- (d) Compliance Assurance Monitoring (CAM).
  - (1) Except for emission units that are exempt under 30 TAC § 122.604(c) and (d), (Compliance Assurance Monitoring Applicability) as specified in (2) of this section, CAM applies to an emission unit at a major source subject to this chapter provided the following criteria are met:
    - (A) The emission unit is subject to an emission limitation or standard for an air pollutant (or surrogate thereof) in an applicable requirement;
    - (B) The emission unit uses a control device to achieve compliance with the emission limitation or standard; and
    - (C) The emission unit has the pre-control device potential to emit greater than or equal to the amount in tons per year required for a site to be classified as a major source.
  - (2) CAM shall not apply to any of the following:
    - (A) Emission limitations or standards proposed by the United States Environmental Protection Agency (EPA) after November 15, 1990, under the Federal Clean Air Act (FCAA) § 111 (Standards of Performance for New Stationary Sources) or FCAA § 112 (Hazardous Air Pollutants);
    - (B) Emission limitations or standards under FCAA, Title IV-A (Acid Deposition Control);
    - (C) Emission limitations or standards under FCAA, Title VI (Stratospheric Ozone Protection);
    - (D) Emission limitations or standards that apply solely under an emissions trading program approved or promulgated by the EPA under the FCAA that allows for trading emissions;
    - (E) Emission caps that meet the requirements specified in 40 Code of Federal Regulations (CFR) § 70.4(b)(12) (State Program Submittals and Transition);
    - (F) Other emission limitations or standards specified as exempt by EPA;
    - (G) Emission limitations or standards for which an applicable requirement specifies a continuous compliance determination method, unless the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (such as a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test); or
    - (H) A utility unit, as defined in 40 CFR § 72.2 (Definitions), that is municipally owned if the permit holder documents in a permit application the following:
      - (i) The utility is exempt from all monitoring requirements in 40 CFR Part 75 (Continuous Emission Monitoring) (including the appendices);
      - (ii) The utility unit is operated for the sole purpose of providing electricity during periods of peak electrical demand or emergency situations, as demonstrated by historical operating data and relevant contractual obligation, and will be operated consistent with that purpose throughout the permit term; and
      - (iii) The actual emissions from the utility unit, based on the average annual emissions over the last three calendar years of operation (or the total time the unit has been in operation for a unit in operation less than three years), are less than 50 percent of the amount in tons per year required for a site to be classified as a major source and are expected to remain so.
  - (3) Applicability for CAM must be determined on a pollutant-by-pollutant basis; therefore, all of the criteria in (d)(1) and (d)(2) of this General Operating Permit (GOP) must be satisfied for a particular pollutant for each emission unit to be subject to CAM for that pollutant.

- (4) A Form OP-MON (Monitoring Requirements) must be submitted for each monitoring option chosen. This form must include the pollutant being monitored, control device, deviation limit, and monitoring option used. Unless the deviation limit is specifically defined by the monitoring option (for example, 1,500 degrees Fahrenheit), a proposed deviation limit, and a justification for the proposed deviation limit must be submitted on the Form OP-MON. If the deviation limit changes, for example due to recent testing, the GOP application must be revised with a new Form OP-MON for that option. Additional instructions for the addition of CAM into the application may be reviewed in the Oil and Gas GOP Statement of Basis and the Compliance Assurance Monitoring guidance document located at <a href="https://www.tceq.texas.gov/permitting/air/guidance/titlev/tv">www.tceq.texas.gov/permitting/air/guidance/titlev/tv</a> fop guidance.html.
- (5) Small units are those with a pre-control device potential to emit greater than the major source thresholds, but post-control device potential to emit less than the major source thresholds.
- (6) Large units are those with a pre-control device and post-control device potential to emit greater than the major source thresholds.
- (7) "Small/Large" options are appropriate for both small and large units. Large units must always use the monitoring options with the designation of "Small/Large." Small units have the option of using monitoring options with either a "Small" or "Small/Large" designation.
- (e) Compliance Assurance Monitoring Option Tables.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius	once per day	n/a*	CAMG-OG-CC-017
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Nitrogen Oxides (NO <sub>x)</sub> Concentration	Small	Use method specified in 30 TAC § 117.8000(c)(1), (3), (5), and (6) (Stack Testing Requirements) to stack test the unit for NO <sub>x</sub> emissions. Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.	once every two years	n/a*	CAMG-OG-CC-018

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations,	four times per hour	one hour	CAMG-OG-CC-019
	NOx	Small/Large	engineering calculations, or historical data.  Use method specified in 30 TAC § 117.8000(c)(1), (3), (5), and (6) to	once every	n/a	CAMG-OG-CC-020
	Concentration		stack test the unit for $NO_x$ emissions.  Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.	two years		

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3.	Inlet Gas Temperature, and	Small	in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-CC-021
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration		Use Reference Method 7E or 20 to stack test the unit for NO <sub>x</sub> emissions on a biennial calendar basis. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods.	once every two years	n/a	CAMG-OG-CC-022
			Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.			

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	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
4.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-CC-023
	NO <sub>x</sub> Concentration	Small/Large	Use Reference Method 7E or 20 to stack test the unit for NO <sub>x</sub> emissions on a biennial calendar basis. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.	Once every two years	n/a	CAMG-OG-CC-024

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
5.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius	once per day	n/a*	CAMG-OG-CC-025
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small	Use method specified in 30 TAC § 117.8000(c)(1), (3), (5), and (6) to stack test the unit for $NO_x$ emissions within 15,000 hours of operation after the previous emission test. Note that the conditions of 30 TAC § 117.8140(a)(2)(B)(i) and (ii) (Emission Monitoring for Engines) apply.	every 15,000 hours of operation	n/a	CAMG-OG-CC-026
			Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.			

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	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
6.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CC-027
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small/Large	Use method specified in 30 TAC § 117.8000(c)(1), (3), (5), and (6) to stack test the unit for $NO_x$ emissions within 15,000 hours of operation after the previous emission test. Note that the conditions of 30 TAC § 117.8140(a)(2)(B)(i) and (ii) apply.	every 15,000 hours of operation	n/a	CAMG-OG-CC-028
			Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
7.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-CC-029
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Small Concentration	Small	Use Reference Method 7E or 20 to stack test the unit for NO <sub>x</sub> emissions within 15,000 hours of operation after the previous emission test. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A 100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. In addition, install and operate an elapsed operating time meter to record hours of operation.	every 15,000 hours of operation	n/a	CAMG-OG-CC-030
			Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.			

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	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
8.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CC-031
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small/Large	Use Reference Method 7E or 20 to stack test the unit for NO <sub>x</sub> emissions within 15,000 hours of operation after the previous emission test. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. In addition, install and operate an elapsed operating time meter to record hours of operation.	every 15,000 hours of operation	n/a	CAMG-OG-CC-032
			Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
9.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-CC-033
	NO <sub>x</sub> Concentration	Small	Use a portable analyzer to monitor NO <sub>x</sub> and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). NO <sub>x</sub> Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per million British thermal units (MMBtu), pounds per hour). Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.	once per quarter	n/a*	CAMG-OG-CC-034

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
10.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-CC-035

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
NO <sub>x</sub> Concentration		Use a portable analyzer to monitor NO <sub>x</sub> and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). NO <sub>x</sub> Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).  Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.	Once per quarter	n/a*	CAMG-OG-CC-036

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
11.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-CC-037
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Oxygen Concentration	Small	The monitoring device shall measure the oxygen concentration of the oxygen sensor in millivolts or oxygen concentration. The oxygen sensor shall be installed in the engine exhaust at the inlet to the catalyst. The monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.	once per day	n/a*	CAMG-OG-CC-038
			Deviation Limit: A minimum and maximum oxygen level (measured in millivolts or oxygen concentration) shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

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	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
12.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CC-039
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Oxygen Concentration	Small/Large	The monitoring device shall measure the oxygen concentration of the oxygen sensor in millivolts or oxygen concentration. The oxygen sensor shall be installed in the engine exhaust at the inlet to the catalyst. The monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.	four times per hour	one hour	CAMG-OG-CC-040
			Deviation Limit: A minimum and maximum oxygen level (measured in millivolts or oxygen concentration) shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
13.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  ■ ± 2 percent of reading; or  ■ ± 2.5 degrees Celsius.  Deviation Limit: The inlet temperature remains ≥750 F and ≤1250 F.	once per day	n/a*	CAMG-OG-CC-041
	Pressure Drop	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.5 inches water gauge pressure (± 125 pascals); or  • ± 0.5 percent of span.  Deviation Limit: The pressure drop across the catalyst shall not change by more than 2 inches of water at 100 percent load or ± 10 percent from the pressure drop across the catalyst measured during the initial performance test.	once per day	n/a*	CAMG-OG-CC-042

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
14.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CC-043
			Deviation Limit: The inlet temperature remains ≥750 ℉ and ≤1250 ℉.			
	Pressure Drop	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.5 inches water gauge pressure (± 125 pascals); or  • ± 0.5 percent of span.	four times per hour	one hour	CAMG-OG-CC-044
			Deviation Limit: The pressure drop across the catalyst shall not change by more than 2 inches of water at 100 percent load or ± 10 percent from the pressure drop across the catalyst measured during the initial performance test.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
15.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-001
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small/Large	Use method specified in 30 TAC § 117.8000(c)(1), (3), (5), and (6) to stack test unit for $NO_x$ emissions.	once every two years	n/a	CAMG-OG-CC-002
			Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
16.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-003
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small/Large	Use Reference Method 7E or 20 to stack test the unit for NO <sub>x</sub> emissions on a biennial calendar basis. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods.	once every two years	n/a	CAMG-OG-CC-004
			Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
17.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-005
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small/Large	Use method specified in 30 TAC § 117.8000(c)(1), (3), (5), and (6) to stack test the unit for $NO_x$ emissions within 15,000 hours of operation after the previous emission test. Note that the conditions of 30 TAC § 117.8140(a)(2)(B)(i) and (ii) must be met.	every 15,000 hours of operation	n/a	CAMG-OG-CC-006
			Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
18.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	four times per hour	0	CAMG-OG-CC-007
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small/Large	Use Reference Method 7E or 20 to stack test the unit for NO <sub>x</sub> emissions within 15,000 hours of operation after the previous emission test. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. In addition, install and operate an elapsed operating time meter to record hours of operation.	every 15,000 hours of operation	n/a	CAMG-OG-CC-008
			Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
19.	Fuel Consumption, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	nce with other written urance that the fuel flow annually (whichever is more	n/a*	CAMG-OG-CC-009
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small	Use a portable analyzer to monitor NO <sub>x</sub> and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning and Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). NO <sub>x</sub> Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).	once per quarter	n/a*	CAMG-OG-CC-010
			Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
20.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within $\pm$ 5 percent.	four times per hour	one hour	CAMG-OG-CC-011
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	NO <sub>x</sub> Concentration	Small/Large	Use a portable analyzer to monitor NO <sub>x</sub> and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning and Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). NO <sub>x</sub> Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).	once per quarter	n/a*	CAMG-OG-CC-012
			Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
21.	Fuel Consumption, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	once per day	n/a*	CAMG-OG-CC-013
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	Inlet Gas Temperature	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-CC-014
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
22.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-015
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	Inlet Gas Temperature	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CC-016
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
23.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-CC-045
	Carbon Monoxide (CO) Concentration	Small	Use method specified in 30 TAC § 117.8000(b), (c)(2), (3), (5), and (6) to stack test the unit for CO emissions.  Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.	once every two years	n/a	CAMG-OG-CC-046

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
24.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CC-047
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small/Large	Use method specified in 30 TAC § 117.8000(b), (c)(2), (3), (5), and (6) to stack test the unit for CO emissions.	once every two years	n/a	CAMG-OG-CC-048
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
25.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-CC-049
	CO Concentration	Small/Large	Use Reference Method 10 to stack test the unit for CO emissions on a biennial calendar basis. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods.  Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.	once every two years	n/a	CAMG-OG-CC-050

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
26.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-CC-051
	CO Concentration	Small/Large	Use Reference Method 10 to stack test the unit for CO emissions on a biennial calendar basis. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods.  Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.	once every two years	n/a	CAMG-OG-CC-052

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
27.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.		n/a*	CAMG-OG-CC-053
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small	Use method specified in 30 TAC § 117.8000(b), (c)(2), (3), (5), and (6) to stack test the unit for CO emissions within 15,000 hours of operation after the previous emission test. Note that the conditions of 30 TAC § 117.8140(a)(2)(B)(i) and (ii) apply.	every 15,000 hours of operation	n/a	CAMG-OG-CC-054
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.		one hour	CAMG-OG-CC-055
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small/Large	Use method specified in 30 TAC § 117.8000(b), (c)(2), (3), (5), and (6) to stack test the unit for CO emissions within 15,000 hours of operation after the previous emission test. Note that the conditions of 30 TAC § 117.8140(a)(2)(B)(i) and (ii) apply.	every 15,000 r hours of operation	n/a	CAMG-OG-CC-056
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
29.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-CC-057
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	CO Sma	within 15,000 hours of operation after the previous em Exhaust flow rate may be determined from measured EPA Method 19. California Air Resources Board Meth (adopted June 29, 1983) is an acceptable alternate to	Use Reference Method 10 to stack test the unit for CO emissions within 15,000 hours of operation after the previous emission test. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. In addition, install and operate an elapsed operating time meter to record hours of operation.	every 15,000 hours of operation	n/a	CAMG-OG-CC-058
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
30.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CC-059
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small/Large	Use Reference Method 10 to stack test the unit for CO emissions within 15,000 hours of operation after the previous emission test. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. In addition, install and operate an elapsed operating time meter to record hours of operation.	every 15,000 hours of operation	n/a	CAMG-OG-CC-060
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
31.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-CC-061
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small	Use a portable analyzer to monitor carbon monoxide and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). CO Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).  Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.	once per quarter	n/a*	CAMG-OG-CC-062

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
32. Inlet Gas Temperature, and	Small/Large		four times per hour	n/a*	CAMG-OG-CC-063

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
CO Concentration	Small/Large	Use a portable analyzer to monitor carbon monoxide and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). CO Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).  Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.	once per quarter	n/a*	CAMG-OG-CC-064

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
33.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-073
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small/Large	Use method specified in 30 TAC § 117.8000(b), (c)(2), (3), (5), and (6) to stack test unit for CO emissions.	once every two years	n/a	CAMG-OG-CC-074
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
34.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-075
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	CO Small/Large Concentration	l	once every two years	n/a	CAMG-OG-CC-076	
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
35.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-077
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small/Large	Use method specified in 30 TAC § 117.8000(b), (c)(2), (3), (5), and (6) to stack test the unit for CO emissions within 15,000 hours of operation after the previous emission test. Note that the conditions of 30 TAC § 117.8140(a)(2)(B)(i) and (ii) must be met.	every 15,000 hours of operation	n/a	CAMG-OG-CC-078
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number	
36	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	·	urer's specifications; in accordance with other written s that provide an adequate assurance that the fuel flow alibrated accurately; or at least annually (whichever is more	one hour	CAMG-OG-CC-079
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.				
	CO Concentration	Small/Large	Use Reference Method 10 to stack test the unit for CO emissions within 15,000 hours of operation after the previous emission test. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. In addition, install and operate an elapsed operating time meter to record hours of operation.	every 15,000 hours of operation	n/a	CAMG-OG-CC-080	
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.				

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
37.	Fuel Consumption, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	once per day	n/a*	CAMG-OG-CC-081
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	CO Concentration	Small	Use a portable analyzer to monitor carbon monoxide and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). CO Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).	once per quarter	n/a*	CAMG-OG-CC-082
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
38.	Fuel Consumption, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-CC-083
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data			
	CO Concentration	Small/Large	Use a portable analyzer to monitor carbon monoxide and oxygen concentration in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). CO Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).		n/a*	CAMG-OG-CC-084
			Deviation Limit: The maximum CO rate or concentration (specified in units of the underlying applicable requirement) is the corresponding carbon monoxide limit associated with the emission limitation in the underlying applicable requirement.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Control Device: All Volatile Organic Compound (VOC) Control Devices (Except Flares and Carbon Adsorption System)

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	VOC Concentration	Small	Use a portable analyzer to monitor VOC concentration at the outlet of the control device. The monitoring device shall be calibrated, operated, and maintained in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated, operated, and maintained accurately. The monitoring device shall meet the requirements of 40 CFR Part 60, Appendix A-7, Method 21, Sections 2.0 and 3.0 (Determination of Volatile Organic Compound Leaks). However, the words "leak definition" in Method 21 shall be the outlet concentration (which corresponds to the appropriate deviation limit). The calibration gas shall either be representative of the compounds to be measured or shall be methane and shall be at a concentration associated with 125 percent of the expected organic compound concentration level for the control device outlet vent. The probe inlet of the monitoring device shall be placed at approximately the center of the control device outlet vent. The probe shall be held there for at least 5 minutes during which flow into the control device is expected to occur. The maximum reading during that period shall be used as the measurement.  Deviation Limit: A maximum VOC concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-VO-001

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

# Control Device: All VOC Control Devices (Except Flares and Carbon Adsorption System)

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	VOC Concentration	Small/Large	Use a continuous emission monitoring system (CEMS) to measure and record the concentration of organic compounds in the exhaust stream of the control device. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 (Monitoring Requirements) and the performance specifications of 40 CFR Part 60, Appendix B (Performance Specifications).  Deviation Limit: A maximum VOC rate or concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-VO-002

## Control Device: All NO<sub>x</sub> Control Devices<sup>4</sup>

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	NO <sub>x</sub> Concentration	Small	Use a portable analyzer to monitor NO <sub>x</sub> in the exhaust stream of the control device. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning and Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999). NO <sub>x</sub> Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).  Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.	, ,	n/a*	CAMG-OG-NO-001

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

<sup>&</sup>lt;sup>4</sup>Units using NO<sub>X</sub> control devices may choose one of the options listed for "All NO<sub>X</sub> Control Devices" or they may choose another option from section (e).

# Control Device: All NO<sub>x</sub> Control Devices<sup>4</sup> (continued)

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	NO <sub>x</sub> Concentration	either oxygen or carbon dioxide in the exhaust stream of the control device. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B. NO <sub>x</sub> Emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower-hour, pounds per MMBtu, pounds per hour).	four times per hour	one hour	CAMG-OG-NO-002	
			Deviation Limit: The maximum NO <sub>x</sub> rate or concentration (specified in units of the underlying applicable requirement) is the corresponding NO <sub>x</sub> limit associated with the emission limitation in the underlying applicable requirement.			
3.	NO <sub>x</sub> Concentration	Small/Large	Use a predictive emission monitoring system (PEMS) to predict the emissions of NO <sub>x</sub> in the units of the underlying applicable emission limitation. The PEMS shall be installed, calibrated and tested to prove model functionality, maintained, and operated in accordance with the manufacturer's specifications. In addition, monitor oxygen or carbon dioxide with either a CEMS, operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B, or a PEMS, operated in accordance with above procedures.	four times per hour	one hour	CAMG-OG-NO-003
			Deviation Limit: The maximum $NO_x$ rate or concentration (specified in units of the underlying applicable requirement) is the corresponding $NO_x$ limit associated with the emission limitation in the underlying applicable requirement.			

<sup>&</sup>lt;sup>4</sup>Units using NO<sub>X</sub> control devices may choose one of the options listed for "All NO<sub>X</sub> Control Devices" or they may choose another option from section (e).

# Control Device: All SO<sub>2</sub> Control Devices

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Sulfur Dioxide Concentration	Small/Large	Use a CEMS to measure and record sulfur dioxide emissions in the exhaust stream of the control device. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B. In addition, monitor oxygen or carbon dioxide with a CEMS operated in accordance with above CEMS procedures.  Deviation Limit: The maximum sulfur dioxide rate or concentration (specified in units of the underlying applicable requirement) is the corresponding sulfur dioxide limit associated with the emission limitation in the underlying applicable requirement.	four times per hour	one hour	CAMG-OG-SO-001

## Control Device: Flare

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Pilot Flame	Small/Large	Monitor the presence of a flare pilot flame using a thermocouple or other equivalent device to detect the presence of a flame or using an alarm that uses a thermocouple or other equivalent device to detect the absence of a flame. Maintain records of alarm events and duration of alarm events. Each monitoring device shall be accurate to within manufacturer's recommendations. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately. Deviation Limit: No pilot flame.	continuous	n/a	CAMG-OG-FL-001

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	Visible Emissions	Small	Visible emissions observations shall be made and recorded in accordance with the requirements specified in 40 CFR § 64.7(c) (Operation of Approved Monitoring). Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.		n/a	CAMG-OG-FL-002
			Deviation Limit: No visible emissions. If visible emissions are observed, the permit holder shall either report a deviation or determine visible emissions consistent with Test Method 22 or Test Method 9.			

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3. Visible Emissions	Small	Visible emissions observations shall be made and recorded in the flare operation log. A daily notation in the flare operation log shall include the time of day and whether or not the flare had visible emissions. The flare operator shall record at least 98 percent of these required observations. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes.  Deviation Limit: No visible emissions. If visible emissions are observed, the permit holder shall either report a deviation or determine visible emissions consistent with Test Method 22 or Test Method 9.		n/a	CAMG-OG-FL-003

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
4.	Inlet Flow Rate, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A maximum inlet flow rate shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-FL-004
	Net Heating Value	Small	Calculate the net heating value of the gas being combusted using the procedures and specifications of 40 CFR § 60.18(f)(3) (General Control Device and Work Practice Requirements). The sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed.	once per day	n/a*	CAMG-OG-FL-005
			Deviation Limit: The minimum net heating value of the gas being combusted is 11.2 megajoule per standard cubic meter (MJ/scm) (300 Btu/scf (British thermal units per standard cubic foot/feet)) for steam-assisted or air-assisted flares. The minimum net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) for non-assisted flares. The minimum net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf) for steam-assisted and non-assisted flares designed for and operated with an exit velocity equal to or greater than 18.3 meters per second (m/sec) (60 feet per second (ft/sec)) but less than 122 m/sec (400 ft/sec).			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
5.	Inlet Flow Rate, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A maximum inlet flow rate shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FL-006
	Net Heating Value	Small/Large	A continuous analyzer that provides the net heating value of the gas being combusted using the procedures and specifications of 40 CFR § 60.18(f)(3). The sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed.  Deviation Limit: The minimum net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) for steam-assisted or air-assisted flares. The minimum net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) for nonassisted flares. The minimum net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf) for steam-assisted and nonassisted flares designed for and operated with an exit velocity equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec).	four times per hour	one hour	CAMG-OG-FL-007

## Control Device: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer/Thermal Oxidizer)

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1. Combustion Temperature/ Exhaust Gas Temperature	Small	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum combustion temperature shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-TI-001

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

# Control Device: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer/Thermal Oxidizer) (continued)

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2. Combustion Temperature/ Exhaust Gas Temperature	Small/Large	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum combustion temperature shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-TI-002

## Control Device: Vapor Combustor

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Combustion Temperature/ Exhaust Gas Temperature	Small	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	once per day	per day n/a*	CAMG-OG-VC-001
			Deviation Limit: A minimum combustion temperature shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
2.	Combustion Temperature/ Exhaust Gas Temperature	Small/Large	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum combustion temperature shall be established using the most appropriate of the following: the most	four times per hour	one hour	CAMG-OG-VC-002
			recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

## Control Device: Catalytic Incinerator

	Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Catalyst Bed Inlet and Outlet Gas Temperature	Small	The monitoring devices shall be installed in the inlet to and exit of the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.	once per day	once per day n/a* CAMG-OG-CI-001	CAMG-OG-CI-001
			Deviation Limit: A minimum temperature difference across the inlet and outlet of the catalyst bed shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
2.	Catalyst Bed Inlet and Outlet Gas Temperature	Small/Large	The monitoring devices shall be installed in the inlet to and exit of the catalyst bed Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-CI-002
			Deviation Limit: A minimum temperature difference across the inlet and outlet of the catalyst bed shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations

## Control Device: Steam Generating Unit<sup>5</sup> (Boiler/Process Heater) Used as VOC Control

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Combustion     Temperature/     Exhaust Gas     Temperature	Small	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber into which the VOC is introduced. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum combustion temperature shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SG-001

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

<sup>&</sup>lt;sup>5</sup> A steam generating unit is a device that combusts any fuel and produces steam or heats water or any other heat transfer medium.

# Control Device: Steam Generating Unit<sup>5</sup> (Boiler/Process Heater) Used as VOC Control (continued)

Inc	licator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	Combustion Temperature/ Exhaust Gas Temperature	Small/Large	· · · · · · · · · · · · · · · · · · ·	four times per hour	one hour	CAMG-OG-SG-002

In	dicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Total Regeneration Stream Mass Flow, and	Small	Measure and record, during a regeneration cycle, the total regeneration stream mass flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span.  Deviation Limit: A minimum regeneration stream mass flow shall be established using the most appropriate of the following: the	. ,	n/a*	CAMG-OG-CA-001
			most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Carbon Bed Temperature	Small	Measure and record, during a regeneration cycle, the carbon bed temperature for the duration of the steaming cycle and to measure the actual bed temperature after regeneration and within 15 minutes of completing the cooling cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.  Deviation Limit: A maximum temperature of the carbon bed after regeneration [and after completion of any cooling cycle(s)] shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.		n/a*	CAMG-OG-CA-002

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2. Total Regeneration Stream Mass Flow, and	Small/Large	Measure and record, during a regeneration cycle, the total regeneration stream mass flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span.  Deviation Limit: A minimum regeneration stream mass flow shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.		one hour	CAMG-OG-CA-003

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Carbon Bed Temperature	Small/Large	Measure and record, during a regeneration cycle, the carbon bed temperature for the duration of the steaming cycle and to measure the actual bed temperature after regeneration and within 15 minutes of completing the cooling cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.  Deviation Limit: A maximum temperature of the carbon bed after regeneration [and after completion of any cooling cycle(s)] shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.		one hour	CAMG-OG-CA-004

In	dicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3.	Total Regeneration Stream Volumetric Flow, and	Small	Measure and record, during a regeneration cycle, the total regeneration stream volumetric flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span. Deviation Limit: A minimum regeneration stream volumetric flow shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-CA-005

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Carbon Bed Temperature	Small	Measure and record, during a regeneration cycle, the carbon bed temperature for the duration of the steaming cycle and to measure the actual bed temperature after regeneration and within 15 minutes of completing the cooling cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-CA-006
		Deviation Limit: A maximum temperature of the carbon bed after regeneration [and after completion of any cooling cycle(s)] shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicato	or Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Stre	generation eam umetric Flow,	Small/ Large	Measure and record, during a regeneration cycle, the total regeneration stream volumetric flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span.  Deviation Limit: A minimum regeneration stream volumetric flow shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-CA-007
_	rbon Bed mperature	Small/ Large	Measure and record, during a regeneration cycle, the carbon bed temperature for the duration of the steaming cycle and to measure the actual bed temperature after regeneration and within 15 minutes of completing the cooling cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 0.75 percent of the temperature being measured expressed in degrees Celsius; or  • ± 2.5 degrees Celsius.  Deviation Limit: A maximum temperature of the carbon bed after regeneration [and after completion of any cooling cycle(s)] shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-CA-008

Indica	ator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
R	otal Regeneration Itream Mass Iow, and	regeneration stream mass flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span.  Deviation Limit: A minimum regeneration stream mass flow	once per day	n/a*	CAMG-OG-CA-009	
			Deviation Limit: A minimum regeneration stream mass flow shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	carbon Bed ressure	Small	Measure and record, during a regeneration cycle, the carbon bed pressure for the duration of the vacuum cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.	once per day	n/a*	CAMG-OG-CA-010
			Deviation Limit: A minimum pressure of the carbon bed during regeneration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number	
6. Total Regeneration Stream Mass Flow, and	Small/ Large	Measure and record, during a regeneration cycle, the total regeneration stream mass flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span.	four times per hour	one hour	es per one hour CAMG-OG-CA-011	CAMG-OG-CA-011
		Deviation Limit: A minimum regeneration stream mass flow shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.				
Carbon Bed Pressure	Small/ Large	Measure and record, during a regeneration cycle, the carbon bed pressure for the duration of the vacuum cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.	four times per hour	one hour	CAMG-OG-CA-012	
		Deviation Limit: A minimum pressure of the carbon bed during regeneration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.				

Indicate	or Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Re St	otal egeneration iream olumetric Flow, nd	Small	Measure and record, during a regeneration cycle, the total regeneration stream volumetric flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span.	once per day	n/a*	CAMG-OG-CA-013
			Deviation Limit: A minimum regeneration stream volumetric flow shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	arbon Bed ressure	Small	Measure and record, during a regeneration cycle, the carbon bed pressure for the duration of the vacuum cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.	once per day	n/a*	CAMG-OG-CA-014
			Deviation Limit: A minimum pressure of the carbon bed during regeneration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Ind	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
8.	Total Regeneration Stream Volumetric Flow, and	Small/ Large	Measure and record, during a regeneration cycle, the total regeneration stream volumetric flow. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 10 percent of span.	four times per hour	one hour	CAMG-OG-CA-015
			Deviation Limit: A minimum regeneration stream volumetric flow shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	Carbon Bed Pressure	Small/ Large	Measure and record, during a regeneration cycle, the carbon bed pressure for the duration of the vacuum cycle. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.	four times per hour	one hour	CAMG-OG-CA-016
			Deviation Limit: A minimum pressure of the carbon bed during regeneration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

Indicator Monit	ored Siz	е	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
9. VOC Concentra	ion Small		Use a portable analyzer to monitor exhaust gas VOC concentration at the outlet of the carbon adsorption system. The monitoring device shall be calibrated, operated, and maintained in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated, operated, and maintained accurately. The monitoring device shall meet the requirements of 40 CFR Part 60, Appendix A-7, Method 21, Sections 2.0 and 3.0. However, the words "leak definition" in Method 21 shall be the outlet concentration. The calibration gas shall either be representative of the compounds to be measured or shall be methane and shall be at a concentration associated with 125 percent of the expected organic compound concentration level for the carbon adsorber outlet vent. The probe inlet of the monitoring device shall be placed at approximately the center of the carbon adsorber outlet vent. The probe shall be held there for at least 5 minutes during which flow into the carbon adsorber is expected to occur. The maximum reading during that period shall be used as the measurement.  Deviation Limit: A maximum VOC concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-CA-017

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Ind	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
10.	VOC Concentration	Small/ Large	organic compounds in the exhaust stream of the control device. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.	four times per hour	one hour	CAMG-OG-CA-018
			Deviation Limit: A maximum VOC rate or concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data for the outlet of the last or final polishing canister in the series of canisters.			

# Control Device: Carbon Adsorption System (Non-Regenerative)

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1. Carbon Replacement Interval (Work Practice)	Small/ Large	Establish and monitor the replacement time interval of the carbon canister(s), as determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system.  Deviation Limit: A minimum carbon replacement interval shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.		n/a	CAMG-OG-CA-019

### Control Device: Carbon Adsorption System (Non-Regenerative) (continued)

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2. VOC Concentration	Small	Use a portable analyzer to monitor VOC concentration at the outlet of the first, second canister of the series of canisters but before the inlet to the second, third or final polishing canister in the series, as appropriate. Once breakthrough has been determined with the portable analyzer for the first, second canister, use the portable analyzer to monitor VOC concentration at the outlet of the last or final polishing canister in the series until the first, second canister is replaced. The monitoring device shall be calibrated, operated, and maintained in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated, operated, and maintained accurately. The monitoring device shall meet the requirements of 40 CFR Part 60, Appendix A-7, Method 21, Sections 2.0 and 3.0. However, the words "leak definition" in Method 21 shall be the outlet concentration. The calibration gas shall either be representative of the compounds to be measured or shall be methane and shall be at a concentration associated with 125 percent of the expected organic compound concentration level for the carbon adsorber outlet vent. The probe inlet of the monitoring device shall be placed at approximately the center of the carbon adsorber vent. The probe shall be held there for at least 5 minutes during which flow into the carbon adsorber is expected to occur. The maximum reading during that period shall be used as the measurement.  Deviation Limit: A maximum VOC concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data for the outlet of the last or final polishing canister in the series of canisters.	once per day	n/a*	CAMG-OG-CA-020

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3.	VOC Concentration	Small/ Large	Use a CEMS to measure and record the concentration of organic compounds in the exhaust stream of the control device. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the Performance Specifications of 40 CFR Part 60, Appendix B.  Deviation Limit: A maximum VOC rate or concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data for the outlet of the last or final polishing canister in the series of canisters.	hour	one hour	CAMG-OG-CA-021

### Control Device: Condenser System

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Exhaust Gas Temperature	Small	The monitoring device shall be installed at the outlet to the condenser system. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A maximum exhaust gas temperature shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations (GRI-GLYCalc v. 3.0 or most recent version), or historical data.	once per day	n/a*	CAMG-OG-CS-001

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

# Control Device: Condenser System (continued)

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	Exhaust Gas Temperature	Small/Large	The monitoring device shall be installed at the outlet to the condenser system. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A maximum exhaust gas temperature shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations (GRI-GLYCalc v. 3.0 or most recent version), or historical data.		one-hour	CAMG-OG-CS-002
3.	Exhaust Gas Temperature	Small/Large	The monitoring device shall be installed at the outlet to the condenser system. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A maximum exhaust gas temperature shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations (GRI-GLYCalc v. 3.0 or most recent version), or historical data.		daily	CAMG-OG-CS-003

### Control Device: Selective Catalytic Reduction

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-001
	Injection Nozzle Flow Rate	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A minimum flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-002

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indica	tor Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
T	nlet Gas emperature, nd	Small/ Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SC-003
	njection Nozzle ilow Rate	Small/ Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A minimum flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SC-004

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3.	Inlet Gas Temperature, and	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	once per day	n/a*	CAMG-OG-SC-005
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Injection Nozzle Supply Pressure	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design supply pressure.	once per day	n/a*	CAMG-OG-SC-006
			Deviation Limit: A minimum supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
4.	Inlet Gas Temperature, and	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-SC-007
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Injection Nozzle Supply Pressure	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design supply pressure.	four times per hour	one hour	CAMG-OG-SC-008
			Deviation Limit: A minimum supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

Ind	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
5.	Inlet Gas Temperature, and		The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-009

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Inlet Oxygen Concentration		Use a portable analyzer to monitor oxygen concentration in the inlet flue gas to the catalyst bed. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999).	once per day	n/a*	CAMG-OG-SC-010
		Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
6.	Inlet Gas Temperature, and	Small/ Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SC-011
	Inlet Oxygen Concentration	Small/ Large	Use a CEMS to measure and record the inlet oxygen concentration to the catalyst bed. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SC-012

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
7. Injection Nozzle Flow Rate, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A minimum flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-013
Inlet Oxygen Concentration	Small	Use a portable analyzer to monitor oxygen concentration in the inlet flue gas to the catalyst bed. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999).  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-014

<sup>\*</sup> The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	icator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
8.	Injection Nozzle Flow Rate, and	Small/ Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A minimum flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SC-015
	Inlet Oxygen Concentration	Small/ Large	Use a CEMS to measure and record the inlet oxygen concentration to the catalyst bed. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SC-016

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
9. Injection Nozzle Supply Pressure, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design supply pressure.  Deviation Limit: A minimum supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-017
Inlet Oxygen Concentration	Small	Use a portable analyzer to monitor oxygen concentration in the inlet flue gas to the catalyst bed. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999).  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-018

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
10.	Injection Nozzle Supply Pressure, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design supply pressure.	four times per hour	one hour	CAMG-OG-SC-019
			Deviation Limit: A minimum supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Inlet Oxygen Concentration	Small/Large	Use a CEMS to measure and record the inlet oxygen concentration to the catalyst bed. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.	four times per hour	one hour	CAMG-OG-SC-020
			Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
11. Catalyst Bed Pressure Drop and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.	once per day	n/a*	CAMG-OG-SC-021
		Deviation Limit: A minimum and maximum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
Inlet Oxygen Concentration	Small	Use a portable analyzer to monitor oxygen concentration in the inlet flue gas to the catalyst bed. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999).	once per day	n/a*	CAMG-OG-SC-022
		Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
12.	Catalyst Bed Pressure Drop, and	Small/ Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or • ± 2 percent of span.	four times per hour	one hour	CAMG-OG-SC-023
			Deviation Limit: A minimum and maximum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Inlet Oxygen Concentration	Small/ Large	Use a CEMS to measure and record the inlet oxygen concentration to the catalyst bed. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.	four times per hour	one hour	CAMG-OG-SC-024
			Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

Indicato	or Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
	essure Drop,		Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.  Deviation Limit: A minimum and maximum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-025

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Inlet Gas Temperature	Small	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SC-026

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indic	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
14.	Catalyst Bed Pressure Drop, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.	four times per hour	one hour	CAMG-OG-SC-027
			Deviation Limit: A minimum and maximum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			
	Inlet Gas Temperature	Small/Large	The monitoring device shall be installed to record the inlet flue gas temperature to the catalyst bed. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or  • ± 2.5 degrees Celsius.	four times per hour	one hour	CAMG-OG-SC-028
			Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

#### Control Device: Flue Gas Recirculation

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1. Combustion Temperature/ Exhaust Gas Temperature, and	Small	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-FG-001

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Oxygen Concentration	Small	Use a portable analyzer to monitor oxygen concentration in the exhaust stream. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning & Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999).	once per day	n/a*	CAMG-OG-FG-002
		Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	Combustion Temperature/ Exhaust Gas Temperature, and	Small/Large	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-003
	Oxygen Concentration	Small/Large	Use a CEMS to measure and record the concentration of oxygen in the exhaust stream. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-004

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3. Combustion Temperature/ Exhaust Gas Temperature, and	Small	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-FG-005

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Fan Motor Current	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1 percent of reading; or  • ± 5 percent over its operating range.	once per day	n/a*	CAMG-OG-FG-006
		Deviation Limit: A minimum current shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitor	ed Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
4. Combustion Temperature Exhaust Gas Temperature and		The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-007
Fan Motor Current	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1 percent of reading; or  • ± 5 percent over its operating range.  Deviation Limit: A minimum current shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-008

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
5. Combustion Temperature/ Exhaust Gas Temperature, and	Small	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-FG-009

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Recirculated Flue Gas Flow Rate	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.	once per day	n/a*	CAMG-OG-FG-010
		Deviation Limit: A minimum flow rate shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
6. Combustion Temperature/ Exhaust Gas Temperature, and	Small/Large	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: A minimum and maximum temperature shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-011
Recirculated Flue Gas Flow Rate	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A minimum flow rate shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-012

Indicato	or Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1	kygen oncentration, d	Small	Use a portable analyzer to monitor oxygen concentration in the exhaust stream. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning and Standards, Emission Measurement Center Conditional Test Method-Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999).  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance	once per day	n/a*	CAMG-OG-FG-013
			test data, manufacturer's recommendations, engineering calculations, or historical data.			
	n Motor ırrent	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1 percent of reading; or  • ± 5 percent over its operating range.	once per day	n/a*	CAMG-OG-FG-014
			Deviation Limit: A minimum current shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
8.	Oxygen Concentration, and	Small/ Large	Use a CEMS to measure and record the concentration of oxygen in the exhaust stream. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.	four times per hour	one hour	CAMG-OG-FG-015
			Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	Fan Motor Current	Small/ Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  1 percent of reading; or  2 percent over its operating range.	four times per hour	one hour	CAMG-OG-FG-016
			Deviation Limit: A minimum current shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

Indicator Monitore	d Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
9. Oxygen Concentration and	Small	Use a portable analyzer to monitor oxygen concentration in the exhaust stream. The portable analyzer shall be operated in accordance with the United States Environmental Protection Agency's, Office of Air Quality Planning and Standards, Emission Measurement Center Conditional Test Method - Determination of Oxygen, Carbon Monoxide, and Oxides of Nitrogen from Stationary Sources For Periodic Monitoring (Portable Electrochemical Analyzer Procedure) [CTM-034] (September 8, 1999).  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-FG-017

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Recirculated Flue Gas Flow Rate	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A minimum flow rate shall be established	once per day	n/a*	CAMG-OG-FG-018
		using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
10.	Oxygen Concentration, and	Small/Large	Use a CEMS to measure and record the concentration of oxygen in the exhaust stream. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the performance specifications of 40 CFR Part 60, Appendix B.  Deviation Limit: A minimum and maximum oxygen concentration shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-019
	Recirculated Flue Gas Flow Rate	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance the device is calibrated accurately; or at least annually (whichever) is more frequent, and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: A minimum flow rate shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-FG-020

### Control Device: Steam/Water Injection System

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Steam or Water Flow Rate, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 5 percent.	once per day	n/a*	CAMG-OG-SI-001
			Deviation Limit: A minimum water or steam to fuel consumption ratio shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	Fuel Consumption	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 5 percent.	once per day	n/a*	CAMG-OG-SI-002
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

# Control Device: Steam/Water Injection Systems (continued)

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2.	Steam or Water Flow Rate, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-SI-003
			Deviation Limit: A minimum water or steam to fuel consumption ratio shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
	Fuel Consumption	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the fuel flow meter is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 5 percent.	four times per hour	one hour	CAMG-OG-SI-004
			Deviation Limit: A maximum fuel consumption limit shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			

### Control Device: SO<sub>2</sub> Scrubber

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1. Pressure Drop, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.  Deviation Limit: A minimum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SS-001
Liquid Flow Rate	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design liquid flow rate.  Deviation Limit: A minimum liquid flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SS-002

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2. Pressure Drop, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.  Deviation Limit: A minimum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SS-003
Liquid Flow Rate	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design liquid flow rate.  Deviation Limit: A minimum liquid flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SS-004

Indicate	or Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3. Pr	ressure Drop, nd	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.  Deviation Limit: A minimum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SS-005
	quid Supply essure	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design liquid supply pressure.  Deviation Limit: A minimum liquid supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SS-006

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
4. Pressure Drop, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 1-inch water gauge pressure (± 250 pascals); or  • ± 2 percent of span.  Deviation Limit: A minimum pressure drop shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SS-007
Liquid Supply Pressure	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design liquid supply pressure.  Deviation Limit: A minimum liquid supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SS-008

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
5. pH, and	Small	Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned weekly using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least weekly, whichever is more frequent, and shall be accurate to within ± 0.5 pH units.  Deviation Limit: A minimum pH shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SS-009
Liquid Flow Rate	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design liquid flow rate.  Deviation Limit: A minimum liquid flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	once per day	n/a*	CAMG-OG-SS-010

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
6. pH, and	Small/ Large	Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned weekly using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least weekly, whichever is more frequent, and shall be accurate to within ± 0.5 pH units.  Deviation Limit: A minimum pH shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SS-011
Liquid Flow Rate	Small/ Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design liquid flow rate.  Deviation Limit: A minimum liquid flow rate shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.	four times per hour	one hour	CAMG-OG-SS-012

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
7. pH, and	Small	Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned weekly using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least weekly, whichever is more frequent, and shall be accurate to within ± 0.5 pH units.	once per day	n/a*	CAMG-OG-SS-013
		Deviation Limit: A minimum pH shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
Liquid Supply Pressure	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design liquid supply pressure.	once per day	n/a*	CAMG-OG-SS-014
		Deviation Limit: A minimum liquid supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
8. pH, and	Small/Large	Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned weekly using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least weekly, whichever is more frequent, and shall be accurate to within ± 0.5 pH units.	four times per hour	one hour	CAMG-OG-SS-015
		Deviation Limit: A minimum pH shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
Liquid Supply Pressure	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 5 percent of span; or  • ± 5 percent of design liquid supply pressure.	four times per hour	one hour	CAMG-OG-SS-016
		Deviation Limit: A minimum liquid supply pressure shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
9. pH, and	Small	Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned weekly using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least weekly, whichever is more frequent, and shall be accurate to within ± 0.5 pH units.	once per day	n/a*	CAMG-OG-SS-017
		Deviation Limit: A minimum pH shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
Liquid Flow Rate and Gas Flow Rate	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 2 percent of span.	once per day	n/a*	CAMG-OG-SS-018
		Deviation Limit: A minimum liquid-to-gas ratio shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
10. pH, and	Small/ Large	Each monitoring device shall be cleaned with an automatic cleaning system, or cleaned weekly using hydraulic, chemical, or mechanical cleaning. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least weekly, whichever is more frequent, and shall be accurate to within ± 0.5 pH units.	four times per hour	one hour	CAMG-OG-SS-019
		Deviation Limit: A minimum pH shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data.			
Liquid Flow Rate and Gas Flow Rate	Small/ Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within ± 2 percent of span.	four times per hour	one hour	CAMG-OG-SS-020
		Deviation Limit: A minimum liquid-to-gas ratio shall be established using the most appropriate of the following: the most recent performance test data, the manufacturer's recommendations, engineering calculations, or historical data.			

### Control Device: Sulfur Recovery Unit (Flare)

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number	
1. H <sub>2</sub> S Inlet Concentration, and	Small	Measure the inlet concentration of hydrogen sulfide (H <sub>2</sub> S) using either the Tutwiler procedure in 40 CFR § 60.648, the stain tube procedures of GPA 2377-86, or a chromatographic procedure following ASTM E-260.	once per day	n/a*	CAMG-OG-SR-001	
		be established using the most appropriate of the most recent performance test data, many recommendations, engineering calculations, data. Inlet concentration and flow rate shall be	Deviation Limit: Minimum sulfur reduction efficiency shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data. Inlet concentration and flow rate shall be used to compute the sulfur feed rate as follows:			
		<ul> <li>Sulfur Feed Rate = 3.707X10<sup>-7</sup>(Inlet Flow Rate) (H<sub>2</sub>S Concentration)</li> <li>Sulfur Feed Rate = Long tons/day.</li> <li>Inlet Flow Rate = Flow rate of acid gas feed, dscf/day.</li> <li>H<sub>2</sub>S Concentration = H<sub>2</sub>S concentration as measured by Tutwiler or ASTM E-260, percent by volume.</li> <li>3.707X10<sup>-7</sup> = Conversion constant.</li> <li>The sulfur reduction efficiency shall be computed using the sulfur feed rate and sulfur accumulation as follows:</li> <li>Reduction Efficiency = (100)(Sulfur Accumulation)/(Sulfur Feed Rate)</li> <li>Reduction Efficiency = Percent.</li> <li>Sulfur Accumulation = Total Sulfur, long tons, accumulation over 24 hours (day), long tons/day.</li> <li>Sulfur Feed Rate = Long tons/day.</li> </ul>				

<sup>\*</sup>The permit holder may elect to collect monitoring data on a more frequent basis than is required by the minimum frequency and calculate a daily average for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances in order to avoid reporting deviations.

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Inlet Flow Rate, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within one of the following:  • ± 2 percent of span; or • ± 5 percent of design flow rate.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-001.	once per day	n/a*	CAMG-OG-SR-002
Sulfur Accumulation, and	Small	Measure the accumulation of sulfur product for each 24-hour period by measuring and recording sulfur production or by measuring and recording the liquid level in the storage tanks. The monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall have an accuracy of ± 2 percent.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-001.	once per day	n/a*	CAMG-OG-SR-003

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Pilot Flame	Small	, , , , , , , , , , , , , , , , , , , ,	four times per hour	n/a	CAMG-OG-SR-004

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
India 2.	H <sub>2</sub> S Inlet Concentration, and	Size Small/ Large	Monitoring Specifications and Procedures  Measure the inlet concentration of H <sub>2</sub> S using either the Tutwiler procedure in 40 CFR § 60.648 (Optional Procedure for Measuring Hydrogen Sulfide in Acid Gas-Tutwiler Procedure), the stain tube procedures of GPA 2377-86, or a chromatographic procedure following ASTM E-260.  Deviation Limit: A minimum sulfur reduction efficiency shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data. Inlet concentration and flow rate shall be used to compute the sulfur feed rate as follows:  Sulfur Feed Rate = 3.707X10-7(Inlet Flow Rate)(H <sub>2</sub> S Concentration)  Sulfur Feed Rate = Long tons/day.	Min. Freq. once per day	Average n/a*	CAM Option Number  CAMG-OG-SR-005
			<ul> <li>Sulfur Feed Rate = Long tons/day.</li> <li>Inlet Flow Rate = Flow rate of acid gas feed, dscf/day.</li> <li>H<sub>2</sub>S Concentration = H<sub>2</sub>S concentration as measured by Tutwiler or ASTM E-260, percent by volume.</li> <li>3.707X10<sup>-7</sup> = Conversion constant.</li> </ul>			
			The sulfur reduction efficiency shall be computed using the sulfur feed rate and sulfur accumulation as follows:			
			<ul> <li>Reduction Efficiency = (100)(Sulfur Accumulation)/(Sulfur Feed Rate)</li> <li>Reduction Efficiency = Percent.</li> <li>Sulfur Accumulation = Total Sulfur, long tons,</li> </ul>			
			<ul> <li>accumulation over 24 hours (day), long tons/day.</li> <li>Sulfur Feed Rate = Long tons/day.</li> </ul>			

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Inlet Flow Rate, and	Small/ Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-005.	four times per hour	one hour	CAMG-OG-SR-006
Sulfur Accumulation, and	Small/Large	Measure the accumulation of sulfur product for each 24-hour period by measuring and recording sulfur production or by measuring and recording the liquid level in the storage tanks. The monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall have an accuracy of ± 2 percent.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-005.	once per day	n/a*	CAMG-OG-SR-007

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Pilot Flame	Small/Large	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. Each monitoring device shall be accurate to within manufacturer's recommendations. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide an adequate assurance that the device is calibrated accurately.  Deviation Limit: No pilot flame.	four times per hour	n/a	CAMG-OG-SR-008

## Control Device: Sulfur Recovery Unit (Incinerator)

Indi	cator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
1.	Combustion Temperature/ Exhaust Gas Temperature, and	Small/ Large	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: The minimum combustion temperature is 1200 °F (649 °C).	four times per hour	one hour	CAMG-OG-SR-009
	SO <sub>2</sub> Mass Emissions in Pounds per Hour	Small/Large	Use a CEMS to measure and record the mass emissions rate of sulfur dioxide expressed in pounds per hour in the exhaust stream of the control device. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § 60.13 and the Performance Specifications of 40 CFR Part 60, Appendix B.  Deviation Limit: The maximum SO <sub>x</sub> mass emission rate is the applicable or corresponding emission limit.	four times per hour	one hour	CAMG-OG-SR-010

Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
2. H <sub>2</sub> S Inlet Concentration, and	Small	Measure the inlet concentration of H <sub>2</sub> S using either the Tutwiler procedure in 40 CFR § 60.648, the stain tube procedures of GPA 2377-86, or a chromatographic procedure following ASTM E-260.	once per day	n/a*	CAMG-OG-SR-011
		Deviation Limit: Minimum sulfur reduction efficiency shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data. Inlet concentration and flow rate shall be used to compute the sulfur feed rate as follows:			
		<ul> <li>Sulfur Feed Rate = 3.707X10<sup>-7</sup>(Inlet Flow Rate)(H<sub>2</sub>S Concentration)</li> <li>Sulfur Feed Rate = Long tons/day.</li> <li>Inlet Flow Rate = Flow rate of acid gas feed, dscf/day.</li> <li>H<sub>2</sub>S Concentration = H<sub>2</sub>S concentration as measured by Tutwiler or ASTM E-260, percent by volume.</li> <li>3.707X10<sup>-7</sup> = Conversion constant.</li> <li>The sulfur reduction efficiency shall be computed using the sulfur feed rate and sulfur accumulation as follows:</li> <li>Reduction Efficiency = (100)(Sulfur Accumulation)/(Sulfur Feed Rate)</li> <li>Reduction Efficiency = Percent.</li> <li>Sulfur Accumulation = Total Sulfur, long tons, accumulation over 24 hours (day), long tons/day.</li> <li>Sulfur Feed Rate = Long tons/day.</li> </ul>			

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Inlet Flow Rate, and	Small	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of span; or • ± 5 percent of design flow rate.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-011.	once per day	n/a*	CAMG-OG-SR-012
Sulfur Accumulation, and	Small	Measure the accumulation of sulfur product for each 24-hour period by measuring and recording sulfur production or by measuring and recording the liquid level in the storage tanks. The monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall have an accuracy of ± 2 percent.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-011.	once per day	n/a*	CAMG-OG-SR-013

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Combustion Temperature/ Exhaust Gas Temperature	Small	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: The minimum combustion temperature is 1200 °F (649 °C).	once per day	n/a*	CAMG-OG-SR-014

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
3. H <sub>2</sub> S Inlet Concentration, and	Small/Large	Measure the inlet concentration of H₂S using either the Tutwiler procedure in 40 CFR § 60.648, the stain tube procedures of GPA 2377-86, or a chromatographic procedure following ASTM E-260.	once per day	n/a*	CAMG-OG-SR-015
		Deviation Limit: Minimum sulfur reduction efficiency shall be established using the most appropriate of the following: the most recent performance test data, manufacturer's recommendations, engineering calculations, or historical data. Inlet concentration and flow rate shall be used to compute the sulfur feed rate as follows:			
		<ul> <li>Sulfur Feed Rate = 3.707X10<sup>-7</sup>(Inlet Flow Rate) (H<sub>2</sub>S Concentration)</li> <li>Sulfur Feed Rate = Long tons/day.</li> <li>Inlet Flow Rate = Flow rate of acid gas feed, dscf/day.</li> <li>H<sub>2</sub>S Concentration = H<sub>2</sub>S concentration as measured by Tutwiler or ASTM E-260, percent by volume.</li> <li>3.707X10<sup>-7</sup> = Conversion constant.</li> <li>The sulfur reduction efficiency shall be computed using the sulfur feed rate and sulfur accumulation as follows:</li> <li>Reduction Efficiency = (100)(Sulfur Accumulation)/(Sulfur Feed Rate)</li> <li>Reduction Efficiency = Percent.</li> <li>Sulfur Accumulation = Total Sulfur, long tons, accumulation over 24 hours (day), long tons/day.</li> <li>Sulfur Feed Rate = Long tons/day.</li> </ul>			

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Inlet Flow Rate, and	Small/Large	Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall be accurate to within one of the following:  • ± 2 percent of span; or  • ± 5 percent of design flow rate.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-015.	four times per hour	one hour	CAMG-OG-SR-016
Sulfur Accumulation, and	Small/Large	Measure the accumulation of sulfur product for each 24-hour period by measuring and recording sulfur production or by measuring and recording the liquid level in the storage tanks. The monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent) and shall have an accuracy of ± 2 percent.  Deviation Limit: See Deviation Limit in CAMG-OG-SR-015.	once per day	n/a*	CAMG-OG-SR-017

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Indicator Monitored	Size	Monitoring Specifications and Procedures	Min. Freq.	Average	CAM Option Number
Combustion Temperature/ Exhaust Gas Temperature	Small/Large	The monitoring device shall be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated in accordance with the manufacturer's specifications; in accordance with other written procedures that provide an adequate assurance that the device is calibrated accurately; or at least annually (whichever is more frequent), and shall be accurate to within one of the following:  • ± 2 percent of reading; or • ± 2.5 degrees Celsius.  Deviation Limit: The minimum combustion temperature is 1200 °F (649 °C).	four times per hour	one hour	CAMG-OG-SR-018