

**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
STANDARDS AND REGULATIONS**

**National Emission Standards**

**CHAPTER 5**

**TABLE OF CONTENTS**

Section 1.	Introduction to national emission standards .....	5-1
Section 2.	New source performance standards .....	5-1
Section 3.	National emission standards for hazardous air pollutants.....	5-35
Section 4.	Incorporation by reference .....	5-45



**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
STANDARDS AND REGULATIONS**

**National Emission Standards**

**CHAPTER 5**

**Section 1. Introduction to national emission standards.**

(a) This Chapter incorporates emission control regulations developed by the Environmental Protection Agency for specific source categories. The State of Wyoming, Air Quality Division adopts these Federal Regulations in order to maintain administrative authority with regards to the standards. Section 2 contains New Source Performance Standards (NSPS) which regulate criteria pollutant emissions from specific categories of new sources. Section 3 contains National Emission Standards for Hazardous Air Pollutants (NESHAP) which regulates hazardous air pollutant emissions from specific categories of new and existing sources. Section 4 incorporates by reference all Code of Federal Regulations (CFRs), including their Appendices, cited in this Chapter and all American Society for Testing and Materials (ASTM) standards cited in this Chapter.

**Section 2. New source performance standards.**

(a) General: The U.S. Environmental Protection Agency regulations on Standards of Performance for New Stationary Sources, designated in Chapter 5, Section 2(b) and as amended by the word or phrase “substitutions” given in Chapter 5, Section 2(c), are incorporated into these regulations. The specific documents containing the complete text of the regulations are found in 40 CFR part 60.

(b) Designated Standards of Performance: The following Standards of Performance are incorporated by reference under Section 4(a) of this Chapter.

40 CFR part 60, Subpart D -	Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971
40 CFR part 60, Subpart Da -	Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978
40 CFR part 60, Subpart Db -	Standards of performance for Industrial-Commercial-Institutional Steam Generating Units

40 CFR part 60, Subpart Dc -	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
40 CFR part 60, Subpart Ea -	Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994
40 CFR part 60, Subpart Eb -	Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996
40 CFR part 60, Subpart Ec -	Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996
40 CFR part 60, Subpart F -	Standards of Performance for Portland Cement Plants
40 CFR part 60, Subpart G -	Standards of Performance for Nitric Acid Plants
40 CFR part 60, Subpart H -	Standards of Performance for Sulfuric Acid Plants
40 CFR part 60, Subpart I -	Standards of Performance for Hot Mix Asphalt Facilities
40 CFR part 60, Subpart J -	Standards of Performance for Petroleum Refineries
40 CFR part 60, Subpart Ja -	Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007
40 CFR part 60, Subpart K -	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or

Modification Commenced After  
June 11, 1973, and Prior to May 19, 1978

- 40 CFR part 60, Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984
- 40 CFR part 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
- 40 CFR part 60, Subpart T - Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants
- 40 CFR part 60, Subpart U - Standards of Performance for the Phosphate Fertilizer Industry: Superphosphoric Acid Plants
- 40 CFR part 60, Subpart V - Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants
- 40 CFR part 60, Subpart W - Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants
- 40 CFR part 60, Subpart X - Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities
- 40 CFR part 60, Subpart Y - Standards of Performance for Coal Preparation Plants
- 40 CFR part 60, Subpart DD - Standards of Performance for Grain Elevators
- 40 CFR part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines

40 CFR part 60, Subpart HH -	Standards of Performance for Lime Manufacturing Plants
40 CFR part 60, Subpart NN -	Standards of Performance for Phosphate Rock Plants
40 CFR part 60, Subpart VV -	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006
40 CFR part 60, Subpart VVa -	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006
40 CFR part 60, Subpart WW -	Standards of Performance for the Beverage Can Surface Coating Industry
40 CFR part 60, Subpart XX -	Standards of Performance for Bulk Gasoline Terminals
40 CFR part 60, Subpart AAA -	Standards of Performance for New Residential Wood Heaters
40 CFR part 60, Subpart GGG -	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006
40 CFR part 60, Subpart GGGa -	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006
40 CFR part 60, Subpart JJJ -	Standards of Performance for Petroleum Dry Cleaners

40 CFR part 60, Subpart KKK -	Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants
40 CFR part 60, Subpart LLL -	Standards of Performance for Onshore Natural Gas Processing: SO <sub>2</sub> Emissions
40 CFR part 60, Subpart OOO -	Standards of Performance for Nonmetallic Mineral Processing Plants
40 CFR part 60, Subpart QQQ -	Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems
40 CFR part 60, Subpart UUU -	Standards of Performance for Calciners and Dryers in Mineral Industries
40 CFR part 60, Subpart WWW -	Standards of Performance for Municipal Solid Waste Landfills
40 CFR part 60, Subpart AAAA -	Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001
40 CFR part 60, Subpart CCCC -	Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001
40 CFR part 60, Subpart EEEE -	Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006
40 CFR part 60, Subpart IIII -	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

40 CFR part 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

(i) Designated Appendices. The following appendices are incorporated by reference under Section 4(a) of this Chapter.

40 CFR part 60, Appendix A - Test Methods

40 CFR part 60, Appendix B - Performance Specifications

40 CFR part 60, Appendix C - Determination of Emission Rate Change

40 CFR part 60, Appendix D - Required Emission Inventory Information

40 CFR part 60, Appendix F - Quality Assurance Procedures

40 CFR part 60, Appendix I - Removable Label and Owner's Manual

(c) Word or Phrase Substitutions: In the standards designated in Chapter 5, Section 2(b) substitute:

- (i) Chapter 5, Section 2 for Subpart A
- (ii) Chapter 5, Section 2(h) for 60.8
- (iii) Chapter 5, Section 2(g) for 60.7
- (iv) Chapter 5, Section 2(m) for 60.18
- (v) Chapter 5, Section 2(e)(i) for 60.2
- (vi) Chapter 5, Section 2(e)(ii) for 60.3
- (vii) Chapter 5, Section 2(i) for 60.11
- (viii) Chapter 5, Section 2(j) for 60.13
- (ix) Chapter 5, Section 2(k) for 60.14
- (x) Chapter 5, Section 2(l) for 60.15
- (xi) Chapter 6, Section 2(b)(i) for 60.5 and 60.6
- (xii) Chapter 6, Section 2(i) for 60.7(a)(2) and (3)
- (xiii) Chapter 6, Section 2(j) for 60.8(a) and (d)
- (xiv) Section 35-11-1101 Environmental Quality Act for 60.9
- (xv) Chapter 1, Section 4 for 60.12
- (xvi) Chapter 5, Section 2(n) for 60.19

(d) Applicability: The provisions of Chapter 5, Section 2 are applicable to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication of any



proposed standard as designated in the applicable subparts of the Standards of Performance referenced in Chapter 5, Section 2(b) and contained in 40 CFR part 60.

(i) In addition to complying with the provisions of this section, the Owner or Operator of an affected facility may be required to obtain an operating permit issued to stationary sources by the Administrator pursuant to Title V of the Clean Air Act (Act) as amended November 15, 1990 (42 U.S.C. 7661). For more information about obtaining an operating permit see Chapter 6, Section 3.

(e) Definitions and Abbreviations: The following terms are explicitly defined for use in this section. As used in this section, all terms not defined herein shall have the meaning given to them in Chapter 1, Section 3.

(i) Definitions:

**“Act”** means the Clean Air Act (42 U.S.C. 7401 et seq.).

**“Administrator”** means the Administrator of the Division of Air Quality, Wyoming Department of Environmental Quality, except for those authorities which cannot be delegated to the state, in which case “administrator” means both the administrator of the Environmental Protection Agency and the Administrator of the Division of Air Quality, Wyoming Department of Environmental Quality.

**“Affected facility”** means, with reference to a stationary source, any apparatus to which a standard is applicable.

**“Alternative method”** means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to the Administrator’s satisfaction to, in some specific cases, produce results adequate for his determination of compliance.

**“Capital expenditure”** means an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable “annual asset guideline repair allowance percentage” specified in the latest edition of Internal Revenue Service (IRS) Publication 534 and the existing facility’s basis, as defined by section 1012 of the Internal Revenue Code. However, the total expenditure for a physical or operational change to an existing facility must not be reduced by any “excluded additions” as defined in IRS Publication 534, as would be done for tax purposes.

**“Clean coal technology demonstration project”** means a project using funds appropriated under the heading ‘Department of Energy-Clean Coal Technology’, up to a total amount of \$2,500,000,000 for commercial demonstrations of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency.

**“Commenced”**, as applied to construction or modification of any new facility or source, means that the owner or operator has obtained a Construction Permit required by Chapter 6, Section 2 or either has (i) begun, or caused to begin, a continuous program of physical on-site construction or modification of the facility or (ii) entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction or modification of the facility to be completed within a reasonable time.

**“Construction”** means fabrication, erection, or installation of an affected facility.

**“Continuous monitoring system”** means the total equipment, required under the emission monitoring sections, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

**“Electric utility steam generating unit”** means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

**“Equivalent method”** means any method of sampling and analyzing for an air pollutant which has been demonstrated to the Administrator’s satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.

**“Excess emissions and monitoring systems performance report”** is a report that must be submitted periodically by a source in order to provide data on its compliance with stated emission limits and operating parameters, and on the performance of its monitoring systems.

**“Existing facility”** means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this section, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type.

**“Isokinetic sampling”** means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sample point.

**“Issuance”** of an operating permit will occur, in accordance with Chapter 6, Section 3.

**“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. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**“Monitoring device”** means the total equipment, required under the monitoring of operations sections, used to measure and record (if applicable) process parameters.

**“Nitrogen oxides”** means all oxides of nitrogen except nitrous oxide, as measured by test methods set forth in this section.

**“One-hour period”** means any 60-minute period commencing on the hour.

**“Opacity”** means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

**“Operating permit” or “part 70 permit”** means any permit or group of permits covering a source under Chapter 6, Section 3 that is issued, renewed, amended or revised pursuant to Chapter 6, Section 3.

**“Owner or operator”** means any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part.

**“Particulate matter”** means any finely divided solid or liquid material, other than uncombined water, as measured by the reference methods specified under each subpart, or an equivalent or alternative method.

**“Permit program”** means the comprehensive State operating permit system established pursuant to Title V of the Act (42 U.S.C. 7661) and regulations in Chapter 6, Section 3.

**“Proportional sampling”** means sampling at a rate that produces a constant ratio of sampling rate to stack gas flow rate.

**“Reactivation of a very clean coal-fired electric utility steam generating unit”** means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

(A) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority’s emissions inventory at the time of enactment;

(B) Was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;

(C) Is equipped with low-NO<sub>x</sub> burners prior to the time of commencement of operations following reactivation; and

(D) Is otherwise in compliance with the requirements of the Clean Air Act.

**“Reference method”** means any method of sampling and analyzing for an air pollutant as specified in the applicable subpart.

**“Repowering”** means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator of EPA, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990. Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

**“Run”** means the net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

**“Shutdown”** means the cessation of operation of an affected facility for any purpose.

**“Six-minute period”** means any one of the 10 equal parts of a one-hour period.

**“Standard”** means a standard of performance proposed or promulgated under this section.

**“Standard conditions”** means a temperature of 293°K (68°F) and a pressure of 101.3 Kilopascals of Hg (29.92 in. of Hg).

**“Start-up”** means the setting in operation of an affected facility for any purpose.

**“State”** means the Wyoming Air Quality Division which has been delegated authority to implement:

- (A) The provisions of this section; and/or
- (B) The permit program established under 40 CFR part 70.

**“Stationary source”** means any building, structure, facility, or installation which emits or may emit any air pollutant.

**“Volatile organic compounds”** means any organic compound which participates in atmospheric photochemical reactions; or which is measured by a reference method, an equivalent method, an alternative method, or which is determined by procedures specified under any subpart.

(ii) Abbreviations:

A	ampere
A.S.T.M.	American Society for Testing and Materials
Btu	British thermal unit
cal	calorie
CdS	Cadmium sulfide
cfm	cubic feet per minute
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
°C	degree Celsius (centigrade)
°F	degree Fahrenheit
°K	degree Kelvin
°R	degree Rankine
dscm	dry cubic meter(s) at standard conditions
dscf	dry cubic feet at standard conditions
eq	equivalents
g	gram(s)
gal	gallon(s)
g eq	gram equivalents
gr	grain(s)
HCl	hydrochloric acid
Hg	mercury
hr	hour(s)
H <sub>2</sub> O	water
H <sub>2</sub> S	hydrogen sulfide
H <sub>2</sub> SO <sub>4</sub>	sulfuric acid
Hz	hertz
in	inch(es)
J	joule

k	1,000
kg	kilogram(s)
l	liters
lb	pound(s)
lpm	Liter(s) per minute
m	meter(s)
meq	milliequivalent(s)
mg	milligram(s)
Mg	megagram - $10^6$ gram
min	minute(s)
ml	milliliter(s)
mm	millimeter(s)
mol. wt.	molecular weight
mv	millivolt
N	newton
N	nitrogen
ng	nanogram - $10^{-9}$ gram
nm	nanometer(s) - $10^{-9}$ meter
NO	nitric oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
O <sub>2</sub>	oxygen
Pa	pascal
ppb	parts per billion
ppm	parts per million
psia	pounds per square inch absolute
s	second
sec	second
SO <sub>2</sub>	sulfur dioxide
SO <sub>3</sub>	sulfur trioxide
STD	at standard conditions
µg	microgram(s) - $10^{-6}$ gram
V	volt
W	watt

(f) Permit Requirements: Compliance with the provisions of this section shall in no way relieve the owner or operator of responsibility for compliance with other applicable sections of these regulations. The permit requirements of Chapter 6, Section 2 are specifically applicable to affected facilities subject to the requirements of this section.

(g) Notification and Recordkeeping:

(i) Any owner or operator subject to the provisions of this section shall furnish the Administrator written notification as follows:

(A) A notification of the date construction (or reconstruction as defined under Chapter 1, Section 3) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

(B) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in Chapter 5, Section 2(k). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(C) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with Chapter 5, Section 2(j)(iii). Notification shall be postmarked not less than 30 days prior to such date.

(D) A notification of the anticipated date for conducting the opacity observations required by Chapter 5, Section 2(i)(v) of this section. The notification shall be postmarked not less than 30 days prior to such date.

(E) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by Chapter 5, Section 2(h) in lieu of Method 9 observation data as allowed by Chapter 5, Section 2(i)(v)(D). This notification shall be postmarked not less than 30 days prior to the date of the performance test.

(ii) Any owner or operator subject to the provisions of this section shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(iii) Each owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see paragraph E of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30<sup>th</sup> day following the end of

each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

(A) The magnitude of excess emissions computed in accordance with Chapter 5, Section 2(j)(viii), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(B) Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(C) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(D) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(E) The summary report form shall contain the information and be in the format shown in Form B unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(I) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in paragraph (iii) of this subsection need not be submitted unless requested by the Administrator.

(II) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in paragraph (iii) of this subsection shall both be submitted.



Form B  
EXCESS EMISSION SUMMARY REPORT

Emission Data Summary		CMS Performance Summary	
I. Duration of Excess Emissions in Reporting Period Due to:		I. CMS Downtime in Reporting Period Due to:	
A. Startup/Shutdown	_____	A. Monitor Equipment Malfunctions	_____
B. Control Equipment Problems	_____	B. Non-Monitor Equipment Malfunctions	_____
C. Process Problems	_____	C. Quality Assurance Calibration	_____
D. Other Known Causes	_____	D. Other Known Causes	_____
E. Unknown Causes	_____	E. Unknown Causes	_____
II. Total Duration of Excess Emission	_____	II. Total CMS Downtime	_____
III. Total Duration of Excess Emissions x 100 divided by Total Source Operating Time minus Total CMS Downtime	_____	III. Total CMS Downtime x 100 divided by Total Source Operating Time	_____

**Total time of excess emission events due to emergency/abnormal operations** \_\_\_\_\_.

NOTE:

1. Only report excess emissions which occur when the unit/process is operating. Include all excess emissions in the Emission Data Summary including those excess emissions associated with startup/shutdown and those excess emissions associated with Chapter 1, Section 5 (Emergency/Abnormal) operations. **Report times in hours for gaseous monitors and in tenths of an hour for opacity monitors.** Include detailed excess emission information and causes in the Excess Emission Table (Form C).
2. Only report CEM downtime which occurs while the unit/process is operating. **Report time in hours to one decimal point.** Include detailed CEM downtime and causes in the Monitor Outage Table (Form D).
3. Include an explanation of what corrective actions were taken for total excess emissions or monitor downtime for the quarter (Emission Data Summary and CMS Performance Summary, Item III) greater than 5%. (**See Instructions for further details.**)

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

Name \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

(iv) (A) Notwithstanding the frequency of reporting requirements specified in paragraph (iii) of this subsection, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(I) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this section continually demonstrate that the facility is in compliance with the applicable standard;

(II) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this section and the applicable standard; and

(III) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (iv)(B) of this subsection.

(B) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of the intent to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the ground on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(C) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (iv)(A) and (iv)(B) of this subsection.

(v) Any owner or operator subject to the provisions of this section shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this section recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and record.

(vi) Individual subparts of 40 CFR part 60 may include specific provisions which clarify or made inapplicable the provisions set forth in this section.

(h) Performance Tests:

(i) The owner or operator of an affected facility shall conduct performance test(s) within the times specified in Chapter 6, Section 2(j) and furnish the Administrator a written report of the results of such performance test(s).

(ii) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology; (2) obtains approval from the EPA Administrator for use of an equivalent method; (3) obtains approval from the EPA Administrator for use of an alternative method the results of which he had determined to be adequate for indicating whether a specific source is in compliance; (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard; or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require other testing.

(iii) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of start-up, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(iv) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(A) Sampling ports adequate for test methods applicable to such facility. This includes:

(I) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and;

(II) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(B) Safe sampling platform(s);

(C) Safe access to sampling platform(s);

(D) Utilities for sampling and testing equipment.

(v) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(i) Compliance With Standards and Maintenance Requirements:

(i) Compliance with standards in this section, other than opacity standards, shall be determined by performance tests established by Chapter 5, Section 2(h), unless otherwise specified in the applicable standard.

(ii) Compliance with opacity standards in this section shall be determined by conducting observations in accordance with Reference Method 9 in 40 CFR part 60, Appendix A or any alternative method that is approved by the EPA Administrator, or as provided in paragraph (v)(D) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

(iii) The opacity standards set forth in this section shall apply at all times except during periods of start-up, shutdown, malfunction, and as otherwise provided in the applicable standard.

(iv) At all times, including periods of start-up, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating 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, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(v) (A) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in Chapter 5, Section 2(h) unless one of the following conditions apply. If no performance test under Chapter 5, Section 2(h) is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial start-up of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under Chapter 5, Section 2(h), the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in Chapter 5, Section 2(g)(i)(D) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under Chapter 5, Section 2(h). The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of 40 CFR part 60, Appendix A. Opacity reading of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, any records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (v)(D) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in 40 CFR part 60, Appendix B, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(I) The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(B) The owner or operator of an affected facility to which an opacity standard in this section applies shall conduct opacity observations in accordance with Chapter 5, Section 2(i)(ii), shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under Chapter 5, Section 2(h).

(C) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produce during the initial performance test required by Chapter 5, Section 2(h) and furnish the Administrator a written report of the monitoring results along with Method 9 and Chapter 5, Section 2(h) performance test results.

(D) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under Chapter 5, Section 2(h) in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision in writing, at least 30 days before any performance test required under Chapter 5, Section 2(h) is conducted. Once the owner or operator of an affected facility has notified the Administrator to that Effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under Chapter 5, Section 2(h) until the owner or operator notifies the Administrator in writing to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under Chapter 5, Section 2(h) using COMS data the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under Chapter 5, Section 2(h). The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in Chapter 5, Section 2(j)(iii) of this section, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

(E) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by Chapter 5, Section 2(h), the opacity observation results and observer certification required by Chapter 5, Section 2(i)(v)(A) and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by Chapter 5, Section 2(h). If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with Chapter 5, Section 2(h) of this section but during the time such performance tests are being conducted fails to meet

any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility. The notifications received requesting adjustments to the opacity standard of the affected facility will be forwarded to EPA for resolution.

(vi) Special provisions set forth under an applicable subpart in 40 CFR part 60 shall supersede any conflicting provisions in this section.

(vii) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this section, nothing in this section shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with the applicable requirements if the appropriate performance or compliance test or procedure had been performed.

(j) Monitoring Requirements:

(i) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under 40 CFR part 60, Appendix B and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, 40 CFR part 60, Appendix F, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(ii) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under Chapter 5, Section 2(h). Verification of operational status shall, as a minimum, include completion of manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(iii) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under Chapter 5, Section 2(i)(v)(D), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, 40 CFR part 60, Appendix B, before the performance test required under Chapter 5, Section 2(h) is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under Chapter 5, Section 2(h) or within 30 days thereafter in accordance with the applicable performance specification in 40 CFR part 60, Appendix B. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator.

(A) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under Chapter 5, Section 2(h) and as described in Chapter 5, Section 2(i)(v)(D) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (iii) of this section at least 10 days before the performance test required under Chapter 5, Section 2(h) is conducted.

(B) Except as provided in paragraph (iii)(A) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(C) These continuous monitoring system performance evaluations, except as provided in paragraph (x) of this section shall be conducted in accordance with the requirements and procedures contained in the applicable performance specification of 40 CFR part 60, Appendix B as follows:

(I) Continuous monitoring systems for measuring opacity of emissions installed on or after March 30, 1983 shall comply with all the provisions and requirements in Performance Specification 1: continuous monitoring systems for measuring opacity of emissions installed before March 30, 1983 are required to comply with the provisions and requirements of Performance Specification 1 except for the following:

(1.) Section 4 - Installation specifications.

(2.) Paragraphs 5.1.4 - Optical alignment sight, 5.1.6 - Access to external optics, 5.1.7 - Automatic zero compensation indicator, and 5.1.8 - Slotted tube of Section 5 - Design and Performance Specification 1.

(3.) Paragraph 6.4 - Optical alignment sight of Section 6. Design specifications verification procedure.

If an existing opacity monitoring system is replaced on or after March 30, 1983, the new opacity monitoring system shall comply with the requirements of Performance Specification 1, except the new monitoring system may be located at the same measurement location as for the replaced monitoring system. If a new measurement location is to be determined at the time of replacement, the new location must meet the requirements of Performance Specification 1.

(II) Continuous monitoring systems for measuring nitrogen oxides emissions shall comply with Performance Specification 2.

(III) Continuous monitoring systems for measuring sulfur dioxide emissions shall comply with Performance Specification 2.



(IV) Continuous monitoring systems for measuring the oxygen content or carbon dioxide content of effluent gases shall comply with Performance Specification 3.

(iv) (A) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this section shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in 40 CFR part 60, Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments, the optical surfaces shall be cleaned when the cumulative zero compensation exceeds 4 percent opacity.

(B) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span value) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photodetector assembly.

(v) Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (iv) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(A) All continuous monitoring systems referenced by paragraphs (iii)(A) and (B) of this section for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive ten-second period and one cycle of data recording for each successive six-minute period.

(B) All continuous monitoring systems referenced by paragraphs (iii)(A) and (B) of this section for measuring emissions, except opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(vi) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous

monitoring systems contained in the applicable Performance Specifications of 40 CFR part 60, Appendix B of this section shall be used.

(vii) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emissions standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install applicable continuous monitoring systems on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

(viii) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to six-minute averages and for systems other than opacity to one-hour averages for time period defined under Chapter 5, Section 2(c)(i). Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each six-minute period. For systems other than opacity, one-hour averages shall be computed from four or more data points equally spaced over each one-hour period. Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data output of all continuous monitoring systems may be recorded in reduced or non-reduced form (e.g., ppm pollutant and percent O<sub>2</sub> or lb/million Btu of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits used in subparts to specify the applicable standard (e.g., rounded to the nearest one percent opacity).

(ix) Upon written application by an owner or operator, the Administrator may approve alternatives to any monitoring procedures or requirements of this section including, but not limited to the following:

(A) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this section would not provide accurate measurements due to liquid water or other interferences caused by substances with the effluent gases.

(B) Alternative monitoring requirements when the affected facility is infrequently operated.

(C) Alternative monitoring requirement to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.

(D) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

(E) Alternative methods of converting pollutant concentration measurements to units of the standards.

(F) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.

(G) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.

(H) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1 of 40 CFR part 60, Appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.

(I) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities are released to the atmosphere through more than one point.

(x) An alternative to the relative accuracy test specified in Performance Specification 2 of 40 CFR part 60, Appendix B may be requested as follows:

(A) An alternative to the reference method tests for determining relative accuracy is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the relative accuracy test in Section 7 of Performance Specification 2 and substitute the procedures in Section 10 if the results of the performance test conducted according to the requirements in Chapter 5, Section 2(h) of this section or other tests performed following the criteria in Chapter 5, Section 2(h) demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the relative accuracy test and substitute the procedures in Section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used

to determine compliance continuously with the applicable standard. The petition to waive the relative accuracy test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).

(B) The waiver of CEMS relative accuracy test will be reviewed and may be rescinded at such time following successful completion of the alternative RA procedure that the CEMS data indicate the source emissions approaching the level of the applicable standard. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven consecutive averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven consecutive averaging periods as specified by the applicable regulation(s). It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of relative accuracy testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in Section 7 of Performance Specification 2.

(k) Modification:

(i) Except as provided under paragraphs (iv) and (v) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

(ii) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(A) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors", EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that the emission level

resulting from the physical or operational change will either clearly increase or clearly not increase.

(B) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (ii)(A) of this section does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (ii)(A) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR part 60, Appendix C shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

(iii) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this section any other facility within that source.

(iv) The following shall not, by themselves, be considered modifications under this section:

(A) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (iii) of this section and Chapter 5, Section 2(I).

(B) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(C) An increase in the hours of operation.

(D) Use of an alternative fuel or raw material if, prior to the date any standard under this section becomes applicable to that source type, as provided by Chapter 5, Section 2(d), the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications, as amended, prior to the change. Conversion to coal required for energy considerations as specified in section 111(a)(8) of the Act, shall not be considered a modification.

(E) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(F) The relocation or change in ownership of an existing facility.

(v) Special provisions set forth under an applicable subpart shall supersede any conflicting provisions of Chapter 5, Section 2(k).

(vi) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraphs 2(k)(i) of this section, compliance with all applicable standards must be achieved.

(vii) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this subsection provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this subsection above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.

(viii) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

(ix) (A) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.

(B) This exemption shall not apply to any new unit that:

(I) Is designated as a replacement for an existing unit;

(II) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and

(III) Is located at a different site than the existing unit.

(x) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A

temporary clean coal control technology demonstration project, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the state in which the project is located and other requirements necessary to attain and maintain the National Ambient Air Quality Standards during the project and after it is terminated.

(xi) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

(l) Reconstruction:

(i) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.

(ii) **“Reconstruction”** means the replacement of components of an existing facility to such an extent that:

(A) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and

(B) It is technologically and economically feasible to meet the applicable standards set forth in this section.

(iii) **“Fixed capital cost”** means the capital needed to provide all the depreciable components.

(iv) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:

(A) Name and address of the owner or operator.

(B) The location of the existing facility.

(C) A brief description of the existing facility and the components which are to be replaced.

(D) A description of the existing air pollution control equipment and the proposed air pollution control equipment.

(E) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.

(F) The estimated life of the existing facility after the replacements.

(G) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

(v) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (iv) of this section and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.

(vi) The Administrator's determination under paragraph (v) shall be based on:

(A) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;

(B) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

(C) The extent to which the components being replaced cause or contribute to the emissions from the facility and

(D) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.

(vii) Individual subparts may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

(m) General Control Device Requirements:

(i) This section contains requirements for control devices used to comply with applicable subparts of Chapter 5, Section 2. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.

(ii) Flares:

(A) General Design:



(I) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (D), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(II) Flares shall be operated with flame present at all times, as determined by the methods specified in paragraph (D).

(III) Flares shall be used only with the net heating value of the gas being combusted being 300 Btu/Scf (11.2 MJ/scm) or greater if the flare is steam-assisted or air-assisted or with the net heating value of the gas being combusted being 200 Btu/scf (7.45 MJ/scm) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (D).

(IV) Steam-assisted and nonassisted flare shall be designed for and operated with an exit velocity as determined by the methods specified in paragraph (D)(IV), less than 60 ft/sec (18.3 m/sec) except as follows:

(1.) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (D)(IV) equal to or greater than 60 ft/sec (18.3 m/sec) but less than 400 ft/sec (122 m/sec) are allowed if the net heating value of the gas being combusted is greater than 1000 Btu/scf (37.3 MJ/scm).

(2.) Steam-assisted and nonassisted flares designed for and operated with an exit velocity as determined by the methods specified in paragraph (D)(IV), less than the velocity  $V_{max}$ , as determined by the method specified in paragraph (D)(V), and less than 400 ft/sec (122 m/sec) are allowed.

(V) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in paragraph (D)(VI).

(VI) Flares used to comply with this section shall be steam-assisted, air-assisted or nonassisted.

(B) Owners or operators of flares used to comply with the provisions of this section shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(C) Flares used to comply with the provisions of an applicable subpart shall be operated at all times when emissions may be vented to them.

(D) Determinations:

(I) Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of this section. The observation period is 2 hours and shall be used according to Method 22.

(II) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(III) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

where:

$H_T$  = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the value corresponding to one mole is 20°C.

K = Constant,

$$1.740 \times 10^{-7} \left( \frac{1}{ppm} \right) \left( \frac{gmole}{scm} \right) \left( \frac{MJ}{kcal} \right)$$

Where the standard temperature of  $\left( \frac{gmole}{scm} \right)$  is 20°C

$C_i$  = Concentration of sample component i in ppm on a wet basis, as measured for organics by reference method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-90 (2006) Standard Practice for Analysis of Reformed Gas by Gas Chromatography.

$H_i$  = Net heat of combustion of sample component i, kcal/g mole at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D4809-00 (2005) Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method) if published values are not available or cannot be calculated.

(IV) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as

determined by reference methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(V) The maximum permitted velocity  $V_{max}$ , for flares complying with paragraph (A)(IV)(2.) shall be determined by the following equation:

$$\text{Log}_{10}(V_{\max}) = \frac{H_T + 28.80}{31.7}$$

$V_{\max}$  = Maximum permitted velocity, m/sec

28.8 = Constant

31.7 = Constant

$H_T$  = The net heating value as determined in paragraph (D)(III)

(VI) The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be determined by the following equation:

$$V_{\max} = 8.706 + 0.7084(H_T)$$

$V_{\max}$  = Maximum permitted velocity m/sec

8.706 = Constant

0.7084 = Constant

$H_T$  = The net heating value as determined in paragraph (D)(III)

(n) General Notification and Reporting Requirements:

(i) For the purposes of this section, time periods specified in days shall be measured in calendar days, even if the word “calendar” is absent, unless otherwise specified in an applicable requirement.

(ii) For the purposes of this section, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(iii) Notwithstanding time period or postmark deadlines specified in this section for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (vi) of this subsection.

(iv) The owner or operator may change the dates by which periodic reports under this section shall be submitted (without changing the frequency of reporting) to be consistent with the schedule specified in Chapter 5, Section 2, by mutual agreement between the owner or operator and the Administrator. The allowance in the previous sentence applies in each state beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in 40 CFR part 63. Procedures governing the implementation of this provision are specified in paragraph (vi) of this subsection.

(v) If an owner or operator supervises one or more stationary sources affected by standards set under this section and standards set under 40 CFR part 61, Chapter 5, Section 3 or both, may be arranged by mutual agreement between the owner or operator and the Administrator a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each state beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this section, or 1 year after the stationary source is required to be in compliance with the applicable 40 CFR part 61 or Chapter 5, Section 3, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (vi) of this subsection.

(vi) (A) (I) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (vi)(B) and (vi)(C) of this subsection, the owner or operator of an affected facility remains strictly subject to the requirements of this section.

(II) An owner or operator shall request the adjustment provided for in paragraphs (vi)(B) and (vi)(C) of this subsection each time changes to an applicable time period or postmark deadline specified in this section are desired.

(B) Notwithstanding time periods or postmark deadlines specified in this section for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information is considered useful to convince the Administrator that an adjustment is warranted.

(C) If, in the Administrator’s judgment, an owner or operator’s request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(D) If the Administrator is unable to meet a specified deadline, the owner or operator will be notified of any significant delay and inform the owner or operator of the amended schedule.

**Section 3. National emission standards for hazardous air pollutants.**

(a) General: The U.S. Environmental Protection Agency regulations on national emission standards for hazardous air pollutants (NESHAP), established pursuant to section 112 of the Act as amended November 15, 1990, and amended by the word or phrase “substitutions” given in Chapter 5, Section 3(c) are incorporated into these regulations. The specific documents containing the complete text of the regulations are found in 40 CFR part 63. The standards designated in Chapter 5, Section 3(b) regulate specific categories of stationary sources that emit (or have the potential to emit) one or more of the hazardous air pollutants listed pursuant to section 112(b) of the Act, and presented in subsection (c)(i)(A) of Chapter 5, Section 3.

(b) Designated National Emission Standards for Hazardous Air Pollutants: The following standards for hazardous air pollutants, as revised and published in 40 CFR part 63, are incorporated by reference under Section 4(a) of this Chapter.

40 CFR part 63, Subpart D -	Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants
40 CFR part 63, Subpart F -	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry
40 CFR part 63, Subpart G -	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater
40 CFR part 63, Subpart H -	National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

40 CFR part 63, Subpart M -	National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities
40 CFR part 63, Subpart N -	National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks
40 CFR part 63, Subpart R -	National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)
40 CFR part 63, Subpart T -	National Emission Standards for Halogenated Solvent Cleaning
40 CFR part 63, Subpart AA -	National Emission Standards for Hazardous Air Pollutants From Phosphoric Acid Manufacturing Plants
40 CFR part 63, Subpart BB -	National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants
40 CFR part 63, Subpart CC -	National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries
40 CFR part 63, Subpart HH -	National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities
40 CFR part 63, Subpart JJ -	National Emission Standards for Wood Furniture Manufacturing Operations
40 CFR part 63, Subpart OO -	National Emission Standards for Tanks - Level 1

40 CFR part 63, Subpart PP -	National Emission Standards for Containers
40 CFR part 63, Subpart QQ -	National Emission Standards for Surface Impoundments
40 CFR part 63, Subpart RR -	National Emission Standards for Individual Drain Systems
40 CFR part 63, Subpart SS -	National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process
40 CFR part 63, Subpart TT -	National Emission Standards for Equipment Leaks - Control Level 1
40 CFR part 63, Subpart UU -	National Emission Standards for Equipment Leaks - Control Level 2 Standards
40 CFR part 63, Subpart VV -	National Emission Standards for Oil-Water Separators and Organic-Water Separators
40 CFR part 63, Subpart WW -	National Emission Standards for Storage Vessels (Tanks) - Control Level 2
40 CFR part 63, Subpart YY -	National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
40 CFR part 63, Subpart EEE -	National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors
40 CFR part 63, Subpart HHH -	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities

40 CFR part 63, Subpart LLL -	National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry
40 CFR part 63, Subpart UUU -	National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units
40 CFR part 63, Subpart VVV -	National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works
40 CFR part 63, Subpart AAAA -	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
40 CFR part 63, Subpart EEEE -	National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)
40 CFR part 63, Subpart KKKK -	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans
40 CFR part 63, Subpart TTTT -	National Emission Standards for Hazardous Air Pollutants for Leather Finishing Operations
40 CFR part 63, Subpart YYYY -	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines
40 CFR part 63, Subpart ZZZZ -	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR part 63, Subpart AAAAA -	National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants



40 CFR part 63, Subpart GGGGG -	National Emission Standards for Hazardous Air Pollutants: Site Remediation
40 CFR part 63, Subpart MMMMM -	National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations
40 CFR part 63, Subpart NNNNN -	National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production
40 CFR part 63, Subpart BBBBBB -	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities
40 CFR part 63, Subpart WWWWWW -	National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

The following additional standard for hazardous air pollutants, not including later amendments, is adopted by reference from the *Federal Register*, as published by the National Archives and Records Administration. *Federal Register* publishing date, volume and pages for the standard is noted below.

September 13, 2004 Vol. 69, P. 55218	40 CFR part 63 - Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
---	-----------------------------------	--

(i) Designated Appendices: The following appendices are incorporated by reference under Section 4(a) of this Chapter.

40 CFR part 63, Appendix A - Test Methods

40 CFR part 63, Appendix B - Sources Defined For Early Reduction Provisions

40 CFR part 63, Appendix C - Determination of the Fraction Biodegraded ( $F_{bio}$ ) in a Biological Treatment Unit

40 CFR part 63, Appendix D - Alternative Validation Procedure for EPA Waste and Wastewater Methods

40 CFR part 63, Appendix E - Monitoring Procedure for Nonthoroughly Mixed Open Biological Treatment Systems at Kraft Pulp Mills Under Unsafe Sampling Conditions

(c) Initial Applicability Determination For This Section.

(i) The provisions of this section apply to the owner or operator of any stationary source that:

(A) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act, and identified below:

CAS Number	Chemical Name
75070	Acetaldehyde
60355	Acetamide
75058	Acetonitrile
98862	Acetophenone
53963	2-Acetylaminofluorene
107028	Acrolein
79061	Acrylamide
79107	Acrylic acid
107131	Acrylonitrile
107051	Allyl chloride
92671	4-Aminobiphenyl
62533	Aniline
90040	o-Anisidine
1332214	Asbestos
71432	Benzene (including benzene from gasoline)
92875	Benzidine
98077	Benzotrichloride
100447	Benzyl chloride
92524	Biphenyl
117817	Bis(2-ethylhexyl)phthalate (DEHP)
542881	Bis(chloromethyl)ether
75252	Bromoform
106990	1,3-Butadiene
156627	Calcium cyanamide
133062	Captan
63252	Carbaryl
75150	Carbon disulfide
56235	Carbon tetrachloride

CAS Number	Chemical Name
463581	Carbonyl sulfide
120809	Catechol
133904	Chloramben
57749	Chlordane
7782505	Chlorine
79118	Chloroacetic acid
532274	2-Chloroacetophenone
108907	Chlorobenzene
510156	Chlorobenzilate
67663	Chloroform
107302	Chloromethyl methyl ether
126998	Chloroprene
1319773	Cresols/Cresylic acid (isomers and mixture)
95487	o-Cresol
108394	m-Cresol
106445	p-Cresol
98828	Cumene
94757	2,4-D, salts and esters
3547044	DDE
334883	Diazomethane
132649	Dibenzofurans
96128	1,2-Dibromo-3-chloropropane
84742	Dibutylphthalate
106467	1,4-Dichlorobenzene(p)
91941	3,3-Dichlorobenzidene
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)
542756	1,3-Dichloropropene
62737	Dichlorvos
111422	Diethanolamine
121697	N,N-Diethyl aniline (N,N-Dimethylaniline)
64675	Diethyl sulfate
119904	3,3-Dimethoxybenzidine
60117	Dimethyl aminoazobenzene
119937	3,3-Dimethyl benzidine
79447	Dimethyl carbamoyl chloride
68122	Dimethyl formamide
57147	1,1-Dimethyl hydrazine
131113	Dimethyl phthalate
77781	Dimethyl sulfate
534521	4,6-Dinitro-o-cresol, and salts
51285	2,4-Dinitrophenol
121142	2,4-Dinitrotoluene
123911	1,4-Dioxane (1,4-Diethyleneoxide)
122667	1,2-Diphenylhydrazine

CAS Number	Chemical Name
106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
106887	1,2-Epoxybutane
140885	Ethyl acrylate
100414	Ethyl benzene
51796	Ethyl carbamate (Urethane)
75003	Ethyl chloride (Chloroethane)
106934	Ethylene dibromide (Dibromoethane)
107062	Ethylene dichloride (1,2-Dichloroethane)
107211	Ethylene glycol
151564	Ethylene imine (Aziridine)
75218	Ethylene oxide
96457	Ethylene thiourea
75343	Ethylidene dichloride (1,1-Dichloroethane)
50000	Formaldehyde
76448	Heptachlor
118741	Hexachlorobenzene
87683	Hexachlorobutadiene
77474	Hexachlorocyclopentadiene
67721	Hexachloroethane
822060	Hexamethylene-1, 6-diisocyanate
680319	Hexamethylphosphoramide
110543	Hexane
302012	Hydrazine
7647010	Hydrochloric acid
7664393	Hydrogen fluoride (Hydrofluoric acid)
123319	Hydroquinone
78591	Isophorone
58899	Lindane (all isomers)
108316	Maleic anhydride
67561	Methanol
72435	Methoxychlor
74839	Methyl bromide (Bromomethane)
74873	Methyl chloride (Chloromethane)
71556	Methyl chloroform (1,1,1-Trichloroethane)
60344	Methyl hydrazine
74884	Methyl iodide (Iodomethane)
108101	Methyl isobutyl ketone (Hexone)
624839	Methyl isocyanate
80626	Methyl methacrylate
1634044	Methyl tert butyl ether
101144	4,4-Methylene bis(2-chloroaniline)
75092	Methylene chloride (Dichloromethane)
101688	Methylene diphenyl diisocyanate (MDI)
101779	4,4-Methylenedianiline

CAS Number	Chemical Name
91203	Naphthalene
98953	Nitrobenzene
92933	4-Nitrobiphenyl
100027	4-Nitrophenol
79469	2-Nitropropane
684935	N-Nitroso-N-methylurea
62759	N-Nitrosodimethylamine
59892	N-Nitrosomorpholine
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol
108952	Phenol
106503	p-Phenylenediamine
75445	Phosgene
7803512	Phosphine
7723140	Phosphorus
85449	Phthalic anhydride
1336363	Polychlorinated biphenyls (Aroclors)
1120714	1,3-Propane sultone
57578	beta-Propiolactone
123386	Propionaldehyde
114261	Propoxur (Baygon)
78875	Propylene dichloride (1,2-Dichloropropane)
75569	Propylene oxide
75558	1,2-Propylenimine (2-Methyl aziridine)
91225	Quinoline
106514	Quinone
100425	Styrene
96093	Styrene oxide
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79345	1,1,2,2-Tetrachloroethane
127184	Tetrachloroethylene (Perchloroethylene)
7550450	Titanium tetrachloride
108883	Toluene
95807	2,4-Toluene diamine
584849	2,4-Toluene diisocyanate
95534	o-Toluidine
8001352	Toxaphene (chlorinated camphene)
120821	1,2,4-Trichlorobenzene
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
95954	2,4,5-Trichlorophenol
88062	2,4,6-Trichlorophenol
121448	Triethylamine

CAS Number	Chemical Name
1582098	Trifluralin
540841	2,2,4-Trimethylpentane
108054	Vinyl acetate
593602	Vinyl bromide
75014	Vinyl chloride
75354	Vinylidene chloride (1,1-Dichloroethylene)
95476	o-Xylenes
108383	m-Xylenes
106423	p-Xylenes
0	Antimony Compounds
0	Arsenic Compounds (inorganic including arsine)
0	Beryllium Compounds
0	Cadmium Compounds
0	Chromium Compounds
0	Cobalt Compounds
0	Coke Oven Emissions
0	Cyanide Compounds *1
0	Glycol ethers *2
0	Lead Compounds
0	Manganese Compounds
0	Mercury Compounds
0	Fine mineral fibers *3
0	Nickel Compounds
0	Polycyclic Organic Matter *4
0	Radionuclides (including radon) *5
0	Selenium Compounds

NOTE: For all listings above which contain the word “compounds” and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.

\*1 X'CN where X=H' or any other group where a formal dissociation may occur. For example KCN or Ca(CN)<sub>2</sub>

\*2 Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR' where

n = 1, 2, or 3

R = alkyl or aryl groups

R' = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OH. Polymers are excluded from the glycol category.

\*3 Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.

\*4 Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.

\*5 A type of atom which spontaneously undergoes radioactive decay.

and,

(B) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to 40 CFR part 63.

(ii) In addition to complying with the provisions of this section, the owner or operator of any such source may need to obtain a permit for modification or construction in accordance with Chapter 6, Section 2 of the WAQSR. The owner or operator may also need to obtain an operating permit issued in accordance with Chapter 6, Section 3 of the WAQSR.

(d) General provisions for the subparts listed in Chapter 5, Section 3(b) are contained in Subpart A of 40 CFR part 63 and are incorporated by reference under Section 4(a) of this chapter, unless superseded by requirements in the specific subparts.

#### Section 4. **Incorporation by reference.**

(a) Code of Federal Regulations (CFR). All Code of Federal Regulations (CFRs), including their Appendices, cited in this Chapter, revised and published as of July 1, 2010, not including any later amendments, are incorporated by reference. Copies of the Code of Federal Regulations are available for public inspection and copies can be obtained at cost from the Department of Environmental Quality, Division of Air Quality, 122 W. 25<sup>th</sup> Street, Cheyenne, Wyoming 82002. Copies of the CFRs can also be obtained at cost from Government Institutes, 15200 NBN Way, Building B, Blue Ridge Summit, PA 17214.

(b) American Society for Testing and Materials (ASTM). All ASTM standards cited in this Chapter, revised and published as of July 1, 2010, not including any later amendments, are incorporated by reference. Copies of the ASTM standards are available for public inspection and copies can be obtained at cost from the Department of Environmental Quality, Division of Air Quality, 122 W. 25<sup>th</sup> Street, Cheyenne, Wyoming 82002. Copies can also be obtained at cost from the American Society for Testing and Materials, 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959.