 C.F.R. Part 63, Subpart DDDDD. Therefore, the permittee must meet the work practice standard according to Table 3 of Subpart DDDDD. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 of Subpart DDDDD shown in Specific Condition #18. [Reg.19.304 and 40 C.F.R. § 63.7530(h)]

47. The permittee must monitor and collect data according to 40 C.F.R. § 63.7535 and the site-specific monitoring plan required by § 63.7505(d). [Reg.19.304 and 40 C.F.R. § 63.7535(a)]

48. The permittee must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods

(see 40 C.F.R. § 63.8(c)(7)), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. 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 in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable. [Reg.19.304 and 40 C.F.R. § 63.7535(b)]

49. The permittee may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system. [Reg.19.304 and 40 C.F.R. § 63.7535(c)]

50. Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report. [Reg.19.304 and 40 C.F.R. § 63.7535(d)]

51. To demonstrate continuous compliance with the Boiler MACT emission limits, the permittee shall keep records of the type and amount of all fuels burned in each boiler, as specified in§ 63.7555(d), during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in equal to or lower emissions of chlorine and mercury than the maximum values calculated during the last performance test. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(2)(ii)]

52. The permittee shall recalculate the maximum chlorine input using Equation 7 of § 63.7530, if the permittee plan to burn a new type of fuel or a new mixture of fuels. If the results of recalculating the maximum chlorine input using Equation 7 of § 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then the permittee shall conduct a new performance test within 60 days

of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. The permittee shall also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). [Reg.19.304 and 40 C.F.R. 63.7540(a)(4)]

53. The permittee shall recalculate the maximum mercury input using Equation 8 of § 63.7530, if the permittee plan to burn a new type of fuel or a new mixture of fuels. If the results of recalculating the maximum mercury input using Equation 8 of § 63.7530 are greater than the maximum mercury input level established during the previous performance test, then the permittee shall conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. The permittee shall also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). [Reg.19.304 and 40 C.F.R. 63.7540(a)(6)]

54. For startup and shutdown, the permittee must meet the work practice standards according to items 5 and 6 of Table 3 of 40 C.F.R. Part 63, Subpart DDDDD shown in Specific Condition #18. [Reg.19.304 and 40 C.F.R. § 63.7540(d)]

55. The initial notification for SN-01 and SN-02 was submitted on May 29, 2013. [Reg.19.304 and 40 C.F.R. § 63.7545(a) and (b)]

56. If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. [Reg.19.304 and 40 C.F.R. § 63.7545(d)]

57. The permittee must submit each report in Table 9 of 40 C.F.R. Part 63, Subpart DDDDD that applies to the permittee. [Reg.19.304 and 40 C.F.R. § 63.7550(a)]

**Table 9 to 40 C.F.R. Part 63, Subpart DDDDD**

| You must submit a | The report must contain . . . | You must submit the report . . . |
|---|---|---|
| Compliance report | a. Information required in § 63.7550(c)(1) through (5); and | Semiannually, annually, biennially, or every 5 years according to the requirements in § 63.7550(b). |
| | b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards for periods of startup and shutdown in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and | |
| | c. If you have a deviation from any emission limitation (emission limit | |

| You must submit a | The report must contain . . . | You must submit the report . . . |
|---|---|---|
| | and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard for periods of startup and shutdown, during the reporting period, the report must contain the information in § 63.7550(d); and | |
| | d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), or otherwise not operating, the report must contain the information in § 63.7550(e) | |

58. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 C.F.R. § 63.10(a), you must submit each report, according to 40 C.F.R. § 63.7550 (h), by the date in Table 9 of 40 C.F.R. Part 63, Subpart DDDDD and according to the requirements listed below. [Reg.19.304 and 40 C.F.R. § 63.7550(b)]

    a. The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 C.F.R. § 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in § 63.7495. [40 C.F.R. § 63.7550(b)(1)]

    b. The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. [40 C.F.R. § 63.7550(b)(2)]

    c. Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. [40 C.F.R. § 63.7550(b)(3)]

    d. Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 C.F.R. § 63.7550(b)(4)]

    e. For each affected source that is subject to permitting regulations pursuant to 40 C.F.R. Part 70 or Part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of 40 C.F.R. § 63.7550. [40 C.F.R. § 63.7550(b)(5)]

59. For each deviation from an emission limit, operating limit, and monitoring requirement in 40 C.F.R. Part 63, Subpart DDDDD occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the following information as required in 40

C.F.R. § 63.7550(e)(1) through (9). This includes any deviations from your site-specific monitoring plan as required in § 63.7505(d). [Reg.19.304 and 40 C.F.R. § 63.7550(e)]

a. The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from). [40 C.F.R. § 63.75450(e)(1)]

b. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks. [40 C.F.R. § 63.7550(e)(2)]

c. The date, time, and duration that each CMS was out of control, including the information in § 63.8(c)(8). [40 C.F.R. § 63.7550(e)(3)]

d. The date and time that each deviation started and stopped. [40 C.F.R. § 63.7550(e)(4)]

e. A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period. [40 C.F.R. § 63.7550(e)(5)]

f. A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes. [40 C.F.R. § 63.7550(e)(6)]

g. A summary of the total duration of CMS's 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. [40 C.F.R. § 63.7550(e)(7)]

h. A brief description of the source for which there was a deviation. [40 C.F.R. § 63.7550(e)(8)]

i. A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation. [40 C.F.R. § 63.7550(e)(9)]

60. The permittee must submit the reports according to the procedures specified below. [Reg.19.304 and 40 C.F.R. § 63.7550(h)]

a. Within 60 days after the date of completing each performance test (as defined in § 63.2) required by 40 C.F.R. Part 63, Subpart DDDDD, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph (a)(i) or (a)(ii) of this condition. [40 C.F.R. § 63.7550(h)(1)]

i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (http://www.epa.gov/ttn/chief/ert/index.html), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible

markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted 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/OAPQS/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 as described earlier in this paragraph. [40 C.F.R. § 63.7550(h)(1)(i)]

ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in 40 C.F.R. § 63.13. [40 C.F.R. § 63.7550(h)(1)(ii)]

b. You must submit all reports required by Table 9 of 40 C.F.R. Part 63, Subpart DDDDD electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for Subpart DDDDD. Instead of using the electronic report in CEDRI for Subpart DDDDD, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to Subpart DDDDD is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 C.F.R. § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 C.F.R. § 63.7550(h)(3)]

61. The permittee must keep records according to 40 C.F.R. § 63.7555(a)(1) and (2). [Reg.19.304 and 40 C.F.R. § 63.7555(a)]

a. A copy of each notification and report that you submitted to comply with 40 C.F.R. Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in 40 C.F.R. § 63.10(b)(2)(xiv). [40 C.F.R. § 63.7555(a)(1)]

b. Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 C.F.R. § 63.10(b)(2)(viii). [40 C.F.R. § 63.7555(a)(2)]

62. For each CEMS and continuous monitoring system the permittee must keep records according to 40 C.F.R. § 63.7555 (b)(1) through (5). [Reg.19.304 and 40 C.F.R. § 63.7555(b)]

    a. Records described in 40 C.F.R. § 63.10(b)(2)(vii) through (xi). [40 C.F.R. § 63.7555(b)(1)]

    b. Monitoring data for continuous opacity monitoring system during a performance evaluation as required in 40 C.F.R. § 63.6(h)(7)(i) and (ii). [40 C.F.R. § 63.7555(b)(2)]

    c. Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 C.F.R. § 63.8(d)(3). [40 C.F.R. § 63.7555(b)(3)]

    d. Request for alternatives to relative accuracy test for CEMS as required in 40 C.F.R. § 63.8(f)(6)(i). [40 C.F.R. § 63.7555(b)(4)]

    e. Records of the date and time that each deviation started and stopped. [40 C.F.R. § 63.7555(b)(5)]

63. The permittee must keep the records required in Table 8 of 40 C.F.R. Part 63, Subpart DDDDD, including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies. [Reg.19.304 and 40 C.F.R. § 63.7555(c)]

64. The permittee must also keep the following applicable records. [Reg.19.304 and 40 C.F.R. § 63.7555(d)]

    a. You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used. [40 C.F.R. § 63.7555(d)(1)]

    b. If, consistent with 40 C.F.R. § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 of 40 C.F.R. Part 63, Subpart DDDDD, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year. [40 C.F.R. § 63.7555(d)(5)]

    c. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. [40 C.F.R. § 63.7555(d)(6)]

    d. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 C.F.R. § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation. [40 C.F.R. § 63.7555(d)(7)]

e. You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown. [40 C.F.R. § 63.7555(d)(9)]

f. You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown. [40 C.F.R. § 63.7555(d)(10)]

65. The permittee must keep records in a form suitable and readily available for expeditious review, according to 40 C.F.R. § 63.10(b)(1). The permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. § 63.10(b)(1). You can keep the records off site for the remaining 3 years. [Reg.19.304 and 40 C.F.R. § 63.7560(a), (b), and (c)]

66. The permittee must comply with the General Provisions of 40 C.F.R. § 63.1 through 63.15 as outlined in Table 10 of 40 C.F.R. Part 63, Subpart DDDDD, as they apply to the permittee. [Reg.19.304 and 40 C.F.R. § 63.7565]

SN-03 #1 Veneer Dryer
SN-04 #2 Veneer Dryer
SN-05 #3 Veneer Dryer

Wet plywood veneer is conveyed to one of the three (3) steam heated veneer dryers to reduce the moisture content. The drying process releases volatile organic compounds (VOC). 95% of the VOC emissions from the veneer dryer are released through the hot zones and then conveyed to the incinerator (SN-22). The incinerator is the BACT which was installed to control VOC emissions. The remaining 5% of VOC emissions from the veneer dryer cool zones are released to atmosphere through SN-03, SN-04 and SN-05. Emissions are based on a maximum dryer capacity of 57 MSF/hr. The "hot zone" emissions are subject to the control requirements prescribed in 40 C.F.R. 63, Subpart DDDD NESHAP for Plywood and Composite Wood Panels (PCWP).

Specific Conditions

67. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.19.501 and Reg.19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| Source | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 03, 04 and 05 | SN-03 #1 Veneer Dryer<br>SN-04 #2 Veneer Dryer<br>SN-05 #3 Veneer Dryer | $PM_{10}$<br>VOC<br>CO | 7.0<br>3.3<br>3.0 | 24.8<br>12.2<br>11.0 |

68. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| Source | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 03, 04 and 05 | SN-03 #1 Veneer Dryer<br>SN-04 #2 Veneer Dryer<br>SN-05 #3 Veneer Dryer | PM<br>Acetone<br>Acetaldehyde<br>Formaldehyde<br>Methanol<br>MIBK<br>Phenol<br>Xylene | 7.0<br>0.6<br>0.92<br>0.27<br>2.74<br>0.37<br>0.97<br>0.23 | 24.8<br>2.2<br>3.40<br>0.98<br>10.20<br>1.38<br>3.61<br>0.84 |

69. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 03 | 20% | 19.503 & 40 C.F.R. Part 52, Subpart E |
| 04 | 20% | 19.503 & 40 C.F.R. Part 52, Subpart E |
| 05 | 20% | 19.503 & 40 C.F.R. Part 52, Subpart E |

70. The permittee will conduct weekly observations of the opacity from SN-03, SN-04 and SN-05 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.19.503 et seq. and 40 C.F.R. § 52, Subpart E]

NESHAP Subpart DDDD Specific Conditions

71. The permittee shall minimize fugitive emissions from the dryer doors (through proper maintenance procedures) and the green end of the dryers (through proper balancing of the heated zone exhausts). [Reg.19.304 and 40 C.F.R. § 63.2241(a), Table 3]

72. The permittee shall develop and implement a plan for minimizing fugitive emissions from the veneer dryer heated zones and green end and submit the plan with the Notification of Compliance Status. The plan is subject to review and approval of the Department. These records shall be kept onsite and made available to Department personnel upon request. [Reg.19.304 and 40 C.F.R. § 63.2265, Table 6]

73. The permittee shall document that the plan for minimizing fugitive emissions from dryer doors and green end is being followed and fully implemented. These records shall be kept onsite, updated monthly, and made available to Department personnel upon request. [Reg.19.304 and 40 C.F.R. § 63.2241, § 63.2271, Table 8]

SN-06 #1 Lumber Kiln
SN-06a #1 Lumber Kiln Burners
SN-08 #3 Lumber Kiln
SN-09 #4 Lumber Kiln

Lumber is stacked onto kiln buggies and batch-fed into the steam-heated double track Lumber Kiln No. 1, SN-06, and is continuously fed into the steam-heated Kiln No. 3, SN-08, and natural gas direct fired Kiln No. 4, SN-09. The existing kiln tracks from decommissioned Kiln No. 2 are used to transfer lumber to and from the continuous kiln. With the continuous kiln system, a pusher system on each end conveys a continuous feed of lumber on one track into the kiln and in the opposite direction out of the kiln on a second track. The heat from the dried lumber exiting the kiln preheats the green lumber entering the kiln on the second track. Steam is provided to kilns number #1 and #3 by the Wood-Fuel Boilers and Natural Gas Boiler. After drying, the lumber is removed from the kilns and placed in the cooling sheds. Green lumber from other facilities is received at the Gurdon facility for drying.

Specific Conditions

74. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 77and 79. [Reg.19.501 and Reg.19.901 *et seq.* and 40 C.F.R. Part 52, Subpart E]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-06 and SN-08 | SN-06 #1 Lumber Kiln<br>SN-08 #3 Lumber Kiln | $PM_{10}$<br>VOC | 0.5<br>113.5 | 1.9<br>494.2 |
| SN-09 | SN-09 #4 Lumber Kiln | VOC | 92.0 | 373.7 |

75. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 77 and 79. [Reg.19.501 and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-09 | SN-09 #4 Lumber Kiln | $PM_{10}$<br>$SO_2$<br>CO<br>$NO_X$<br>Lead | 0.7<br>0.1<br>5.3<br>1.3<br>0.001 | 2.6<br>0.1<br>23.0<br>5.6<br>0.001 |
| SN-06a | #1 Lumber Kiln Burners | $PM_{10}$<br>$SO_2$<br>VOC<br>CO<br>$NO_x$ | 0.3<br>0.1<br>0.2<br>2.6<br>2.0 | 1.1<br>0.1<br>0.8<br>11.4<br>8.4 |

76. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 77 and 79. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 06 & 08 | SN-06 #1 Lumber Kiln<br>SN-08 #3 Lumber Kiln | PM | 0.5 | 1.9 |
| | | Acetone | 0.88 | 3.82 |
| | | Acetaldehyde | 0.93 | 4.06 |
| | | Acrolein | 0.14 | 0.62 |
| | | Formaldehyde | 0.75 | 3.28 |
| | | Methanol | 5.24 | 22.83 |
| | | MIBK | 0.02 | 0.10 |
| | | Phenol | 0.53 | 2.33 |
| | | Xylene | 0.01 | 0.02 |
| | | Benzene | 0.01 | 0.01 |
| | | Poly Organic Matter | 0.01 | 0.01 |
| | | Propionaldehyde | 0.06 | 0.26 |
| | | Arsenic | 0.01 | 0.01 |
| | | Beryllium | 0.01 | 0.01 |
| | | Cadmium | 0.01 | 0.01 |
| | | Manganese | 0.01 | 0.01 |
| | | Mercury | 0.01 | 0.01 |
| 06a | #1 Lumber Kiln Burners | PM | 0.3 | 1.3 |
| | | Total HAPs^ | N/A | 0.31 |
| SN-09 | SN-09 #4 Lumber Kiln | PM | 0.3 | 1.3 |
| | | Acetone | 0.71 | 2.9 |
| | | Acetaldehyde | 0.75 | 3.1 |
| | | Acrolein | 0.2 | 0.47 |
| | | Benzene | 0.00008 | 0.0004 |
| | | Formaldehyde | 0.61 | 2.5 |
| | | Hexane | 0.1 | 0.3 |
| | | Methanol | 5.09 | 20.7 |
| | | MIBK | 0.1 | 0.1 |
| | | Phenol | 0.52 | 2.2 |
| | | Polycyclic Organic Matter | 0.0003 | 0.0002 |
| | | Propionaldehyde | 0.1 | 0.1 |
| | | Xylene | 0.1 | 0.1 |
| | | Arsenic | 0.000007 | 0.00003 |
| | | Beryllium | 0.000001 | 0.000002 |
| | | Cadmium | 0.00004 | 0.0002 |
| | | Manganese | 0.00002 | 0.00006 |
| | | Mercury | 0.000009 | 0.00004 |

^Burner combustion.

77. The permittee shall not exceed a combined throughput limit of 172,000,000 board feet of lumber in the drying kilns, SN-06 or SN-08, and 130,000,000 board feet of lumber in drying kiln, SN-09 during any consecutive twelve month period. [Reg.19.705 and Reg.19.901 *et seq.*, Reg.18.1004, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

78. The permittee shall not exceed a limit of 3.8 lb VOC per 1,000 board feet in the lumber kiln SN-09. [Reg.19.705 and Reg.19.901 *et seq*., Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

79. The permittee shall maintain monthly and annual production records for each drying kiln to demonstrate compliance with the limit listed in Specific Conditions 77 and 78. A monthly report shall be prepared containing the individual records for each of the last twelve months and the total of the twelve months. These records shall be kept on site and shall be made available to Department personnel upon request. A twelve consecutive month total and each month's data shall be submitted to the Department in accordance with General Provision 7. [Reg.19.705 and Reg.19.901 *et seq*., Reg.18.1004, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

## SN-10 Chip Fines Cyclone

The Chip Fines cyclone controls the particulate matter emissions from the chip screens. Upon arrival at the mill, logs are graded and low quality logs deemed unfit for plywood or lumber are sent to a chipper which fragments the logs into small pieces called chips. Scrap from the plyblock core milling operation and scrap veneer are also chipped in their respective chippers. Scraps from the sawmill operations are also chipped in their respective chippers.
The discharges from all chippers are conveyed to the chip screen. The chip screen is a machine that separates the chips into three (3) categories: oversize chips, properly sized chips and fines. The oversize chips are conveyed to a rechipper which reduces the size of the chips. The discharge from the rechipper is conveyed back to the chip screen. The properly sized chips are conveyed to storage for sale to paper mills. The fines are collected by a cyclone and finally delivered to the fuel storage building at the powerhouse.

### Specific Conditions

80. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.19.501 and Reg19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| Sn | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-10 | Chip Fines Cyclone | $PM_{10}$ | 0.1 | 0.1 |

81. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| Sn | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-10 | Chip Fines Cyclone | PM | 0.5 | 2.1 |

82. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 10 | 20% | 19.503 and 40 C.F.R. Part 52 |

83. The permittee will conduct weekly observations of the opacity from SN-10 and keep a record of these observations. If visible emissions which appear to be in excess of the

permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-11 Planer Shavings Cyclone
SN-50 Planer Shavings Baghouse

Rough cut, dried lumber from the three lumber kilns, SN-06, SN-08, and SN-09 is moved to the Planer Mill for planing to finished dimensions. The shavings from the planer are collected by the Planer Shavings Cyclone/Baghouse. Dry planer shavings empty from the cyclone bottom discharge to the shavings truck bin. Clean air form the cyclone is pulled through the baghouse associated with SN-11. The bottom discharge of the baghouse is routed to a smaller baghouse that discharges to the truck bin, SN-50.

Specific Conditions

84. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.19.501 and Reg.19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-11 | Planer Shavings Cyclone | $PM_{10}$ | 0.8 | 3.4 |
| SN-50 | Planer Shavings Baghouse | $PM_{10}$ | 0.1 | 0.1 |

85. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-11 | Planer Shavings Cyclone | PM | 1.1 | 4.5 |
| SN-50 | Planer Shavings Baghouse | PM | 0.1 | 0.1 |

86. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 11 and 50 | 5% | 18.501 &<br>A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |

87. The permittee will conduct weekly observations of the opacity from SN-11 and SN-50 and keep a record of these observations. If visible emissions which appear to be in

excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-12 Dry Wood Fuel Transfer Cyclone
SN-13 Dry Wood Fuel Transfer Cyclone
SN-14 Dry Wood Fuel Transfer Cyclone

Damaged veneer from the veneer dryers, the veneer lay-up machines, the pre-presses and the hot presses is transferred to the plywood waste hog. The plywood waste hog also receives trim scrap from the plywood finishing area. The plywood waste hog grinds the scrap to the desired size and delivers it to the Dry Wood Fuel Transfer cyclone. The hogged fuel is conveyed from this cyclone to one of the two possible locations. The fuel may be conveyed to a storage bin for truck loadout. The emissions from the truck loadout bin are controlled by the Dry Wood Fuel Truck cyclone. The alternate destination for hogged fuel is the fuel storage building at the powerhouse. The powerhouse emissions are controlled by the Powerhouse Dry Wood Fuel cyclone.

Specific Conditions

88. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.19.501 and Reg.19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | Lb/hr | Tpy |
|---|---|---|---|---|
| 12 | Dry Wood Fuel Transfer Cyclone | $PM_{10}$ | 1.1 | 4.5 |
| 13 | Dry Wood Fuel Transfer Cyclone | $PM_{10}$ | 0.3 | 1.3 |
| 14 | Dry Wood Fuel Transfer Cyclone | $PM_{10}$ | 0.1 | 0.4 |

89. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.18.801 and [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | Lb/hr | Tpy |
|---|---|---|---|---|
| 12 | Dry Wood Fuel Transfer Cyclone | PM | 0.3 | 1.2 |
| 13 | Dry Wood Fuel Transfer Cyclone | PM | 0.1 | 0.4 |
| 14 | Dry Wood Fuel Transfer Cyclone | PM | 0.1 | 0.1 |

90. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Visible Emissions

| SN | Limit | Regulatory Citation |
|---|---|---|
| 12 | 5% | 18.501 & A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |
| 13 | 5% | 18.501 & A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |
| 14 | 5% | 18.501 & A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |

91. The permittee will conduct weekly observations of the opacity from SN-12, SN-13, and SN-14 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-15 Sander Dust Cyclone
SN-16 Sander Dust Cyclone

After the new plywood panels leave the hot presses, they are cooled and delivered to the Finishing Area. In this area the panels are trimmed and fed through a sander to smooth the panel surfaces. The sander dust is collected by the Sander Dust Cyclone/Baghouse. The collected sander dust is delivered directly to a storage bin at the powerhouse. These emissions are controlled by another baghouse, the Sander Dust Cyclone Baghouse.

Specific Conditions

92. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.19.501 and Reg.19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 15 | Sander Dust Cyclone | $PM_{10}$ | 0.3 | 1.0 |
| 16 | Sander Dust Cyclone | $PM_{10}$ | 0.1 | 0.1 |

93. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emissions rates shall be demonstrated by maximum capacity of the equipment and proper operation of the cyclone. [Reg.18.801 and [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 15 | Sander Dust Cyclone | PM | 0.9 | 3.7 |
| 16 | Sander Dust Cyclone | PM | 0.1 | 0.2 |

94. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 15 | 5% | 18.501 &A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |
| 16 | 5% | 18.501 &A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |

95. The permittee will conduct weekly observations of the opacity from SN-15 and SN-16 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-17 Press Fan #1
SN-18 Press Fan #2
SN-19 Press Fan #3
SN-20 Press Fan #4
SN-21 Press Fan #5
SN-35 Press Fan #6
SN-36 Press Fan #7

After the plywood veneers are coated with glue and assembled into panels, the panels pass through a pre-press before entering one of four hot presses. The panels are held under pressure as steam is used to heat the presses and cure the glue. Emissions from the press area are exhausted through general building ventilation, primarily via Press Fan #1 through #7 (SN-17 through SN-21, SN-35 and SN-36).

Specific Conditions

96. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.19.501 and reg.19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-17, SN-18, SN-19, SN-20, SN-21, SN-35, and SN-36 | Press Fan #1 -#6 | $PM_{10}$<br>VOC | 6.6<br>35.0 | 23.3<br>97.3 |

97. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

| Sources | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-17, SN-18, SN-19, SN-20, SN-21, SN-35, and SN-36 | Press Fan #1 -#6 | PM | 6.6 | 23.3 |
| | | Acetone | 1.19 | 3.32 |
| | | Acetaldehyde | 0.90 | 2.51 |
| | | Formaldehyde | 0.81 | 2.25 |
| | | Methanol | 27.94 | 77.81 |
| | | MIBK | 0.08 | 0.22 |
| | | Phenol | 0.26 | 0.71 |

98. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 17, 18, 19 20, 21, 35, 36 | 20% | 19.503 & 40 C.F.R. Part 52 Subpart E |

99. The permittee will conduct weekly observations of the opacity from SN-17 through SN-21, SN-35, and SN-36 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

## SN-22 Veneer Dryer Regenerative Catalytic Oxidizer

Flue gas from the three (3) Veneer Dryers "hot zones" containing VOC/HAP enters the RCO unit though an inlet manifold. A control valve directs the gas into an energy recovery chamber which preheats the process stream. The process gas and contaminants are progressively heated in the stoneware bed as they move toward the catalyst bed which consists of a layer of ceramic saddles coated with a catalyst – commonly a noble metal such as platinum or rhodium, which promotes oxidation of the organics. The VOC/HAPs are then oxidized across the catalyst, releasing energy in the second stoneware bed thereby reducing any auxiliary fuel requirement. The stoneware bed is heated and the gas is cooled so that the outlet gas temperature is only slightly higher than the inlet temperature. The flow control valve switches and alternates the stoneware bed so each is in inlet and outlet mode. If the process gas contains enough VOCs, the energy released from their combustion allows self-sustained operation.

### Specific Conditions

100. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 104, 105 and 109. [Reg.19.501 et *seq.* and 40 C.F.R. Part 52, Subpart E]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 22 | Veneer Dryer Regenerative Catalytic Oxidizer | $PM_{10}$ | 3.8 | 13.8 |
| | | $SO_2$ | 0.2 | 0.3 |
| | | CO | 10.3 | 41.2 |
| | | Lead | 0.001 | 0.001 |

101. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Condition 105 and 109. [Reg.19.501 and Reg.19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 22 | Veneer Dryer Regenerative Catalytic Oxidizer | VOC (as carbon) | 9.6 | 35.7 |
| | | $NO_X$ | 5.6 | 24.4 |

102. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Condition 109. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 22 | Veneer Dryer Regenerative Catalytic Oxidizer | PM | 3.5 | 12.3 |
| | | Acetone | 0.13 | 0.46 |
| | | Acetaldehyde | 0.16 | 0.58 |
| | | Benzene | 0.03 | 0.11 |
| | | Formaldehyde | 0.38 | 1.33 |
| | | Hexane | 0.11 | 0.44 |
| | | Methanol | 0.15 | 0.53 |
| | | Phenol | 0.36 | 1.31 |
| | | Polycyclic Organic Matter | 0.001 | 0.001 |
| | | Arsenic | 0.001 | 0.001 |
| | | Beryllium | 0.001 | 0.001 |
| | | Cadmium | 0.001 | 0.001 |
| | | Manganese | 0.001 | 0.001 |
| | | Mercury | 0.01 | 0.01 |

103. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 22 | 5% | 18.501 & A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |

104. The permittee will conduct weekly observations of the opacity from SN-22 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

105. The permittee shall conduct initial stack emission testing for the veneer dryer RCO (SN-22) for the following pollutants in accordance with Plantwide Condition #3 and the indicated test methods as listed in 40 C.F.R. Part 60 Appendix A. All tests shall be conducted with the veneer dryers operating at 90% or greater of the rated capacity. If veneer dryers cannot achieve 90% or greater of the rated capacity, then they shall be limited to operating at no more than 10% above the tested rated capacity until such time as a higher production rate is demonstrated through a subsequent stack test. The initial performance test was conducted on the veneer dryer RCO (SN-22) on June 20, 2012. [Reg.19.702 and 40 C.F.R. § 52 Subpart E]

| Pollutant | EPA Reference Method |
|---|---|
| NOx | 7E |
| CO | 10 |
| VOC | 25A |

106. The permittee shall establish the minimum firebox temperature for the RCO during the initial performance test required by Specific Condition #105. Following the initial performance test, the permittee may elect to conduct additional performance testing in order to establish an alternate minimum temperature value for the RCO in accordance with Specific Condition #113. [Reg.19.702 and 40 C.F.R. § 52 Subpart E]

107. The permittee shall submit a report to the Department if the *combined* annual emissions, in tons per year, from the Veneer Dryer RCO project and the Natural Gas Rental Boiler (Removed with permit #0463-AOP-10) project identified in the permit application dated June 26, 2012, exceed the baseline actual emissions (as documented and maintained in the permit application dated June 26, 2012 and pursuant to paragraph (r)(6)(i)( c ) of 40 C.F.R. 52.21), by a significant amount (as defined in paragraph (b)(23) of 40 C.F.R. 52.21) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained in the June 26, 2012, permit application and pursuant to paragraph (r)(6)(i)(c) of 40 C.F.R. 52.21. Such report shall be submitted to the Administrator within 60 days after the end of such year. The report shall contain the following:

a. The name, address and telephone number of the major stationary source;

b. The annual emissions as calculated pursuant to paragraph (r)(6)(iii) of this section; and

c. Any other information that the owner or operator wishes to include in the report including an explanation as to why the emissions differ from the preconstruction projection.

[40 C.F.R. § 52.21(r)(6)(v)(a through c)]

NESHAP Subpart DDDD Specific Conditions

108. The permittee shall comply with one of the following emission limitation for the softwood veneer dryer hot zones (SN-22) except during periods of start-up, shutdown, and malfunction and as approved in the facility's routine control device maintenance exemption (RCDME):

a. Reduce emissions of total HAP, measured as THC (as carbon), by 90%, or

b. Limit emissions of total HAP, measured as THC (as carbon), to 20 ppmvd.

[Reg.19.304 and 40 C.F.R. § 63.2250(a) and Table 1B to Subpart DDDD of Part 63]

109. The permittee shall maintain the 3-hour block average catalytic oxidizer temperature above the minimum temperature established during the performance test and check the activity level of a representative sample of the catalyst at least every 12 months or maintain the 3-hour block average THC concentration in the exhaust for SN-22 below the maximum concentration established during the performance test. [Reg.19.304 and 40 C.F.R. § 63, § 63.2240(b) and Table 2; 40 C.F.R. 64]

110. The permittee shall comply with the following general requirements:

a. Always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

b. Develop a written SSMP according to the provisions in § 63.6(e)(3).

[Reg.19.304 and 40 C.F.R. § 63.2250(b) through (d)]

111. To demonstrate initial compliance with the compliance options and operating requirements, the facility must conduct performance tests and establish each site-specific operating requirement in Table 2 to this subpart according to the requirements in § 63.2262 and Table 4 to this subpart. Some, but not all, of the requirements are listed below. The facility must do the following:

a. Select sampling port's location and the number of traverse ports using Method 1 or 1A of 40 C.F.R. part 60, appendix A (as appropriate).

b. Determine velocity and volumetric flow rate using Method 2 in addition to Method 2A, 2C, 2D, 2F, or 2G in appendix A to 40 C.F.R. part 60 (as appropriate).

c. Conduct gas molecular weight analysis using Method 3, 3A, or 3B in appendix A to 40 C.F.R. part 60 (as appropriate).

d. Measure moisture content of the stack gas using Method 4 in appendix A to 40 C.F.R. part 60; OR Method 320 in appendix A to 40 C.F.R. part 63; OR ASTM D6348–03 (IBR, see § 63.14(b)).

e. Measure emissions of total HAP as THC using Method 25A in appendix A to 40 C.F.R. part 60. The facility may measure emissions of methane using EPA Method 18 in appendix A to 40 C.F.R. part 60 and subtract the methane emissions from the emissions of total HAP as THC.

f. Establish the site-specific operating requirements (including the parameter limits or THC concentration limits) in table 2 to this subpart using data from the parameter monitoring system or THC CEMS and the applicable performance test method(s).

[Reg.19.304 and 40 C.F.R. § 63.2260(a) and Table 4]

112. During the performance test, you must continuously monitor during the required 1-hour test runs either the temperature at the inlet to each catalyst bed or the temperature in the combustion chamber. For regenerative catalytic oxidizers, you must calculate the average of the temperature measurements from each catalyst bed inlet or within the combustion chamber prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum catalytic oxidizer temperature. The minimum catalytic oxidizer temperature must then be established as the average of the three minimum 15-minute temperatures monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions. [Reg.19.304 and 40 C.F.R. § 63.2262(l)(1)]

113. The facility may establish a different minimum catalytic oxidizer temperature by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraphs (l)(1) and (2) of this section that demonstrates compliance with the applicable compliance options of this subpart. [Reg.19.304 and 40 C.F.R. § 63.2262(l)(2)]

114. The facility may establish operating requirements using THC CEMS. If the facility choose to meet the operating requirements by monitoring THC concentration instead of monitoring control device or process operating parameters, the facility must establish your THC concentration operating requirement according to the following: [Reg.19.304 and 40 C.F.R. § 63.2262(o)(1) and (2)]

a. During the performance test, the facility must continuously monitor THC concentration using the facility's CEMS during each of the required 1-hour test runs. The maximum THC concentration must then be established as the average of the three maximum 15-minute THC concentrations monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of THC concentration values under different operating conditions.

b. The facility may establish a different maximum THC concentration by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in permit Specific Condition 114(a) that demonstrates compliance with the compliance options in Tables 1A and 1B to this subpart.

115. Within 180 calendar days after the compliance date, the permittee must demonstrate a reduction in emissions of total HAP as THC using Method 25A over a 3-hour performance test for SN-22 and record operating parameters listed below and submit the results with the Notification of Compliance Status before the close of business on the 60th calendar day after completion of the performance test. The permittee shall submit notification of Performance Test is required at least 60 calendar days prior to the initial or any subsequent performance test. [Reg.19.304 and 40 C.F.R. §§ 63.2260, 63.2261(a), 63.2262, 63.2280(d)(2), 63.2280(a)(c), 63.7(c), Table 2, Table 4, Table 5]

116. The permittee shall collect and record the temperature for SN-22 at least every 15 minutes, reduce the data to 3-hour block averages, and maintain the 3-hour block average temperatures above the minimum established during the performance test to demonstrate compliance or the permittee shall collect and record the THC concentration for SN-22 at least every 15 minutes, reduce the data to 3-hour block averages, and maintain the 3-hour block average THC concentration below the maximum established during the performance test to demonstrate compliance. These records shall be kept onsite, updated daily, and made available to Department personnel upon request. [Reg.19.304 and 40 C.F.R. §§ 63.2262, 63.2269, 63.2270, 63.2271, Table 2, Table 7].

117. The permittee shall develop and implement a Start-Up, Shutdown, and Malfunction (SSM) Plan that covers each applicable emission limitation or work practice standard. The permittee shall maintain records of SSM events onsite and these records shall be made available to Department personnel upon request. [Reg.19.304 and 40 C.F.R. § 63.6(e)].

118. The permittee shall submit Semi-Annual Compliance Reports as outlined in § 63.1417(j) no later than 31 days after each 180 day period. Each report shall cover the previous 180 day period. The permittee shall report start-up, shutdown, and malfunction events handled consistent with the SSM Plan on the Semi-Annual Compliance Report. If applicable, reports of routine control device maintenance exemption activity shall be included with the Semi-Annual Compliance Report. [Reg.19.304 and 40 C.F.R. § 63.2281]

119. The permittee shall submit other reports as required by 40 C.F.R. Part 63. These reports shall include: [Reg.19.304 and 40 C.F.R. § 63 Subpart DDDD, 40 C.F.R. § 63 Subpart A]

a. Routine control device maintenance exemption request. The request must be submitted no later than 30 days before the compliance date - § 63.2290(e)

b. Reports of start-up, shutdown, malfunction events inconsistent with SSM Plan. These events shall be reported on an immediate SSM report - § 63.10(d)(5)(ii).

120. The requirement to submit periodic start-up, shutdown, and malfunction reports, as required by Specific Conditions 118 and 119, shall supersede and shall be deemed compliance with the upset reporting requirements specified in General Provision 8 and regulation 19.601. [Reg.19.304, 40 C.F.R. § 63.2281, and 40 C.F.R. § 63 Subpart A]

121. The permittee shall keep records required by § 63.2282 in compliance with § 63.2283. [Reg.19.304, 40 C.F.R. §§ 63.2282, and 63.2283]

SN-23 Log Sawing
SN-24 Log Debarking

Log processing, for both lumber and plywood production, begins with the logs being cut to the proper lengths by the cutoff saws. Low quality logs are diverted to the fiber debarker where the bark is removed prior to the logs being reduced to chips in the chipper. After the good quality logs are cut to the desired length, they are delivered to the ring debarkers for bark removal. The debarked plyblocks are delivered to the veneer area. The debarked logs are then delivered to the sawmill where the logs are ripped into green dimensional lumber. Sawing operations are performed under a partial enclosure; therefore, a control efficiency of 70% was applied to the emission factor.

Specific Conditions

122. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 9 and 10. [Reg.19.501 *et seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | Lb/hr | tpy |
|---|---|---|---|---|
| 23 | Log Sawing | $PM_{10}$ | 0.4 | 1.6 |
| 24 | Log Debarking | $PM_{10}$ | 2.2 | 3.9 |

123. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 9 and 10. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | Lb/hr | tpy |
|---|---|---|---|---|
| 23 | Log Sawing | PM | 0.7 | 2.7 |
| 24 | Log Debarking | PM | 3.8 | 6.6 |

124. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 23 | 20% | 19.503 and 40 C.F.R. Part 52 |
| 24 | 20% | 19.503 and 40 C.F.R. Part 52 |

125. The permittee will conduct weekly observations of the opacity from SN-23 and SN-24 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If

visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-25 By-Products Transfer Points (Fugitives)
SN-26 Plant Haul Roads (Fugitive)
SN-29 Sawdust & Fines Cyclone

By-Products Transfer Points

By-product handling includes conveyor transfer points, cyclones, and truck and railcar loading. Chippers, hogs and screens are included as transfer points. By-products produced at the plant include bark, sawdust, planer shavings, ash, sander dust, trim and chips. Bark from the debarkers and sawdust from the log cutoff saws and the sawmill are transferred to the bark and sawdust conveyor.

Screened and shredded material is sent to the powerhouse and fed onto the fuel feed chains or stored in the fuel storage building. If the fuel house is full, fuel is stored outside on a concrete pad. Excess bark and sawdust are loaded into trucks by a front-end loader.

Plant Haul Roads

GP maintains miscellaneous operations that support lumber and plywood production. Operations in this area include road traffic. Logs, lumber chips, plywood, landscape timbers, other value added products, bark, sawdust, ash, plytrim and shavings are all shipped into or out of the plant by truck. Currently, most of the plant roads have been paved and are now vacuumed for dust control. The two remaining sections of unpaved road are watered for dust control.

Sawdust & Fines Cyclone

A market other than fuel has been developed for the sawdust from the sawmill and the chip fines from the chip screens. GP has installed additional handling equipment to convey these by-products to a truck bin similar to the shavings truck bin. The sawdust is conveyed to a blower feeder and then into a blower where it is sent to a cyclone above the truck bin. A diverter is located in the chip fines blower duct to divert the fines into the sawdust duct. This enables the chip fines to be collected in the cyclone along with the sawdust.

Specific Conditions

126. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 9 and 10. [Reg.19.501 *et seq*. and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | Lb/hr | Tpy |
|---|---|---|---|---|
| 25 | By-Products Transfer Points (Fugitives) | $PM_{10}$ | 0.3 | 1.2 |
| 26 | Plant Haul Roads (Fugitive) | $PM_{10}$ | 1.7 | 6.8 |
| 29 | Sawdust & Fines Cyclone | $PM_{10}$ | 2.0 | 8.8 |

127. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 9 and 10. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | Lb/hr | Tpy |
|---|---|---|---|---|
| 25 | By-Products Transfer Points (Fugitives) | PM | 2.8 | 4.3 |
| 26 | Plant Haul Roads (Fugitive) | PM | 8.5 | 33.5 |
| 29 | Sawdust & Fines Cyclone | PM | 2.0 | 8.8 |

128. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 25 | 20% | 19.503 and 40 C.F.R. Part 52 |
| 26 | 20% | 19.503 and 40 C.F.R. Part 52 |
| 29 | 20% | 19.503 and 40 C.F.R. Part 52 |

129. The permittee will conduct weekly observations of the opacity from sources SN-25 and SN-29 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

## SN-30 Log Steaming Vats

In order to prepare the logs for the veneer lathe, the logs are soaked in a heated bath. The facility also has a heat exchanger on one of the vat water storage tanks. Using stream from the boiler, the heat exchanger is used to speed evaporation from a single tank. The heat exchanger also allows for the return of pre-heated water to the log vat to replace evaporated and log absorption losses.

### Specific Conditions

130. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

| SN | Source | Pollutant | Lb/hr | Tpy |
|---|---|---|---|---|
| 30 | Log Steaming Vats | VOC | 7.9 | 31.2 |

131. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 30 | Log Steaming Vats | Acetone | 0.4 | 1.21 |
| | | Methanol | 0.75 | 2.96 |
| | | Acetaldehyde | 0.48 | 1.88 |

## SN-31 Ply Trim Hog

During cutting of the excess trim from plywood sheets, it has been determined that fugitive volatile emissions occur.

### Specific Conditions

132. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| SN-31 | Ply Trim Hog | VOC | 8.1 | 22.5 |

133. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 7 and 8. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| SN-31 | Ply Trim Hog | Acetone | 0.2 | 0.5 |
| | | Methanol | 1.13 | 3.14 |
| | | Acetaldehyde | 0.09 | 0.25 |
| | | Formaldehyde | 0.04 | 0.09 |

## SN-32 Sander

During sanding of the plywood sheets, it has been determined that fugitive volatile emissions occur.

### Specific Conditions

134. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 136 and 137. [Reg.19.501 and Reg.19.901 *et seq.* and 40 C.F.R. § 52, Subpart E]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| SN-32 | Sander | VOC | 10.7 | 33.4 |

135. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Specific Conditions 136 and 137. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| SN-32 | Sander | Acetone | 0.28 | 0.86 |
| | | Formaldehyde | 0.08 | 0.23 |
| | | Methanol | 0.45 | 1.40 |
| | | Acetaldehyde | 0.11 | 0.32 |

136. The permittee shall not process more than 300,000 MSF, on a 3/8" basis, through the sander (SN-32) during any consecutive twelve month period. [Reg.19.705, Reg.18.1004, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-31140 C.F.R. § 70.6]

137. The permittee shall maintain monthly and annual production records which demonstrate compliance with the limit listed in Specific Condition #136. A monthly report shall be prepared containing the individual records for each of the last twelve months and the total of the twelve months. These records shall be kept on site and shall be made available to Department personnel upon request. A twelve consecutive month total and each month's data shall be submitted to the Department in accordance with General Provision #7. [Reg.19.705, Reg.18.1004, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

SN-33 Layup Lines Baghouse

The panel assembly line is a three-ply line that produces three-ply products only. This line runs parallel to the existing equipment and feeds into the existing three presses. GP installed a new baghouse to control emissions from the tongue and groove (T&G) and hog operations from the layup lines. The previous control devices SN-12, SN-13 and SN-15 controlled the T&G and hog operations. The previous setup did not allow for the T&G and siding operations to be operated simultaneously. With a dedicated control device for the layup lines, both operations are operated simultaneously. Installing the additional lay-up line increased the hourly operating rate and the hourly PM/$PM_{10}$ emissions. However, this reduced the operating hours required to produce the current permitted annual volume.

Specific Conditions

138. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emission rates shall be demonstrated by maximum capacity of the equipment and proper operation of the equipment. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| SN-33 | Layup Lines Baghouse | $PM_{10}$ | 0.5 | 2.0 |

139. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emission rates shall be demonstrated by maximum capacity of the equipment and proper operation of the equipment. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| SN-33 | Layup Lines Baghouse | PM | 0.2 | 0.5 |

140. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 33 | 5% | 18.501 & A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 |

141. The permittee will conduct weekly observations of the opacity from SN-33 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that

visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-37 Stencil, Edge Seal, Nail Line, and Logo/Trademark Application

Stencils, nail lines, and logos/trademarks may be applied to the board. The edge seal may be applied to the edge of the board. Volatile organic emissions will be released into the general plant environment and not directly vented to the atmosphere through a stack. These ink/paint applications are considered Group 1 miscellaneous coating operations under the Plywood and Composite Wood Panels (PCWP) MACT, 40 C.F.R. 63 Subpart DDDD and subject to applicable work practice requirements. Miscellaneous coating operations that are not Group 1 miscellaneous coating operations may take place at the facility, but are not subject to the following work practice requirements or Specific Conditions.

Specific Conditions

142. The permittee shall not exceed the emission rates set forth in the following table. Compliance with these limits shall be demonstrated by compliance with Specific Condition #143. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

Maximum Criteria Emission Rates

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| SN-37 | Stencil, Edge Seal, Nail Line, and Logo/Trademark Application | VOC | 3.4 | 4.9 |

143. The permittee will not emit more than 4.9 tons of VOC at SN-37 per consecutive twelve month period. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

144. The permittee will maintain records which demonstrate compliance of the VOC limit in Specific Condition #143. These records shall be updated monthly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]

145. SN-37 does not contain any countable HAPs (i.e.: less than 0.1% for OSHA defined carcinogens and less than 1% by mass for other organic HAP compounds). The facility must submit a modification prior to any changes that result in a HAP content greater than 0.1% for OSHA defined carcinogens and greater than 1% by mass for other organic HAP. [Reg.19.304 and 40 C.F.R. § 63.2241]

146. The permittee shall maintain records which demonstrate compliance with Specific Condition #145. These records shall be shall be kept on site, and shall be made available to Department personnel upon request. [Reg.19. 702 and 40 C.F.R. § 52.21, Subpart E]

147. The permittee must meet the notification requirements according to the schedule in 40 C.F.R. § 63.2280 and according to 40 C.F.R. Part 63, subpart A. [Reg.19.304 and 40 C.F.R. § 63.2280]

148. The permittee shall report each deviation to the work practice requirement to use only non-HAP coatings as specified in Specific Condition #145. These deviations shall be reported in accordance with § 63.2281. If there are no deviations from the non-HAP coating requirements, the permittee shall submit a statement that there were no deviations from the work practice requirements during the reporting period. [Reg.19.304 and 40 C.F.R. § 63.2271]

## SN-38 Panel Oil Application

The panel oil will be applied to the board. Volatile organic emissions will be released into the general plant environment and not directly vented to the atmosphere through a stack. The panel oil application is a miscellaneous coating operation, but is not a Group 1 miscellaneous coating operation under the Plywood and Composite Wood Panels (PCWP) MACT, 40 C.F.R. 63 Subpart DDDD.

### Specific Conditions

149. The permittee shall not exceed the emission rates set forth in the following table. Compliance with these limits shall be demonstrated by compliance with Specific Condition 150. [Reg.19.501 et *seq.* and 40 C.F.R. § 52, Subpart E]

Maximum Criteria Emission Rates

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| SN-38 | Panel Oil Application | VOC | 6.4 | 17.9 |

150. The permittee will not emit more than 17.9 tons of VOC at SN-38 per consecutive twelve month period. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

151. The permittee will maintain records which demonstrate compliance of the VOC limit in Specific Condition #150. These records shall be updated monthly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. [Reg.19. 702 and 40 C.F.R. § 52.21, Subpart E]

152. The VOC concentration of the panel oil used at SN-38 shall exceed 3.3 g/L (grams of VOC per liter of oil) as applied. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

153. The permittee will maintain records which demonstrate compliance of the VOC concentration limit in Specific Condition #152 above. These records shall be updated monthly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. [Reg.19.702 and 40 C.F.R. § 52.21, Subpart E]

SN-39 Panel Patch (Synthetic and Solid Wood)

The panel patch will be applied to the board. Volatile organic emissions will be released into the general plant environment and not directly vented to the atmosphere through a stack. The panel patch is a miscellaneous coating operation, but is not a Group 1 miscellaneous coating operation under the Plywood and Composite Wood Panels (PCWP) MACT, 40 C.F.R. 63 Subpart DDDD.

Specific Conditions

154. The permittee shall not exceed the emission rates set forth in the following table. Compliance with these limits shall be demonstrated by compliance with Specific Condition 155. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

Maximum Criteria Emission Rates

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 39 | Panel Patch | VOC | 0.1 | 0.2 |

155. The permittee will not emit more than 0.2 tons of VOC at SN-39 per consecutive twelve month period. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

156. The permittee will maintain records which demonstrate compliance of the VOC limit in Specific Condition #155. These records shall be updated monthly, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. [Reg.19.702 and 40 C.F.R. § 52.21, Subpart E]

SN-40 Glue Line

Pieces of veneer are coated with glue and stacked on top of each other prior to being pressed into plywood.

Specific Conditions

157. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition 159. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 40 | Glue Line | VOC | 0.3 | 0.8 |

158. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with the formaldehyde emissions rates by compliance with Specific Condition 161. [Reg.18.801, and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 40 | Glue Line | Benzene<br>Formaldehyde<br>Methanol<br>Xylene | 0.01<br>0.01<br>0.24<br>0.01 | 0.01<br>0.01<br>0.66<br>0.01 |

159. The permittee shall not receive glue with a VOC content greater than 8.8 % by weight. [Reg19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

160. The permittee will maintain records which demonstrate compliance with the VOC limit in Specific Conditions #159 and the VOC tpy limit in Specific Condition #157. These records shall be updated monthly, shall be kept onsite, and shall be made available to Department personnel upon request. [Reg.19.702, Reg.18.1004 and 40 C.F.R. § 52, Subpart E]

161. The permittee shall not receive glue with a formaldehyde content greater than 0.1 % by weight. [Reg.18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

162. The permittee will maintain records which demonstrate compliance with the formaldehyde limit in Specific Condition #161 and the HAPs tpy limits in Specific Condition #158. These records shall be updated monthly, shall be kept on site, and shall be made available to Department personnel upon request. [Reg.18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

## SN-42 Bark Shredder

Bark from the debarkers and sawdust from the saws are transferred to the bark and sawdust conveyor. This material is passed through a disc screen with oversized material being shredded (SN-42). Screened and shredded material is then sent to the powerhouse where it may be stored in a pile prior to firing in the boiler.

### Specific Conditions

163. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 9 and 10. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 42 | Bark Shredder | $PM_{10}$ | 0.2 | 0.6 |

164. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition by compliance with Plantwide Conditions 9 and 10. [Reg.18.801, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

| SN | Source | Pollutant | lb/hr | Tpy |
|---|---|---|---|---|
| 42 | Bark Shredder | PM | 0.3 | 1.1 |

165. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

| SN | Limit | Regulatory Citation |
|---|---|---|
| 42 | 20% | 19.503 and 40 C.F.R. Part 52 |

166. The permittee will conduct weekly observations of the opacity from SN-42 and keep a record of these observations. If visible emissions which appear to be in excess of the permitted opacity are detected during weekly observations, the permittee shall conduct an EPA Reference Method 9 measurement of the visible emissions. If visible emissions in excess of the permitted opacity are detected by EPA Reference Method 9, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of the cause of any visible emissions which appear to be in excess of the permitted opacity and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-48 and 49
Fire Pump Diesel Engine and Feed Water Pump Engine

Source Description

Emergency engines are used at the facility for fire prevention and control for pumping feed water to the wood-fired boiler wet scrubbers.

Specific Conditions

167. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

| SN | Description | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 48 | Fire Pump Engine | $PM_{10}$ | 0.6 | 0.2 |
| | | $SO_2$ | 0.6 | 0.2 |
| | | VOC | 0.7 | 0.2 |
| | | CO | 1.7 | 0.5 |
| | | $NO_X$ | 7.9 | 2.0 |
| 49 | Feed Water Pump Engine | $PM_{10}$ | 0.6 | 0.2 |
| | | $SO_2$ | 0.6 | 0.2 |
| | | VOC | 0.7 | 0.2 |
| | | CO | 1.7 | 0.5 |
| | | $NO_X$ | 7.8 | 2.0 |

168. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by with Plantwide Condition 5. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

| SN | Description | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| 48 | Fire Pump Diesel Engine | PM | 0.6 | 0.2 |
| | | Acetaldehyde | 0.01 | 0.01 |
| | | Acrolein | 0.01 | 0.01 |
| | | 1,3 – Butadiene | 0.01 | 0.01 |
| | | Benzene | 0.01 | 0.01 |
| | | Formaldehyde | 0.01 | 0.01 |
| 49 | Feed Water Pump | PM | 0.6 | 0.2 |

| SN | Description | Pollutant | lb/hr | tpy |
|---|---|---|---|---|
| | Engine | Acetaldehyde | 0.01 | 0.01 |
| | | Acrolein | 0.01 | 0.01 |
| | | 1,3 – Butadiene | 0.01 | 0.01 |
| | | Benzene | 0.01 | 0.01 |
| | | Formaldehyde | 0.01 | 0.01 |

169. The permittee shall not operate the emergency generators (SN-48 and SN-49) in excess of 100 non-emergency hours per calendar year. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

170. The permittee shall not operate the SN-48 or SN-49 in excess of 500 total hours each (emergency and non-emergency) per rolling 12 month period in order to demonstrate compliance with the annual emission rate limits. Emergency operation in excess of these hours may be allowable but shall be reported and will be evaluated in accordance with Regulation 19 §19.602 and other applicable regulations. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

171. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition 170. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. The twelve month rolling totals and each individual month's data shall be maintained on-site, made available to Department personnel upon request, and submitted in accordance with General Provision 7. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]

172. The permittee must submit all notifications required in 40 C.F.R. 63.7(b) and (c), (f)(4) and (f)(6), 63.9 (b) through (3) and (g) and (h) that apply by the dates specified. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

173. The permittee must for SN-48 and 49 change oil and filter every 500 hours of operation or annually, whichever comes first; inspect air filter every 1,000 hours of operation or annually, whichever comes first and replace as necessary; inspect all hoses and belts every 500 hours of operation or annually, whichever comes first and replace as necessary. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

174. The permittee must for SN-48 and SN-49 minimize the engines time spent at idle and minimize the startup time to a period appropriate and safe loading of the engine, not to exceed 30 minutes, after which the non-startup emission limitations apply. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

175. The permittee must install a non-resettable hour meter on SN-48 and SN-49 if one is not already installed. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

176. The permittee must be in compliance with the emission limitations, operating limitations, and other requirements of Subpart ZZZZ that apply at all times. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

177. The permittee shall at all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

178. The permittee must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

179. The permittee shall maintain records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment, records of all required maintenance performed on the air pollution control and monitoring equipment, and records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

180. The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

181. The records in Specific Condition 179 and 180 must be in a form suitable and readily available for expeditious review according to 40 C.F.R. 63.10(b)(1), keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1) . [Reg.19.304 and 40 C.F.R. § 63 Subpart ZZZZ]

## SECTION V: COMPLIANCE PLAN AND SCHEDULE

Georgia-Pacific Wood Products LLC will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

## SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Reg.19.704, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Reg.19.410(B) and 40 C.F.R. § 52 Subpart E]

3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee shall submit the compliance test results to the Department within sixty (60) calendar days after completing the testing. [Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

4. The permittee must provide:

    a. Sampling ports adequate for applicable test methods;
    b. Safe sampling platforms;
    c. Safe access to sampling platforms; and
    d. Utilities for sampling and testing equipment.

    [Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Reg.19.303 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Reg. 26 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

7. The permittee shall not exceed the production of 425,000,000 square feet of 3/8 equivalent plywood through the plywood dryers during any consecutive twelve month

period. The permittee shall not exceed the production of 435,000,000 square feet of 3/8 equivalent plywood in the Finish Area during any consecutive twelve month period. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 C.F.R. 70.6]

8. The permittee shall maintain monthly and annual production records which demonstrate compliance with the limits listed in Plantwide Condition #7. A monthly report shall be prepared containing the individual records for each of the last twelve months and the total of the twelve months. These records shall be kept on site and shall be made available to Department personnel upon request. A twelve consecutive month total and each month's data shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 C.F.R. Part 52 Subpart E]

9. The permittee shall not exceed 2,011,179 tons of logs processed at this facility during any consecutive twelve month period. [Regulation 19, §19.705, §18.1004 of Regulation #18, A.C.A. §8-4-203 as referenced by §8-4-304 and §8 4-311, and 40 C.F.R. §70.6]

10. The permittee shall maintain monthly and annual records which demonstrate compliance with the limit listed in Plantwide Condition #9. A monthly report shall be prepared containing the individual records for each of the last twelve months and the total of the twelve months. The reports shall be updated within 15 days of the end of the month for which the data is being recorded. These records shall be kept on site and shall be made available to Department personnel upon request. A twelve consecutive month total and each month's data shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705, §18.1004 of Regulation #18, 40 C.F.R. Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Reasonable Possibility

11. The permittee shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the Veneer Dryer (SN-03, SN-04 and SN-05) project (as requested in the permit application for Permit 0463-AOP-R7 dated June 27, 2014) and that is emitted by any emissions unit identified in 40 C.F.R. Part 52.21(r)(6)(i)(*b*); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years (60 months) following resumption of regular operations after the change. [Regulation 19, §19.705 and §19.901; 40 C.F.R. Part 52.21(r)(6)(iii); A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311; and 40 C.F.R. Part 70.6]

12. A reasonable possibility exists that the Advanced Process Controls (APCs) on the Veneer Dryers (SN-03, SN-04, and SN-05) and on the Wood-fired boilers (SN-01 and SN-02) and the automated sheet station on the Glue Line may result in a significant increase for $PM_{10}$, and $PM_{2.5}$. The applicable requirements of "reasonable possibility" include the following:
    a. The permittee shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any project-affected sources emissions unit; and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases then design capacity or potential to emit that regulated NSR pollutant at such emissions unit.
    b. The permittee shall submit a report if the annual emissions, in tons per year, from the APC project exceed the baseline actual emissions (as documented and maintained pursuant to Interim Plantwide Condition 12(a), by a significant amount (i.e. 25 tons PM, 15 tons $PM_{10}$, or 10 tons $PM_{2.5}$). Such report shall be submitted within 60 days after the end of such year. The report shall contain the following: [40 C.F.R. § 52.21(r)(6)(v)]
        i. The name, address and telephone number of the major stationary source;
        ii. The annual emissions as calculated pursuant to (a); and
        iii. Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
    c. The permittee shall make the information required to be documented and maintained pursuant to this condition available for review upon request for inspection by ADEQ, the EPA, or general public. [40 C.F.R. §52.21®(7) and 40 C.F.R § 70.4(b)(3)(viii)]

13. A reasonable possibility exists that the natural gas fired burners on the No. 1 Lumber Kiln (SN-06) may result in a significant increase for PM. The applicable requirements of "reasonable possibility" include the following:

a. The permittee shall monitor the emissions of PM and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit that regulated NSR pollutant at such emissions unit. [40 C.F.R. § 52.21(r)(6)(iii)]

b. The permittee shall submit a report if the annual emissions, in tons per year, from the No. 1 Lumber Kiln natural gas burners project exceed the baseline actual emissions (as documented and maintained pursuant to Plantwide Condition 13(a), by a significant amount (i.e. 25 tons PM). Such report shall be submitted within 60 days after the end of such year. The report shall contain the following: [40 C.F.R. § 52.221(r)(6)(v)]

i. The name, address and telephone number of the major stationary source;
ii. The annual emissions as calculated pursuant to Plantwide Condition 13(a); and
iii. Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

c. The permittee shall make the information required to be documented and maintained pursuant to Plantwide Condition 13(a) available for review upon a request for inspection by ADEQ, the EPA, or the general public. [40 C.F.R. § 52.21(r)(7) and 40 C.F.R. § 70.4(b)(3)(viii)]

**Title VI Provisions**

14. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 C.F.R. Part 82, Subpart E]

a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

15. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 C.F.R. Part 82, Subpart F]

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152)
e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

16. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 C.F.R. Part 82, Subpart A, Production and Consumption Controls.

17. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 C.F.R. part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

    The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

18. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 C.F.R. Part 82, Subpart G.

## SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated February 15, 2016.

| Equipment ID | Description | Category |
|---|---|---|
| B-7 | Diesel; 250 gallons | A-2 |
| B-6 | Hydraulic Oil; 200 gallons | A-2 |
| B-14 | Hydraulic Oil; 250 gallons | A-2 |
| B-15 | Hydraulic Oil; 250 gallons | A-2 |
| B-16 | Hydraulic Oil; 250 gallons | A-2 |
| B-23 | Hydraulic Oil; 250 gallons | A-2 |
| B-27 | Hydraulic Oil; 100 gallons | A-2 |
| B-28 | Hydraulic Oil; 165 gallons | A-2 |
| B-29 | Hydraulic Oil; 165 gallons | A-2 |
| B-30 | Hydraulic Oil; 100 gallons | A-2 |
| B-31 | Hydraulic Oil; 100 gallons | A-2 |
| B-32 | Hydraulic Oil; 100 gallons | A-2 |
| B-33 | Hydraulic Oil; 100 gallons | A-2 |
| Tank B-1 | Diesel; 10,000 gallons | A-3 |
| Tank B-9 | Diesel; 1,000 gallons | A-3 |
| Tank G-1 | Diesel; 400 gallons | A-3 |
| Tank RT-1 | Resin; 300 gallons | A-3 |
| Tank B-12 | Plyform Oil; 5,500 gallons | A-3 |
| Tank B-13 | Plyform Oil; 2,500 gallons | A-3 |
| Tank B-3 | Hydraulic Oil; 2,000 gallons | A-3 |
| Tank B-4 | Hydraulic Oil; 2,000 gallons | A-3 |
| Tank B-5 | Hydraulic Oil; 2,000 gallons | A-3 |

| Equipment ID | Description | Category |
|---|---|---|
| Tank B-10 | Hydraulic Oil; 3,000 gallons | A-3 |
| Tank B-11 | Hydraulic Oil; 5,000 gallons | A-3 |
| Tank B-18 | Hydraulic Oil; 1,000 gallons | A-3 |
| Tank B-19 | Hydraulic Oil; 1,000 gallons | A-3 |
| Tank B-21 | Hydraulic Oil; 5,000 gallons | A-3 |
| Tank B-22 | Hydraulic Oil; 285 gallons | A-3 |
| Tank B-24 | Hydraulic Oil; 1,024 gallons | A-3 |
| Tank B-25 | Hydraulic Oil; 600 gallons | A-3 |
| Tank B-26 | Hydraulic Oil; 270 gallons | A-3 |
| Tank B-34 | Hydraulic Oil; 420 gallons | A-3 |
| Tank B-35 | Hydraulic Oil; 500 gallons | A-3 |
| Tank B-20 | Saw Guide Oil; 550 gallons | A-3 |
| Tank B-2 | Gasoline; 1,000 gallons | A-3 |
| - | Chippers | A-13 |
| - | Chip Screens | A-13 |
| - | Dry Ice – Cleaning | A-13 |
| - | Sock Filters | A-13 |
| - | Parts Washers | A-13 |
| Tank B-8 | Diesel; 12,000 gallons | A-13 |
| Tank RT-1 | Resin; 19,930 gallons | A-13 |
| Tank RT-2 | Resin; 19,930 gallons | A-13 |
| Tanks GT1-GT7 | Glue | A-13 |
| - | New Parts Washers | A-13 |
| - | Mold Inhibitor Operation | A-13 |

## SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 C.F.R. § 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 C.F.R. § 70.6(a)(2) and Reg.26.701(B)]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Reg.26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 C.F.R. § 70.6(a)(1)(ii) and Reg.26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit.

    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing the analyses;
    d. The analytical techniques or methods used;
    e. The results of such analyses; and
    f. The operating conditions existing at the time of sampling or measurement.

    [40 C.F.R. § 70.6(a)(3)(ii)(A) and Reg.26.701(C)(2)]

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 C.F.R. § 70.6(a)(3)(ii)(B) and Reg.26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Reg.26.2 must certify all required reports. The permittee will send the reports to the address below:

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   5301 Northshore Drive
   North Little Rock, AR 72118-5317

   [40 C.F.R. § 70.6(a)(3)(iii)(A) and Reg.26.701(C)(3)(a)]

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

   a. For all upset conditions (as defined in Reg.19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:

      i. The facility name and location;
      ii. The process unit or emission source deviating from the permit limit;
      iii. The permit limit, including the identification of pollutants, from which deviation occurs;
      iv. The date and time the deviation started;
      v. The duration of the deviation;
      vi. The emissions during the deviation;
      vii. The probable cause of such deviations;
      viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and

ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Reg.19.601, Reg.19.602, Reg.26.701(C)(3)(b), and 40 C.F.R. § 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 C.F.R. § 70.6(a)(5), Reg.26.701(E), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. § 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 C.F.R. § 70.6(a)(6)(i) and Reg.26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 C.F.R. § 70.6(a)(6)(ii) and Reg.26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 70.6(a)(6)(iii) and Reg.26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 C.F.R. § 70.6(a)(6)(iv) and Reg.26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 C.F.R. § 70.6(a)(6)(v) and Reg.26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 C.F.R. § 70.6(a)(7) and Reg.26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 C.F.R. § 70.6(a)(8) and Reg.26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 C.F.R. § 70.6(a)(9)(i) and Reg.26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 C.F.R. § 70.6(b) and Reg.26.702(A) and (B)]

19. Any document (including reports) required by this permit pursuant to 40 C.F.R. § 70 must contain a certification by a responsible official as defined in Reg.26.2. [40 C.F.R. § 70.6(c)(1) and Reg.26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 C.F.R. § 70.6(c)(2) and Reg.26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
    d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 C.F.R. § 70.6(c)(5) and Reg.26.703(E)(3)]

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
    e. Such other facts as the Department may require elsewhere in this permit or by § 114(a)(3) and § 504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Reg.26.704(C)]

    a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
    b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
    c. The applicable requirements of the acid rain program, consistent with § 408(a) of the Act; or
    d. The ability of EPA to obtain information from a source pursuant to § 114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:

    a. Such an extension does not violate a federal requirement;
    b. The permittee demonstrates the need for the extension; and
    c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Reg.18.314(A), Reg.19.416(A), Reg.26.1013(A), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:

    a. Such a request does not violate a federal requirement;
    b. Such a request is temporary in nature;
    c. Such a request will not result in a condition of air pollution;
    d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
    e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
    f. The permittee maintains records of the dates and results of such temporary emissions/testing.

    [Reg.18.314(B), Reg.19.416(B), Reg.26.1013(B), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:

    a. The request does not violate a federal requirement;
    b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
    c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

    [Reg.18.314(C), Reg.19.416(C), Reg.26.1013(C), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

# APPENDIX A

Title 40: Protection of Environment
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

# Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

**Contents**

§60.40c Applicability and delegation of authority.
§60.41c Definitions.
§60.42c Standard for sulfur dioxide ($SO_2$).
§60.43c Standard for particulate matter (PM).
§60.44c Compliance and performance test methods and procedures for sulfur dioxide.
§60.45c Compliance and performance test methods and procedures for particulate matter.
§60.46c Emission monitoring for sulfur dioxide.
§60.47c Emission monitoring for particulate matter.
§60.48c Reporting and recordkeeping requirements.

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

Back to Top

## §60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide ($SO_2$) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Affected facilities (*i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and $NO_X$ standards under this subpart and the $SO_2$ standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

Back to Top

**§60.41c Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

*Annual capacity factor* means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

*Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

*Combined cycle system* means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.*, the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

*Conventional technology* means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

*Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see §60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see §60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see §60.17).

*Dry flue gas desulfurization technology* means a $SO_2$ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

*Emerging technology* means any $SO_2$ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

*Federally enforceable* means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

*Fluidized bed combustion technology* means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*Fuel pretreatment* means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

*Heat input* means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

*Heat transfer medium* means any material that is used to transfer heat from one point to another point.

*Maximum design heat input capacity* means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

*Natural gas* means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

*Noncontinental area* means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Oil* means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

*Potential sulfur dioxide emission rate* means the theoretical $SO_2$ emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

*Process heater* means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

*Steam generating unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Temporary boiler* means a steam generating unit that combusts natural gas or distillate oil with a potential $SO_2$ emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

*Wet flue gas desulfurization technology* means an $SO_2$ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

*Wet scrubber system* means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or $SO_2$.

*Wood* means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

Back to Top

**§60.42c Standard for sulfur dioxide ($SO_2$).**

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential $SO_2$ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential $SO_2$ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential $SO_2$ emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of $SO_2$ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input $SO_2$ emissions limit or the 90 percent $SO_2$ reduction requirement

specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of $SO_2$ emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 50 percent (0.50) of the potential $SO_2$ emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent $SO_2$ reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of the following:

(1) The percent of potential $SO_2$ emission rate or numerical $SO_2$ emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

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Where:

$E_s$ = $SO_2$ emission limit, expressed in ng/J or lb/MMBtu heat input;

$K_a$ = 520 ng/J (1.2 lb/MMBtu);

$K_b$ = 260 ng/J (0.60 lb/MMBtu);

$K_c$ = 215 ng/J (0.50 lb/MMBtu);

$H_a$ = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

$H_b$ = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

$H_c$ = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential $SO_2$ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential $SO_2$ emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion $SO_2$ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The $SO_2$ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

Back to Top

**§60.43c Standard for particulate matter (PM).**

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or $SO_2$ emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

Back to Top

**§60.44c Compliance and performance test methods and procedures for sulfur dioxide.**

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and $SO_2$ emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and $SO_2$ emission limits under §60.42c is based on the average percent reduction and the average $SO_2$ emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and $SO_2$ emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly $SO_2$ emission rate ($E_{ho}$) and the 30-day average $SO_2$ emission rate ($E_{ao}$). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate $E_{ao}$ when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted $E_{ho}$ ($E_{ho}o$) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted $E_{ao}$ ($E_{ao}o$). The $E_{ho}o$ is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

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Where:

$E_{ho}o$ = Adjusted $E_{ho}$, ng/J (lb/MMBtu);

$E_{ho}$ = Hourly $SO_2$ emission rate, ng/J (lb/MMBtu);

$E_w$ = $SO_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$ for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$ if the owner or operator elects to assume $E_w = 0$.

$X_k$ = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$ or $X_k$ if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the $SO_2$ emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential $SO_2$ emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

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Where:

$\%P_s$ = Potential $SO_2$ emission rate, in percent;

$\%R_g$ = $SO_2$ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = $SO_2$ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_g o$) is computed from $E_{ao}o$ from paragraph (e)(1) of this section and an adjusted average $SO_2$ inlet rate ($E_{ai}o$) using the following formula:

$$\%R_g o = 100\left(1 - \frac{E^{\circ}_{ao}}{E^{\circ}_{ai}}\right)$$

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Where:

$\%R_g o$ = Adjusted $\%R_g$, in percent;

$E_{ao}o$ = Adjusted $E_{ao}$, ng/J (lb/MMBtu); and

$E_{ai}o$ = Adjusted average $SO_2$ inlet rate, ng/J (lb/MMBtu).

(ii) To compute $E_{ai}o$, an adjusted hourly $SO_2$ inlet rate ($E_{hi}o$) is used. The $E_{hi}o$ is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

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Where:

$E_{hi}o$ = Adjusted $E_{hi}$, ng/J (lb/MMBtu);

$E_{hi}$ = Hourly $SO_2$ inlet rate, ng/J (lb/MMBtu);

$E_w$ = $SO_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$ for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$ if the owner or operator elects to assume $E_w$ = 0; and

$X_k$ = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the $SO_2$ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the $SO_2$ standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid $SO_2$ emissions data in calculating $\%P_s$ and $E_{ho}$ under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or $E_{ho}$ pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Back to Top

**§60.45c Compliance and performance test methods and procedures for particulate matter.**

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A

of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen ($O_2$) or carbon dioxide ($CO_2$) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The $O_2$ or $CO_2$ measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and $O_2$ (or $CO_2$) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O2 (or $CO_2$), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (*i.e.*, reference method) data and performance test (*i.e.*, compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/*) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

Back to Top

**§60.46c Emission monitoring for sulfur dioxide.**

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the $SO_2$ emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring $SO_2$ concentrations and either $O_2$ or $CO_2$ concentrations at the outlet of the $SO_2$ control device (or the outlet of the steam generating unit if no $SO_2$ control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure $SO_2$ concentrations and either $O_2$ or $CO_2$ concentrations at both the inlet and outlet of the $SO_2$ control device.

(b) The 1-hour average $SO_2$ emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average $SO_2$ emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly $SO_2$ emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the $SO_2$ CEMS at the inlet to the $SO_2$ control device shall be 125 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted, and the span value of the $SO_2$ CEMS at the outlet from the $SO_2$ control device shall be 50 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the $SO_2$ CEMS at the outlet from the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) shall be 125 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average $SO_2$ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average $SO_2$ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average $SO_2$ input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure $SO_2$ at the inlet or outlet of the $SO_2$ control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$ and $CO_2$ measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the $SO_2$ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

Back to Top

**§60.47c Emission monitoring for particulate matter.**

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later,

and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.*, 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.*, 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of

appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.45c(c). The CEMS specified in paragraph §60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, $SO_2$, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source.

The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in §60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section §60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section §60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under §60.48c(c).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

Back to Top

**§60.48c Reporting and recordkeeping requirements.**

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling $SO_2$ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the $SO_2$ emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the $SO_2$ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the $SO_2$ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average $SO_2$ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential $SO_2$ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which $SO_2$ or diluent ($O_2$ or $CO_2$) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the $SO_2$ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the $SO_2$ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Back to Top

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# APPENDIX B

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Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

# Subpart DDDD—National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

## Contents

What This Subpart Covers

§63.2230 What is the purpose of this subpart?
§63.2231 Does this subpart apply to me?
§63.2232 What parts of my plant does this subpart cover?
§63.2233 When do I have to comply with this subpart?

Compliance Options, Operating Requirements, and Work Practice Requirements

§63.2240 What are the compliance options and operating requirements and how must I meet them?
§63.2241 What are the work practice requirements and how must I meet them?

General Compliance Requirements

§63.2250 What are the general requirements?
§63.2251 What are the requirements for the routine control device maintenance exemption?
§63.2252 What are the requirements for process units that have no control or work practice requirements?

Initial Compliance Requirements

§63.2260 How do I demonstrate initial compliance with the compliance options, operating requirements, and work practice requirements?
§63.2261 By what date must I conduct performance tests or other initial compliance demonstrations?
§63.2262 How do I conduct performance tests and establish operating requirements?
§63.2263 Initial compliance demonstration for a dry rotary dryer.
§63.2264 Initial compliance demonstration for a hardwood veneer dryer.
§63.2265 Initial compliance demonstration for a softwood veneer dryer.
§63.2266 Initial compliance demonstration for a veneer redryer.
§63.2267 Initial compliance demonstration for a reconstituted wood product press or board cooler.
§63.2268 Initial compliance demonstration for a wet control device.
§63.2269 What are my monitoring installation, operation, and maintenance requirements?

Continuous Compliance Requirements

§63.2270 How do I monitor and collect data to demonstrate continuous compliance?
§63.2271 How do I demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements?

Notifications, Reports, and Records

§63.2280 What notifications must I submit and when?
§63.2281 What reports must I submit and when?
§63.2282 What records must I keep?
§63.2283 In what form and how long must I keep my records?

Other Requirements and Information

§63.2290 What parts of the General Provisions apply to me?
§63.2291 Who implements and enforces this subpart?
§63.2292 What definitions apply to this subpart?
Table 1A to Subpart DDDD of Part 63—Production-Based Compliance Options
Table 1B to Subpart DDDD of Part 63—Add-on Control Systems Compliance Options
Table 2 to Subpart DDDD of Part 63—Operating Requirements
Table 3 to Subpart DDDD of Part 63—Work Practice Requirements
Table 4 to Subpart DDDD of Part 63—Requirements for Performance Tests
Table 5 to Subpart DDDD of Part 63—Performance Testing and Initial Compliance Demonstrations for the Compliance Options and Operating Requirements
Table 6 to Subpart DDDD of Part 63—Initial Compliance Demonstrations for Work Practice Requirements

Table 7 to Subpart DDDD of Part 63—Continuous Compliance With the Compliance Options and Operating Requirements
Table 8 to Subpart DDDD of Part 63—Continuous Compliance With the Work Practice Requirements
Table 9 to Subpart DDDD of Part 63—Requirements for Reports
Table 10 to Subpart DDDD of Part 63—Applicability of General Provisions to Subpart DDDD
Appendix A to Subpart DDDD of Part 63—Alternative Procedure To Determine Capture Efficiency From Enclosures Around Hot Presses in the Plywood and Composite Wood Products Industry Using Sulfur Hexafluoride Tracer Gas

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Back to Top

**What This Subpart Covers**

Source: 69 FR 46011, July 30, 2004, unless otherwise noted.

Back to Top

### §63.2230 What is the purpose of this subpart?

This subpart establishes national compliance options, operating requirements, and work practice requirements for hazardous air pollutants (HAP) emitted from plywood and composite wood products (PCWP) manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the compliance options, operating requirements, and work practice requirements.

Back to Top

### §63.2231 Does this subpart apply to me?

This subpart applies to you if you meet the criteria in paragraphs (a) and (b) of this section.

(a) You own or operate a PCWP manufacturing facility. A PCWP manufacturing facility is a facility that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

(b) The PCWP manufacturing facility is located at a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

[69 FR 46011, July 30, 2004, as amended at 72 FR 61062, Oct. 29, 2007]

Back to Top

**§63.2232 What parts of my plant does this subpart cover?**

(a) This subpart applies to each new, reconstructed, or existing affected source at a PCWP manufacturing facility.

(b) The affected source is the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products. The affected source includes, but is not limited to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other national emission standards for hazardous air pollutants (NESHAP)). The affected source also includes onsite storage and preparation of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (§63.2292). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

(c) An affected source is a new affected source if you commenced construction of the affected source after January 9, 2003, and you meet the applicability criteria at the time you commenced construction.

(d) An affected source is reconstructed if you meet the criteria as defined in §63.2.

(e) An affected source is existing if it is not new or reconstructed.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8371, Feb. 16, 2006]

Back to Top

**§63.2233 When do I have to comply with this subpart?**

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraph (a)(1) or (2) of this section, whichever is applicable.

(1) If the initial startup of your affected source is before September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart no later than September 28, 2004.

(2) If the initial startup of your affected source is after September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart upon initial startup of your affected source.

(b) If you have an existing affected source, you must comply with the compliance options, operating requirements, and work practice requirements for existing sources no later than October 1, 2007.

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, you must be in compliance with this subpart by October 1, 2007 or upon initial startup of your affected source as a major source, whichever is later.

(d) You must meet the notification requirements according to the schedule in §63.2280 and according to 40 CFR part 63, subpart A. Some of the notifications must be submitted before you are required to comply with the compliance options, operating requirements, and work practice requirements in this subpart.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006; 72 FR 61062, Oct. 29, 2007]

Back to Top

**Compliance Options, Operating Requirements, and Work Practice Requirements**

Back to Top

### §63.2240 What are the compliance options and operating requirements and how must I meet them?

You must meet the compliance options and operating requirements described in Tables 1A, 1B, and 2 to this subpart and in paragraph (c) of this section by using one or more of the compliance options listed in paragraphs (a), (b), and (c) of this section. The process units subject to the compliance options are listed in Tables 1A and 1B to this subpart and are defined in §63.2292. You need only to meet one of the compliance options outlined in paragraphs (a) through (c) of this section for each process unit. You cannot combine compliance options in paragraph (a), (b), or (c) for a single process unit. (For example, you cannot use a production-based compliance option in paragraph (a) for one vent of a veneer dryer and an add-on control system compliance option in paragraph (b) for another vent on the same veneer dryer. You must use either the production-based compliance option or an add-on control system compliance option for the entire dryer.)

(a) *Production-based compliance options.* You must meet the production-based total HAP compliance options in Table 1A to this subpart and the applicable operating requirements in Table 2 to this subpart. You may not use an add-on control system or wet control device to meet the production-based compliance options.

(b) *Compliance options for add-on control systems.* You must use an emissions control system and demonstrate that the resulting emissions meet the compliance options and operating requirements in Tables 1B and 2 to this subpart. If you own or operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, and you choose to comply with one of the concentration-based compliance options for a control system outlet (presented as option numbers 2, 4, and 6 in Table 1B to this subpart), you must have a capture device that either meets the definition of wood products enclosure in §63.2292 or achieves a capture efficiency of greater than or equal to 95 percent.

(c) *Emissions averaging compliance option (for existing sources only).* Using the procedures in paragraphs (c)(1) through (3) of this section, you must demonstrate that emissions included in the emissions average meet the compliance options and operating requirements. New sources may not use emissions averaging to comply with this subpart.

(1) *Calculation of required and actual mass removal.* Limit emissions of total HAP, as defined in §63.2292, to include acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde from your affected source to the standard specified by Equations 1, 2, and 3 of this section.

$$RMR = 0.90 \times \left( \sum_{i=1}^{n} UCEP_i \times OH_i \right) \quad (Eq.\ 1)$$

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$$AMR = \left( \sum_{i=1}^{n} CD_i \times OCEP_i \times OH_i \right) \quad (Eq.\ 2)$$

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$$AMR \geq RMR \quad (Eq.\ 3)$$

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Where:

RMR = required mass removal of total HAP from all process units generating debits (*i.e.*, all process units that are subject to the compliance options in Tables 1A and 1B to this subpart and that are either uncontrolled or under-controlled), pounds per semiannual period;

AMR = actual mass removal of total HAP from all process units generating credits (*i.e.*, all process units that are controlled as part of the Emissions Averaging Plan including credits from debit-generating process units that are under-controlled), pounds per semiannual period;

$UCEP_i$ = mass of total HAP from an uncontrolled or under-controlled process unit (i) that generates debits, pounds per hour;

$OH_i$ = number of hours a process unit (i) is operated during the semiannual period, hours per 6-month period;

$CD_i$ = control system efficiency for the emission point (i) for total HAP, expressed as a fraction, and not to exceed 90 percent, unitless (Note: To calculate the control system efficiency of biological treatment units that do not meet the definition of biofilter in §63.2292, you must use 40 CFR part 63, appendix C, Determination of the Fraction Biodegraded ($F_{bio}$) in a Biological Treatment Unit.);

$OCEP_i$ = mass of total HAP from a process unit (i) that generates credits (including credits from debit-generating process units that are under-controlled), pounds per hour;

0.90 = required control system efficiency of 90 percent multiplied, unitless.

(2) *Requirements for debits and credits.* You must calculate debits and credits as specified in paragraphs (c)(2)(i) through (vi) of this section.

(i) You must limit process units in the emissions average to those process units located at the existing affected source as defined in §63.2292.

(ii) You cannot use nonoperating process units to generate emissions averaging credits. You cannot use process units that are shut down to generate emissions averaging debits or credits.

(iii) You may not include in your emissions average process units controlled to comply with a State, Tribal, or Federal rule other than this subpart.

(iv) You must use actual measurements of total HAP emissions from process units to calculate your required mass removal (RMR) and actual mass removal (AMR). The total HAP measurements must be obtained according to §63.2262(b) through (d), (g), and (h), using the methods specified in Table 4 to this subpart.

(v) Your initial demonstration that the credit-generating process units will be capable of generating enough credits to offset the debits from the debit-generating process units must be made under representative operating conditions. After the compliance date, you must use actual operating data for all debit and credit calculations.

(vi) Do not include emissions from the following time periods in your emissions averaging calculations:

(A) Emissions during periods of startup, shutdown, and malfunction as described in the startup, shutdown, and malfunction plan (SSMP).

(B) Emissions during periods of monitoring malfunctions, associated repairs, and required quality assurance or control activities or during periods of control device maintenance covered in your routine control device maintenance exemption. No credits may be assigned to credit-generating process units, and maximum debits must be assigned to debit-generating process units during these periods.

(3) *Operating requirements.* You must meet the operating requirements in Table 2 to this subpart for each process unit or control device used in calculation of emissions averaging credits.

Back to Top

**§63.2241 What are the work practice requirements and how must I meet them?**

(a) You must meet each work practice requirement in Table 3 to this subpart that applies to you.

(b) As provided in §63.6(g), we, the EPA, may choose to grant you permission to use an alternative to the work practice requirements in this section.

(c) If you have a dry rotary dryer, you may choose to designate your dry rotary dryer as a green rotary dryer and meet the more stringent compliance options and operating requirements in §63.2240 for green rotary dryers instead of the work practices for dry rotary dryers. If you have a hardwood veneer dryer or veneer redryer, you may choose to designate your hardwood veneer dryer or veneer redryer as a softwood veneer dryer and meet the more stringent compliance options and operating requirements in §63.2240 for softwood veneer dryer heated zones instead of the work practices for hardwood veneer dryers or veneer redryers.

Back to Top

**General Compliance Requirements**

Back to Top

**§63.2250 What are the general requirements?**

(a) You must be in compliance with the compliance options, operating requirements, and the work practice requirements in this subpart at all times, except during periods of process unit or control device startup, shutdown, and malfunction; prior to process unit initial startup; and during the routine control device maintenance exemption specified in §63.2251. The compliance options, operating requirements, and work practice requirements do not apply during times when the process unit(s) subject to the compliance options, operating requirements, and work practice requirements are not operating, or during periods of startup, shutdown, and malfunction. Startup and shutdown periods must not exceed the minimum amount of time necessary for these events.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i).

(c) You must develop a written SSMP according to the provisions in §63.6(e)(3).

(d) Shutoff of direct-fired burners resulting from partial and full production stoppages of direct-fired softwood veneer dryers or over-temperature events shall be deemed shutdowns and not malfunctions. Lighting or re-lighting any one or all gas burners in direct-fired softwood veneer dryers shall be deemed startups and not malfunctions.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006; 71 FR 20463, Apr. 20, 2006]

Back to Top

**§63.2251 What are the requirements for the routine control device maintenance exemption?**

(a) You may request a routine control device maintenance exemption from the EPA Administrator for routine maintenance events such as control device bakeouts, washouts, media replacement, and replacement of corroded parts. Your 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 process shutdowns, describe how you plan to make reasonable efforts to minimize emissions during the maintenance, and provide any other documentation required by the EPA Administrator.

(b) The routine control device maintenance exemption must not exceed the percentages of process unit operating uptime in paragraphs (b)(1) and (2) of this section.

(1) If the control device is used to control a green rotary dryer, tube dryer, rotary strand dryer, or pressurized refiner, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(2) If the control device is used to control a softwood veneer dryer, reconstituted wood product press, reconstituted wood product board cooler, hardboard oven, press predryer, conveyor strand dryer, or fiberboard mat dryer, then the routine control device maintenance exemption must not exceed 0.5 percent of annual operating uptime for each process unit controlled.

(3) If the control device is used to control a combination of equipment listed in both paragraphs (b)(1) and (2) of this section, such as a tube dryer and a reconstituted wood product press, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(c) The request for the routine control device maintenance exemption, if approved by the EPA Administrator, must be IBR in and attached to the affected source's title V permit.

(d) The compliance options and operating requirements do not apply during times when control device maintenance covered under your approved routine control device maintenance exemption is performed. You must minimize emissions to the greatest extent possible during these routine control device maintenance periods.

(e) To the extent practical, startup and shutdown of emission control systems must be scheduled during times when process equipment is also shut down.

Back to Top

### §63.2252 What are the requirements for process units that have no control or work practice requirements?

For process units not subject to the compliance options or work practice requirements specified in §63.2240 (including, but not limited to, lumber kilns), you are not required to comply with the compliance options, work practice requirements, performance testing, monitoring, SSM plans, and recordkeeping or reporting requirements of this subpart, or any other requirements in subpart A of this part, except for the initial notification requirements in §63.9(b).

[71 FR 8372, Feb. 16, 2006]

Back to Top

## Initial Compliance Requirements

Back to Top

### §63.2260 How do I demonstrate initial compliance with the compliance options, operating requirements, and work practice requirements?

(a) To demonstrate initial compliance with the compliance options and operating requirements, you must conduct performance tests and establish each site-specific operating requirement in Table 2 to this subpart according to the requirements in §63.2262 and Table 4 to this subpart. Combustion units that accept process exhausts into the flame zone are exempt from the initial performance testing and operating requirements for thermal oxidizers.

(b) You must demonstrate initial compliance with each compliance option, operating requirement, and work practice requirement that applies to you according to Tables 5 and 6 to this subpart and according to §§63.2260 through 63.2269 of this subpart.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.2280(d).

Back to Top

### §63.2261 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) You must conduct performance tests upon initial startup or no later than 180 calendar days after the compliance date that is specified for your source in §63.2233 and according to §63.7(a)(2), whichever is later.

(b) You must conduct initial compliance demonstrations that do not require performance tests upon initial startup or no later than 30 calendar days after the compliance date that is specified for your source in §63.2233, whichever is later.

Back to Top

### §63.2262 How do I conduct performance tests and establish operating requirements?

(a) You must conduct each performance test according to the requirements in §63.7(e)(1), the requirements in paragraphs (b) through (o) of this section, and according to the methods specified in Table 4 to this subpart.

(b) *Periods when performance tests must be conducted.* (1) You must not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(2) You must test under representative operating conditions as defined in §63.2292. You must describe representative operating conditions in your performance test report for the process and control systems and explain why they are representative.

(c) *Number of test runs.* You must conduct three separate test runs for each performance test required in this section as specified in §63.7(e)(3). Each test run must last at least 1 hour except for: testing of a temporary total enclosure (TTE) conducted using Methods 204A through 204F of 40 CFR part 51, appendix M, which require three separate test runs of at least 3 hours each; and testing of an enclosure conducted using the alternative tracer gas method in appendix A to this subpart, which requires a minimum of three separate runs of at least 20 minutes each.

(d) *Location of sampling sites.* (1) Sampling sites must be located at the inlet (if emission reduction testing or documentation of inlet methanol or formaldehyde concentration is required) and outlet of the control device (defined in §63.2292) and prior to any releases to the atmosphere. For control sequences with wet control devices (defined in §63.2292) followed by control devices (defined in §63.2292), sampling sites may be located at the inlet and outlet of the control sequence and prior to any releases to the atmosphere.

(2) Sampling sites for process units meeting compliance options without a control device must be located prior to any releases to the atmosphere. Facilities demonstrating compliance with a

production-based compliance option for a process unit equipped with a wet control device must locate sampling sites prior to the wet control device.

(e) *Collection of monitoring data.* You must collect operating parameter monitoring system or continuous emissions monitoring system (CEMS) data at least every 15 minutes during the entire performance test and determine the parameter or concentration value for the operating requirement during the performance test using the methods specified in paragraphs (k) through (o) of this section.

(f) *Collection of production data.* To comply with any of the production-based compliance options, you must measure and record the process unit throughput during each performance test.

(g) *Nondetect data.* (1) Except as specified in paragraph (g)(2) of this section, all nondetect data (§63.2292) must be treated as one-half of the method detection limit when determining total HAP, formaldehyde, methanol, or total hydrocarbon (THC) emission rates.

(2) When showing compliance with the production-based compliance options in Table 1A to this subpart, you may treat emissions of an individual HAP as zero if all three of the performance test runs result in a nondetect measurement, and the method detection limit is less than or equal to 1 parts per million by volume, dry basis (ppmvd). Otherwise, nondetect data for individual HAP must be treated as one-half of the method detection limit.

(h) *Calculation of percent reduction across a control system.* When determining the control system efficiency for any control system included in your emissions averaging plan (not to exceed 90 percent) and when complying with any of the compliance options based on percent reduction across a control system in Table 1B to this subpart, as part of the performance test, you must calculate the percent reduction using Equation 1 of this section:

$$PR = CE \times \frac{ER_{in} - ER_{out}}{ER_{in}}(100) \qquad (Eq.\ 1)$$

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Where:

PR = percent reduction, percent;

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 to this subpart);

$ER_{in}$ = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the inlet vent stream of the control device, pounds per hour;

$ER_{out}$ = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the outlet vent stream of the control device, pounds per hour.

(i) *Calculation of mass per unit production.* To comply with any of the production-based compliance options in Table 1A to this subpart, you must calculate your mass per unit production emissions for each performance test run using Equation 2 of this section:

$$MP = \frac{ER_{HAP}}{P \times CE} \qquad (Eq.\ 2)$$

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Where:

MP = mass per unit production, pounds per oven dried ton OR pounds per thousand square feet on a specified thickness basis (see paragraph (j) of this section if you need to convert from one thickness basis to another);

$ER_{HAP}$ = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde) in the stack, pounds per hour;

P = process unit production rate (throughput), oven dried tons per hour OR thousand square feet per hour on a specified thickness basis;

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 to this subpart).

(j) *Thickness basis conversion.* Use Equation 3 of this section to convert from one thickness basis to another:

$$MSF_B = MSF_A \times \frac{A}{B} \qquad (Eq.\ 3)$$

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Where:

$MSF_A$ = thousand square feet on an A-inch basis;

$MSF_B$ = thousand square feet on a B-inch basis;

A = old thickness you are converting from, inches;

B = new thickness you are converting to, inches.

(k) *Establishing thermal oxidizer operating requirements.* If you operate a thermal oxidizer, you must establish your thermal oxidizer operating parameters according to paragraphs (k)(1) through (3) of this section.

(1) During the performance test, you must continuously monitor the firebox temperature during each of the required 1-hour test runs. For regenerative thermal oxidizers, you may measure the temperature in multiple locations (*e.g.*, one location per burner) in the combustion chamber and calculate the average of the temperature measurements prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum firebox temperature. The minimum firebox temperature must then be established as the average of the three minimum 15-minute firebox temperatures monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum firebox temperature for your thermal oxidizer by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (k)(1) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(3) If your thermal oxidizer is a combustion unit that accepts process exhaust into the flame zone, then you are exempt from the performance testing and monitoring requirements specified in paragraphs (k)(1) and (2) of this section. To demonstrate initial compliance, you must submit documentation with your Notification of Compliance Status showing that process exhausts controlled by the combustion unit enter into the flame zone.

(l) *Establishing catalytic oxidizer operating requirements.* If you operate a catalytic oxidizer, you must establish your catalytic oxidizer operating parameters according to paragraphs (l)(1) and (2) of this section.

(1) During the performance test, you must continuously monitor during the required 1-hour test runs either the temperature at the inlet to each catalyst bed or the temperature in the combustion chamber. For regenerative catalytic oxidizers, you must calculate the average of the temperature measurements from each catalyst bed inlet or within the combustion chamber prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum catalytic oxidizer temperature. The minimum catalytic oxidizer temperature must then be established as the average of the three minimum 15-minute temperatures monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum catalytic oxidizer temperature by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraphs (l)(1) and (2) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(m) *Establishing biofilter operating requirements.* If you operate a biofilter, you must establish your biofilter operating requirements according to paragraphs (m)(1) through (3) of this section.

(1) During the performance test, you must continuously monitor the biofilter bed temperature during each of the required 1-hour test runs. To monitor biofilter bed temperature, you may use multiple thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15-minute averages for purposes of establishing biofilter bed temperature limits. The biofilter bed temperature range must be established as the minimum and maximum 15-minute biofilter bed temperatures monitored during the three test runs. You may base your biofilter bed temperature range on values recorded during previous performance tests provided that the data used to establish the temperature ranges have been obtained using the test methods required in this subpart. If you use data from previous performance tests, you must certify that the biofilter and associated process unit(s) have not been modified subsequent to the date of the performance tests. Replacement of the biofilter media with the same type of material is not considered a modification of the biofilter for purposes of this section.

(2) For a new biofilter installation, you will be allowed up to 180 days following the compliance date or 180 days following initial startup of the biofilter to complete the requirements in paragraph (m)(1) of this section.

(3) You may expand your biofilter bed temperature operating range by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (m)(1) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(n) *Establishing operating requirements for process units meeting compliance options without a control device.* If you operate a process unit that meets a compliance option in Table 1A to this subpart, or is a process unit that generates debits in an emissions average without the use of a control device, you must establish your process unit operating parameters according to paragraphs (n)(1) through (2) of this section.

(1) During the performance test, you must identify and document the process unit controlling parameter(s) that affect total HAP emissions during the three-run performance test. The controlling parameters you identify must coincide with the representative operating conditions you describe according to §63.2262(b)(2). For each parameter, you must specify appropriate monitoring methods, monitoring frequencies, and for continuously monitored parameters, averaging times not to exceed 24 hours. The operating limit for each controlling parameter must then be established as the minimum, maximum, range, or average (as appropriate depending on the parameter) recorded during the performance test. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish different controlling parameter limits for your process unit by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (n)(1) of this section that demonstrates compliance with the compliance options in Table 1A to this subpart or is used to establish emission averaging debits for an uncontrolled process unit.

(o) *Establishing operating requirements using THC CEMS.* If you choose to meet the operating requirements by monitoring THC concentration instead of monitoring control device or process operating parameters, you must establish your THC concentration operating requirement according to paragraphs (o)(1) through (2) of this section.

(1) During the performance test, you must continuously monitor THC concentration using your CEMS during each of the required 1-hour test runs. The maximum THC concentration must then be established as the average of the three maximum 15-minute THC concentrations monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of THC concentration values under different operating conditions.

(2) You may establish a different maximum THC concentration by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (o)(1) of this section that demonstrates compliance with the compliance options in Tables 1A and 1B to this subpart.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

Back to Top

**§63.2263 Initial compliance demonstration for a dry rotary dryer.**

If you operate a dry rotary dryer, you must demonstrate that your dryer processes furnish with an inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a dryer inlet temperature of less than or equal to 600 °F. You must designate and clearly identify each dry rotary dryer. You must record the inlet furnish moisture content (dry basis) and inlet dryer operating temperature according to §63.2269(a), (b), and (c) and §63.2270 for a minimum of 30 calendar days. You must submit the highest recorded 24-hour average inlet furnish moisture content and the highest recorded 24-hour average dryer inlet temperature with your Notification of Compliance Status. In addition, you must submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the dry rotary dryer will dry furnish with a maximum inlet moisture content less than or equal to 30 percent (by weight, dry basis) and will operate with a maximum inlet temperature of less than or equal to 600 °F in the future.

Back to Top

**§63.2264 Initial compliance demonstration for a hardwood veneer dryer.**

If you operate a hardwood veneer dryer, you must record the annual volume percentage of softwood veneer species processed in the dryer as follows:

(a) Use Equation 1 of this section to calculate the annual volume percentage of softwood species dried:

$$SW_{\%} = \frac{SW}{T}(100) \qquad (Eq.\ 1)$$

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Where:

SW% = annual volume percent softwood species dried;

SW = softwood veneer dried during the previous 12 months, thousand square feet ( $^{3}/_{8}$ -inch basis);

T = total softwood and hardwood veneer dried during the previous 12 months, thousand square feet ( $^{3}/_{8}$ -inch basis).

(b) You must designate and clearly identify each hardwood veneer dryer. Submit with the Notification of Compliance Status the annual volume percentage of softwood species dried in the dryer based on your dryer production for the 12 months prior to the compliance date specified for your source in §63.2233. If you did not dry any softwood species in the dryer during the 12 months prior to the compliance date, then you need only to submit a statement indicating that no softwood species were dried. In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer dryer will be used to process less than 30 volume percent softwood species in the future.

Back to Top

**§63.2265 Initial compliance demonstration for a softwood veneer dryer.**

If you operate a softwood veneer dryer, you must develop a plan for review and approval for minimizing fugitive emissions from the veneer dryer heated zones, and you must submit the plan with your Notification of Compliance Status.

Back to Top

**§63.2266 Initial compliance demonstration for a veneer redryer.**

If you operate a veneer redryer, you must record the inlet moisture content of the veneer processed in the redryer according to §63.2269(a) and (c) and §63.2270 for a minimum of 30

calendar days. You must designate and clearly identify each veneer redryer. You must submit the highest recorded 24-hour average inlet veneer moisture content with your Notification of Compliance Status to show that your veneer redryer processes veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis). In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer redryer will dry veneer with a moisture content less than 25 percent (by weight, dry basis) in the future.

Back to Top

**§63.2267 Initial compliance demonstration for a reconstituted wood product press or board cooler.**

If you operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, then you must either use a wood products enclosure as defined in §63.2292 or measure the capture efficiency of the capture device for the press or board cooler using Methods 204 and 204A through 204F of 40 CFR part 51, appendix M (as appropriate), or using the alternative tracer gas method contained in appendix A to this subpart. You must submit documentation that the wood products enclosure meets the press enclosure design criteria in §63.2292 or the results of the capture efficiency verification with your Notification of Compliance Status.

Back to Top

**§63.2268 Initial compliance demonstration for a wet control device.**

If you use a wet control device as the sole means of reducing HAP emissions, you must develop and implement a plan for review and approval to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere such that the desired emissions reductions are obtained. You must submit the plan with your Notification of Compliance Status.

Back to Top

**§63.2269 What are my monitoring installation, operation, and maintenance requirements?**

(a) *General continuous parameter monitoring requirements.* You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to paragraphs (a)(1) through (3) of this section.

(1) The CPMS must be capable of completing a minimum of one cycle of operation (sampling, analyzing, and recording) for each successive 15-minute period.

(2) At all times, you must maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(3) Record the results of each inspection, calibration, and validation check.

(b) *Temperature monitoring.* For each temperature monitoring device, you must meet the requirements in paragraphs (a) and (b)(1) through (6) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) Use a temperature sensor with a minimum accuracy of 4 °F or 0.75 percent of the temperature value, whichever is larger.

(3) If a chart recorder is used, it must have a sensitivity with minor divisions not more than 20 °F.

(4) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, you must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 °F of the process temperature sensor's reading.

(5) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(6) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion.

(c) Wood moisture monitoring. For each furnish or veneer moisture meter, you must meet the requirements in paragraphs (a)(1) through (3) and paragraphs (c)(1) through (5) of this section.

(1) For dry rotary dryers, use a continuous moisture monitor with a minimum accuracy of 1 percent (dry basis) moisture or better in the 25 to 35 percent (dry basis) moisture content range. For veneer redryers, use a continuous moisture monitor with a minimum accuracy of 3 percent (dry basis) moisture or better in the 15 to 25 percent (dry basis) moisture content range. Alternatively, you may use a continuous moisture monitor with a minimum accuracy of 5 percent (dry basis) moisture or better for dry rotary dryers used to dry furnish with less than 25 percent (dry basis) moisture or for veneer redryers used to redry veneer with less than 20 percent (dry basis) moisture.

(2) Locate the moisture monitor in a position that provides a representative measure of furnish or veneer moisture.

(3) Calibrate the moisture monitor based on the procedures specified by the moisture monitor manufacturer at least once per semiannual compliance period (or more frequently if recommended by the moisture monitor manufacturer).

(4) At least quarterly, inspect all components of the moisture monitor for integrity and all electrical connections for continuity.

(5) Use Equation 1 of this section to convert percent moisture measurements wet basis to a dry basis:

$$MC_{dry} = \frac{MC_{wet}/100}{1-(MC_{wet}/100)}(100) \qquad (Eq.\ 1)$$

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Where:

$MC_{dry}$ = percent moisture content of wood material (weight percent, dry basis);

$MC_{wet}$ = percent moisture content of wood material (weight percent, wet basis).

(d) *Continuous emission monitoring system(s).* Each CEMS must be installed, operated, and maintained according to paragraphs (d)(1) through (4) of this section.

(1) Each CEMS for monitoring THC concentration must be installed, operated, and maintained according to Performance Specification 8 of 40 CFR part 60, appendix B. You must also comply with Procedure 1 of 40 CFR part 60, appendix F.

(2) You must conduct a performance evaluation of each CEMS according to the requirements in §63.8 and according to Performance Specification 8 of 40 CFR part 60, appendix B.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and §63.2270(d) and (e).

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

Back to Top

**Continuous Compliance Requirements**

Back to Top

**§63.2270 How do I monitor and collect data to demonstrate continuous compliance?**

(a) You must monitor and collect data according to this section.

(b) Except for, as appropriate, monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the process unit is operating. For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities; data recorded during periods of startup, shutdown, and malfunction; or data recorded during periods of control device downtime covered in any approved routine control device maintenance exemption in data averages and calculations used to report emission or operating levels, nor may such data be used in fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control system.

(d) Except as provided in paragraph (e) of this section, determine the 3-hour block average of all recorded readings, calculated after every 3 hours of operation as the average of the evenly spaced recorded readings in the previous 3 operating hours (excluding periods described in paragraphs (b) and (c) of this section).

(e) For dry rotary dryer and veneer redryer wood moisture monitoring, dry rotary dryer temperature monitoring, biofilter bed temperature monitoring, and biofilter outlet THC monitoring, determine the 24-hour block average of all recorded readings, calculated after every 24 hours of operation as the average of the evenly spaced recorded readings in the previous 24 operating hours (excluding periods described in paragraphs (b) and (c) of this section).

(f) To calculate the data averages for each 3-hour or 24-hour averaging period, you must have at least 75 percent of the required recorded readings for that period using only recorded readings that are based on valid data (*i.e.*, not from periods described in paragraphs (b) and (c) of this section).

Back to Top

**§63.2271 How do I demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements?**

(a) You must demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements in §§63.2240 and 63.2241 that apply to you according to the methods specified in Tables 7 and 8 to this subpart.

(b) You must report each instance in which you did not meet each compliance option, operating requirement, and work practice requirement in Tables 7 and 8 to this subpart that applies to you. This includes periods of startup, shutdown, and malfunction and periods of control device maintenance specified in paragraphs (b)(1) through (3) of this section. These instances are deviations from the compliance options, operating requirements, and work practice requirements in this subpart. These deviations must be reported according to the requirements in §63.2281.

(1) [Reserved]

(2) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The EPA Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

(3) Deviations that occur during periods of control device maintenance covered by any approved routine control device maintenance exemption are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with the approved routine control device maintenance exemption.

[69 FR 46011, July 30, 2004, as amended at 71 FR 20463, Apr. 20, 2006]

Back to Top

**Notifications, Reports, and Records**

Back to Top

**§63.2280 What notifications must I submit and when?**

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9 (b) through (e), and (g) and (h) by the dates specified.

(b) You must submit an Initial Notification no later than 120 calendar days after September 28, 2004, or after initial startup, whichever is later, as specified in §63.9(b)(2).

(c) If you are required to conduct a performance test, you must submit a written notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as specified in §63.7(b)(1).

(d) If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in Tables 4, 5, and 6 to this subpart, you must submit a Notification of Compliance Status as specified in §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 or 6 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Tables 5 and 6 to this subpart that includes a performance test conducted according to the requirements in Table 4 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to §63.10(d)(2).

(e) If you request a routine control device maintenance exemption according to §63.2251, you must submit your request for the exemption no later than 30 days before the compliance date.

(f) If you use the emissions averaging compliance option in §63.2240(c), you must submit an Emissions Averaging Plan to the EPA Administrator for approval no later than 1 year before the compliance date or no later than 1 year before the date you would begin using an emissions average, whichever is later. The Emissions Averaging Plan must include the information in paragraphs (f)(1) through (6) of this section.

(1) Identification of all the process units to be included in the emissions average indicating which process units will be used to generate credits, and which process units that are subject to compliance options in Tables 1A and 1B to this subpart will be uncontrolled (used to generate debits) or under-controlled (used to generate debits and credits).

(2) Description of the control system used to generate emission credits for each process unit used to generate credits.

(3) Determination of the total HAP control efficiency for the control system used to generate emission credits for each credit-generating process unit.

(4) Calculation of the RMR and AMR, as calculated using Equations 1 through 3 of §63.2240(c)(1).

(5) Documentation of total HAP measurements made according to §63.2240(c)(2)(iv) and other relevant documentation to support calculation of the RMR and AMR.

(6) A summary of the operating parameters you will monitor and monitoring methods for each debit-generating and credit-generating process unit.

(g) You must notify the EPA Administrator within 30 days before you take any of the actions specified in paragraphs (g)(1) through (3) of this section.

(1) You modify or replace the control system for any process unit subject to the compliance options and operating requirements in this subpart.

(2) You shut down any process unit included in your Emissions Averaging Plan.

(3) You change a continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit or control device.

Back to Top

**§63.2281 What reports must I submit and when?**

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 9 to this subpart and as specified in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.2233 ending on June 30 or December 31, and lasting at least 6 months, but less than 12 months. For example, if your compliance date is March 1, then the first semiannual reporting period would begin on March 1 and end on December 31.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31 for the semiannual reporting period ending on June 30 and December 31, respectively.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information in paragraphs (c)(1) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information specified in §63.10(d)(5)(i).

(5) A description of control device maintenance performed while the control device was offline and one or more of the process units controlled by the control device was operating, including the information specified in paragraphs (c)(5)(i) through (iii) of this section.

(i) The date and time when the control device was shut down and restarted.

(ii) Identification of the process units that were operating and the number of hours that each process unit operated while the control device was offline.

(iii) A statement of whether or not the control device maintenance was included in your approved routine control device maintenance exemption developed pursuant to §63.2251. If the control device maintenance was included in your approved routine control device maintenance exemption, then you must report the information in paragraphs (c)(5)(iii)(A) through (C) of this section.

(A) The total amount of time that each process unit controlled by the control device operated during the semiannual compliance period and during the previous semiannual compliance period.

(B) The amount of time that each process unit controlled by the control device operated while the control device was down for maintenance covered under the routine control device maintenance exemption during the semiannual compliance period and during the previous semiannual compliance period.

(C) Based on the information recorded under paragraphs (c)(5)(iii)(A) and (B) of this section for each process unit, compute the annual percent of process unit operating uptime during which the control device was offline for routine maintenance using Equation 1 of this section.

$$RM = \frac{DT_p + DT_c}{PU_p + PU_c} \qquad (Eq.\ 1)$$

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Where:

RM = Annual percentage of process unit uptime during which control device is down for routine control device maintenance;

$PU_p$ = Process unit uptime for the previous semiannual compliance period;

$PU_c$ = Process unit uptime for the current semiannual compliance period;

$DT_p$ = Control device downtime claimed under the routine control device maintenance exemption for the previous semiannual compliance period;

$DT_c$ = Control device downtime claimed under the routine control device maintenance exemption for the current semiannual compliance period.

(6) The results of any performance tests conducted during the semiannual reporting period.

(7) If there are no deviations from any applicable compliance option or operating requirement, and there are no deviations from the requirements for work practice requirements in Table 8 to this subpart, a statement that there were no deviations from the compliance options, operating requirements, or work practice requirements during the reporting period.

(8) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from a compliance option or operating requirement and for each deviation from the work practice requirements in Table 8 to this subpart that occurs at an affected source where you are not using a CMS to comply with the compliance options, operating requirements, or work practice requirements in this subpart, the compliance report must contain the information in paragraphs (c)(1) through (6) of this section and in paragraphs (d)(1) and (2) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

(1) The total operating time of each affected source during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from a compliance option or operating requirement occurring at an affected source where you are using a CMS to comply with the compliance options and operating requirements in this subpart, you must include the information in paragraphs (c)(1) through (6) and paragraphs (e)(1) through (11) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

(1) The date and time that each malfunction started and stopped.

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction; during a period of control device maintenance covered in your approved routine control device maintenance exemption; or during another period.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control system problems, control device maintenance, process problems, other known causes, and other unknown causes.

(7) 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.

(8) A brief description of the process units.

(9) A brief description of the CMS.

(10) The date of the latest CMS certification or audit.

(11) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) If you comply with the emissions averaging compliance option in §63.2240(c), you must include in your semiannual compliance report calculations based on operating data from the semiannual reporting period that demonstrate that actual mass removal equals or exceeds the required mass removal.

(g) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 9 to this subpart along with, or as part of, the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any compliance option, operating requirement, or work practice requirement in this subpart, submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

Back to Top

### §63.2282 What records must I keep?

(a) You must keep the records listed in paragraphs (a)(1) through (4) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Documentation of your approved routine control device maintenance exemption, if you request such an exemption under §63.2251.

(4) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(b) You must keep the records required in Tables 7 and 8 to this subpart to show continuous compliance with each compliance option, operating requirement, and work practice requirement that applies to you.

(c) For each CEMS, you must keep the following records.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Request for alternatives to relative accuracy testing for CEMS as required in §63.8(f)(6)(i).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(d) If you comply with the emissions averaging compliance option in §63.2240(c), you must keep records of all information required to calculate emission debits and credits.

(e) If you operate a catalytic oxidizer, you must keep records of annual catalyst activity checks and subsequent corrective actions.

Back to Top

### §63.2283 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review as specified in §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

Back to Top

**Other Requirements and Information**

Back to Top

**§63.2290 What parts of the General Provisions apply to me?**

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.13 apply to you.

Back to Top

**§63.2291 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the compliance options, operating requirements, and work practice requirements in §§63.2240 and 63.2241 as specified in §63.6(g). For the purposes of delegation authority under 40 CFR part 63, subpart E, “compliance options” represent “emission limits”; “operating requirements” represent “operating limits”; and “work practice requirements” represent “work practice standards.”

(2) Approval of major alternatives to test methods as specified in §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring as specified in §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting as specified in §63.10(f) and as defined in §63.90.

[69 FR 46011, July 30, 2004, as amended at 72 FR 61063, Oct. 29, 2007]

Back to Top

**§63.2292 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act (CAA), in 40 CFR 63.2, the General Provisions, and in this section as follows:

*Affected source* means the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products. The affected source includes, but is not limited to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other NESHAP). The affected source also includes onsite storage of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (defined elsewhere in this section). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

*Agricultural fiber* means the fiber of an annual agricultural crop. Examples of agricultural fibers include, but are not limited to, wheat straw, rice straw, and bagasse.

*Biofilter* means an enclosed control system such as a tank or series of tanks with a fixed roof that contact emissions with a solid media (such as bark) and use microbiological activity to transform organic pollutants in a process exhaust stream to innocuous compounds such as carbon dioxide, water, and inorganic salts. Wastewater treatment systems such as aeration lagoons or activated sludge systems are not considered to be biofilters.

*Capture device* means a hood, enclosure, or other means of collecting emissions into a duct so that the emissions can be measured.

*Capture efficiency* means the fraction (expressed as a percentage) of the pollutants from an emission source that are collected by a capture device.

*Catalytic oxidizer* means a control system that combusts or oxidizes, in the presence of a catalyst, exhaust gas from a process unit. Catalytic oxidizers include regenerative catalytic oxidizers and thermal catalytic oxidizers.

*Combustion unit* means a dryer burner, process heater, or boiler. Combustion units may be used for combustion of organic HAP emissions.

*Control device* means any equipment that reduces the quantity of HAP emitted to the air. The device may destroy the HAP or secure the HAP for subsequent recovery. Control devices include, but are not limited to, thermal or catalytic oxidizers, combustion units that incinerate process exhausts, biofilters, and condensers.

*Control system or add-on control system* means the combination of capture and control devices used to reduce HAP emissions to the atmosphere.

*Conveyor strand dryer* means a conveyor dryer used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A *conveyor strand dryer* is a process unit.

*Conveyor strand dryer zone* means each portion of a conveyor strand dryer with a separate heat exchange system and exhaust vent(s). Conveyor strand dryers contain multiple zones (e.g., three zones), which may be divided into multiple sections.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any compliance option, operating requirement, or work practice requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart, and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any compliance option, operating requirement, or work practice requirement in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart. A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

*Direct-fired process unit* means a process unit that is heated by the passing of combustion exhaust through the process unit such that the process material is contacted by the combustion exhaust.

*Dryer heated zones* means the zones of a softwood veneer dryer or fiberboard mat dryer that are equipped with heating and hot air circulation units. The cooling zone(s) of the dryer through which ambient air is blown are not part of the dryer heated zones.

*Dry forming* means the process of making a mat of resinated fiber to be compressed into a reconstituted wood product such as particleboard, oriented strandboard, medium density fiberboard, or hardboard.

*Dry rotary dryer* means a rotary dryer that dries wood particles or fibers with a maximum inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a maximum inlet temperature of less than or equal to 600 °F. A dry rotary dryer is a process unit.

*Engineered wood product* means a product made with lumber, veneers, strands of wood, or from other small wood elements that are bound together with resin. Engineered wood products include, but are not limited to, laminated strand lumber, laminated veneer lumber, parallel strand lumber, wood I-joists, and glue-laminated beams.

*Fiber* means the discrete elements of wood or similar cellulosic material, which are separated by mechanical means, as in refining, that can be formed into boards.

*Fiberboard* means a composite panel composed of cellulosic fibers (usually wood or agricultural material) made by wet forming and compacting a mat of fibers. Fiberboard density generally is less than 0.50 grams per cubic centimeter (31.5 pounds per cubic foot).

*Fiberboard mat dryer* means a dryer used to reduce the moisture of wet-formed wood fiber mats by applying heat. A *fiberboard mat dryer* is a process unit.

*Flame zone* means the portion of the combustion chamber in a combustion unit that is occupied by the flame envelope.

*Furnish* means the fibers, particles, or strands used for making boards.

*Glue-laminated beam* means a structural wood beam made by bonding lumber together along its faces with resin.

*Green rotary dryer* means a rotary dryer that dries wood particles or fibers with an inlet moisture content of greater than 30 percent (by weight, dry basis) at any dryer inlet temperature or operates with an inlet temperature of greater than 600 °F with any inlet moisture content. A *green rotary dryer* is a process unit.

*Group 1 miscellaneous coating operations* means application of edge seals, nail lines, logo (or other information) paint, shelving edge fillers, trademark/gradestamp inks, and wood putty patches to plywood and composite wood products (except kiln-dried lumber) on the same site where the plywood and composite wood products are manufactured. Group 1 miscellaneous

coating operations also include application of synthetic patches to plywood at new affected sources.

*Hardboard* means a composite panel composed of inter-felted cellulosic fibers made by dry or wet forming and pressing of a resinated fiber mat. Hardboard generally has a density of 0.50 grams per cubic centimeter (31.5 pounds per cubic foot) or greater.

*Hardboard oven* means an oven used to heat treat or temper hardboard after hot pressing. Humidification chambers are not considered as part of hardboard ovens. A *hardboard oven* is a process unit.

*Hardwood* means the wood of a broad-leafed tree, either deciduous or evergreen. Examples of hardwoods include, but are not limited to, aspen, birch, poplar, and oak.

*Hardwood veneer dryer* means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium on rollers, belts, cables, or wire mesh. Hardwood veneer dryers are used to dry veneer with less than 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere in this section) that are heated by conventional means are not considered to be hardwood veneer dryers. A *hardwood veneer dryer* is a process unit.

*Kiln-dried lumber* means solid wood lumber that has been dried in a lumber kiln.

*Laminated strand lumber (LSL)* means a composite product formed into a billet made of thin wood strands cut from whole logs, resinated, and pressed together with the grain of each strand oriented parallel to the length of the finished product.

*Laminated veneer lumber (LVL)* means a composite product formed into a billet made from layers of resinated wood veneer sheets or pieces pressed together with the grain of each veneer aligned primarily along the length of the finished product. *Laminated veneer lumber* is also known as parallel strand lumber (PSL).

*Lumber* means boards or planks sawed or split from logs or timber, including logs or timber processed for use as utility poles or other wood components. Lumber can be either green (non-dried) or dried. Lumber is typically either air-dried or kiln-dried.

*Lumber kiln* means an enclosed dryer operated by applying heat to reduce the moisture content of lumber.

*Medium density fiberboard (MDF)* means a composite panel composed of cellulosic fibers (usually wood or agricultural fiber) made by dry forming and pressing of a resinated fiber mat.

*Method detection limit* means the minimum concentration of an analyte that can be determined with 99 percent confidence that the true value is greater than zero.

*Miscellaneous coating operations* means application of any of the following to plywood or composite wood products: edge seals, moisture sealants, anti-skid coatings, company logos, trademark or grade stamps, nail lines, synthetic patches, wood patches, wood putty, concrete forming oils, glues for veneer composing, and shelving edge fillers. Miscellaneous coating operations also include the application of primer to oriented strandboard siding that occurs at the same site as oriented strandboard manufacture and application of asphalt, clay slurry, or titanium dioxide coatings to fiberboard at the same site of fiberboard manufacture.

*Molded particleboard* means a shaped composite product (other than a composite panel) composed primarily of cellulosic materials (usually wood or agricultural fiber) generally in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

*MSF* means thousand square feet (92.9 square meters). Square footage of panels is usually measured on a thickness basis, such as $^{3}/_{8}$ -inch, to define the total volume of panels. Equation 6 of §63.2262(j) shows how to convert from one thickness basis to another.

*Nondetect data* means, for the purposes of this subpart, any value that is below the method detection limit.

*Non-HAP coating* means a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds.

*1-hour period* means a 60-minute period.

*Oriented strandboard (OSB)* means a composite panel produced from thin wood strands cut from whole logs, formed into resinated layers (with the grain of strands in one layer oriented perpendicular to the strands in adjacent layers), and pressed.

*Oven-dried ton(s) (ODT)* means tons of wood dried until all of the moisture in the wood is removed. One oven-dried ton equals 907 oven-dried kilograms.

*Parallel strand lumber (PSL)* means a composite product formed into a billet made from layers of resinated wood veneer sheets or pieces pressed together with the grain of each veneer aligned primarily along the length of the finished product. *Parallel strand lumber* is also known as laminated veneer lumber (LVL).

*Partial wood products enclosure* means an enclosure that does not meet the design criteria for a wood products enclosure as defined in this subpart.

*Particle* means a discrete, small piece of cellulosic material (usually wood or agricultural fiber) produced mechanically and used as the aggregate for a particleboard.

*Particleboard* means a composite panel composed primarily of cellulosic materials (usually wood or agricultural fiber) generally in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

*Plywood* means a panel product consisting of layers of wood veneers hot pressed together with resin. Plywood includes panel products made by hot pressing (with resin) veneers to a substrate such as particleboard, medium density fiberboard, or lumber. Plywood products may be flat or curved.

*Plywood and composite wood products (PCWP) manufacturing facility* means a facility that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a panel, engineered wood product, or other product defined in §63.2292. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, molded particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

*Press predryer* means a dryer used to reduce the moisture and elevate the temperature by applying heat to a wet-formed fiber mat before the mat enters a hot press. A *press predryer* is a process unit.

*Pressurized refiner* means a piece of equipment operated under pressure for preheating (usually by steaming) wood material and refining (rubbing or grinding) the wood material into fibers. Pressurized refiners are operated with continuous infeed and outfeed of wood material and maintain elevated internal pressures (*i.e.*, there is no pressure release) throughout the preheating and refining process. A *pressurized refiner* is a process unit.

*Primary tube dryer* means a single-stage tube dryer or the first stage of a multi-stage tube dryer. Tube dryer stages are separated by vents for removal of moist gases between stages (*e.g.*, a product cyclone at the end of a single-stage dryer or between the first and second stages of a multi-stage tube dryer). The first stage of a multi-stage tube dryer is used to remove the majority of the moisture from the wood furnish (compared to the moisture reduction in subsequent stages of the tube dryer). Blow-lines used to apply resin are considered part of the primary tube dryer. A *primary tube dryer* is a process unit.

*Process unit* means equipment classified according to its function such as a blender, dryer, press, former, or board cooler.

*Reconstituted wood product board cooler* means a piece of equipment designed to reduce the temperature of a board by means of forced air or convection within a controlled time period after the board exits the reconstituted wood product press unloader. Board coolers include wicket and

star type coolers commonly found at medium density fiberboard and particleboard plants. Board coolers do not include cooling sections of dryers (*e.g.*, veneer dryers or fiberboard mat dryers) or coolers integrated into or following hardboard bake ovens or humidifiers. A *reconstituted wood product board cooler* is a process unit.

*Reconstituted wood product press* means a press, including (if applicable) the press unloader, that presses a resinated mat of wood fibers, particles, or strands between hot platens or hot rollers to compact and set the mat into a panel by simultaneous application of heat and pressure. Reconstituted wood product presses are used in the manufacture of hardboard, medium density fiberboard, particleboard, and oriented strandboard. Extruders are not considered to be reconstituted wood product presses. A *reconstituted wood product press* is a process unit.

*Representative operating conditions* means operation of a process unit during performance testing under the conditions that the process unit will typically be operating in the future, including use of a representative range of materials (*e.g.*, wood material of a typical species mix and moisture content or typical resin formulation) and representative operating temperature range.

*Resin* means the synthetic adhesive (including glue) or natural binder, including additives, used to bond wood or other cellulosic materials together to produce plywood and composite wood products.

*Responsible official* means responsible official as defined in 40 CFR 70.2 and 40 CFR 71.2.

*Rotary strand dryer* means a rotary dryer operated by applying heat and used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A *rotary strand dryer* is a process unit.

*Secondary tube dryer* means the second stage and subsequent stages following the primary stage of a multi-stage tube dryer. Secondary tube dryers, also referred to as relay dryers, operate at lower temperatures than the primary tube dryer they follow. Secondary tube dryers are used to remove only a small amount of the furnish moisture compared to the furnish moisture reduction across the primary tube dryer. A *secondary tube dryer* is a process unit.

*Softwood* means the wood of a coniferous tree. Examples of softwoods include, but are not limited to, Southern yellow pine, Douglas fir, and White spruce.

*Softwood veneer dryer* means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium, generally on rollers, belts, cables, or wire mesh. Softwood veneer dryers are used to dry veneer with greater than or equal to 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere

in this section) that are heated by conventional means are not considered to be softwood veneer dryers. A *softwood veneer dryer* is a process unit.

*Startup* means bringing equipment online and starting the production process.

*Startup, initial* means the first time equipment is put into operation. Initial startup does not include operation solely for testing equipment. Initial startup does not include subsequent startups (as defined in this section) following malfunction or shutdowns or following changes in product or between batch operations. Initial startup does not include startup of equipment that occurred when the source was an area source.

*Startup, shutdown, and malfunction plan* (SSMP) means a plan developed according to the provisions of §63.6(e)(3).

*Strand* means a long (with respect to thickness and width), flat wood piece specially cut from a log for use in oriented strandboard, laminated strand lumber, or other wood strand-based product.

*Temporary total enclosure (TTE)* means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source, as defined in Method 204 of 40 CFR part 51, appendix M.

*Thermal oxidizer* means a control system that combusts or oxidizes exhaust gas from a process unit. Thermal oxidizers include regenerative thermal oxidizers and combustion units.

*Total hazardous air pollutant emissions* means, for purposes of this subpart, the sum of the emissions of the following six compounds: acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde.

*Tube dryer* means a single-stage or multi-stage dryer operated by applying heat to reduce the moisture of wood fibers or particles as they are conveyed (usually pneumatically) through the dryer. Resin may or may not be applied to the wood material before it enters the tube dryer. Tube dryers do not include pneumatic fiber transport systems that use temperature and humidity conditioned pneumatic system supply air in order to prevent cooling of the wood fiber as it is moved through the process. A *tube dryer* is a process unit.

*Veneer* means thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, or other products.

*Veneer redryer* means a dryer heated by conventional means, such as direct wood-fired, direct-gas-fired, or steam heated, that is used to redry veneer that has been previously dried. Because the veneer dried in a veneer redryer has been previously dried, the inlet moisture content of the veneer entering the redryer is less than 25 percent (by weight, dry basis). Batch units used to redry veneer (such as redry cookers) are not considered to be veneer redryers. A *veneer redryer* is a process unit.

*Wet control device* means any equipment that uses water as a means of collecting an air pollutant. Wet control devices include scrubbers, wet electrostatic precipitators, and electrified filter beds. Wet control devices do not include biofilters or other equipment that destroys or degrades HAP.

*Wet forming* means the process of making a slurry of water, fiber, and additives into a mat of fibers to be compressed into a fiberboard or hardboard product.

*Wood I-joists* means a structural wood beam with an I-shaped cross section formed by bonding (with resin) wood or laminated veneer lumber flanges onto a web cut from a panel such as plywood or oriented strandboard.

*Wood products enclosure* means a permanently installed containment that was designed to meet the following physical design criteria:

(1) Any natural draft opening shall be at least four equivalent opening diameters from each HAP-emitting point, except for where board enters and exits the enclosure, unless otherwise specified by the EPA Administrator.

(2) The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor, and ceiling.

(3) The average facial velocity of air through all natural draft openings shall be at least 3,600 meters per hour (200 feet per minute). The direction of airflow through all natural draft openings shall be into the enclosure.

(4) All access doors and windows whose areas are not included in item 2 of this definition and are not included in the calculation of facial velocity in item 3 of this definition shall be closed during routine operation of the process.

(5) The enclosure is designed and maintained to capture all emissions for discharge through a control device.

*Work practice requirement* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

Back to Top

**Table 1A to Subpart DDDD of Part 63—Production-Based Compliance Options**

| **For the following process units . . .** | **You must meet the following production-based compliance option (total HAP[a] basis) . . .** |
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| | |
|---|---|
| (1) Fiberboard mat dryer heated zones (at new affected sources only) | 0.022 lb/MSF 1/2 ″. |
| (2) Green rotary dryers | 0.058 lb/ODT. |
| (3) Hardboard ovens | 0.022 lb/MSF 1/8 ″. |
| (4) Press predryers (at new affected sources only) | 0.037 lb/MSF 1/2 ″. |
| (5) Pressurized refiners | 0.039 lb/ODT. |
| (6) Primary tube dryers | 0.26 lb/ODT. |
| (7) Reconstituted wood product board coolers (at new affected sources only) | 0.014 lb/MSF 3/4 ″. |
| (8) Reconstituted wood product presses | 0.30 lb/MSF 3/4 ″. |
| (9) Softwood veneer dryer heated zones | 0.022 lb/MSF 3/8 ″. |
| (10) Rotary strand dryers | 0.18 lb/ODT. |
| (11) Secondary tube dryers | 0.010 lb/ODT. |

[a]Total HAP, as defined in §63.2292, includes acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. lb/ODT = pounds per oven-dried ton; lb/MSF = pounds per thousand square feet with a specified thickness basis (inches). Section 63.2262(j) shows how to convert from one thickness basis to another.

Note: There is no production-based compliance option for conveyor strand dryers.

Back to Top

**Table 1B to Subpart DDDD of Part 63—Add-on Control Systems Compliance Options**

| **For each of the following process units . . .** | **You must comply with one of the following six compliance options by using an emissions control** |
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| | **system . . .** |
| Fiberboard mat dryer heated zones (at new affected sources only); green rotary dryers; hardboard ovens; press predryers (at new affected sources only); pressurized refiners; primary tube dryers; secondary tube dryers; reconstituted wood product board coolers (at new affected sources only); reconstituted wood product presses; softwood veneer dryer heated zones; rotary strand dryers; conveyor strand dryer zone one (at existing affected sources); and conveyor strand dryer zones one and two (at new affected sources) | (1) Reduce emissions of total HAP, measured as THC (as carbon)[a], by 90 percent; or<br>(2) Limit emissions of total HAP, measured as THC (as carbon)[a], to 20 ppmvd; or<br>(3) Reduce methanol emissions by 90 percent; or<br>(4) Limit methanol emissions to less than or equal to 1 ppmvd if uncontrolled methanol emissions entering the control device are greater than or equal to 10 ppmvd; or<br>(5) Reduce formaldehyde emissions by 90 percent; or<br>(6) Limit formaldehyde emissions to less than or equal to 1 ppmvd if uncontrolled formaldehyde emissions entering the control device are greater than or equal to 10 ppmvd. |

[a]You may choose to subtract methane from THC as carbon measurements.

Back to Top

**Table 2 to Subpart DDDD of Part 63—Operating Requirements**

| **If you operate a(n) . . .** | **You must . . .** | **Or you must . . .** |
|---|---|---|
| (1) Thermal oxidizer | Maintain the 3-hour block average firebox temperature above the minimum temperature established during the performance test | Maintain the 3-hour block average THC concentration[a] in the thermal oxidizer exhaust below the maximum concentration established during the performance test. |
| (2) Catalytic oxidizer | Maintain the 3-hour block average | Maintain the 3-hour block |

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| | catalytic oxidizer temperature above the minimum temperature established during the performance test; AND check the activity level of a representative sample of the catalyst at least every 12 months | average THC concentration[a] in the catalytic oxidizer exhaust below the maximum concentration established during the performance test. |
| (3) Biofilter | Maintain the 24-hour block biofilter bed temperature within the range established according to §63.2262(m) | Maintain the 24-hour block average THC concentration[a] in the biofilter exhaust below the maximum concentration established during the performance test. |
| (4) Control device other than a thermal oxidizer, catalytic oxidizer, or biofilter | Petition the EPA Administrator for site-specific operating parameter(s) to be established during the performance test and maintain the average operating parameter(s) within the range(s) established during the performance test | Maintain the 3-hour block average THC concentration[a] in the control device exhaust below the maximum concentration established during the performance test. |
| (5) Process unit that meets a compliance option in Table 1A of this subpart, or a process unit that generates debits in an emissions average without the use of a control device | Maintain on a daily basis the process unit controlling operating parameter(s) within the ranges established during the performance test according to §63.2262(n) | Maintain the 3-hour block average THC concentration[a] in the process unit exhaust below the maximum concentration established during the performance test. |

[a]You may choose to subtract methane from THC measurements.

Back to Top

**Table 3 to Subpart DDDD of Part 63—Work Practice Requirements**

| **For the following process units at existing or new affected sources . . .** | **You must . . .** |
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| (1) Dry rotary dryers | Process furnish with a 24-hour block average inlet moisture content of less than or equal to 30 percent (by weight, dry basis); AND operate with a 24-hour block average inlet dryer temperature of less than or equal to 600 °F. |
| (2) Hardwood veneer dryers | Process less than 30 volume percent softwood species on an annual basis. |
| (3) Softwood veneer dryers | Minimize fugitive emissions from the dryer doors through (proper maintenance procedures) and the green end of the dryers (through proper balancing of the heated zone exhausts). |
| (4) Veneer redryers | Process veneer that has been previously dried, such that the 24-hour block average inlet moisture content of the veneer is less than or equal to 25 percent (by weight, dry basis). |
| (5) Group 1 miscellaneous coating operations | Use non-HAP coatings as defined in §63.2292. |

Back to Top

**Table 4 to Subpart DDDD of Part 63—Requirements for Performance Tests**

| **For . . .** | **You must . . .** | **Using . . .** |
|---|---|---|
| (1) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c) | select sampling port's location and the number of traverse ports | Method 1 or 1A of 40 CFR part 60, appendix A (as appropriate). |
| (2) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c) | determine velocity and volumetric flow rate | Method 2 in addition to Method 2A, 2C, 2D, 2F, or 2G in appendix A to 40 CFR part 60 (as appropriate). |
| (3) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in | conduct gas molecular weight analysis | Method 3, 3A, or 3B in appendix A to 40 CFR part 60 (as appropriate). |

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| calculation of an emissions average under §63.2240(c) | | |
| (4) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c) | measure moisture content of the stack gas | Method 4 in appendix A to 40 CFR part 60; OR Method 320 in appendix A to 40 CFR part 63; OR ASTM D6348-03 (IBR, see §63.14(b)). |
| (5) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a total HAP as THC compliance option | measure emissions of total HAP as THC | Method 25A in appendix A to 40 CFR part 60. You may measure emissions of methane using EPA Method 18 in appendix A to 40 CFR part 60 and subtract the methane emissions from the emissions of total HAP as THC. |
| (6) each process unit subject to a compliance option in table 1A to this subpart; OR for each process unit used in calculation of an emissions average under §63.2240(c) | measure emissions of total HAP (as defined in §63.2292) | Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14(f)); OR ASTM D6348-03 (IBR, see §63.14(b)) provided that percent R as determined in Annex A5 of ASTM D6348-03 is equal or greater than 70 percent and less than or equal to 130 percent. |
| (7) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a methanol compliance option | measure emissions of methanol | Method 308 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method CI/WP-98.01 (IBR, see §63.14(f)); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14(f)). |
| (8) each process unit subject to a compliance option in table 1B | measure emissions of formaldehyde | Method 316 in appendix A to 40 CFR part 63; OR Method 320 in appendix A |

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| to this subpart for which you choose to demonstrate compliance using a formaldehyde compliance option | | to 40 CFR part 63; OR Method 0011 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication No. SW-846) for formaldehyde; OR the NCASI Method CI/WP-98.01 (IBR, see §63.14(f)); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14(f)). |
| (9) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1B to this subpart or used in calculation of an emissions average under §63.2240(c) | meet the design specifications included in the definition of wood products enclosure in §63.2292; or determine the percent capture efficiency of the enclosure directing emissions to an add-on control device | Methods 204 and 204A through 204F of 40 CFR part 51, appendix M, to determine capture efficiency (except for wood products enclosures as defined in §63.2292). Enclosures that meet the definition of wood products enclosure or that meet Method 204 requirements for a permanent total enclosure (PTE) are assumed to have a capture efficiency of 100 percent. Enclosures that do not meet either the PTE requirements or design criteria for a wood products enclosure must determine the capture efficiency by constructing a TTE according to the requirements of Method 204 and applying Methods 204A through 204F (as appropriate). As an alternative to Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart. |
| (10) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1A to this | determine the percent capture efficiency | a TTE and Methods 204 and 204A through 204F (as appropriate) of 40 CFR part 51, appendix M. As an alternative to installing a TTE and using Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart. Enclosures that meet the design criteria (1) through |

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| subpart | | (4) in the definition of wood products enclosure, or that meet Method 204 requirements for a PTE (except for the criteria specified in section 6.2 of Method 204) are assumed to have a capture efficiency of 100 percent. Measured emissions divided by the capture efficiency provides the emission rate. |
| (11) each process unit subject to a compliance option in tables 1A and 1B to this subpart or used in calculation of an emissions average under §63.2240(c) | establish the site-specific operating requirements (including the parameter limits or THC concentration limits) in table 2 to this subpart | data from the parameter monitoring system or THC CEMS and the applicable performance test method(s). |

[71 FR 8373, Feb. 16, 2006]

Back to Top

**Table 5 to Subpart DDDD of Part 63—Performance Testing and Initial Compliance Demonstrations for the Compliance Options and Operating Requirements**

| **For each . . .** | **For the following compliance options and operating requirements . . .** | **You have demonstrated initial compliance if . . .** |
|---|---|---|
| (1) Process unit listed in Table 1A to this subpart | Meet the production-based compliance options listed in Table 1A to this subpart | The average total HAP emissions measured using the methods in Table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in Table 1A to this subpart; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance |

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| | | option value. |
| (2) Process unit listed in Table 1B to this subpart | Reduce emissions of total HAP, measured as THC, by 90 percent | Total HAP emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, are reduced by at least 90 percent, as calculated using the procedures in §63.2262; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent. |
| (3) Process unit listed in Table 1B to this subpart | Limit emissions of total HAP, measured as THC, to 20 ppmvd | The average total HAP emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, do not exceed 20 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed 20 ppmvd. |
| (4) Process unit listed in Table 1B to this subpart | Reduce methanol or formaldehyde emissions by 90 percent | The methanol or formaldehyde emissions measured using the methods in Table 4 to this subpart over the 3-hour performance test, are reduced by at least 90 percent, as calculated using the procedures in §63.2262; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent. |
| (5) Process unit listed in Table 1B to this subpart | Limit methanol or formaldehyde emissions to less than or equal to 1 ppmvd (if uncontrolled emissions are greater than or equal to 10 ppmvd) | The average methanol or formaldehyde emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, do not exceed 1 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 to this |

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| | | subpart for the process unit over the performance test during which emissions did not exceed 1 ppmvd. If the process unit is a reconstituted wood product press or a reconstituted wood product board cooler, your capture device either meets the EPA Method 204 criteria for a PTE or achieves a capture efficiency of greater than or equal to 95 percent. |
| (6) Reconstituted wood product press at a new or existing affected source, or reconstituted wood product board cooler at a new affected source | Compliance options in Tables 1A and 1B to this subpart or the emissions averaging compliance option in §63.2240(c) | You submit the results of capture efficiency verification using the methods in Table 4 to this subpart with your Notification of Compliance Status. |
| (7) Process unit listed in Table 1B to this subpart controlled by routing exhaust to a combustion unit | Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) | You submit with your Notification of Compliance Status documentation showing that the process exhausts controlled enter into the flame zone of your combustion unit. |
| (8) Process unit listed in Table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions | Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) | You submit with your Notification of Compliance Status your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere. |

Back to Top

**Table 6 to Subpart DDDD of Part 63—Initial Compliance Demonstrations for Work Practice Requirements**

| For each . . . | For the following work practice requirements . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| (1) Dry rotary | Process furnish with an inlet moisture content less than or | You meet the work practice requirement AND you submit a signed statement with the |

| | | |
|---|---|---|
| dryer | equal to 30 percent (by weight, dry basis) AND operate with an inlet dryer temperature of less than or equal to 600 °F | Notification of Compliance Status that the dryer meets the criteria of a “dry rotary dryer” AND you have a record of the inlet moisture content and inlet dryer temperature (as required in §63.2263). |
| (2) Hardwood veneer dryer | Process less than 30 volume percent softwood species | You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer meets the criteria of a “hardwood veneer dryer” AND you have a record of the percentage of softwoods processed in the dryer (as required in §63.2264). |
| (3) Softwood veneer dryer | Minimize fugitive emissions from the dryer doors and the green end | You meet the work practice requirement AND you submit with the Notification of Compliance Status a copy of your plan for minimizing fugitive emissions from the veneer dryer heated zones (as required in §63.2265). |
| (4) Veneer redryers | Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis) | You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer operates only as a redryer AND you have a record of the veneer inlet moisture content of the veneer processed in the redryer (as required in §63.2266). |
| (5) Group 1 miscellaneous coating operations | Use non-HAP coatings as defined in §63.2292 | You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that you are using non-HAP coatings AND you have a record showing that you are using non-HAP coatings. |

Back to Top

**Table 7 to Subpart DDDD of Part 63—Continuous Compliance With the Compliance Options and Operating Requirements**

| For . . . | For the following compliance options and operating requirements . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| (1) Each process unit listed in Table 1B to this subpart or used in calculation of an emissions average under §63.2240(c) | Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of operating parameters | Collecting and recording the operating parameter monitoring system data listed in Table 2 to this subpart for the process unit according to §63.2269(a) through (b) and §63.2270; AND reducing the operating parameter monitoring system data to the specified averages in units of the applicable requirement according to calculations in §63.2270; AND maintaining the average operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262. |
| (2) Each process unit listed in Tables 1A and 1B to this subpart or used in calculation of an emissions average under §63.2240(c) | Compliance options in Tables 1A and 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 of this subpart based on THC CEMS data | Collecting and recording the THC monitoring data listed in Table 2 to this subpart for the process unit according to §63.2269(d); AND reducing the CEMS data to 3-hour block averages according to calculations in §63.2269(d); AND maintaining the 3-hour block average THC concentration in the exhaust gases less than or equal to the THC concentration established according to §63.2262. |
| (3) Each process unit using a biofilter | Compliance options in Tables 1B to this subpart or the emissions averaging compliance option in §63.2240(c) | Conducting a repeat performance test using the applicable method(s) specified in Table 4 to this subpart within 2 years following the previous performance test and within 180 days after each replacement of any portion of the biofilter bed media with a different type of media or each |

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| | | replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media. |
| (4) Each process unit using a catalytic oxidizer | Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) | Checking the activity level of a representative sample of the catalyst at least every 12 months and taking any necessary corrective action to ensure that the catalyst is performing within its design range. |
| (5) Each process unit listed in Table 1A to this subpart, or each process unit without a control device used in calculation of an emissions averaging debit under §63.2240(c) | Compliance options in Table 1A to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of process unit controlling operating parameters | Collecting and recording on a daily basis process unit controlling operating parameter data; AND maintaining the operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262. |
| (6) Each Process unit listed in Table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions | Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) | Implementing your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere. |

Back to Top

**Table 8 to Subpart DDDD of Part 63—Continuous Compliance With the Work Practice Requirements**

| For . . . | For the following work practice requirements . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| (1) Dry rotary dryer | Process furnish with an inlet moisture content less than or equal to 30 percent (by weight, dry basis) AND operate with | Maintaining the 24-hour block average inlet furnish moisture content at less than or equal to 30 percent (by weight, dry basis) AND maintaining the 24-hour block average inlet |

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| | an inlet dryer temperature of less than or equal to 600 °F | dryer temperature at less than or equal to 600 °F; AND keeping records of the inlet temperature of furnish moisture content and inlet dryer temperature. |
| (2) Hardwood veneer dryer | Process less than 30 volume percent softwood species | Maintaining the volume percent softwood species processed below 30 percent AND keeping records of the volume percent softwood species processed. |
| (3) Softwood veneer dryer | Minimize fugitive emissions from the dryer doors and the green end | Following (and documenting that you are following) your plan for minimizing fugitive emissions. |
| (4) Veneer redryers | Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis) | Maintaining the 24-hour block average inlet moisture content of the veneer processed at or below of less than or 25 percent AND keeping records of the inlet moisture content of the veneer processed. |
| (5) Group 1 miscellaneous coating operations | Use non-HAP coatings as defined in §63.2292 | Continuing to use non-HAP coatings AND keeping records showing that you are using non-HAP coatings. |

Back to Top

**Table 9 to Subpart DDDD of Part 63—Requirements for Reports**

| **You must submit a(n) . . .** | **The report must contain . . .** | **You must submit the report . . .** |
|---|---|---|
| (1) Compliance report | The information in §63.2281(c) through (g) | Semiannually according to the requirements in §63.2281(b). |
| (2) immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent | (i) Actions taken for the event | By fax or telephone within 2 working days after starting actions inconsistent with the plan. |

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| with your SSMP | | |
| | (ii) The information in §63.10(d)(5)(ii) | By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. |

Back to Top

**Table 10 to Subpart DDDD of Part 63—Applicability of General Provisions to Subpart DDDD**

| Citation | Subject | Brief description | Applies to subpart DDDD |
|---|---|---|---|
| §63.1 | Applicability | Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications | Yes. |
| §63.2 | Definitions | Definitions for part 63 standards | Yes. |
| §63.3 | Units and Abbreviations | Units and abbreviations for part 63 standards | Yes. |
| §63.4 | Prohibited Activities | Prohibited activities; compliance date; circumvention, fragmentation | Yes. |
| §63.5 | Construction/Reconstruction | Applicability; applications; approvals | Yes. |
| §63.6(a) | Applicability | GP apply unless compliance extension; GP apply to area sources that become major | Yes. |
| §63.6(b)(1)-(4) | Compliance Dates for New and Reconstructed Sources | Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or | Yes. |

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| | | reconstruction commences for section 112(f) | |
| §63.6(b)(5) | Notification | Must notify if commenced construction or reconstruction after proposal | Yes. |
| §63.6(b)(6) | [Reserved] | | |
| §63.6(b)(7) | Compliance Dates for New and Reconstructed Area Sources that Become Major | Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source | Yes. |
| §63.6(c)(1)-(2) | Compliance Dates for Existing Sources | Comply according to date in subpart, which must be no later than 3 years after effective date; for section 112(f) standards, comply within 90 days of effective date unless compliance extension | Yes. |
| §63.6(c)(3)-(4) | [Reserved] | | |
| §63.6(c)(5) | Compliance Dates for Existing Area Sources that Become Major | Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (*e.g.*, 3 years) | Yes. |
| §63.6(d) | [Reserved] | | |
| §63.6(e)(1)-(2) | Operation & Maintenance | Operate to minimize emissions at all times; correct malfunctions as soon as practicable; operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and | Yes. |

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| | | maintenance requirements were met | |
| §63.6(e)(3) | Startup, Shutdown, and Malfunction Plan (SSMP) | Requirement for SSM and SSMP; content of SSMP | Yes. |
| §63.6(f)(1) | Compliance Except During SSM | You must comply with emission standards at all times except during SSM | Yes. |
| §63.6(f)(2)-(3) | Methods for Determining Compliance | Compliance based on performance test, operation and maintenance plans, records, inspection | Yes. |
| §63.6(g)(1)-(3) | Alternative Standard | Procedures for getting an alternative standard | Yes. |
| §63.6(h)(1)-(9) | Opacity/Visible Emission (VE) Standards | Requirements for opacity and visible emission standards | NA. |
| §63.6(i)(1)-(14) | Compliance Extension | Procedures and criteria for Administrator to grant compliance extension | Yes. |
| §63.6(i)(15) | [Reserved] | | |
| §63.6(i)(16) | Compliance Extension | Compliance extension and Administrator's authority | Yes. |
| §63.6(j) | Presidential Compliance Exemption | President may exempt source category from requirement to comply with rule | Yes. |
| §63.7(a)(1)-(2) | Performance Test Dates | Dates for conducting initial performance testing and other compliance demonstrations; must conduct 180 days after first subject to rule | Yes. |

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| §63.7(a)(3) | Section 114 Authority | Administrator may require a performance test under CAA section 114 at any time | Yes. |
| §63.7(b)(1) | Notification of Performance Test | Must notify Administrator 60 days before the test | Yes. |
| §63.7(b)(2) | Notification of Rescheduling | If have to reschedule performance test, must notify Administrator as soon as practicable | Yes. |
| §63.7(c) | Quality Assurance/Test Plan | Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing | Yes. |
| §63.7(d) | Testing Facilities | Requirements for testing facilities | Yes. |
| §63.7(e)(1) | Conditions for Conducting Performance Tests | Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a violation to exceed standard during SSM | Yes. |
| §63.7(e)(2) | Conditions for Conducting Performance Tests | Must conduct according to rule and EPA test methods unless Administrator approves alternative | Yes. |
| §63.7(e)(3) | Test Run Duration | Must have three test runs for at least the time specified in the relevant standard; compliance is based on arithmetic mean of three runs; specifies conditions when data from an additional test run can be used | Yes. |

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| §63.7(f) | Alternative Test Method | Procedures by which Administrator can grant approval to use an alternative test method | Yes. |
| §63.7(g) | Performance Test Data Analysis | Must include raw data in performance test report; must submit performance test data 60 days after end of test with the notification of compliance status; keep data for 5 years | Yes. |
| §63.7(h) | Waiver of Tests | Procedures for Administrator to waive performance test | Yes. |
| §63.8(a)(1) | Applicability of Monitoring Requirements | Subject to all monitoring requirements in standard | Yes. |
| §63.8(a)(2) | Performance Specifications | Performance specifications in appendix B of part 60 apply | Yes. |
| §63.8(a)(3) | [Reserved] | | |
| §63.8(a)(4) | Monitoring with Flares | Requirements for flares in §63.11 apply | NA. |
| §63.8(b)(1) | Monitoring | Must conduct monitoring according to standard unless Administrator approves alternative | Yes. |
| §63.8(b)(2)-(3) | Multiple Effluents and Multiple Monitoring Systems | Specific requirements for installing monitoring systems; must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring | Yes. |

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| | | system is a backup | |
| §63.8(c)(1) | Monitoring System Operation and Maintenance | Maintain monitoring system in a manner consistent with and good air pollution control practices | Yes. |
| §63.8(c)(1)(i) | Operation and Maintenance of CMS | Must maintain and operate CMS in accordance with §63.6(e)(1) | Yes. |
| §63.8(c)(1)(ii) | Spare Parts for CMS | Must maintain spare parts for routine CMS repairs | Yes. |
| §63.8(c)(1)(iii) | SSMP for CMS | Must develop and implement SSMP for CMS | Yes. |
| §63.8(c)(2)-(3) | Monitoring System Installation | Must install to get representative emission of parameter measurements; must verify operational status before or at performance test | Yes. |
| §63.8(c)(4) | Continuous Monitoring System (CMS) Requirements | CMS must be operating except during breakdown, out-of-control, repair, maintenance, and high-level calibration drifts; COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period | Yes. |
| §63.8(c)(5) | Continuous Opacity Monitoring System (COMS) Minimum Procedures | COMS minimum procedures | NA. |
| §63.8(c)(6)-(8) | CMS Requirements | Zero and high-level calibration check requirements; out-of-control periods | Yes. |

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| §63.8(d) | CMS Quality Control | Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years. Keep old versions for 5 years after revisions | Yes. |
| §63.8(e) | CMS Performance Evaluation | Notification, performance evaluation test plan, reports | Yes. |
| §63.8(f)(1)-(5) | Alternative Monitoring Method | Procedures for Administrator to approve alternative monitoring | Yes. |
| §63.8(f)(6) | Alternative to Relative Accuracy Test | Procedures for Administrator to approve alternative relative accuracy tests for CEMS | Yes. |
| §63.8(g) | Data Reduction | COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that can't be used in average; rounding of data | Yes. |
| §63.9(a) | Notification Requirements | Applicability and State delegation | Yes. |
| §63.9(b)(1)-(2) | Initial Notifications | Submit notification 120 days after effective date; contents of notification | Yes. |
| §63.9(b)(3) | [Reserved] | | |
| §63.9(b)(4)-(5) | Initial Notifications | Submit notification 120 days after effective date; notification of intent to construct/reconstruct; notification of commencement of construct/reconstruct; notification of startup; contents of each | Yes. |

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| §63.9(c) | Request for Compliance Extension | Can request if cannot comply by date or if installed best available control technology/lowest achievable emission rate | Yes. |
| §63.9(d) | Notification of Special Compliance Requirements for New Source | For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date | Yes. |
| §63.9(e) | Notification of Performance Test | Notify EPA Administrator 60 days prior | Yes. |
| §63.9(f) | Notification of Visible Emissions/Opacity Test | Notify EPA Administrator 30 days prior | No. |
| §63.9(g) | Additional Notifications When Using CMS | Notification of performance evaluation; notification using COMS data; notification that exceeded criterion for relative accuracy | Yes. |
| §63.9(h)(1)-(6) | Notification of Compliance Status | Contents; due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority | Yes. |
| §63.9(i) | Adjustment of Submittal Deadlines | Procedures for Administrator to approve change in when notifications must be submitted | Yes. |
| §63.9(j) | Change in Previous Information | Must submit within 15 days after the change | Yes. |
| §63.10(a) | Recordkeeping/Reporting | Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for | Yes. |

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| | | owners of more than one source | |
| §63.10(b)(1) | Recordkeeping/Reporting | General Requirements; keep all records readily available; keep for 5 years | Yes. |
| §63.10(b)(2)(i)-(iv) | Records Related to Startup, Shutdown, and Malfunction | Occurrence of each of operation (process equipment); occurrence of each malfunction of air pollution equipment; maintenance on air pollution control equipment; actions during startup, shutdown, and malfunction | Yes. |
| §63.10(b)(2)(vi) and (x)-(xi) | CMS Records | Malfunctions, inoperative, out-of-control | Yes. |
| §63.10(b)(2)(vii)-(ix) | Records | Measurements to demonstrate compliance with compliance options and operating requirements; performance test, performance evaluation, and visible emission observation results; measurements to determine conditions of performance tests and performance evaluations | Yes. |
| §63.10(b)(2)(xii) | Records | Records when under waiver | Yes. |
| §63.10(b)(2)(xiii) | Records | Records when using alternative to relative accuracy test | Yes. |
| §63.10(b)(2)(xiv) | Records | All documentation supporting initial notification and notification of compliance status | Yes. |
| §63.10(b)(3) | Records | Applicability determinations | Yes. |
| §63.10(c)(1)-(6), | Records | Additional records for CMS | Yes. |

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| (9)-(15) | | | |
| §63.10(c)(7)-(8) | Records | Records of excess emissions and parameter monitoring exceedances for CMS | No. |
| §63.10(d)(1) | General Reporting Requirements | Requirement to report | Yes. |
| §63.10(d)(2) | Report of Performance Test Results | When to submit to Federal or State authority | Yes. |
| §63.10(d)(3) | Reporting Opacity or VE Observations | What to report and when | NA. |
| §63.10(d)(4) | Progress Reports | Must submit progress reports on schedule if under compliance extension | Yes. |
| §63.10(d)(5) | Startup, Shutdown, and Malfunction Reports | Contents and submission | Yes. |
| §63.10(e)(1)-(2) | Additional CMS Reports | Must report results for each CEM on a unit; written copy of performance evaluation; 3 copies of COMS performance evaluation | Yes. |
| §63.10(e)(3) | Reports | Excess emission reports | No. |
| §63.10(e)(4) | Reporting COMS data | Must submit COMS data with performance test data | NA. |
| §63.10(f) | Waiver for Recordkeeping/Reporting | Procedures for EPA Administrator to waive | Yes. |
| §63.11 | Flares | Requirements for flares | NA. |
| §63.12 | Delegation | State authority to enforce standards | Yes. |

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| §63.13 | Addresses | Addresses where reports, notifications, and requests are send | Yes. |
| §63.14 | Incorporation by Reference | Test methods incorporated by reference | Yes. |
| §63.15 | Availability of Information | Public and confidential information | Yes. |

Back to Top

**Appendix A to Subpart DDDD of Part 63—Alternative Procedure To Determine Capture Efficiency From Enclosures Around Hot Presses in the Plywood and Composite Wood Products Industry Using Sulfur Hexafluoride Tracer Gas**

1.0 Scope and Application

This procedure has been developed specifically for the rule for the plywood and composite wood products (PCWP) industry and is used to determine the capture efficiency of a partial hot press enclosure in that industry. This procedure is applicable for the determination of capture efficiency for enclosures around hot presses and is an alternative to the construction of temporary total enclosures (TTE). Sulfur hexafluoride ($SF_6$) is used as a tracer gas (other tracer gases may be used if approved by the EPA Administrator). This gas is not indigenous to the ambient atmosphere and is nonreactive.

This procedure uses infrared spectrometry (IR) as the analytical technique. When the infrared spectrometer used is a Fourier-Transform Infrared spectrometer (FTIR), an alternate instrument calibration procedure may be used; the alternate calibration procedure is the calibration transfer standard (CTS) procedure of EPA Method 320 (appendix A to 40 CFR part 63). Other analytical techniques which are capable of equivalent Method Performance (Section 13.0) also may be used. Specifically, gas chromatography with electron capture detection (GC/ECD) is an applicable technique for analysis of $SF_6$.

2.0 Summary of Method

A constant mass flow rate of $SF_6$ tracer gas is released through manifolds at multiple locations within the enclosure to mimic the release of hazardous air pollutants during the press process. This test method requires a minimum of three $SF_6$ injection points (two at the press unloader and one at the press) and provides details about considerations for locating the injection points. A GC/ECD is used to measure the concentration of $SF_6$ at the inlet duct to the control device (outlet duct from enclosure). Simultaneously, EPA Method 2 (appendix A to 40 CFR part 60) is used to measure the flow rate at the inlet duct to the control device. The concentration and flow rate measurements are used to calculate the mass emission rate of $SF_6$ at the control device inlet.

Through calculation of the mass of $SF_6$ released through the manifolds and the mass of $SF_6$ measured at the inlet to the control device, the capture efficiency of the enclosure is calculated.

In addition, optional samples of the ambient air may be taken at locations around the perimeter of the enclosure to quantify the ambient concentration of $SF_6$ and to identify those areas of the enclosure that may be performing less efficiently; these samples would be taken using disposable syringes and would be analyzed using a GC/ECD.

Finally, in addition to the requirements specified in this procedure, the data quality objectives (DQO) or lower confidence limit (LCL) criteria specified in appendix A to 40 CFR part 63, subpart KK, Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods, must also be satisfied. A minimum of three test runs are required for this procedure; however, additional test runs may be required based on the results of the DQO or LCL analysis.

3.0 Definitions

3.1 Capture efficiency (CE). The weight per unit time of $SF_6$ entering the control device divided by the weight per unit time of $SF_6$ released through manifolds at multiple locations within the enclosure.

3.2 Control device (CD). The equipment used to reduce, by destruction or removal, press exhaust air pollutants prior to discharge to the ambient air.

3.3 Control/destruction efficiency (DE). The volatile organic compound or HAP removal efficiency of the control device.

3.4 Data Quality Objective (DQO) Approach. A statistical procedure to determine the precision of the data from a test series and to qualify the data in the determination of capture efficiency for compliance purposes. If the results of the DQO analysis of the initial three test runs do not satisfy the DQO criterion, the LCL approach can be used or additional test runs must be conducted. If additional test runs are conducted, then the DQO or LCL analysis is conducted using the data from both the initial test runs and all additional test runs.

3.5 Lower Confidence Limit (LCL) Approach. An alternative statistical procedure that can be used to qualify data in the determination of capture efficiency for compliance purposes. If the results of the LCL approach produce a CE that is too low for demonstrating compliance, then additional test runs must be conducted until the LCL or DQO is met. As with the DQO, data from all valid test runs must be used in the calculation.

3.6 Minimum Measurement Level (MML). The minimum tracer gas concentration expected to be measured during the test series. This value is selected by the tester based on the capabilities of the IR spectrometer (or GC/ECD) and the other known or measured parameters of the hot press

enclosure to be tested. The selected MML must be above the low-level calibration standard and preferably below the mid-level calibration standard.

3.7 Method 204. The U.S. EPA Method 204, “Criteria For and Verification of a Permanent or Temporary Total Enclosure” (40 CFR part 51, appendix M).

3.8 Method 205. The U.S. EPA Method 205, “Verification of Gas Dilution Systems for Field Instrument Calibrations” (40 CFR part 51, appendix M).

3.9 Method 320. The U.S. EPA Method 320, “Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy” (40 CFR part 63, appendix A).

3.10 Overall capture and control efficiency (CCE). The collection and control/destruction efficiency of both the PPE and CD combined. The CCE is calculated as the product of the CE and DE.

3.11 Partial press enclosure (PPE). The physical barrier that “partially” encloses the press equipment, captures a significant amount of the associated emissions, and transports those emissions to the CD.

3.12 Test series. A minimum of three test runs or, when more than three runs are conducted, all of the test runs conducted.

4.0 Interferences

There are no known interferences.

5.0 Safety

Sulfur hexafluoride is a colorless, odorless, nonflammable liquefied gas. It is stable and nonreactive and, because it is noncorrosive, most structural materials are compatible with it. The Occupational Safety and Health Administration Permissible Emission Limit-Time Weighted Average (PEL-TWA) and Threshold Limit Value-Time Weighted Average (TLV-TWA) concentrations are 1,000 parts per million. Sulfur hexafluoride is an asphyxiant. Exposure to an oxygen-deficient atmosphere (less than 19.5 percent oxygen) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness, and death. Exposure to atmospheres containing less than 12 percent oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help themselves. Contact with liquid or cold vapor may cause frostbite. Avoid breathing sulfur hexafluoride gas. Self-contained breathing apparatus may be required by rescue workers. Sulfur hexafluoride is not listed as a carcinogen or a potential carcinogen.

6.0 Equipment and Supplies

This method requires equipment and supplies for: (a) the injection of tracer gas into the enclosure, (b) the measurement of the tracer gas concentration in the exhaust gas entering the control device, and (c) the measurement of the volumetric flow rate of the exhaust gas entering the control device. In addition, the requisite equipment needed for EPA Methods 1-4 in appendix A to 40 CFR part 60 will be required. Equipment and supplies for optional ambient air sampling are discussed in Section 8.6.

6.1 Tracer Gas Injection.

6.1.1 Manifolds. This method requires the use of tracer gas supply cylinder(s) along with the appropriate flow control elements. Figure 1 shows a schematic drawing of the injection system showing potential locations for the tracer gas manifolds. Figure 2 shows a schematic drawing of the recommended configuration of the injection manifold. Three tracer gas discharge manifolds are required at a minimum.

6.1.2 Flow Control Meter. Flow control and measurement meter for measuring the quantity of tracer gas injected. A mass flow, volumetric flow, or critical orifice control meter can be used for this method. The meter must be accurate to within ±5 percent at the flow rate used. This means that the flow meter must be calibrated against a primary standard for flow measurement at the appropriate flow rate.

6.2 Measurement of Tracer Gas Concentration.

6.2.1 Sampling Probes. Use Pyrex or stainless steel sampling probes of sufficient length to reach the traverse points calculated according to EPA Method 1 (appendix A to 40 CFR part 60).

6.2.2 Sampling Line. Use a heated Teflon sampling line to transport the sample to the analytical instrument.

6.2.3 Sampling Pump. Use a sampling pump capable of extracting sufficient sample from the duct and transporting to the analytical instrument.

6.2.4 Sample Conditioning System. Use a particulate filter sufficient to protect the sampling pump and analytical instrument. At the discretion of the tester and depending on the equipment used and the moisture content of the exhaust gas, it may be necessary to further condition the sample by removing moisture using a condenser.

6.2.5 Analytical Instrument. Use one of the following analytical instruments.

6.2.5.1 Spectrometer. Use an infrared spectrometer designed to measuring $SF_6$ tracer gas and capable of meeting or exceeding the specifications of this procedure. An FTIR meeting the specifications of Method 320 in appendix A to 40 CFR part 63 may be used.

6.2.5.2 GC/ECD. Use a GC/ECD designed to measure $SF_6$ tracer gas and capable of meeting or exceeding the specifications of this procedure.

6.2.6 Recorder. At a minimum, use a recorder with linear strip chart. An automated data acquisition system (DAS) is recommended.

6.3 Exhaust Gas Flow Rate Measurement. Use equipment specified for EPA Methods 2, 3, and 4 in appendix A to 40 CFR part 60 for measuring flow rate of exhaust gas at the inlet to the control device.

7.0 Reagents and Standards

7.1 Tracer Gas. Use $SF_6$ as the tracer gas. The manufacturer of the $SF_6$ tracer gas should provide a recommended shelf life for the tracer gas cylinder over which the concentration does not change more than ±2 percent from the certified value. A gas mixture of $SF_6$ diluted with nitrogen should be used; based on experience and calculations, pure $SF_6$ gas is not necessary to conduct tracer gas testing. Select a concentration and flow rate that is appropriate for the analytical instrument's detection limit, the MML, and the exhaust gas flow rate from the enclosure (see section 8.1.1). You may use a tracer gas other than $SF_6$ with the prior approval of the EPA Administrator. If you use an approved tracer gas other than $SF_6$, all references to $SF_6$ in this protocol instead refer to the approved tracer gas.

7.2 Calibration Gases. The $SF_6$ calibration gases required will be dependent on the selected MML and the appropriate span selected for the test. Commercial cylinder gases certified by the manufacturer to be accurate to within 1 percent of the certified label value are preferable, although cylinder gases certified by the manufacturer to 2 percent accuracy are allowed. Additionally, the manufacturer of the $SF_6$ calibration gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value. Another option allowed by this method is for the tester to obtain high concentration certified cylinder gases and then use a dilution system meeting the requirements of EPA Method 205, 40 CFR part 51, appendix M, to make multi-level calibration gas standards. Low-level, mid-level, and high-level calibration gases will be required. The MML must be above the low-level standard, the high-level standard must be no more than four times the low-level standard, and the mid-level standard must be approximately halfway between the high- and low-level standards. See section 12.1 for an example calculation of this procedure.

Note: If using an FTIR as the analytical instrument, the tester has the option of following the CTS procedures of Method 320 in appendix A to 40 CFR part 63; the calibration standards (and procedures) specified in Method 320 may be used in lieu of the calibration standards and procedures in this protocol.

7.2.1 Zero Gas. High purity nitrogen.

7.2.2 Low-Level Calibration Gas. An $SF_6$ calibration gas in nitrogen with a concentration equivalent to 20 to 30 percent of the applicable span value.

7.2.3 Mid-Level Calibration Gas. An $SF_6$ calibration gas in nitrogen with a concentration equivalent to 45 to 55 percent of the applicable span value.

7.2.4 High-Level Calibration Gas. An $SF_6$ calibration gas in nitrogen with a concentration equivalent to 80 to 90 percent of the applicable span value.

8.0 Sample Collection, Preservation, Storage, and Transport

8.1 Test Design.

8.1.1 Determination of Minimum Tracer Gas Flow Rate.

8.1.1.1 Determine (via design calculations or measurements) the approximate flow rate of the exhaust gas through the enclosure, actual cubic feet per minute (acfm).

8.1.1.2 Calculate the minimum tracer gas injection rate necessary to assure a detectable $SF_6$ concentration at the exhaust gas measurement point (see section 12.1 for calculation).

8.1.1.3 Select a flow meter for the injection system with an operating range appropriate for the injection rate selected.

8.1.2 Determination of the Approximate Time to Reach Equilibrium.

8.1.2.1 Determine the volume of the enclosure.

8.1.2.2 Calculate the air changes per minute of the enclosure by dividing the approximate exhaust flow rate (8.1.1.1 above) by the enclosed volume (8.1.2.1 above).

8.1.2.3 Calculate the time at which the tracer concentration in the enclosure will achieve approximate equilibrium. Divide 3 by the air changes per minute (8.1.2.2 above) to establish this time. This is the approximate length of time for the system to come to equilibrium. Concentration equilibrium occurs when the tracer concentration in the enclosure stops changing as a function of time for a constant tracer release rate. Because the press is continuously cycling, equilibrium may be exhibited by a repeating, but stable, cyclic pattern rather than a single constant concentration value. Assure sufficient tracer gas is available to allow the system to come to equilibrium, and to sample for a minimum of 20 minutes and repeat the procedure for a minimum of three test runs. Additional test runs may be required based on the results of the DQO and LCL analyses described in 40 CFR part 63, subpart KK, appendix A.

8.1.3 Location of Injection Points. This method requires a minimum of three tracer gas injection points. The injection points should be located within leak prone, volatile organic compound/hazardous air pollutant (VOC/HAP) producing areas around the press, or horizontally within 12 inches of the defined equipment. One potential configuration of the injection points is depicted in Figure 1. The effect of wind, exfiltration through the building envelope, and air flowing through open building doors should be considered when locating tracer gas injection

points within the enclosure. The injection points should also be located at a vertical elevation equal to the VOC/HAP generating zones. The injection points should not be located beneath obstructions that would prevent a natural dispersion of the gas. Document the selected injection points in a drawing(s).

8.1.4 Location of Flow Measurement and Tracer Sampling. Accurate CD inlet gas flow rate measurements are critical to the success of this procedure. Select a measurement location meeting the criteria of EPA Method 1 (40 CFR part 60, appendix A), Sampling and Velocity Traverses for Stationary Sources. Also, when selecting the measurement location, consider whether stratification of the tracer gas is likely at the location (*e.g.*, do not select a location immediately after a point of air in-leakage to the duct).

8.2 Tracer Gas Release. Release the tracer gas at a calculated flow rate (see section 12.1 for calculation) through a minimum of three injection manifolds located as described above in 8.1.3. The tracer gas delivery lines must be routed into the enclosure and attached to the manifolds without violating the integrity of the enclosure.

8.3 Pretest Measurements.

8.3.1 Location of Sampling Point(s). If stratification is not suspected at the measurement location, select a single sample point located at the centroid of the CD inlet duct or at a point no closer to the CD inlet duct walls than 1 meter. If stratification is suspected, establish a "measurement line" that passes through the centroidal area and in the direction of any expected stratification. Locate three traverse points at 16.7, 50.0 and 83.3 percent of the measurement line and sample from each of these three points during each run, or follow the procedure in section 8.3.2 to verify whether stratification does or does not exist.

8.3.2 Stratification Verification. The presence or absence of stratification can be verified by using the following procedure. While the facility is operating normally, initiate tracer gas release into the enclosure. For rectangular ducts, locate at least nine sample points in the cross section such that the sample points are the centroids of similarly-shaped, equal area divisions of the cross section. Measure the tracer gas concentration at each point. Calculate the mean value for all sample points. For circular ducts, conduct a 12-point traverse (*i.e.*, six points on each of the two perpendicular diameters) locating the sample points as described in 40 CFR part 60, appendix A, Method 1. Perform the measurements and calculations as described above. Determine if the mean pollutant concentration is more than 10 percent different from any single point. If so, the cross section is considered to be stratified, and the tester may not use a single sample point location, but must use the three traverse points at 16.7, 50.0, and 83.3 percent of the entire measurement line. Other traverse points may be selected, provided that they can be shown to the satisfaction of the Administrator to provide a representative sample over the stack or duct cross section.

8.4 CD Inlet Gas Flow Rate Measurements. The procedures of EPA Methods 1-4 (40 CFR part 60, appendix A) are used to determine the CD inlet gas flow rate. Molecular weight (Method 3) and moisture (Method 4) determinations are only required once for each test series. However, if the test series is not completed within 24 hours, then the molecular weight and moisture measurements should be repeated daily. As a minimum, velocity measurements are conducted according to the procedures of Methods 1 and 2 before and after each test run, as close to the start and end of the run as practicable. A velocity measurement between two runs satisfies both the criterion of “after” the run just completed and “before” the run to be initiated. Accurate exhaust gas flow rate measurements are critical to the success of this procedure. If significant temporal variations of flow rate are anticipated during the test run under normal process operating conditions, take appropriate steps to accurately measure the flow rate during the test. Examples of steps that might be taken include: (1) conducting additional velocity traverses during the test run; or (2) continuously monitoring a single point of average velocity during the run and using these data, in conjunction with the pre- and post-test traverses, to calculate an average velocity for the test run.

8.5 Tracer Gas Measurement Procedure.

8.5.1 Calibration Error Test. Immediately prior to the emission test (within 2 hours of the start of the test), introduce zero gas and high-level calibration gas at the calibration valve assembly. Zero and calibrate the analyzer according to the manufacturer's procedures using, respectively, nitrogen and the calibration gases. Calculate the predicted response for the low-level and mid-level gases based on a linear response line between the zero and high-level response. Then introduce the low-level and mid-level calibration gases successively to the measurement system. Record the analyzer responses for the low-level and mid-level calibration gases and determine the differences between the measurement system responses and the predicted responses using the equation in section 12.3. These differences must be less than 5 percent of the respective calibration gas value. If not, the measurement system must be replaced or repaired prior to testing. No adjustments to the measurement system shall be conducted after the calibration and before the drift determination (section 8.5.4). If adjustments are necessary before the completion of the test series, perform the drift checks prior to the required adjustments and repeat the calibration following the adjustments. If multiple electronic ranges are to be used, each additional range must be checked with a mid-level calibration gas to verify the multiplication factor.

Note: If using an FTIR for the analytical instrument, you may choose to follow the pretest preparation, evaluation, and calibration procedures of Method 320 (section 8.0) (40 CFR part 63, appendix A) in lieu of the above procedure.

8.5.2 Response Time Test. Conduct this test once prior to each test series. Introduce zero gas into the measurement system at the calibration valve assembly. When the system output has stabilized, switch quickly to the high-level calibration gas. Record the time from the

concentration change to the measurement system response equivalent to 95 percent of the step change. Repeat the test three times and average the results.

8.5.3 $SF_6$ Measurement. Sampling of the enclosure exhaust gas at the inlet to the CD should begin at the onset of tracer gas release. If necessary, adjust the tracer gas injection rate such that the measured tracer gas concentration at the CD inlet is within the spectrometer's calibration range (*i.e.*, between the MML and the span value). Once the tracer gas concentration reaches equilibrium, the $SF_6$ concentration should be measured using the infrared spectrometer continuously for at least 20 minutes per run. Continuously record (*i.e.*, record at least once per minute) the concentration. Conduct at least three test runs. On the recording chart, in the data acquisition system, or in a log book, make a note of periods of process interruption or cyclic operation such as the cycles of the hot press operation. Table 1 to this appendix summarizes the physical measurements required for the enclosure testing.

Note: If a GC/ECD is used as the analytical instrument, a continuous record (at least once per minute) likely will not be possible; make a minimum of five injections during each test run. Also, the minimum test run duration criterion of 20 minutes applies.

8.5.4 Drift Determination. Immediately following the completion of the test run, reintroduce the zero and mid-level calibration gases, one at a time, to the measurement system at the calibration valve assembly. (Make no adjustments to the measurement system until both the zero and calibration drift checks are made.) Record the analyzer responses for the zero and mid-level calibration gases and determine the difference between the instrument responses for each gas prior to and after the emission test run using the equation in section 12.4. If the drift values exceed the specified limits (section 13), invalidate the test results preceding the check and repeat the test following corrections to the measurement system. Alternatively, recalibrate the test measurement system as in section 8.5.1 and report the results using both sets of calibration data (*i.e.*, data determined prior to the test period and data determined following the test period).
Note: If using an FTIR for the analytical instrument, you may choose to follow the post-test calibration procedures of Method 320 in appendix A to 40 CFR part 63 (section 8.11.2) in lieu of the above procedures.

8.6 Ambient Air Sampling (Optional). Sampling the ambient air surrounding the enclosure is optional. However, taking these samples during the capture efficiency testing will identify those areas of the enclosure that may be performing less efficiently.

8.6.1 Location of Ambient Samples Outside the Enclosure (Optional). In selecting the sampling locations for collecting samples of the ambient air surrounding the enclosure, consider potential leak points, the direction of the release, and laminar flow characteristics in the area surrounding the enclosure. Samples should be collected from all sides of the enclosure, downstream in the prevailing room air flow, and in the operating personnel occupancy areas.

8.6.2 Collection of Ambient Samples (Optional). During the tracer gas release, collect ambient samples from the area surrounding the enclosure perimeter at predetermined location using disposable syringes or some other type of containers that are non-absorbent, inert, and that have low permeability (*i.e.*, polyvinyl fluoride film or polyester film sample bags or polyethylene, polypropylene, nylon or glass bottles). The use of disposable syringes allows samples to be injected directly into a gas chromatograph. Concentration measurements taken around the perimeter of the enclosure provide evidence of capture performance and will assist in the identification of those areas of the enclosure that are performing less efficiently.

8.6.3 Analysis and Storage of Ambient Samples (Optional). Analyze the ambient samples using an analytical instrument calibrated and operated according to the procedures in this appendix or ASTM E 260 and ASTM E 697. Samples may be analyzed immediately after a sample is taken, or they may be stored for future analysis. Experience has shown no degradation of concentration in polypropylene syringes when stored for several months as long as the needle or syringe is plugged. Polypropylene syringes should be discarded after one use to eliminate the possibility of cross contamination of samples.

9.0 Quality Control

9.1 Sampling, System Leak Check. A sampling system leak check should be conducted prior to and after each test run to ensure the integrity of the sampling system.

9.2 Zero and Calibration Drift Tests.

| **Section** | **Quality control measure** | **Effect** |
|---|---|---|
| 8.5.4 | Zero and calibration drift tests | Ensures that bias introduced by drift in the measurement system output during the run is no greater than 3 percent of span. |

10.0 Calibration and Standardization

10.1 Control Device Inlet Air Flow Rate Measurement Equipment. Follow the equipment calibration requirements specified in Methods 2, 3, and 4 (appendix A to 40 CFR part 60) for measuring the velocity, molecular weight, and moisture of the control device inlet air.

10.2 Tracer Gas Injection Rate. A dry gas volume flow meter, mass flow meter, or orifice can be used to measure the tracer gas injection flow rate. The selected flow measurement device must have an accuracy of greater than ±5 percent at the field operating range. Prior to the test, verify the calibration of the selected flow measurement device using either a wet test meter, spirometer, or liquid displacement meter as the calibration device. Select a minimum of two flow rates to bracket the expected field operating range of the flow meter. Conduct three calibration runs at each of the two selected flow rates. For each run, note the exact quantity of gas as

determined by the calibration standard and the gas volume indicated by the flow meter. For each flow rate, calculate the average percent difference of the indicated flow compared to the calibration standard.

10.3 Spectrometer. Follow the calibration requirements specified by the equipment manufacturer for infrared spectrometer measurements and conduct the pretest calibration error test specified in section 8.5.1. Note: if using an FTIR analytical instrument see Method 320, section 10 (appendix A to 40 CFR part 63).

10.4 Gas Chromatograph. Follow the pre-test calibration requirements specified in section 8.5.1.

10.5 Gas Chromatograph for Ambient Sampling (Optional). For the optional ambient sampling, follow the calibration requirements specified in section 8.5.1 or ASTM E 260 and E 697 and by the equipment manufacturer for gas chromatograph measurements.

11.0 Analytical Procedures

The sample collection and analysis are concurrent for this method (see section 8.0).

12.0 Calculations and Data Analysis

12.1 Estimate MML and Span. The MML is the minimum measurement level. The selection of this level is at the discretion of the tester. However, the MML must be higher than the low-level calibration standard, and the tester must be able to measure at this level with a precision of $\leq$10 percent. As an example, select the MML as 10 times the instrument's published detection limit. The detection limit of one instrument is 0.01 parts per million by volume (ppmv). Therefore, the MML would be 0.10 ppmv. Select the low-level calibration standard as 0.08 ppmv. The high-level standard would be four times the low-level standard or 0.32 ppmv. A reasonable mid-level standard would then be 0.20 ppmv (halfway between the low-level standard and the high-level standard). Finally, the span value would be approximately 0.40 ppmv (the high-level value is 80 percent of the span). In this example, the following MML, calibration standards, and span values would apply:

MML = 0.10 ppmv

Low-level standard = 0.08 ppmv

Mid-level standard = 0.20 ppmv

High-level standard = 0.32 ppmv

Span value = 0.40 ppmv

12.2 Estimate Tracer Gas Injection Rate for the Given Span. To estimate the minimum and maximum tracer gas injection rate, assume a worst case capture efficiency of 80 percent, and calculate the tracer gas flow rate based on known or measured parameters. To estimate the minimum tracer gas injection rate, assume that the MML concentration (10 times the IR detection limit in this example) is desired at the measurement location. The following equation can be used to estimate the minimum tracer gas injection rate:

$((Q_{T\text{-}MIN} \times 0.8)/Q_E) \times (C_T \div 100) \times 10^6 = MML$

$Q_{T\text{-}MIN} = 1.25 \times MML \times (Q_E/C_T) \times 10^{-4}$

Where:

$Q_{T\text{-}MIN}$ = minimum volumetric flow rate of tracer gas injected, standard cubic feet per minute (scfm);

$Q_E$ = volumetric flow rate of exhaust gas, scfm;

$C_T$ = Tracer gas ($SF_6$) concentration in gas blend, percent by volume;

MML = minimum measured level, ppmv = $10 \times IR_{DL}$ (for this example);

$IR_{DL}$ = IR detection limit, ppmv.

Standard conditions: 20 °C, 760 millimeters of mercury (mm Hg).

To estimate the maximum tracer gas injection rate, assume that the span value is desired at the measurement location. The following equation can be used to estimate the maximum tracer gas injection rate:

$((Q_{T\text{-}MAX} \times 0.8)/Q_E) \times (C_T \div 100) \times 10^6 = \text{span value}$

$Q_{T\text{-}MAX} = 1.25 \times \text{span value} \times (Q_E/C_T) \times 10^{-4}$

Where:

$Q_{T\text{-}MAX}$ = maximum volumetric flow rate of tracer gas injected, scfm;

Span value = instrument span value, ppmv.

The following example illustrates this calculation procedure:

Find the range of volumetric flow rate of tracer gas to be injected when the following parameters are known:

$Q_E$ = 60,000 scfm (typical exhaust gas flow rate from an enclosure);

$C_T$ = 2 percent $SF_6$ in nitrogen;

$IR_{DL}$ = 0.01 ppmv (per manufacturer's specifications);

MML = 10 × $IR_{DL}$ = 0.10 ppmv;

Span value = 0.40 ppmv;

$Q_T$ = ?

Minimum tracer gas volumetric flow rate:

$Q_{T\text{-}MIN} = 1.25 \times MML \times (Q_E/C_T) \times 10^{-4}$

$Q_{T\text{-}MIN} = 1.25 \times 0.10 \times (60{,}000/2) \times 10^{-4} = 0.375$ scfm

Maximum tracer gas volumetric flow rate:

$Q_{T\text{-}MAX} = 1.25 \times$ span value $\times (Q_E/C_T) \times 10^{-4}$

$Q_{T\text{-}MAX} = 1.25 \times 0.40 \times (60{,}000/2) \times 10^{-4} = 1.5$ scfm

In this example, the estimated total volumetric flow rate of the two percent $SF_6$ tracer gas injected through the manifolds in the enclosure lies between 0.375 and 1.5 scfm.

12.3 Calibration Error. Calculate the calibration error for the low-level and mid-level calibration gases using the following equation:

Err = |$C_{std}$−$C_{meas}$verbar; ÷ $C_{std}$ × 100

Where:

Err = calibration error, percent;

$C_{std}$ = low-level or mid-level calibration gas value, ppmv;

$C_{meas}$ = measured response to low-level or mid-level concentration gas, ppmv.

12.4 Calibration Drift. Calculate the calibration drift for the zero and low-level calibration gases using the following equation:

D = |verbar;$C_{initial}$ − $C_{final}$ |verbar; ÷ $C_{span}$ × 100

Where:

D = calibration drift, percent;

$C_{initial}$ = low-level or mid-level calibration gas value measured before test run, ppmv;

$C_{final}$ = low-level or mid-level calibration gas value measured after test run, ppmv;

$C_{span}$ = span value, ppmv.

12.5 Calculate Capture Efficiency. The equation to calculate enclosure capture efficiency is provided below:

$CE = (SF_{6\text{-}CD} \div SF_{6\text{-}INJ}) \times 100$

Where:

CE = capture efficiency;

$SF_{6\text{-}CD}$ = mass of $SF_6$ measured at the inlet to the CD;

$SF_{6\text{-}INJ}$ = mass of $SF_6$ injected from the tracer source into the enclosure.

Calculate the CE for each of the initial three test runs. Then follow the procedures outlined in section 12.6 to calculate the overall capture efficiency.

12.6 Calculate Overall Capture Efficiency. After calculating the capture efficiency for each of the initial three test runs, follow the procedures in 40 CFR part 63, subpart KK, appendix A, to determine if the results of the testing can be used in determining compliance with the requirements of the rule. There are two methods that can be used: the DQO and LCL methods. The DQO method is described in section 3 of 40 CFR part 63, subpart KK, appendix A, and provides a measure of the precision of the capture efficiency testing conducted. Section 3 of 40 CFR part 63, subpart KK, appendix A, provides an example calculation using results from a facility. If the DQO criteria are met using the first set of three test runs, then the facility can use the average capture efficiency of these test results to determine the capture efficiency of the enclosure. If the DQO criteria are not met, then the facility can conduct another set of three runs and run the DQO analysis again using the results from the six runs *OR* the facility can elect to use the LCL approach.

The LCL method is described in section 4 of 40 CFR part 63, subpart KK, appendix A, and provides sources that may be performing much better than their regulatory requirement, a screening option by which they can demonstrate compliance. The LCL approach compares the 80 percent lower confidence limit for the mean measured CE value to the applicable regulatory requirement. If the LCL capture efficiency is higher than the applicable limit, then the facility is in initial compliance and would use the LCL capture efficiency as the capture efficiency to determine compliance. If the LCL capture efficiency is lower than the applicable limit, then the facility must perform additional test runs and re-run the DQO or LCL analysis.

13.0 Method Performance

13.1 Measurement System Performance Specifications.

13.1.1 Zero Drift. Less than ±3 percent of the span value.

13.1.2 Calibration Drift. Less than ±3 percent of the span value.

13.1.3 Calibration Error. Less than ±5 percent of the calibration gas value.

13.2 Flow Measurement Specifications. The mass flow, volumetric flow, or critical orifice control meter used should have an accuracy of greater than ±5 percent at the flow rate used.

13.3 Calibration and Tracer Gas Specifications. The manufacturer of the calibration and tracer gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ±2 percent from the certified value.

14.0 Pollution Prevention [Reserved]

*15.0 Waste Management [Reserved]*

*16.0 References*

1. 40 CFR part 60, appendix A, EPA Method 1—Sample and velocity traverses for stationary sources.

2. 40 CFR part 60, appendix A, EPA Method 2—Determination of stack gas velocity and volumetric flow rate.

3. 40 CFR part 60, appendix A, EPA Method 3—Gas analysis for the determination of dry molecular weight.

4. 40 CFR part 60, appendix A, EPA Method 4—Determination of moisture content in stack gases.

5. SEMI F15-93 Test Method for Enclosures Using Sulfur Hexafluoride Tracer Gas and Gas Chromotography.

6. Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, to EPA Regional Directors, Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions, February 7, 1995. (That memorandum contains an attached technical document from Candace Sorrell, Emission Monitoring and Analysis Division, “Guidelines for Determining Capture Efficiency,” January 9, 1994).

7. Technical Systems Audit of Testing at Plant “C,” EPA-454/R-00-26, May 2000.

8. Material Safety Data Sheet for $SF_6$ Air Products and Chemicals, Inc. Website: *www3.airproducts.com.* October 2001.

17.0 Tables, Diagrams, Flowcharts, and Validation Data

**Table 1 to Appendix A—Summary of Critical Physical Measurements for Enclosure Testing**

| Measurement | Measurement instrumentation | Measurement frequency | Measurement site |
|---|---|---|---|
| Tracer gas injection rate | Mass flow meter, volumetric flow meter or critical orifice | Continuous | Injection manifolds (cylinder gas). |
| Tracer gas concentration at control device inlet | Infrared Spectrometer or GC/ECD | Continuous (at least one reading per minute) for a minimum of 20 minutes | Inlet duct to the control device (outlet duct of enclosure). |
| Volumetric air flow rate | EPA Methods 1, 2, 3, 4 (40 CFR part 60, appendix A)<br>• Velocity sensor (Manometer/Pitot tube)<br>• Thermocouple | Each test run for velocity (minimum); Daily for moisture and molecular weight | Inlet duct to the control device (outlet duct of enclosure). |
| | • Midget Impinger sampler | | |
| | • Orsat or Fyrite | | |

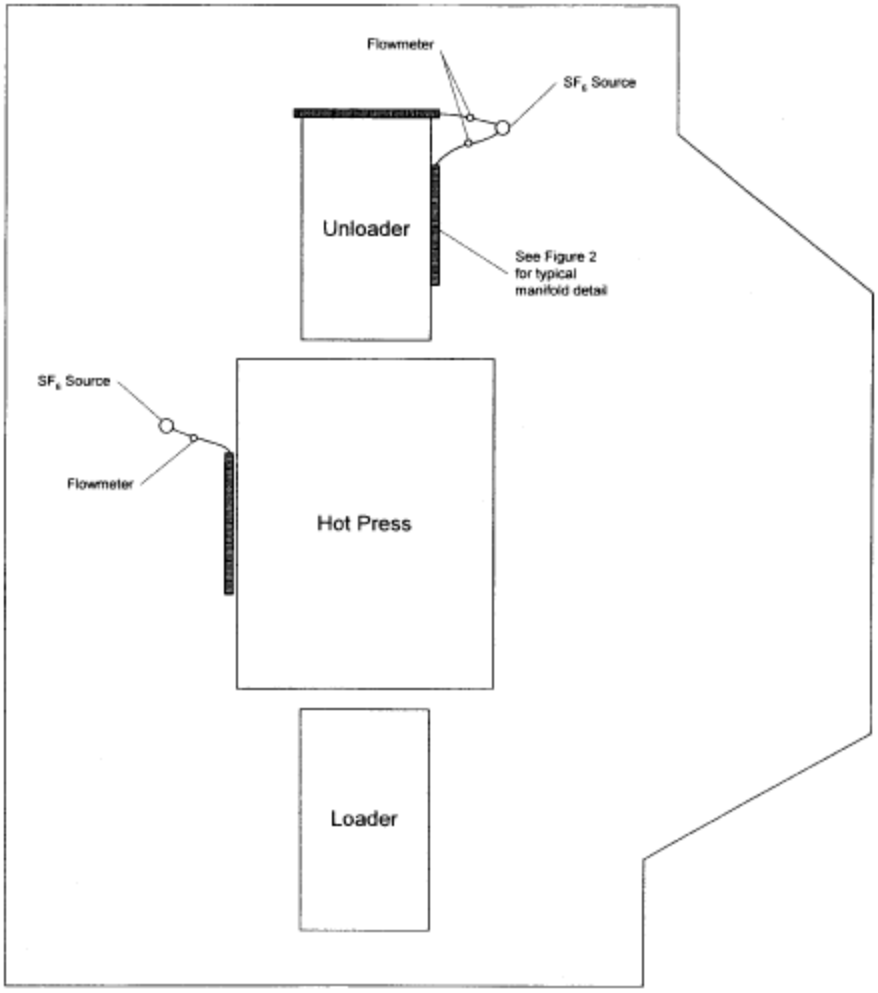


Figure 1. Plan view schematic of hot press and enclosure showing $SF_6$ manifold locations.

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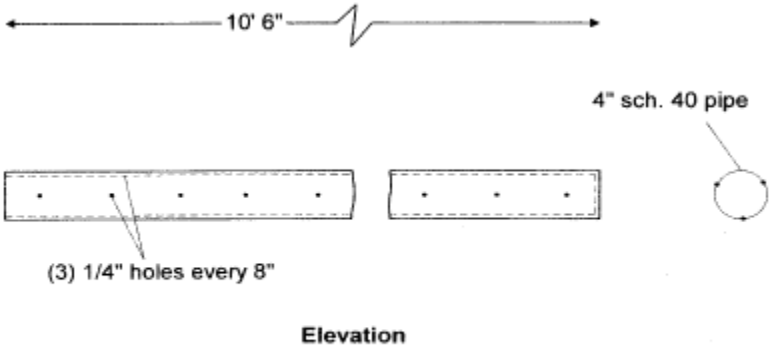


Figure 2. Schematic detail for manifold system for $SF_6$ injection.

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[69 FR 46011, July 30, 2004, as amended at 71 FR 8375, Feb. 16, 2006]

Back to Top

# APPENDIX C

# Arkansas Department of Environmental Quality

# CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

**Revised September 2013**

## PREAMBLE

These conditions are intended to outline the requirements for facilities required to operate Continuous Emission Monitoring Systems/Continuous Opacity Monitoring Systems (CEMS/COMS). Generally there are three types of sources required to operate CEMS/COMS:

1. CEMS/COMS required by 40 CFR Part 60 or 63,
2. CEMS required by 40 CFR Part 75,
3. CEMS/COMS required by ADEQ permit for reasons other than Part 60, 63 or 75.

These CEMS/COMS conditions are not intended to supercede Part 60, 63 or 75 requirements.

- Only CEMS/COMS in the third category (those required by ADEQ permit for reasons other than Part 60, 63, or 75) shall comply with SECTION II, MONITORING REQUIREMENTS and SECTION IV, QUALITY ASSURANCE/QUALITY CONTROL.

- All CEMS/COMS shall comply with Section III, NOTIFICATION AND RECORDKEEPING.

## SECTION I

## DEFINITIONS

**Continuous Emission Monitoring System (CEMS) -** The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data.

**Continuous Opacity Monitoring System (COMS) -** The total equipment required for the determination of opacity as to include sampling, analysis and recording of emission data.

**Calibration Drift (CD) -** The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place.

**Back-up CEMS** (Secondary CEMS) - A CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEMS is to serve as a back-up to the primary CEMS to minimize monitor downtime.

**Excess Emissions -** Any period in which the emissions exceed the permit limits.

**Monitor Downtime -** Any period during which the CEMS/COMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

**Out-of-Control Period -** Begins with the time corresponding to the completion of the fifth, consecutive, daily CD check with a CD in excess of two times the allowable limit, or the time corresponding to the completion of the daily CD check preceding the daily CD check that results in a CD in excess of four times the allowable limit and the time corresponding to the completion of the sampling for the Relative Accuracy Test Audit (RATA), Relative Accuracy Audit (RAA), or Cylinder Gas Audit (CGA) which exceeds the limits outlined in Section IV. Out-of-Control Period ends with the time corresponding to the completion of the CD check following corrective action with the results being within the allowable CD limit or the completion of the sampling of the subsequent successful RATA, RAA, or CGA.

**Primary CEMS -** The main reporting CEMS with the ability to sample, analyze, and record stack pollutant to determine gas concentration and/or emission rate.

**Relative Accuracy (RA) -** The absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference method tests of the applicable emission limit.

**Span Value** – The upper limit of a gas concentration measurement range.

## SECTION II

## MONITORING REQUIREMENTS

** Only CEMS/COMS required by ADEQ permit for reasons other than Part 60, 63 or 75 shall comply with this section.

A. For new sources, the installation date for the CEMS/COMS shall be no later than thirty (30) days from the date of start-up of the source.

B. For existing sources, the installation date for the CEMS/COMS shall be no later than sixty (60) days from the issuance of the permit unless the permit requires a specific date.

C. Within sixty (60) days of installation of a CEMS/COMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PST's for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the ADEQ CEM Coordinator prior to testing.

D. Each CEMS/COMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval, the excess zero and span drifts measured must be quantified and recorded.

E. All CEMS/COMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Percent of monitor down-time is calculated by dividing the total minutes the monitor is not in operation by the total time in the calendar quarter and multiplying by one hundred. Failure to maintain operation time shall constitute a violation of the CEMS conditions.

F. Percent of excess emissions are calculated by dividing the total minutes of excess emissions by the total time the source operated and multiplying by one hundred. Failure to maintain compliance may constitute a violation of the CEMS conditions.

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit.

H. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

I. When the pollutant from a single affected facility is released through more than one point, a CEMS/COMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the ADEQ

CEM Coordinator. When more than one CEM/COM is used to monitor emissions from one affected facility the owner or operator shall report the results as required from each CEMS/COMS.

## SECTION III

## NOTIFICATION AND RECORD KEEPING

** All CEMS/COMS shall comply with this section.

A. When requested to do so by an owner or operator, the ADEQ CEM Coordinator will review plans for installation or modification for the purpose of providing technical advice to the owner or operator.

B. Each facility which operates a CEMS/COMS shall notify the ADEQ CEM Coordinator of the date for which the demonstration of the CEMS/COMS performance will commence (i.e. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 business days prior to testing. Performance test results shall be submitted to the Department within thirty days after completion of testing.

C. Each facility which operates a CEMS/COMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.

D. Each facility required to install a CEMS/COMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, CEM Coordinator) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter.

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADEQ Quarterly Excess Emission Report Forms. Alternate forms may be used with prior written approval from the Department.

F. Each facility which operates a CEMS/COMS must maintain on site a file of CEMS/COMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for a period of at least five years, and is required to be maintained in such a condition that it can easily be audited by an inspector.

G. Quarterly reports shall be used by the Department to determine compliance with the permit.

## SECTION IV

## QUALITY ASSURANCE/QUALITY CONTROL

** Only CEMS/COMS required by ADEQ permit for reasons other than Part 60, 63 or 75 shall comply with this section.

A. For each CEMS/COMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, CEM Coordinator). CEMS quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS/COMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS/COMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

**C.** Facilities responsible for one, or more, CEMS/COMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

1. Calibration of CEMS/COMS
    a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS/COMS
    a. Out-of-control period determination
    b. Steps of corrective action
3. Preventive maintenance of CEMS/COMS
    a. CEMS/COMS information
        1) Manufacture
        2) Model number
        3) Serial number
    b. Scheduled activities (check list)
    c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS/COMS

D. A Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three

quarters but in no more than three quarters in succession. The RATA should be conducted in accordance with the applicable test procedure in 40 CFR Part 60 Appendix A and calculated in accordance with the applicable performance specification in 40 CFR Part 60 Appendix B. CGA's and RAA's should be conducted and the data calculated in accordance with the procedures outlined on 40 CFR Part 60 Appendix F.

If alternative testing procedures or methods of calculation are to be used in the RATA, RAA or CGA audits prior authorization must be obtained from the ADEQ CEM Coordinator.

E. Criteria for excessive audit inaccuracy.

**RATA**

| | |
|---|---|
| All Pollutants except Carbon Monoxide | > 20% Relative Accuracy |
| Carbon Monoxide | > 10% Relative Accuracy |
| All Pollutants except Carbon Monoxide | > 10% of the Applicable Standard |
| Carbon Monoxide | > 5% of the Applicable Standard |
| Diluent ($O_2$ & $CO_2$) | > 1.0 % O2 or CO2 |
| Flow | > 20% Relative Accuracy |

**CGA**

| | |
|---|---|
| Pollutant | > 15% of average audit value or 5 ppm difference |
| Diluent ($O_2$ & $CO_2$) | > 15% of average audit value or 5 ppm difference |

**RAA**

| | |
|---|---|
| Pollutant | > 15% of the three run average or > 7.5 % of the applicable standard |
| Diluent ($O_2$ & $CO_2$) | > 15% of the three run average or > 7.5 % of the applicable standard |

F. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. If the CEMS exceeds the audit inaccuracies listed above, the CEMS is out-of-control. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart. The end of the out-of-control period is the time corresponding to the completion of the successful daily zero or span drift or completion of the successful CGA, RAA or RATA.

G. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEMS is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEMS shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minimum the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

# APPENDIX D

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# Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

## Contents

What This Subpart Covers

§63.7480 What is the purpose of this subpart?
§63.7485 Am I subject to this subpart?
§63.7490 What is the affected source of this subpart?
§63.7491 Are any boilers or process heaters not subject to this subpart?
§63.7495 When do I have to comply with this subpart?

Emission Limitations and Work Practice Standards

§63.7499 What are the subcategories of boilers and process heaters?
§63.7500 What emission limitations, work practice standards, and operating limits must I meet?
§63.7501 [Reserved]

General Compliance Requirements

§63.7505 What are my general requirements for complying with this subpart?

Testing, Fuel Analyses, and Initial Compliance Requirements

§63.7510 What are my initial compliance requirements and by what date must I conduct them?
§63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?
§63.7520 What stack tests and procedures must I use?
§63.7521 What fuel analyses, fuel specification, and procedures must I use?
§63.7522 Can I use emissions averaging to comply with this subpart?
§63.7525 What are my monitoring, installation, operation, and maintenance requirements?
§63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?
§63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

Continuous Compliance Requirements

§63.7535 Is there a minimum amount of monitoring data I must obtain?
§63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?
§63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

Notification, Reports, and Records

§63.7545 What notifications must I submit and when?
§63.7550 What reports must I submit and when?
§63.7555 What records must I keep?
§63.7560 In what form and how long must I keep my records?

Other Requirements and Information

§63.7565 What parts of the General Provisions apply to me?
§63.7570 Who implements and enforces this subpart?
§63.7575 What definitions apply to this subpart?
Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters
Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters
Table 3 to Subpart DDDDD of Part 63—Work Practice Standards
Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters
Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements
Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements
Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits[ab]
Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance
Table 9 to Subpart DDDDD of Part 63—Reporting Requirements
Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart

DDDDD
Table 11 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011
Table 12 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After May 20, 2011, and Before December 23, 2011
Table 13 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before April 1, 2013

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Source: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

Back to Top

**What This Subpart Covers**

Back to Top

**§63.7480 What is the purpose of this subpart?**

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

Back to Top

**§63.7485 Am I subject to this subpart?**

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

[78 FR 7162, Jan. 31, 2013]

Back to Top

**§63.7490 What is the affected source of this subpart?**

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in §63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in §63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in §63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

Back to Top

**§63.7491 Are any boilers or process heaters not subject to this subpart?**

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part or a natural gas-fired EGU as defined in subpart UUUUU of this part firing at least 85 percent natural gas on an annual heat input basis.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see §63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers and process heaters as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler or process heater specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in §63.1200(b) is not covered by Subpart EEE.

(n) Residential boilers as defined in this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72806, Nov. 20, 2015]

Back to Top

**§63.7495 When do I have to comply with this subpart?**

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in §63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in §63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart and are no longer subject to part 60, subparts CCCC or DDDD beginning on the effective date of the switch as identified under the provisions of §60.2145(a)(2) and (3) or §60.2710(a)(2) and (3).

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in §63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

(h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, you must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change.

(i) If you own or operate a new industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory, you must be in compliance with the applicable new source provisions of this subpart on the effective date of the fuel switch or physical change.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

Back to Top

**Emission Limitations and Work Practice Standards**

Back to Top

**§63.7499 What are the subcategories of boilers and process heaters?**

The subcategories of boilers and process heaters, as defined in §63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

Back to Top

**§63.7500 What emission limitations, work practice standards, and operating limits must I meet?**

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under §63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using equation 21 of §63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010 and before May 20, 2011, you may comply with the emission limits in Table 1 or 11 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction on or after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction on or after December 23, 2011 and before April 1, 2013, you may comply with the emission limits in Table 1 or 13 to this subpart until January 31, 2016.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under §63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in §63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

Back to Top

**§63.7501 [Reserved]**

Back to Top

**General Compliance Requirements**

Back to Top

**§63.7505 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in §63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in §63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of §63.7525. Using the process described in §63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the 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 control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of “startup” in §63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

Back to Top

**Testing, Fuel Analyses, and Initial Compliance Requirements**

Back to Top

**§63.7510 What are my initial compliance requirements and by what date must I conduct them?**

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance (stack) testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to §63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under §63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to §63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to §63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to §63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to §63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart and establish operating limits according to §63.7530 and Table 8 to this subpart. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and

operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to §63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, as specified in §63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with §63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495.

(f) For new or reconstructed affected sources (as defined in §63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013 or within 180 days after startup of the source, whichever is later. If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent (that is, higher) than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than July 29, 2016.

(g) For new or reconstructed affected sources (as defined in §63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in §63.7515(d) following the initial compliance date specified in §63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in §63.7515(d).

(h) For affected sources (as defined in §63.7490) that ceased burning solid waste consistent with §63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you

must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in §63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in §63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to this subpart, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in §63.7495.

(k) For affected sources, as defined in §63.7490, that switch subcategories consistent with §63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.

[78 FR 7164, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

Back to Top

**§63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?**

(a) You must conduct all applicable performance tests according to §63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under §63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury

input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to §63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in §63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on one day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to §63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in §63.7550.

(g) For affected sources (as defined in §63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) and the schedule described in §63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra-low sulfur liquid fuel, you do not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra-low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in §63.7525(a)(3) of this subpart to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in §63.7510(a).

[78 FR 7165, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

Back to Top

**§63.7520 What stack tests and procedures must I use?**

(a) You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in §63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and

mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013]

Back to Top

**§63.7521 What fuel analyses, fuel specification, and procedures must I use?**

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not

required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in §63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in §63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) You must obtain composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial

compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in §63.7510(a), you must obtain a composite fuel sample during each performance test run.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in §63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section, or as an alternative where fuel specification analysis is not practical, you must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an other gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to this subpart.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop a site-specific fuel analysis plan for other gas 1 fuels according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in §63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart. When using a fuel supplier's fuel analysis, the owner or operator is not required to submit the information in §63.7521(g)(2)(iii).

(h) You must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

Back to Top

**§63.7522 Can I use emissions averaging to comply with this subpart?**

(a) As an alternative to meeting the requirements of §63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by

emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to this subpart as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on April 1, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on April 1, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are subject to numeric emission limits following the compliance date specified in §63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq. 1a)}$$

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Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 1b)}$$

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Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c). If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, Eadj, determined according to §63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 1c)}$$

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Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c). If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, Eadj, determined according to §63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to this subpart that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sm \times Cfi) \div \sum_{i=1}^{n} (Sm \times Cfi) \quad \text{(Eq. 2)}$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in §63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual electrical generation for the month if you are complying with the emission limits on an electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \text{(Eq. 3a)}$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 3b)}$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, $E_{adj}$, determined according to §63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \quad \text{(Eq. 3c)}$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, $E_{adj}$, determined according to §63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sa \times Cfi) \div \sum_{i=1}^{n} (Sa \times Cfi) \quad \text{(Eq. 4)}$$

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Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

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Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) If requested, you must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in §63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with §63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to §63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) If submitted upon request, the Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategory, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in §63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n} (ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

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Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu) or parts per million (ppm).

Eli = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu or ppm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in §63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in §63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013; 80 FR 72809, Nov. 20, 2015]

Back to Top

**§63.7525 What are my monitoring, installation, operation, and maintenance requirements?**

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in §63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide ($CO_2$)) according to the procedures in paragraphs (a)(1) through (6) of this section.

(1) Install the CO CEMS and oxygen (or $CO_2$) analyzer by the compliance date specified in §63.7495. The CO and oxygen (or $CO_2$) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the CO emissions limit be determined using $CO_2$ as a diluent correction in place of oxygen at 3 percent. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate $CO_2$ correction percentage for the fuel type burned in the unit, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The alternative test method request must account for any $CO_2$ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; part 75 of this chapter (if an $CO_2$ analyzer is used); the site-specific monitoring plan developed according to §63.7505(d); and the requirements in §63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to §63.7505(d), and the requirements in §63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in §63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method

10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with §63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(vi) When $CO_2$ is used to correct CO emissions and $CO_2$ is measured on a wet basis, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: A continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring $O_2$ both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, *i.e.,* a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (*e.g.,* hourly average wet-and dry basis $O_2$ values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(3) Complete a minimum of one cycle of CO and oxygen (or $CO_2$) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or $CO_2$) data concurrently. Collect at least four CO and oxygen (or $CO_2$) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in §63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen (or corrected to an $CO_2$ percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be

used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in §63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in §63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in §63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (*e.g.*, bag leak detectors, ESP secondary power, and PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must have a documented detection limit of 0.5 milligram per actual cubic meter, or less.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in §63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of §60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in §63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in §63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in §63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in §63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in §63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in §63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of §63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in §63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in §63.7535(b), and comply with the data calculation requirements specified in §63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in §63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in §63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.*, PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.*, check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues

to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Calibrate the pH monitoring system in accordance with your monitoring plan and according to the manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and

continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see §63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the Federal Register or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in §63.7540(a)(14) for a mercury CEMS and §63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide ($SO_2$) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you elect to use an $SO_2$ CEMS to demonstrate continuous compliance with the HCl emission limit, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to either part 60 or part 75 of this chapter.

(1) The $SO_2$ CEMS must be installed by the compliance date specified in §63.7495.

(2) For on-going quality assurance (QA), the $SO_2$ CEMS must meet either the applicable daily and quarterly requirements in Procedure 1 of appendix F of part 60 or the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the $SO_2$ CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting $SO_2$ data, you must operate the $SO_2$ CEMS as specified in §63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in §63.7535(c). Periods when $SO_2$ data are unavailable may constitute monitoring deviations as specified in §63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured $SO_2$ concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 $SO_2$ data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013; 80 FR 72810, Nov. 20, 2015]

Back to Top

**§63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?**

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to §63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by §63.7510(a)(2). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to §63.7525.

(b) If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in §63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to §63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in §63.7510(a)(2). (Note that §63.7510(a)(2) exempts certain fuels

from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

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Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to §63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

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Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to §63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \quad \text{(Eq. 9)}$$

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Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to §63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in §63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_{1,i} \bar{y} = \frac{1}{n}\sum_{i=1}^{n} y_1 \qquad \text{(Eq. 10)}$$

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Where:

$X_1$ = the PM CPMS data points for the three runs constituting the performance test,

$Y_1$ = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

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Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

$Y_1$ = the three run average lb/MMBtu PM concentration,

$X_1$ = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(*4*) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

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Where:

$O_l$ = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that

demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

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Where:

$X_1$ = the PM CPMS data points for all runs i,

n = the number of data points, and

$O_h$ = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 14)}$$

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Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 30 operating days.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11 through 13 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers (“back half”) of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of this

subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in §63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iv) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(v) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vii) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in §63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(viii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(ix) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a $SO_2$ CEMS is to install and operate the $SO_2$ according to the requirements in §63.7525(m) establish a maximum $SO_2$ emission rate equal to the highest hourly average $SO_2$ measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to §63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \quad \text{(Eq. 15)}$$

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Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \quad \text{(Eq. 16)}$$

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Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} (Hgi90 \times Qi) \quad \text{(Eq. 17)}$$

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Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} (TSM90i \times Qi) \quad \text{(Eq. 18)}$$

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Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d)[Reserved]

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in §63.7575, you must conduct an initial fuel specification analyses according to §63.7521(f) through (i) and according to the frequency listed in §63.7540(c) and maintain records of the results of the testing as outlined in §63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart, you must meet the work practice standard according to Table 3 of this subpart. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 of this subpart.

(i) If you opt to comply with the alternative $SO_2$ CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and $SO_2$ CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with §63.7500(a)(3); and

(3) You establish a unit-specific maximum $SO_2$ operating limit by collecting the maximum hourly $SO_2$ emission rate on the $SO_2$ CEMS during the paired 3-run test for HCl. The maximum $SO_2$ operating limit is equal to the highest hourly average $SO_2$ concentration measured during the HCl performance test.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013; 80 FR 72811, Nov. 20, 2015]

Back to Top

**§63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?**

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance approach for an existing affected boiler for demonstrating initial compliance according to §63.7522(e) and for demonstrating monthly compliance according to §63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at: *http://www.epa.gov/ttn/atw/boiler/boilerpg.html.*

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (*i.e.*, fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left( \sum_{i=1}^{n} EIS_{actual} \right) + EI_{baseline} \quad \text{(Eq. 19)}$$

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Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to this subpart at all times the affected unit is subject to numeric emission limits, following the compliance date specified in §63.7495.

(f) You must use Equation 20 of this section to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 to this subpart.

$$E_{adj} = E_m \times (1 - ECredits) \quad \text{(Eq. 20)}$$

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Where:

$E_{adj}$ = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

$E_m$ = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under §63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015]

Back to Top

**Continuous Compliance Requirements**

Back to Top

**§63.7535 Is there a minimum amount of monitoring data I must obtain?**

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see §63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. 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 in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control

activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015]

Back to Top

**§63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?**

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in §63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must

recalculate the HCl emission rate using Equation 16 of §63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of §63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of §63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of §63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in §63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of §63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of §63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of §63.7530. If the results of recalculating the maximum mercury input using Equation 8 of §63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is subject to numeric emission limits.

(iii) Keep records of CO levels according to §63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in §63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any $NO_X$ requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in §63.7545(e)(2)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in §63.7545(e)(2)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the Federal Register or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in §63.7545(e)(2)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in §63.7545(e)(2)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of §63.7530. If the results of recalculating the maximum TSM input using Equation 9 of §63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of §63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of §63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be

expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (v) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in §63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in §63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in §63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in §63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in §63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in §63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in §63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013, as amended at 80 FR 72813, Nov. 20, 2015]

Back to Top

**§63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?**

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in §63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

Back to Top

**Notification, Reports, and Records**

Back to Top

**§63.7545 What notifications must I submit and when?**

(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in §63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at §63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under §241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of §241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(iii) Identification of whether you are complying the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

(ii) “This facility has had an energy assessment performed according to §63.7530(e).”

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.”

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013; 80 FR 72814, Nov. 20, 2015]

Back to Top

**§63.7550 What reports must I submit and when?**

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through

December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for limited-use boiler or process heater.

(2) If you are complying with the fuel analysis you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(3) If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in (c)(5)(i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(4) If you are complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xviii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with §63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of §63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of §63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of §63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of §63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of §63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of §63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of §63.7530 or the maximum mercury input operating limit using Equation 8 of §63.7530, or the maximum TSM input operating limit using Equation 9 of §63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in §63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with §63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in §63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, $SO_2$, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(xviii) For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of §63.7555(d).

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

(2) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in §63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS's 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.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in §63.2) required by this subpart, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph (h)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*http://www.epa.gov/ttn/chief/ert/index.html*), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted 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/OAPQS/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 as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in 63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being transmitted is 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/OAPQS/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 as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

[78 FR 7183, Jan. 31, 2013, as amended at 80 FR 72814, Nov. 20, 2015]

Back to Top

**§63.7555 What records must I keep?**

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in §63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in §241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per §241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under §241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of §63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of §63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and

process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of §63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of §63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(5) If, consistent with §63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to this subpart, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(6) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(7) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of §63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of §63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) For each startup period, for units selecting paragraph (2) of the definition of “startup” in §63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of “startup” in §63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (*e.g.*, CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

(13) If you choose to use paragraph (2) of the definition of “startup” in §63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of “startup” in §63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

(i) The request shall provide evidence of a documented manufacturer-identified safety issue.

(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.

(iii) In addition, the request shall contain documentation that:

(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;

(B) The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and

(C) Identifies with specificity the details of the manufacturer's statement of concern.

(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

(e) If you elect to average emissions consistent with §63.7522, you must additionally keep a copy of the emission averaging implementation plan required in §63.7522(g), all calculations required under §63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with §63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to §63.7533, you must keep a copy of the Implementation Plan required in §63.7533(d) and copies of all data and calculations used to establish credits according to §63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by §63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013; 80 FR 72816, Nov. 20, 2015]

Back to Top

**§63.7560 In what form and how long must I keep my records?**

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement,

maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.

Back to Top

**Other Requirements and Information**

Back to Top

**§63.7565 What parts of the General Provisions apply to me?**

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

Back to Top

**§63.7570 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits and work practice standards in §63.7500(a) and (b) under §63.6(g), except as specified in §63.7555(d)(13).

(2) Approval of major change to test methods in Table 5 to this subpart under §63.7(e)(2)(ii) and (f) and as defined in §63.90, and alternative analytical methods requested under §63.7521(b)(2).

(3) Approval of major change to monitoring under §63.8(f) and as defined in §63.90, and approval of alternative operating parameters under §§63.7500(a)(2) and 63.7522(g)(2).

(4) Approval of major change to recordkeeping and reporting under §63.10(e) and as defined in §63.90.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7186, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015]

Back to Top

**§63.7575 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act, in §63.2 (the General Provisions), and in this section as follows:

*10-day rolling average* means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

*30-day rolling average* means the arithmetic mean of the previous 720 hours of valid CO CEMS data. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent. For parameters other than CO, 30-day rolling average means either the arithmetic mean of all valid hours of data from 30 successive operating days or the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating.

*Annual capacity factor* means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

*Annual heat input* means the heat input for the 12 months preceding the compliance demonstration.

*Average annual heat input rate* means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

*Bag leak detection system* means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Benchmark* means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

*Biodiesel* means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see §63.14).

*Biomass or bio-based solid fuel* means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.*, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

*Blast furnace gas fuel-fired boiler or process heater* means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

*Boiler* means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in §241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

*Boiler system* means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

*Calendar year* means the period between January 1 and December 31, inclusive, for a given year.

*Clean dry biomass* means any biomass-based solid fuel that have not been painted, pigment-stained, or pressure treated, does not contain contaminants at concentrations not normally associated with virgin biomass materials and has a moisture content of less than 20 percent and is not a solid waste.

*Coal* means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see §63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

*Commercial/institutional boiler* means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

*Common stack* means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

*Cost-effective energy conservation measure* means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

*Daily block average* means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

*Deviation.* (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

*Dioxins/furans* means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

*Distillate oil* means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see §60.14).

*Dry scrubber* means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

*Dutch oven* means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

*Efficiency credit* means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

*Electric utility steam generating unit (EGU)* means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be “capable of combusting” fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

*Electrostatic precipitator (ESP)* means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

*Energy assessment* means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (*e.g.,* steam, hot

water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 33 percent of the energy (*e.g.*, steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (*e.g.*, steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (*e.g.*, product X manufacturing area; product Y drying area; Building Z).

*Energy management practices* means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

*Energy management program* means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

*Energy use system* includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected

boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

*Equivalent* means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

*Federally enforceable* means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*Fluidized bed boiler* means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

*Fluidized bed boiler with an integrated fluidized bed heat exchanger* means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

*Fluidized bed combustion* means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

*Fossil fuel* means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

*Fuel cell* means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

*Fuel type* means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

*Gaseous fuel* includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

*Heat input* means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

*Heavy liquid* includes residual oil and any other liquid fuel not classified as a light liquid.

*Hourly average* means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

*Hot water heater* means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million

Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

*Hybrid suspension grate boiler* means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis as demonstrated by monthly fuel analysis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

*Industrial boiler* means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

*Light liquid* includes distillate oil, biodiesel, or vegetable oil.

*Limited-use boiler or process heater* means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

*Liquid fuel* includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, and vegetable oil.

*Load fraction* means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (*e.g.*, for 50 percent load the load fraction is 0.5). For boilers and process heaters that co-fire natural gas or refinery gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (*e.g.*, if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas the load fraction is 0.5).

*Major source for oil and natural gas production facilities,* as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

*Metal process furnaces* are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

*Million Btu (MMBtu)* means one million British thermal units.

*Minimum activated carbon injection rate* means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum oxygen level* means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum pressure drop* means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum scrubber effluent pH* means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

*Minimum scrubber liquid flow rate* means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

*Minimum scrubber pressure drop* means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum sorbent injection rate* means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion not using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

*Minimum total secondary electric power* means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

*Natural gas* means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see §63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3H_8$.

*Opacity* means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

*Operating day* means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period. For calculating rolling average emissions, an operating day does not include the hours of operation during startup or shutdown.

*Other combustor* means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

*Other gas 1 fuel* means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum concentration of 40 micrograms/cubic meters of mercury.

*Oxygen analyzer system* means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

*Oxygen trim system* means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

*Particulate matter (PM)* means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

*Period of gas curtailment or supply interruption* means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

*Pile burner* means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

*Process heater* means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in §241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

*Pulverized coal boiler* means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

*Qualified energy assessor* means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

*Refinery gas* means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

*Regulated gas stream* means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

*Residential boiler* means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* §63.14(b)).

*Responsible official* means responsible official as defined in §70.2.

*Rolling average* means the average of all data collected during the applicable averaging period. For demonstration of compliance with a CO CEMS-based emission limit based on CO concentration a 30-day (10-day) rolling average is comprised of the average of all the hourly average concentrations over the previous 720 (240) operating hours calculated each operating day. To demonstrate compliance on a 30-day rolling average basis for parameters other than CO, you must indicate the basis of the 30-day rolling average period you are using for compliance, as discussed in §63.7545(e)(2)(iii). If you indicate the 30 operating day basis, you must calculate a new average value each operating day and shall include the measured hourly values for the preceding 30 operating days. If you select the 720 operating hours basis, you must average of all the hourly average concentrations over the previous 720 operating hours calculated each operating day.

*Secondary material* means the material as defined in §241.2 of this chapter.

*Shutdown* means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater.

*Sloped grate* means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at

the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

*Solid fossil fuel* includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

*Solid fuel* means any solid fossil fuel or biomass or bio-based solid fuel.

*Startup* means:

(1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

*Steam output* means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be the appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input (lb per MWh).

(4) For a boiler that performs multiple functions and produces steam to be used for any combination of paragraphs (1), (2), and (3) of this definition that includes electricity generation of paragraph (3) of this definition, the total energy output, in terms of MMBtu of steam output, is the sum of the energy content of steam sent directly to the process and/or used for heating ($S_1$), the energy content of turbine steam sent to process plus energy in electricity according to paragraph (2) of this definition ($S_2$), and the energy content of electricity generated by a electricity only turbine as paragraph (3) of this definition ($MW_{(3)}$) and would be calculated using

Equation 21 of this section. In the case of boilers supplying steam to one or more common heaters, $S_1$, $S_2$, and $MW_{(3)}$ for each boiler would be calculated based on the its (steam energy) contribution (fraction of total steam energy) to the common heater.

$$SO_M = S_1 + S_2 + (MW_{(3)} \, x \, CFn) \qquad \text{(Eq. 21)}$$

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Where:

$SO_M$ = Total steam output for multi-function boiler, MMBtu

$S_1$ = Energy content of steam sent directly to the process and/or used for heating, MMBtu

$S_2$ = Energy content of turbine steam sent to the process plus energy in electricity according to (2) above, MMBtu

$MW_{(3)}$ = Electricity generated according to paragraph (3) of this definition, MWh

CFn = Conversion factor for the appropriate subcategory for converting electricity generated according to paragraph (3) of this definition to equivalent steam energy, MMBtu/MWh

CFn for emission limits for boilers in the unit designed to burn solid fuel subcategory = 10.8

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal = 11.7

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass = 12.1

CFn for emission limits for boilers in one of the subcategories of units designed to burn liquid fuel = 11.2

CFn for emission limits for boilers in the unit designed to burn gas 2 (other) subcategory = 6.2

*Stoker* means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

*Stoker/sloped grate/other unit designed to burn kiln dried biomass* means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or

other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

*Stoker/sloped grate/other unit designed to burn wet biomass* means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

*Suspension burner* means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

*Temporary boiler* means any gaseous or liquid fuel boiler or process heater that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler or process heater is not a temporary boiler or process heater if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or process heater or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler or process heater that replaces a temporary boiler or process heater at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, process heat, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

*Total selected metals (TSM)* means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

*Traditional fuel* means the fuel as defined in §241.2 of this chapter.

*Tune-up* means adjustments made to a boiler or process heater in accordance with the procedures outlined in §63.7540(a)(10).

*Ultra low sulfur liquid fuel* means a distillate oil that has less than or equal to 15 ppm sulfur.

*Unit designed to burn biomass/bio-based solid subcategory* includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

*Unit designed to burn coal/solid fossil fuel subcategory* includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

*Unit designed to burn gas 1 subcategory* includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

*Unit designed to burn gas 2 (other) subcategory* includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

*Unit designed to burn heavy liquid subcategory* means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

*Unit designed to burn light liquid subcategory* means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

*Unit designed to burn liquid subcategory* includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that

burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

*Unit designed to burn liquid fuel that is a non-continental unit* means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Unit designed to burn solid fuel subcategory* means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

*Useful thermal energy* means energy (*i.e.*, steam, hot water, or process heat) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

*Vegetable oil* means oils extracted from vegetation.

*Voluntary Consensus Standards or VCS* mean technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org*), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org*), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, + 41 22 749 01 11, *http://www.iso.org/iso/home.htm*), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au*), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, + 44 (0)20 8996 9001, *http://www.bsigroup.com*), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca*), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium + 32 2 550 08 11, *http://www.cen.eu/cen*), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, + 49 211 6214-230, *http://www.vdi.eu*). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.*, California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other

branches of the U.S. government, *e.g.*, Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

*Waste heat boiler* means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

*Waste heat process heater* means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

*Wet scrubber* means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

*Work practice standard* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015]

Back to Top

**Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters**

As stated in §63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

| **If your boiler or process heater is in this subcategory . . .** | **For the following pollutants . . .** | **The emissions must not exceed the following emission limits, except during startup and shutdown . . .** | **Or the emissions must not exceed the following alternative output-based limits,** | **Using this specified sampling volume or test run duration . . .** |
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| | | | **except during startup and shutdown . . .** | |
| 1. Units in all subcategories designed to burn solid fuel. | a. HCl | 2.2E-02 lb per MMBtu of heat input | 2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh | For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run. |
| | b. Mercury | 8.0E-07[a] lb per MMBtu of heat input | 8.7E-07[a] lb per MMBtu of steam output or 1.1E-05[a] lb per MWh | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 2. Units designed to burn coal/solid fossil fuel | a. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | 1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 3. Pulverized coal boilers designed to burn coal/solid fossil fuel | a. Carbon monoxide (CO) (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average) | 0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |

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| 4. Stokers/others designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average) | 0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 5. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average) | 0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average) | 1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 7. Stokers/sloped grate/others designed to burn wet biomass fuel | a. CO (or CEMS) | 620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average) | 5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average | 1 hr minimum sampling time. |

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| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input) | 3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO | 460 ppm by volume on a dry basis corrected to 3 percent oxygen | 4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | 3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 9. Fluidized bed units designed to burn biomass/bio-based solids | a. CO (or CEMS) | 230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average) | 2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input) | 1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04[a] lb per MMBtu | Collect a minimum of 3 dscm per run. |

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| | | | of steam output or 1.2E-03[a] lb per MWh) | |
| 10. Suspension burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 10-day rolling average) | 1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | 3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 330 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 10-day rolling average) | 3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input) | 4.3E-03 lb per MMBtu of steam output or 4.5E-02 lb per MWh; or (5.2E-05 lb per | Collect a minimum of 3 dscm per run. |

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| | | | MMBtu of steam output or 5.5E-04 lb per MWh) | |
| 12. Fuel cell units designed to burn biomass/bio-based solids | a. CO | 910 ppm by volume on a dry basis corrected to 3 percent oxygen | 1.1 lb per MMBtu of steam output or 1.0E + 01 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.0E-02 lb per MMBtu of heat input; or (2.9E-05[a] lb per MMBtu of heat input) | 3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids | a. CO (or CEMS) | 1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average) | 1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input) | 3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 14. Units designed to burn liquid fuel | a. HCl | 4.4E-04 lb per MMBtu of heat input | 4.8E-04 lb per MMBtu of steam | For M26A: Collect a minimum of 2 dscm |

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| | | | output or 6.1E-03 lb per MWh | per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 4.8E-07[a] lb per MMBtu of heat input | 5.3E-07[a] lb per MMBtu of steam output or 6.7E-06[a] lb per MWh | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 15. Units designed to burn heavy liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input) | 1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05 lb per MMBtu of steam output or 1.1E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 16. Units designed to burn light liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | 1.2E-03[a] lb per MMBtu of steam output or 1.6E-02[a] lb per MWh; or (3.2E-05 lb per | Collect a minimum of 3 dscm per run. |

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| | | | MMBtu of steam output or 4.0E-04 lb per MWh) | |
| 17. Units designed to burn liquid fuel that are non-continental units | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | 2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh) | Collect a minimum of 4 dscm per run. |
| 18. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 0.16 lb per MMBtu of steam output or 1.0 lb per MWh | 1 hr minimum sampling time. |
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | 2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh | For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu of heat input | 1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a |

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| | | | | minimum of 3 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input) | 1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |

[a]If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provisions of §63.7515 are met. For all other pollutants that do not contain a footnote "a", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b]Incorporated by reference, see §63.14.

[c]If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Tables 11, 12 or 13 to this subpart until January 31, 2016. On and after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

[d]An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate $CO_2$ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any $CO_2$ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[78 FR 7193, Jan. 31, 2013, as amended at 80 FR 72819, Nov. 20, 2015]

Back to Top

**Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters**

As stated in §63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

| **If your boiler or process heater is in this subcategory . . .** | **For the following pollutants . . .** | **The emissions must not exceed the following emission limits, except during startup and shutdown . . .** | **The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .** | **Using this specified sampling volume or test run duration . . .** |
|---|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel | a. HCl | 2.2E-02 lb per MMBtu of heat input | 2.5E-02 lb per MMBtu of steam output or 0.27 lb per MWh | For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run. |
| | b. Mercury | 5.7E-06 lb per MMBtu of heat input | 6.4E-06 lb per MMBtu of steam output or 7.3E-05 lb per MWh | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm. |
| 2. Units design to burn coal/solid fossil fuel | a. Filterable PM (or TSM) | 4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input) | 4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 3. Pulverized coal boilers designed to burn coal/solid | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run | 0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3- | 1 hr minimum sampling time. |

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| fossil fuel | | average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | run average | |
| 4. Stokers/others designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 160 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 5. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 7. Stokers/sloped grate/others designed to burn | a. CO (or CEMS) | 1,500 ppm by volume on a dry basis corrected to 3 percent | 1.4 lb per MMBtu of steam output or 17 lb per MWh; 3- | 1 hr minimum sampling time. |

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| wet biomass fuel | | oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | run average | |
| | b. Filterable PM (or TSM) | 3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input) | 4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO | 460 ppm by volume on a dry basis corrected to 3 percent oxygen | 4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | 3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 9. Fluidized bed units designed to burn biomass/bio-based solid | a. CO (or CEMS) | 470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30- | 4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average | 1 hr minimum sampling time. |

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| | | day rolling average) | | |
| | b. Filterable PM (or TSM) | 1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per MMBtu of heat input) | 1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb per MMBtu of steam output or 1.7E-02 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 10. Suspension burners designed to burn biomass/bio-based solid | a. CO (or CEMS) | 2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | 5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid | a. CO (or CEMS) | 770 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10- | 8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |

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| | | day rolling average) | | |
| | b. Filterable PM (or TSM) | 2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input) | 3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 12. Fuel cell units designed to burn biomass/bio-based solid | a. CO | 1,100 ppm by volume on a dry basis corrected to 3 percent oxygen | 2.4 lb per MMBtu of steam output or 12 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input) | 5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 13. Hybrid suspension grate units designed to burn biomass/bio-based solid | a. CO (or CEMS) | 3,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input) | 5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 | Collect a minimum of 1 dscm per run. |

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| | | | lb per MMBtu of steam output or 6.3E-03 lb per MWh) | |
| 14. Units designed to burn liquid fuel | a. HCl | 1.1E-03 lb per MMBtu of heat input | 1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh | For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 2.0E-06[a] lb per MMBtu of heat input | 2.5E-06[a] lb per MMBtu of steam output or 2.8E-05 lb per MWh | For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784,[b] collect a minimum of 2 dscm. |
| 15. Units designed to burn heavy liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input) | 7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 16. Units designed to burn light liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh | 1 hr minimum sampling time. |

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| | | oxygen | | |
| | b. Filterable PM (or TSM) | 7.9E-03[a] lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input) | 9.6E-03[a] lb per MMBtu of steam output or 1.1E-01[a] lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 17. Units designed to burn liquid fuel that are non-continental units | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | 3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 18. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 0.16 lb per MMBtu of steam output or 1.0 lb per MWh | 1 hr minimum sampling time. |
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | 2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh | For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per | 1.4E-05 lb per | For M29, collect a |

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| | | MMBtu of heat input | MMBtu of steam output or 8.3E-05 lb per MWh | minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 2 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input) | 1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |

[a]If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provisions of §63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b]Incorporated by reference, see §63.14.

[c]An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate $CO_2$ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any $CO_2$ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[78 FR 7195, Jan. 31, 2013, as amended at 80 FR 72821, Nov. 20, 2015]

Back to Top

**Table 3 to Subpart DDDDD of Part 63—Work Practice Standards**

As stated in §63.7500, you must comply with the following applicable work practice standards:

| **If your unit is . . .** | **You must meet the following . . .** |
|---|---|
| 1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater | Conduct a tune-up of the boiler or process heater every 5 years as specified in §63.7540. |
| 2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid | Conduct a tune-up of the boiler or process heater biennially as specified in §63.7540. |
| 3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater | Conduct a tune-up of the boiler or process heater annually as specified in §63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans. |
| 4. An existing boiler or process heater located at a major source facility, not including limited use units | Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, |

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| | satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in §63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575: |
| | a. A visual inspection of the boiler or process heater system. |
| | b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. |
| | c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. |
| | d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. |
| | e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified. |
| | f. A list of cost-effective energy conservation measures that are within the facility's control. |

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| | g. A list of the energy savings potential of the energy conservation measures identified. |
| | h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. |
| 5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup | a. You must operate all CMS during startup.<br>b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.<br>c. You have the option of complying using either of the following work practice standards.<br>(1) If you choose to comply using definition (1) of "startup" in §63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR<br>(2) If you choose to comply using definition (2) of "startup" in §63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must |

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| | engage and operate PM control within one hour of first feeding fuels that are not clean fuels[a]. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in §63.7505(e).<br>d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in §63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in §63.7555. |
| 6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown | You must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.<br>If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas. You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of |

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| | shutdown, as specified in §63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in §63.7555. |

[a]As specified in §63.7555(d)(13), the source may request an alternative timeframe with the PM controls requirement to the permitting authority (state, local, or tribal agency) that has been delegated authority for this subpart by EPA. The source must provide evidence that (1) it is unable to safely engage and operate the PM control(s) to meet the "fuel firing + 1 hour" requirement and (2) the PM control device is appropriately designed and sized to meet the filterable PM emission limit. It is acknowledged that there may be another control device that has been installed other than ESP that provides additional PM control (*e.g.*, scrubber).

[78 FR 7198, Jan. 31, 2013, as amended at 80 FR 72823, Nov. 20, 2015]

Back to Top

**Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters**

As stated in §63.7500, you must comply with the applicable operating limits:

**Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters**

| **When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .** | **You must meet these operating limits . . .** |
|---|---|
| 1. Wet PM scrubber control on a boiler or process heater not using a PM CPMS | Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test demonstrating compliance with the PM emission limitation according to §63.7530(b) and Table 7 to this subpart. |
| 2. Wet acid gas (HCl) scrubber[a] control on a boiler or process heater not using a HCl CEMS | Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the performance test demonstrating compliance with the HCl emission limitation according to §63.7530(b) and Table 7 to this subpart. |

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| 3. Fabric filter control on a boiler or process heater not using a PM CPMS | a. Maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average); or |
| | b. Install and operate a bag leak detection system according to §63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period. |
| 4. Electrostatic precipitator control on a boiler or process heater not using a PM CPMS | a. This option is for boilers and process heaters that operate dry control systems (*i.e.*, an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average). |
| | b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (*i.e.*, dry ESP). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to §63.7530(b) and Table 7 to this subpart. |
| 5. Dry scrubber or carbon injection control on a boiler or process heater not using a mercury CEMS | Maintain the minimum sorbent or carbon injection rate as defined in §63.7575 of this subpart. |
| 6. Any other add-on air pollution control type on a boiler or process heater not using a PM CPMS | This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average). |
| 7. Performance testing | For boilers and process heaters that demonstrate compliance with a performance test, maintain the 30-day rolling average operating load |

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| | of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test. |
| 8. Oxygen analyzer system | For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an $O_2$ analyzer system as specified in §63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in §63.7525(a). |
| 9. $SO_2$ CEMS | For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an $SO_2$ CEMS, maintain the 30-day rolling average $SO_2$ emission rate at or below the highest hourly average $SO_2$ concentration measured during the HCl performance test, as specified in Table 8. |

[a]A wet acid gas scrubber is a control device that removes acid gases by contacting the combustion gas with an alkaline slurry or solution. Alkaline reagents include, but not limited to, lime, limestone and sodium.

[80 FR 72874, Nov. 20, 2015]

Back to Top

**Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements**

As stated in §63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

| **To conduct a performance test for the following pollutant . . .** | **You must. . .** | **Using, as appropriate . . .** |
|---|---|---|
| 1. Filterable PM | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |

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| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the PM emission concentration | Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter. |
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 2. TSM | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the TSM emission concentration | Method 29 at 40 CFR part 60, appendix A-8 of this chapter |

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| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 3. Hydrogen chloride | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the hydrogen chloride emission concentration | Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter. |
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 4. Mercury | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the | Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC |

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| | stack gas | 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the mercury emission concentration | Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a] |
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 5. CO | a. Select the sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine oxygen concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981.[a] |
| | c. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | d. Measure the CO emission concentration | Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit. |

[a]Incorporated by reference, see §63.14.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7200, Jan. 31, 2013; 80 FR 72825, Nov. 20, 2015]

Back to Top

**Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements**

As stated in §63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in §63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

| **To conduct a fuel analysis for the following pollutant . . .** | **You must . . .** | **Using . . .** |
|---|---|---|
| 1. Mercury | a. Collect fuel samples | Procedure in §63.7521(c) or ASTM D5192,[a] or ASTM D7430,[a] or ASTM D6883,[a] or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for solid), or ASTM D4177[a] (for liquid), or ASTM D4057[a] (for liquid), or equivalent. |
| | b. Composite fuel samples | Procedure in §63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] (for biomass), or EPA 3050[a] (for solid fuel), or EPA 821-R-01-013[a] (for liquid or solid), or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173,[a] ASTM E871,[a] or ASTM D5864,[a] or ASTM D240, or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent. |
| | f. Measure mercury concentration in fuel sample | ASTM D6722[a] (for coal), EPA SW-846-7471B[a] or EPA 1631 or EPA 1631E (for solid samples), or EPA SW-846-7470A[a] (for liquid samples), or EPA 821-R-01-013 (for liquid or solid), or equivalent. |

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| | g. Convert concentration into units of pounds of mercury per MMBtu of heat content | For fuel mixtures use Equation 8 in §63.7530. |
| 2. HCl | a. Collect fuel samples | Procedure in §63.7521(c) or ASTM D5192,[a] or ASTM D7430,[a] or ASTM D6883,[a] or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent. |
| | b. Composite fuel samples | Procedure in §63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), or ASTM D5198[a] (for biomass), or EPA 3050[a] or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), ASTM D5864, ASTM D240[a] or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173[a] or ASTM E871,[a] or D5864,[a] or ASTM D240,[a] or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent. |
| | f. Measure chlorine concentration in fuel sample | EPA SW-846-9250,[a] ASTM D6721,[a] ASTM D4208[a] (for coal), or EPA SW-846-5050[a] or ASTM E776[a] (for solid fuel), or EPA SW-846-9056[a] or SW-846-9076[a] (for solids or liquids) or equivalent. |
| | g. Convert concentrations into units of pounds of HCl per MMBtu of heat content | For fuel mixtures use Equation 7 in §63.7530 and convert from chlorine to HCl by multiplying by 1.028. |
| 3. Mercury Fuel Specification for | a. Measure mercury concentration in the fuel | Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954,[a] |

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| other gas 1 fuels | sample and convert to units of micrograms per cubic meter, or | ASTM D6350,[a] ISO 6978-1:2003(E),[a] or ISO 6978-2:2003(E),[a] or EPA-1631[a] or equivalent. |
| | b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater | Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784[a] or equivalent. |
| 4. TSM | a. Collect fuel samples | Procedure in §63.7521(c) or ASTM D5192,[a] or ASTM D7430,[a] or ASTM D6883,[a] or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), or ASTM D4177,[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent. |
| | b. Composite fuel samples | Procedure in §63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] or TAPPI T266[a] (for biomass), or EPA 3050[a] or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173[a] or ASTM E871,[a] or D5864, or ASTM D240,[a] or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent. |
| | f. Measure TSM concentration in fuel sample | ASTM D3683,[a] or ASTM D4606,[a] or ASTM D6357[a] or EPA 200.8[a] or EPA SW-846-6020,[a] or EPA SW-846-6020A,[a] or EPA SW-846-6010C,[a] EPA 7060[a] or EPA 7060A[a] (for arsenic only), or EPA SW-846-7740[a] (for |

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| | | selenium only). |
| | g. Convert concentrations into units of pounds of TSM per MMBtu of heat content | For fuel mixtures use Equation 9 in §63.7530. |

[a]Incorporated by reference, see §63.14.

[80 FR 72825, Nov. 20, 2015]

Back to Top

**Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits[ab]**

As stated in §63.7520, you must comply with the following requirements for establishing operating limits:

**Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits[ab]**

| If you have an applicable emission limit for . . . | And your operating limits are based on . . . | You must . . . | Using . . . | According to the following requirements |
|---|---|---|---|---|
| 1. PM, TSM, or mercury | a. Wet scrubber operating parameters | i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to §63.7530(b) | (1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM, TSM, or mercury performance test | (a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests.<br>(b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| | b. Electrostatic precipitator | i. Establish a site-specific minimum | (1) Data from the voltage and | (a) You must collect secondary voltage and |

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| | operating parameters (option only for units that operate wet scrubbers) | total secondary electric power input according to §63.7530(b) | secondary amperage monitors during the PM or mercury performance test | secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests.<br>(b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| | c. Opacity | i. Establish a site-specific maximum opacity level | (1) Data from the opacity monitoring system during the PM performance test | (a) You must collect opacity readings every 15 minutes during the entire period of the performance tests.<br>(b) Determine the average hourly opacity reading for each performance test run by computing the hourly averages using all of the 15-minute readings taken during each performance test run.<br>(c) Determine the highest hourly average opacity reading measured during the test run demonstrating compliance with the PM (or TSM) emission limitation. |

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| 2. HCl | a. Wet scrubber operating parameters | i. Establish site-specific minimum effluent pH and flow rate operating limits according to §63.7530(b) | (1) Data from the pH and liquid flow-rate monitors and the HCl performance test | (a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests.<br>(b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| | b. Dry scrubber operating parameters | i. Establish a site-specific minimum sorbent injection rate operating limit according to §63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent | (1) Data from the sorbent injection rate monitors and HCl or mercury performance test | (a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests.<br>(b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.<br>(c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in §63.7575, to determine the |

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| | | | | required injection rate. |
| | c. Alternative Maximum $SO_2$ emission rate | i. Establish a site-specific maximum $SO_2$ emission rate operating limit according to §63.7530(b) | (1) Data from $SO_2$ CEMS and the HCl performance test | (a) You must collect the $SO_2$ emissions data according to §63.7525(m) during the most recent HCl performance tests.<br>(b) The maximum $SO_2$ emission rate is equal to the highest hourly average $SO_2$ emission rate measured during the most recent HCl performance tests. |
| 3. Mercury | a. Activated carbon injection | i. Establish a site-specific minimum activated carbon injection rate operating limit according to §63.7530(b) | (1) Data from the activated carbon rate monitors and mercury performance test | (a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests.<br>(b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.<br>(c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the |

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| | | | | load fraction, as defined in §63.7575, to determine the required injection rate. |
| 4. Carbon monoxide for which compliance is demonstrated by a performance test | a. Oxygen | i. Establish a unit-specific limit for minimum oxygen level according to §63.7530(b) | (1) Data from the oxygen analyzer system specified in §63.7525(a) | (a) You must collect oxygen data every 15 minutes during the entire period of the performance tests.<br>(b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test.<br>(c) Determine the lowest hourly average established during the performance test as your minimum operating limit. |
| 5. Any pollutant for which compliance is demonstrated by a performance test | a. Boiler or process heater operating load | i. Establish a unit specific limit for maximum operating load according to §63.7520(c) | (1) Data from the operating load monitors or from steam generation monitors | (a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test.<br>(b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test.<br>(c) Determine the highest hourly average |

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| | | | | of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit. |

[a]Operating limits must be confirmed or reestablished during performance tests.

[b]If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests. For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

[80 FR 72827, Nov. 20, 2015]

Back to Top

**Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance**

As stated in §63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

| **If you must meet the following operating limits or work practice standards . . .** | **You must demonstrate continuous compliance by . . .** |
|---|---|
| 1. Opacity | a. Collecting the opacity monitoring system data according to §63.7525(c) and §63.7535; and |
| | b. Reducing the opacity monitoring data to 6-minute averages; and |
| | c. Maintaining daily block average opacity to less than or equal to 10 percent or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation. |
| 2. PM CPMS | a. Collecting the PM CPMS output data according to §63.7525; |

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| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to §63.7530(b)(4). |
| 3. Fabric Filter Bag Leak Detection Operation | Installing and operating a bag leak detection system according to §63.7525 and operating the fabric filter such that the requirements in §63.7540(a)(7) are met. |
| 4. Wet Scrubber Pressure Drop and Liquid Flow-rate | a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§63.7525 and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to §63.7530(b). |
| 5. Wet Scrubber pH | a. Collecting the pH monitoring system data according to §§63.7525 and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to §63.7530(b). |
| 6. Dry Scrubber Sorbent or Carbon Injection Rate | a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§63.7525 and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in §63.7575. |
| 7. Electrostatic Precipitator Total Secondary Electric | a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§63.7525 |

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| Power Input | and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to §63.7530(b). |
| 8. Emission limits using fuel analysis | a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and |
| | b. Reduce the data to 12-month rolling averages; and |
| | c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 13 to this subpart. |
| | d. Calculate the HCI, mercury, and/or TSM emission rate from the boiler or process heater in units of lb/MMBtu using Equation 15 and Equations 17, 18, and/or 19 in §63.7530. |
| 9. Oxygen content | a. Continuously monitor the oxygen content using an oxygen analyzer system according to §63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in §63.7525(a)(7). |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the CO performance test. |
| 10. Boiler or process heater operating load | a. Collecting operating load data or steam generation data every 15 minutes.<br>b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average operating load such that it does not exceed 110 percent of the highest hourly average operating |

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| | load recorded during the performance test according to §63.7520(c). |
| 11. $SO_2$ emissions using $SO_2$ CEMS | a. Collecting the $SO_2$ CEMS output data according to §63.7525; |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average $SO_2$ CEMS emission rate to a level at or below the highest hourly $SO_2$ rate measured during the HCl performance test according to §63.7530. |

[78 FR 7204, Jan. 31, 2013, as amended at 80 FR 72829, Nov. 20, 2015]

Back to Top

**Table 9 to Subpart DDDDD of Part 63—Reporting Requirements**

As stated in §63.7550, you must comply with the following requirements for reports:

| **You must submit a(n)** | **The report must contain . . .** | **You must submit the report . . .** |
|---|---|---|
| 1. Compliance report | a. Information required in §63.7550(c)(1) through (5); and | Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b). |
| | b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards for periods of startup and shutdown in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the | |

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| | CMSs were out-of-control during the reporting period; and | |
| | c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard for periods of startup and shutdown, during the reporting period, the report must contain the information in §63.7550(d); and | |
| | d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in §63.8(c)(7), or otherwise not operating, the report must contain the information in §63.7550(e) | |

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

Back to Top

**Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD**

As stated in §63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Applies to subpart DDDDD |
|---|---|---|
| §63.1 | Applicability | Yes. |
| §63.2 | Definitions | Yes. Additional terms defined in §63.7575 |
| §63.3 | Units and Abbreviations | Yes. |
| §63.4 | Prohibited Activities and Circumvention | Yes. |

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| §63.5 | Preconstruction Review and Notification Requirements | Yes. |
| §63.6(a), (b)(1)-(b)(5), (b)(7), (c) | Compliance with Standards and Maintenance Requirements | Yes. |
| §63.6(e)(1)(i) | General duty to minimize emissions. | No. See §63.7500(a)(3) for the general duty requirement. |
| §63.6(e)(1)(ii) | Requirement to correct malfunctions as soon as practicable. | No. |
| §63.6(e)(3) | Startup, shutdown, and malfunction plan requirements. | No. |
| §63.6(f)(1) | Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards. | No. |
| §63.6(f)(2) and (3) | Compliance with non-opacity emission standards. | Yes. |
| §63.6(g) | Use of alternative standards | Yes, except §63.7555(d)(13) specifies the procedure for application and approval of an alternative timeframe with the PM controls requirement in the startup work practice (2). |
| §63.6(h)(1) | Startup, shutdown, and malfunction exemptions | No. See §63.7500(a). |

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| | to opacity standards. | |
| §63.6(h)(2) to (h)(9) | Determining compliance with opacity emission standards | No. Subpart DDDDD specifies opacity as an operating limit not an emission standard. |
| §63.6(i) | Extension of compliance | Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart. |
| §63.6(j) | Presidential exemption. | Yes. |
| §63.7(a), (b), (c), and (d) | Performance Testing Requirements | Yes. |
| §63.7(e)(1) | Conditions for conducting performance tests | No. Subpart DDDDD specifies conditions for conducting performance tests at §63.7520(a) to (c). |
| §63.7(e)(2)-(e)(9), (f), (g), and (h) | Performance Testing Requirements | Yes. |
| §63.8(a) and (b) | Applicability and Conduct of Monitoring | Yes. |
| §63.8(c)(1) | Operation and maintenance of CMS | Yes. |
| §63.8(c)(1)(i) | General duty to minimize emissions and CMS operation | No. See §63.7500(a)(3). |
| §63.8(c)(1)(ii) | Operation and | Yes. |

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| | maintenance of CMS | |
| §63.8(c)(1)(iii) | Startup, shutdown, and malfunction plans for CMS | No. |
| §63.8(c)(2) to (c)(9) | Operation and maintenance of CMS | Yes. |
| §63.8(d)(1) and (2) | Monitoring Requirements, Quality Control Program | Yes. |
| §63.8(d)(3) | Written procedures for CMS | Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required. |
| §63.8(e) | Performance evaluation of a CMS | Yes. |
| §63.8(f) | Use of an alternative monitoring method. | Yes. |
| §63.8(g) | Reduction of monitoring data | Yes. |
| §63.9 | Notification Requirements | Yes. |
| §63.10(a), (b)(1) | Recordkeeping and Reporting Requirements | Yes. |
| §63.10(b)(2)(i) | Recordkeeping of occurrence and duration of startups or shutdowns | Yes. |

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| §63.10(b)(2)(ii) | Recordkeeping of malfunctions | No. See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions. |
| §63.10(b)(2)(iii) | Maintenance records | Yes. |
| §63.10(b)(2)(iv) and (v) | Actions taken to minimize emissions during startup, shutdown, or malfunction | No. |
| §63.10(b)(2)(vi) | Recordkeeping for CMS malfunctions | Yes. |
| §63.10(b)(2)(vii) to (xiv) | Other CMS requirements | Yes. |
| §63.10(b)(3) | Recordkeeping requirements for applicability determinations | No. |
| §63.10(c)(1) to (9) | Recordkeeping for sources with CMS | Yes. |
| §63.10(c)(10) and (11) | Recording nature and cause of malfunctions, and corrective actions | No. See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions. |
| §63.10(c)(12) and (13) | Recordkeeping for sources with CMS | Yes. |
| §63.10(c)(15) | Use of startup, shutdown, and malfunction plan | No. |

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| §63.10(d)(1) and (2) | General reporting requirements | Yes. |
| §63.10(d)(3) | Reporting opacity or visible emission observation results | No. |
| §63.10(d)(4) | Progress reports under an extension of compliance | Yes. |
| §63.10(d)(5) | Startup, shutdown, and malfunction reports | No. See §63.7550(c)(11) for malfunction reporting requirements. |
| §63.10(e) | Additional reporting requirements for sources with CMS | Yes. |
| §63.10(f) | Waiver of recordkeeping or reporting requirements | Yes. |
| §63.11 | Control Device Requirements | No. |
| §63.12 | State Authority and Delegation | Yes. |
| §63.13-63.16 | Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions | Yes. |
| §63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), | Reserved | No. |

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| 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9). | | |

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

Back to Top

**Table 11 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011**

| **If your boiler or process heater is in this subcategory . . .** | **For the following pollutants . . .** | **The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .** | **Using this specified sampling volume or test run duration . . .** |
|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel | a. HCl | 0.022 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run. |
| 2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis | a. Mercury | 8.0E-07[a] lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less | a. Mercury | 2.0E-06 lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as |

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| than 10 percent biomass/bio-based solids on an annual heat input basis | | | specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 4. Units design to burn coal/solid fossil fuel | a. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 5. Pulverized coal boilers designed to burn coal/solid fossil fuel | a. Carbon monoxide (CO) (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| 6. Stokers designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| 7. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| 8. Fluidized bed units with an integrated heat exchanger | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 | 1 hr minimum sampling time. |

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| designed to burn coal/solid fossil fuel | | percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | |
| 9. Stokers/sloped grate/others designed to burn wet biomass fuel | a. CO (or CEMS) | 620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 10. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO | 560 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 11. Fluidized bed units designed to burn biomass/bio-based solids | a. CO (or CEMS) | 230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |

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| | b. Filterable PM (or TSM) | 9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 12. Suspension burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 13. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 1,010 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 8.0E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 14. Fuel cell units designed to burn biomass/bio-based solids | a. CO | 910 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |
| | b. Filterable | 2.0E-02 lb per MMBtu | Collect a minimum of 2 |

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| | PM (or TSM) | of heat input; or (2.9E-05 lb per MMBtu of heat input) | dscm per run. |
| 15. Hybrid suspension grate boiler designed to burn biomass/bio-based solids | a. CO (or CEMS) | 1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 16. Units designed to burn liquid fuel | a. HCl | 4.4E-04 lb per MMBtu of heat input | For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 4.8E-07[a] lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 17. Units designed to burn heavy liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |

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| | b. Filterable PM (or TSM) | 1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 18. Units designed to burn light liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.0E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 19. Units designed to burn liquid fuel that are non-continental units | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | Collect a minimum of 4 dscm per run. |
| 20. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu | For M29, collect a minimum of 3 dscm per |

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| | | of heat input | run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |

[a]If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provision of §63.7515 are met. For all other pollutants that do not contain a footnote "a", your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b]Incorporated by reference, see §63.14.

[c]An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate $CO_2$ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any $CO_2$ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[80 FR 72831, Nov. 20, 2015]

Back to Top

**Table 12 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After May 20, 2011, and Before December 23, 2011**

| If your boiler or process heater is in | For the following pollutants | The emissions must not exceed the following emission limits, except | Using this specified sampling volume or test |
|---|---|---|---|

| **this subcategory . . .** | **. . .** | **during periods of startup and shutdown . . .** | **run duration . . .** |
|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel | a. HCl | 0.022 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run. |
| | b. Mercury | 3.5E-06[a] lb per MMBtu of heat input | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm. |
| 2. Units design to burn coal/solid fossil fuel | a. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 3. Pulverized coal boilers designed to burn coal/solid fossil fuel | a. Carbon monoxide (CO) (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| 4. Stokers designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| 5. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or | 1 hr minimum sampling time. |

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| | | (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | |
| 6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| 7. Stokers/sloped grate/others designed to burn wet biomass fuel | a. CO (or CEMS) | 620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO<br>b. Filterable PM (or TSM) | 460 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average<br>3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | 1 hr minimum sampling time.<br>Collect a minimum of 2 dscm per run. |
| 9. Fluidized bed units designed to burn biomass/bio-based solids | a. CO (or CEMS) | 260 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |

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| | b. Filterable PM (or TSM) | 9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 10. Suspension burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 12. Fuel cell units designed to burn biomass/bio-based solids | a. CO<br>b. Filterable PM (or TSM) | 910 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average<br>2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | 1 hr minimum sampling time.<br>Collect a minimum of 2 dscm per run. |
| 13. Hybrid suspension grate boiler designed to burn biomass/bio-based | a. CO (or CEMS) | 1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run | 1 hr minimum sampling time. |

| | | | |
|---|---|---|---|
| solids | | average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | |
| | b. Filterable PM (or TSM) | 2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 14. Units designed to burn liquid fuel | a. HCl | 4.4E-04 lb per MMBtu of heat input | For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 4.8E-07[a] lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 15. Units designed to burn heavy liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 16. Units designed to burn light liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.3E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |

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| 17. Units designed to burn liquid fuel that are non-continental units | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | Collect a minimum of 4 dscm per run. |
| 18. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 1 hr minimum sampling time. |
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu of heat input | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |

[a]If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provision of §63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b]Incorporated by reference, see §63.14.

[c]An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon

dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate $CO_2$ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any $CO_2$ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[80 FR 72834, Nov. 20, 2015]

Back to Top

**Table 13 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before April 1, 2013**

| **If your boiler or process heater is in this subcategory . . .** | **For the following pollutants . . .** | **The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .** | **Using this specified sampling volume or test run duration . . .** |
|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel | a. HCl | 0.022 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run. |
| | b. Mercury | 8.6E-07[a] lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 2. Pulverized coal boilers designed to burn coal/solid fossil fuel | a. Carbon monoxide (CO) (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling | 1 hr minimum sampling time. |

| | | | |
|---|---|---|---|
| | | average) | |
| | b. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 3. Stokers designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 4. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |

| | | | |
|---|---|---|---|
| | b. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 6. Stokers/sloped grate/others designed to burn wet biomass fuel | a. CO (or CEMS) | 620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO | 460 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 8. Fluidized bed units designed to burn biomass/bio-based solids | a. CO (or CEMS) | 230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 9. Suspension burners designed to burn | a. CO (or | 2,400 ppm by volume on a dry basis corrected to 3 percent | 1 hr minimum sampling |

| | | | |
|---|---|---|---|
| biomass/bio-based solids | CEMS) | oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | time. |
| | b. Filterable PM (or TSM) | 5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 11. Fuel cell units designed to burn biomass/bio-based solids | a. CO | 910 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids | a. CO (or CEMS) | 1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average) | 1 hr minimum sampling time. |

| | | | |
|---|---|---|---|
| | b. Filterable PM (or TSM) | 2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 13. Units designed to burn liquid fuel | a. HCl | 1.2E-03 lb per MMBtu of heat input | For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 4.9E-07[a] lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm. |
| 14. Units designed to burn heavy liquid fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average) | 1 hr minimum sampling time. |
| 15. Units designed to burn light liquid fuel | a. CO (or CEMS) | 130[a] ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 1-day block average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 16. Units designed to burn liquid fuel that are | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent | 1 hr minimum sampling time. |

| | | | |
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| non-continental units | | oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-hour rolling average) | |
| | b. Filterable PM (or TSM) | 2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 17. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu of heat input | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |

[a]If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to §63.7515 if all of the other provision of §63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b]Incorporated by reference, see §63.14.

[c]An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate $CO_2$ correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any $CO_2$ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[78 FR 7210, Jan. 31, 2013, as amended at 80 FR 72836, Nov. 20, 2015]

Back to Top

# APPENDIX E

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# Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

## Contents

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?
§63.6585 Am I subject to this subpart?
§63.6590 What parts of my plant does this subpart cover?
§63.6595 When do I have to comply with this subpart?

Emission and Operating Limitations

§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?
§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?
§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

General Compliance Requirements

§63.6605 What are my general requirements for complying with this subpart?

Testing and Initial Compliance Requirements

§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?
§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?
§63.6615 When must I conduct subsequent performance tests?
§63.6620 What performance tests and other procedures must I use?
§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?
§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

Continuous Compliance Requirements

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?
§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?
§63.6650 What reports must I submit and when?
§63.6655 What records must I keep?
§63.6660 In what form and how long must I keep my records?

Other Requirements and Information

§63.6665 What parts of the General Provisions apply to me?
§63.6670 Who implements and enforces this subpart?
§63.6675 What definitions apply to this subpart?
Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions
Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions
Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE

≥250 HP Located at a Major Source of HAP Emissions
Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP
Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions
Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions
Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests
Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests
Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements
Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements
Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports
Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.
Appendix A to Subpart ZZZZ of Part 63—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

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Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

Back to Top

**What This Subpart Covers**

Back to Top

**§63.6580 What is the purpose of subpart ZZZZ?**

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

Back to Top

**§63.6585 Am I subject to this subpart?**

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

Back to Top

**§63.6590 What parts of my plant does this subpart cover?**

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not

contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

Back to Top

**§63.6595 When do I have to comply with this subpart?**

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Back to Top

**Emission and Operating Limitations**

Back to Top

**§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE

with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

Back to Top

**§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

Back to Top

**§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

Back to Top

**§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

Back to Top

**§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?**

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

Back to Top

**General Compliance Requirements**

Back to Top

**§63.6605 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on

information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Back to Top

**Testing and Initial Compliance Requirements**

Back to Top

**§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?**

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

Back to Top

**§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?**

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

Back to Top

**§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

Back to Top

**§63.6615 When must I conduct subsequent performance tests?**

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

Back to Top

**§63.6620 What performance tests and other procedures must I use?**

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad \text{(Eq. 1)}$$

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Where:

$C_i$ = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

$C_o$ = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide ($CO_2$). If pollutant concentrations are to be corrected to 15 percent oxygen and $CO_2$ concentration is measured in lieu of oxygen concentration measurement, a $CO_2$ correction factor is needed. Calculate the $CO_2$ correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific $F_o$ value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.\ 2)$$

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Where:

$F_o$ = Fuel factor based on the ratio of oxygen volume to the ultimate $CO_2$ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

$F_d$ = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, $dsm^3/J$ ($dscf/10^6$ Btu).

$F_c$ = Ratio of the volume of $CO_2$ produced to the gross calorific value of the fuel from Method 19, $dsm^3/J$ ($dscf/10^6$ Btu)

(ii) Calculate the $CO_2$ correction factor for correcting measurement data to 15 percent $O_2$, as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq.\ 3)$$

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Where:

$X_{CO2}$ = $CO_2$ correction factor, percent.

5.9 = 20.9 percent $O_2$—15 percent $O_2$, the defined $O_2$ correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent $O_2$ using $CO_2$ as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

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Where:

$C_{adj}$ = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent $O_2$.

$C_d$ = Measured concentration of CO, THC, or formaldehyde, uncorrected.

$X_{CO2}$ = $CO_2$ correction factor, percent.

$\%CO_2$ = Measured $CO_2$ concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.*, wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

Back to Top

**§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?**

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either $O_2$ or $CO_2$ according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent $CO_2$ concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

Back to Top

**§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?**

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure $O_2$ using one of the $O_2$ measurement methods specified in Table 4 of this subpart. Measurements to determine $O_2$ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and $O_2$ emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Back to Top

**Continuous Compliance Requirements**

Back to Top

**§63.6635 How do I monitor and collect data to demonstrate continuous compliance?**

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

Back to Top

**§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure $O_2$ using one of the $O_2$ measurement methods specified in Table 4 of this subpart. Measurements to determine $O_2$ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and $O_2$ emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Back to Top

**Notifications, Reports, and Records**

Back to Top

**§63.6645 What notifications must I submit and when?**

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to

submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

Back to Top

**§63.6650 What reports must I submit and when?**

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or

December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected

source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) 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 operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

Back to Top

**§63.6655 What records must I keep?**

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

Back to Top

**§63.6660 In what form and how long must I keep my records?**

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Back to Top

**Other Requirements and Information**

Back to Top

**§63.6665 What parts of the General Provisions apply to me?**

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

Back to Top

**§63.6670 Who implements and enforces this subpart?**

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

Back to Top

**§63.6675 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

*Alaska Railbelt Grid* means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

*Area source* means any stationary source of HAP that is not a major source as defined in part 63.

*Associated equipment* as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

*Backup power for renewable energy* means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

*Black start engine* means an engine whose only purpose is to start up a combustion turbine.

*CAA* means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

*Commercial emergency stationary RICE* means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

*Compression ignition* means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

*Custody transfer* means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

*Diesel engine* means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

*Digester gas* means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and $CO_2$.

*Dual-fuel engine* means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

*Emergency stationary RICE* means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must

comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

*Engine startup* means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

*Four-stroke engine* means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

*Gaseous fuel* means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

*Gasoline* means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

*Glycol dehydration unit* means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

*Hazardous air pollutants (HAP)* means any air pollutants listed in or pursuant to section 112(b) of the CAA.

*Institutional emergency stationary RICE* means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

*ISO standard day conditions* means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

*Landfill gas* means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and $CO_2$.

*Lean burn engine* means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

*Limited use stationary RICE* means any stationary RICE that operates less than 100 hours per year.

*Liquefied petroleum gas* means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

*Liquid fuel* means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

*Major Source,* as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

*Natural gas* means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

*Non-selective catalytic reduction (NSCR)* means an add-on catalytic nitrogen oxides ($NO_X$) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, $NO_X$, CO, and volatile organic compounds (VOC) into $CO_2$, nitrogen, and water.

*Oil and gas production facility* as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet

contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

*Oxidation catalyst* means an add-on catalytic control device that controls CO and VOC by oxidation.

*Peaking unit or engine* means any standby engine intended for use during periods of high demand that are not emergencies.

*Percent load* means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

*Potential to emit* means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

*Production field facility* means those oil and gas production facilities located prior to the point of custody transfer.

*Production well* means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

*Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3H_8$.

*Remote stationary RICE* means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

*Residential emergency stationary RICE* means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Rich burn engine* means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for $NO_X$ (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

*Site-rated HP* means the maximum manufacturer's design capacity at engine site conditions.

*Spark ignition* means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for

CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

*Stationary reciprocating internal combustion engine (RICE)* means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

*Stationary RICE test cell/stand* means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

*Stoichiometric* means the theoretical air-to-fuel ratio required for complete combustion.

*Storage vessel with the potential for flash emissions* means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

*Subpart* means 40 CFR part 63, subpart ZZZZ.

*Surface site* means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

*Two-stroke engine* means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Back to Top

**Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

| For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . . |
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| 1. 4SRB stationary RICE | a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1] |
| | b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$ | |

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Back to Top

**Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

| **For each . . .** | **You must meet the following operating limitation, except during periods of startup . . .** |
|---|---|
| 1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$ and using NSCR; | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and<br>b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1] |
| 2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by | Comply with any operating limitations approved by the Administrator. |

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| 75 percent or more, if applicable) and not using NSCR; or | |
| existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$ and not using NSCR. | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Back to Top

**Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

| For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. 2SLB stationary RICE | a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent $O_2$. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent $O_2$ until June 15, 2007 | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1] |
| 2. 4SLB stationary RICE | a. Reduce CO emissions by 93 percent or more; or | |
| | b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 | |

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| | percent $O_2$ | |
| 3. CI stationary RICE | a. Reduce CO emissions by 70 percent or more; or | |
| | b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent $O_2$ | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Back to Top

**Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP**

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

| **For each . . .** | **You must meet the following operating limitation, except during periods of startup . . .** |
|---|---|
| 1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and<br>New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and<br>b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1] |

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| oxidation catalyst. | |
| 2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and |
| | b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1] |
| 3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and | Comply with any operating limitations approved by the Administrator. |
| New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and | |
| existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst. | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Back to Top

**Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

| **For each . . .** | **You must meet the following requirement, except during periods of startup . . .** | **During periods of startup you must . . .** |
|---|---|---|
| 1. Emergency stationary CI RICE and black start stationary CI RICE[1] | a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2]<br>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3] | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3] |
| 2. Non-Emergency, non-black start stationary CI RICE <100 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2]<br>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3] | |
| 3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP | Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or | |

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| | less at 15 percent $O_2$. | |
| 4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500 | a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent $O_2$; or<br>b. Reduce CO emissions by 70 percent or more. | |
| 5. Non-Emergency, non-black start stationary CI RICE >500 HP | a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent $O_2$; or<br>b. Reduce CO emissions by 70 percent or more. | |
| 6. Emergency stationary SI RICE and black start stationary SI RICE.[1] | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2]<br>b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3] | |
| 7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2]<br>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; | |
| | c. Inspect all hoses and | |

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| | belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3] | |
| 8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP | a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2]<br>b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; | |
| | c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3] | |
| 9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent $O_2$. | |
| 10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent $O_2$. | |
| 11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500 | Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent $O_2$. | |
| 12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an | Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent $O_2$. | |

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| annual basis | | |

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Back to Top

**Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions**

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

| **For each . . .** | **You must meet the following requirement, except during periods of startup . . .** | **During periods of startup you must . . .** |
|---|---|---|
| 1. Non-Emergency, non-black start CI stationary RICE ≤300 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. |

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| | and replace as necessary. | |
| 2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500 | a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent $O_2$; or | |
| | b. Reduce CO emissions by 70 percent or more. | |
| 3. Non-Emergency, non-black start CI stationary RICE >500 HP | a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent $O_2$; or | |
| | b. Reduce CO emissions by 70 percent or more. | |
| 4. Emergency stationary CI RICE and black start stationary CI RICE.[2] | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; | |

| | | |
|---|---|---|
| calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2] | b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 6. Non-emergency, non-black start 2SLB stationary RICE | a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and | |

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| | c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP | a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year | Install an oxidation catalyst to reduce HAP emissions from the stationary RICE. | |
| 10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and | |

| | | |
|---|---|---|
| | c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP | a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year | Install NSCR to reduce HAP emissions from the stationary RICE. | |
| 13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 1,440 hours | |

| | | |
|---|---|---|
| | of operation or annually, whichever comes first, and replace as necessary. | |

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

Back to Top

**Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests**

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

| **For each . . .** | **Complying with the requirement to . . .** | **You must . . .** |
|---|---|---|
| 1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources | Reduce CO emissions and not using a CEMS | Conduct subsequent performance tests semiannually.[1] |
| 2. 4SRB stationary RICE ≥5,000 HP located at major sources | Reduce formaldehyde emissions | Conduct subsequent performance tests semiannually.[1] |
| 3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources | Limit the concentration of formaldehyde in the stationary RICE exhaust | Conduct subsequent performance tests semiannually.[1] |

| | | |
|---|---|---|
| 4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE | Limit or reduce CO emissions and not using a CEMS | Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first. |
| 5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE | Limit or reduce CO emissions and not using a CEMS | Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first. |

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

Back to Top

**Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests**

As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

| **For each . . .** | **Complying with the requirement to . . .** | **You must . . .** | **Using . . .** | **According to the following requirements . . .** |
|---|---|---|---|---|
| 1. 2SLB, 4SLB, and CI stationary RICE | a. reduce CO emissions | i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and | | (a) For CO and $O_2$ measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of |

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| | | | | Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4. |
| | | ii. Measure the $O_2$ at the inlet and outlet of the control device; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary) | (b) Measurements to determine $O_2$ must be made at the same time as the measurements for CO concentration. |
| | | iii. Measure the CO at the inlet and the outlet of the control device | (1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4 | (c) The CO concentration must be at 15 percent $O_2$, dry basis. |
| 2. 4SRB stationary RICE | a. reduce formaldehyde emissions | i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and | | (a) For formaldehyde, $O_2$, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be |

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| | | | | sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. |
| | | ii. Measure $O_2$ at the inlet and outlet of the control device; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary) | (a) Measurements to determine $O_2$ concentration must be made at the same time as the measurements for formaldehyde or THC concentration. |
| | | iii. Measure moisture content at the inlet and outlet of the control device; and | (1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a] | (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration. |
| | | iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formalde-hyde at the inlet and the outlet of the control device | (1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130 | (a) Formaldehyde concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| | | v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of | (1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7 | (a) THC concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |

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| | | the control device | | |
| 3. Stationary RICE | a. limit the concentra-tion of formalde-hyde or CO in the stationary RICE exhaust | i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and | | (a) For formaldehyde, CO, $O_2$, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device. |
| | | ii. Determine the $O_2$ concentration of the stationary RICE exhaust at the sampling port location; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary) | (a) Measurements to determine $O_2$ concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration. |
| | | iii. Measure moisture content of the station-ary RICE exhaust at | (1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of | (a) Measurements to determine moisture content must be made at the same |

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| | | the sampling port location; and | 40 CFR part 63, appendix A, or ASTM D 6348-03[a] | time and location as the measurements for formaldehyde or CO concentration. |
| | | iv. Measure formalde-hyde at the exhaust of the station-ary RICE; or | (1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130 | (a) Formaldehyde concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| | | v. measure CO at the exhaust of the station-ary RICE | (1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a] | (a) CO concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |

[a]You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b]You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[79 FR 11290, Feb. 27, 2014]

Back to Top

**Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements**

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

| For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . . |
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| 1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Reduce CO emissions and using oxidation catalyst, and using a CPMS | i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and<br>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and<br>iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS | i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Reduce CO emissions and not using oxidation catalyst | i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and<br>ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and<br>iii. You have recorded the approved |

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| | | operating parameters (if any) during the initial performance test. |
| 4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Limit the concentration of CO, and not using oxidation catalyst | i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and<br>ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Reduce CO emissions, and using a CEMS | i. You have installed a CEMS to continuously monitor CO and either $O_2$ or $CO_2$ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and<br>ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and |
| | | iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period. |
| 6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Limit the concentration of CO, and using a CEMS | i. You have installed a CEMS to continuously monitor CO and either $O_2$ or $CO_2$ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and |

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| | | ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and |
| | | iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period. |
| 7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and not using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 |

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| | | percent; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and<br>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and<br>ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |

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| 11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP | a. Reduce CO emissions | i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction. |
| 12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP | a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust | i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable. |
| 13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install an oxidation catalyst | i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent $O_2$; |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F. |
| 14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install NSCR | i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent $O_2$, or the average reduction of emissions of THC is 30 percent or more; |
| | | ii. You have installed a CPMS to |

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| | | continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F. |

[78 FR 6712, Jan. 30, 2013]

Back to Top

**Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements**

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

| **For each . . .** | **Complying with the requirement to . . .** | **You must demonstrate continuous compliance by . . .** |
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| 1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP | a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS | i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and<br>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and<br>iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 2. New or reconstructed non-emergency | a. Reduce CO | i. Conducting semiannual performance |

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| 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP | emissions and not using an oxidation catalyst, and using a CPMS | tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and<br>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and<br>iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS | i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and<br>ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and |
| | | iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1. |
| 4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and using NSCR | i. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | ii. Reducing these data to 4-hour rolling averages; and |

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| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and not using NSCR | i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | ii. Reducing these data to 4-hour rolling averages; and |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP | a. Reduce formaldehyde emissions | Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a] |
| 7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and<br>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |

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| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and<br>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non- | a. Work or Management practices | i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or<br>ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with |

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| emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE | | good air pollution control practice for minimizing emissions. |
| 10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE | a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst | i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and |
| | | ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and |

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| | | demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE | a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst | i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and |
| | | ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 12. Existing limited use CI stationary RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst | i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and |
| | | ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |

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| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 13. Existing limited use CI stationary RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst | i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and |
| | | ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated | a. Install an oxidation catalyst | i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO |

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| more than 24 hours per calendar year | | concentration is less than or equal to 47 ppmvd at 15 percent $O_2$; and either<br>ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or<br>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F. |
| 15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install NSCR | i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent $O_2$, or the average reduction of emissions of THC is 30 percent or more; and either<br>ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or<br>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F. |

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]

Back to Top

**Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports**

As stated in §63.6650, you must comply with the following requirements for reports:

| For each . . . | You must submit a . . . | The report must contain . . . | You must submit the report . . . |
|---|---|---|---|
| 1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP | Compliance report | a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or | i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and<br>ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations. |
| | | b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or | i. Semiannually according to the requirements in §63.6650(b). |
| | | c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4). | i. Semiannually according to the requirements in §63.6650(b). |

| | | | |
|---|---|---|---|
| 2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis | Report | a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and | i. Annually, according to the requirements in §63.6650. |
| | | b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and | i. See item 2.a.i. |
| | | c. Any problems or errors suspected with the meters. | i. See item 2.a.i. |
| 3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year | Compliance report | a. The results of the annual compliance demonstration, if conducted during the reporting period. | i. Semiannually according to the requirements in §63.6650(b)(1)-(5). |
| 4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii) | Report | a. The information in §63.6650(h)(1) | i. annually according to the requirements in §63.6650(h)(2)-(3). |

[78 FR 6719, Jan. 30, 2013]

Back to Top

**Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.**

As stated in §63.6665, you must comply with the following applicable general provisions.

| General provisions citation | Subject of citation | Applies to subpart | Explanation |
|---|---|---|---|
| §63.1 | General applicability of the General Provisions | Yes. | |
| §63.2 | Definitions | Yes | Additional terms defined in §63.6675. |
| §63.3 | Units and abbreviations | Yes. | |
| §63.4 | Prohibited activities and circumvention | Yes. | |
| §63.5 | Construction and reconstruction | Yes. | |
| §63.6(a) | Applicability | Yes. | |
| §63.6(b)(1)-(4) | Compliance dates for new and reconstructed sources | Yes. | |
| §63.6(b)(5) | Notification | Yes. | |
| §63.6(b)(6) | [Reserved] | | |
| §63.6(b)(7) | Compliance dates for new and reconstructed area sources that become major sources | Yes. | |
| §63.6(c)(1)-(2) | Compliance dates for existing sources | Yes. | |
| §63.6(c)(3)-(4) | [Reserved] | | |
| §63.6(c)(5) | Compliance dates for existing area sources that become major sources | Yes. | |
| §63.6(d) | [Reserved] | | |

| | | | |
|---|---|---|---|
| §63.6(e) | Operation and maintenance | No. | |
| §63.6(f)(1) | Applicability of standards | No. | |
| §63.6(f)(2) | Methods for determining compliance | Yes. | |
| §63.6(f)(3) | Finding of compliance | Yes. | |
| §63.6(g)(1)-(3) | Use of alternate standard | Yes. | |
| §63.6(h) | Opacity and visible emission standards | No | Subpart ZZZZ does not contain opacity or visible emission standards. |
| §63.6(i) | Compliance extension procedures and criteria | Yes. | |
| §63.6(j) | Presidential compliance exemption | Yes. | |
| §63.7(a)(1)-(2) | Performance test dates | Yes | Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612. |
| §63.7(a)(3) | CAA section 114 authority | Yes. | |
| §63.7(b)(1) | Notification of performance test | Yes | Except that §63.7(b)(1) only applies as specified in §63.6645. |
| §63.7(b)(2) | Notification of rescheduling | Yes | Except that §63.7(b)(2) only applies as specified in §63.6645. |
| §63.7(c) | Quality assurance/test plan | Yes | Except that §63.7(c) only applies as specified in §63.6645. |
| §63.7(d) | Testing facilities | Yes. | |
| §63.7(e)(1) | Conditions for conducting performance tests | No. | Subpart ZZZZ specifies conditions for conducting |

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|---|---|---|---|
| | | | performance tests at §63.6620. |
| §63.7(e)(2) | Conduct of performance tests and reduction of data | Yes | Subpart ZZZZ specifies test methods at §63.6620. |
| §63.7(e)(3) | Test run duration | Yes. | |
| §63.7(e)(4) | Administrator may require other testing under section 114 of the CAA | Yes. | |
| §63.7(f) | Alternative test method provisions | Yes. | |
| §63.7(g) | Performance test data analysis, recordkeeping, and reporting | Yes. | |
| §63.7(h) | Waiver of tests | Yes. | |
| §63.8(a)(1) | Applicability of monitoring requirements | Yes | Subpart ZZZZ contains specific requirements for monitoring at §63.6625. |
| §63.8(a)(2) | Performance specifications | Yes. | |
| §63.8(a)(3) | [Reserved] | | |
| §63.8(a)(4) | Monitoring for control devices | No. | |
| §63.8(b)(1) | Monitoring | Yes. | |
| §63.8(b)(2)-(3) | Multiple effluents and multiple monitoring systems | Yes. | |
| §63.8(c)(1) | Monitoring system operation and maintenance | Yes. | |
| §63.8(c)(1)(i) | Routine and predictable SSM | No | |
| §63.8(c)(1)(ii) | SSM not in Startup Shutdown | Yes. | |

| | | | |
|---|---|---|---|
| | Malfunction Plan | | |
| §63.8(c)(1)(iii) | Compliance with operation and maintenance requirements | No | |
| §63.8(c)(2)-(3) | Monitoring system installation | Yes. | |
| §63.8(c)(4) | Continuous monitoring system (CMS) requirements | Yes | Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS). |
| §63.8(c)(5) | COMS minimum procedures | No | Subpart ZZZZ does not require COMS. |
| §63.8(c)(6)-(8) | CMS requirements | Yes | Except that subpart ZZZZ does not require COMS. |
| §63.8(d) | CMS quality control | Yes. | |
| §63.8(e) | CMS performance evaluation | Yes | Except for §63.8(e)(5)(ii), which applies to COMS. |
| | | Except that §63.8(e) only applies as specified in §63.6645. | |
| §63.8(f)(1)-(5) | Alternative monitoring method | Yes | Except that §63.8(f)(4) only applies as specified in §63.6645. |
| §63.8(f)(6) | Alternative to relative accuracy test | Yes | Except that §63.8(f)(6) only applies as specified in §63.6645. |
| §63.8(g) | Data reduction | Yes | Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640. |

| | | | |
|---|---|---|---|
| §63.9(a) | Applicability and State delegation of notification requirements | Yes. | |
| §63.9(b)(1)-(5) | Initial notifications | Yes | Except that §63.9(b)(3) is reserved. |
| | | Except that §63.9(b) only applies as specified in §63.6645. | |
| §63.9(c) | Request for compliance extension | Yes | Except that §63.9(c) only applies as specified in §63.6645. |
| §63.9(d) | Notification of special compliance requirements for new sources | Yes | Except that §63.9(d) only applies as specified in §63.6645. |
| §63.9(e) | Notification of performance test | Yes | Except that §63.9(e) only applies as specified in §63.6645. |
| §63.9(f) | Notification of visible emission (VE)/opacity test | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(1) | Notification of performance evaluation | Yes | Except that §63.9(g) only applies as specified in §63.6645. |
| §63.9(g)(2) | Notification of use of COMS data | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(3) | Notification that criterion for alternative to RATA is exceeded | Yes | If alternative is in use. |
| | | Except that §63.9(g) only applies as specified in §63.6645. | |

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|---|---|---|---|
| §63.9(h)(1)-(6) | Notification of compliance status | Yes | Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved. |
| | | | Except that §63.9(h) only applies as specified in §63.6645. |
| §63.9(i) | Adjustment of submittal deadlines | Yes. | |
| §63.9(j) | Change in previous information | Yes. | |
| §63.10(a) | Administrative provisions for recordkeeping/reporting | Yes. | |
| §63.10(b)(1) | Record retention | Yes | Except that the most recent 2 years of data do not have to be retained on site. |
| §63.10(b)(2)(i)-(v) | Records related to SSM | No. | |
| §63.10(b)(2)(vi)-(xi) | Records | Yes. | |
| §63.10(b)(2)(xii) | Record when under waiver | Yes. | |
| §63.10(b)(2)(xiii) | Records when using alternative to RATA | Yes | For CO standard if using RATA alternative. |
| §63.10(b)(2)(xiv) | Records of supporting documentation | Yes. | |
| §63.10(b)(3) | Records of applicability determination | Yes. | |
| §63.10(c) | Additional records for sources using CEMS | Yes | Except that §63.10(c)(2)-(4) and (9) are reserved. |

| | | | |
|---|---|---|---|
| §63.10(d)(1) | General reporting requirements | Yes. | |
| §63.10(d)(2) | Report of performance test results | Yes. | |
| §63.10(d)(3) | Reporting opacity or VE observations | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.10(d)(4) | Progress reports | Yes. | |
| §63.10(d)(5) | Startup, shutdown, and malfunction reports | No. | |
| §63.10(e)(1) and (2)(i) | Additional CMS Reports | Yes. | |
| §63.10(e)(2)(ii) | COMS-related report | No | Subpart ZZZZ does not require COMS. |
| §63.10(e)(3) | Excess emission and parameter exceedances reports | Yes. | Except that §63.10(e)(3)(i) (C) is reserved. |
| §63.10(e)(4) | Reporting COMS data | No | Subpart ZZZZ does not require COMS. |
| §63.10(f) | Waiver for recordkeeping/reporting | Yes. | |
| §63.11 | Flares | No. | |
| §63.12 | State authority and delegations | Yes. | |
| §63.13 | Addresses | Yes. | |
| §63.14 | Incorporation by reference | Yes. | |
| §63.15 | Availability of information | Yes. | |

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Back to Top

**Appendix A to Subpart ZZZZ of Part 63—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines**

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen ($O_2$) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

*1.1 Analytes. What does this protocol determine?*

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen ($O_2$).

| **Analyte** | **CAS No.** | **Sensitivity** |
|---|---|---|
| Carbon monoxide (CO) | 630-08-0 | Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive. |
| Oxygen ($O_2$) | *7782-44-7* | |

*1.2 Applicability. When is this protocol acceptable?*

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

*1.3 Data Quality Objectives. How good must my collected data be?*

Refer to Section 13 to verify and document acceptable analyzer performance.

*1.4 Range. What is the targeted analytical range for this protocol?*

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and $O_2$, or no more than twice the permitted CO level.

*1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?*

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and $O_2$ gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

*3.1 Measurement System.* The total equipment required for the measurement of CO and $O_2$ concentrations. The measurement system consists of the following major subsystems:

*3.1.1 Data Recorder.* A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

*3.1.2 Electrochemical (EC) Cell.* A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

*3.1.3 Interference Gas Scrubber.* A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

*3.1.4 Moisture Removal System.* Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

*3.1.5 Sample Interface.* The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

*3.2 Nominal Range.* The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

*3.3 Calibration Gas.* A vendor certified concentration of a specific analyte in an appropriate balance gas.

*3.4 Zero Calibration Error.* The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

*3.5 Up-Scale Calibration Error.* The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

*3.6 Interference Check.* A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

*3.7 Repeatability Check.* A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

*3.8 Sample Flow Rate.* The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

*3.9 Sampling Run.* A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite $O_2$ and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

*3.10 Sampling Day.* A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

*3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check.* The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

*3.12 Performance-Established Configuration.* The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and $NO_2$ are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

*6.1 What equipment do I need for the measurement system?*

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

*6.2 Measurement System Components.*

*6.2.1 Sample Probe.* A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

*6.2.2 Sample Line.* Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

*6.2.3 Calibration Assembly (optional).* A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

*6.2.4 Particulate Filter (optional).* Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

*6.2.5 Sample Pump.* A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

*6.2.8 Sample Flow Rate Monitoring.* An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

*6.2.9 Sample Gas Manifold (optional).* A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

*6.2.10 EC cell.* A device containing one or more EC cells to determine the CO and $O_2$ concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

*6.2.11 Data Recorder.* A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for $O_2$; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

*6.2.12 Interference Gas Filter or Scrubber.* A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

*7.1 Calibration Gases.* CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and $O_2$. Use CO calibration gases with labeled concentration values certified by the

manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent $O_2$) is acceptable for calibration of the $O_2$ cell. If needed, any lower percentage $O_2$ calibration gas must be a mixture of $O_2$ in nitrogen.

*7.1.1 Up-Scale CO Calibration Gas Concentration.* Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

*7.1.2 Up-Scale $O_2$ Calibration Gas Concentration.*

Select an $O_2$ gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent $O_2$. When the average exhaust gas $O_2$ readings are above 6 percent, you may use dry ambient air (20.9 percent $O_2$) for the up-scale $O_2$ calibration gas.

*7.1.3 Zero Gas.* Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., $CO_2$).

8.0 Sample Collection and Analysis

*8.1 Selection of Sampling Sites.*

*8.1.1 Control Device Inlet.* Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

*8.1.2 Exhaust Gas Outlet.* Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

*8.2 Stack Gas Collection and Analysis.* Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the "sample conditioning phase" once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and $O_2$ concentrations.

*8.3 EC Cell Rate.* Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

*10.1 Pre-Sampling Calibration.* Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

*10.1.1 Zero Calibration.* For both the $O_2$ and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

*10.1.2 Zero Calibration Tolerance.* For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent $O_2$ for the $O_2$ channel.

*10.1.3 Up-Scale Calibration.* Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this “sample conditioning phase” once per minute until readings are constant for at least two minutes. Then begin the “measurement data phase” and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

*10.1.4 Up-Scale Calibration Error.* The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent $O_2$, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent $O_2$, whichever is less restrictive, respectively.

*10.2 Post-Sampling Calibration Check.* Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement

data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and $O_2$ concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

*13.1 Measurement Data Phase Performance Check.* Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

*Example:* A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

*13.2 Interference Check.* Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and $NO_2$ gas standards that are generally recognized as representative of diesel-fueled engine NO and $NO_2$ emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

*13.2.1 Interference Response.* The combined NO and $NO_2$ interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

*13.3 Repeatability Check.* Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

*13.3.1 Repeatability Check Procedure.* Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

*13.3.2 Repeatability Check Calculations.* Determine the highest and lowest average "measurement data phase" CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) "Development of an Electrochemical Cell Emission Analyzer Test Protocol", Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) "Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers", EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) "ICAC Test Protocol for Periodic Monitoring", EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) "Code of Federal Regulations", Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

**Table 1: Appendix A—Sampling Run Data.**

| Facility_____ Engine I.D._____ Date_____ | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Run Type: | (_) | | (_) | | (_) | | (_) | | | | |
| (X) | Pre-Sample Calibration | | Stack Gas Sample | | Post-Sample Cal. Check | | Repeatability Check | | | | |
| Run # | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | Time | Scrub. OK | Flow- Rate |
| Gas | $O_2$ | CO | $O_2$ | CO | $O_2$ | CO | $O_2$ | CO | | | |
| | | | | | | | | | | | |
| Sample Cond. Phase | | | | | | | | | | | |

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[78 FR 6721, Jan. 30, 2013]

## CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that a copy of this permit has been mailed by first class mail to Georgia-Pacific Wood Products LLC, #1 GP Lane, Gurdon, AR, 71743, on this 17th day of July, 2018.

Cynthia Hook, ASIII, Office of Air Quality