LUCAS COUNTY

PUBLIC NOTICE
OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF DRAFT PERMIT TO INSTALL
SUBJECT TO PREVENTION OF SIGNIFICANT DETERIORATION REVIEW
TO SUNOCO INC. - TOLEDO REFINERY

Public Notice is hereby given that the Staff of the Ohio Environmental Protection Agency (EPA) has recommended to the Director that the Ohio EPA issue a draft action of a Permit to Install (PTI) to Sunoco Inc. (Sunoco), located in Lucas County, Ohio. The draft action (PTI no. 04-01447) was issued on July 18, 2006. This draft permit proposes to modify the two crude units and the Fluid Catalytic Cracking Unit (FCCU) in order to allow the additional production of petroleum products including gasoline and distillates.

The purpose of this project is to expand the capacity of the FCCU in conjunction with the installation of the additional pollution control equipment required by the Sunoco global Consent Decree entered March 14, 2006. The Consent Decree institutes equipment specific limitations, plant-wide limitations, applicability of certain regulations, additional control equipment and procedures on a specific schedule. Sunoco has been developing a plan to meet the Consent Decree requirements and Sunoco will undertake many of the actions necessary to meet the requirements applicable to the Toledo Refinery in 2008, over 18 months ahead of the Consent Decree schedule.

Due to the proposed modifications, increases or decreses in allowable air emissions of several pollutants will result as listed below:

Pollutant	Net Change	PSD Significance Level
CO	+366.63	100
NO_x	-418.6	40
SO_2	-8331.66	40
VOC	+30.657	40
PM_{10}	+82.94	15

This facility is subject to the applicable attainment provisions of the Ohio EPA permit to install requirements (OAC 3745-31).

U.S EPA allows sources to consume no more than the maximum available ambient PSD increments for each PSD pollutant. Ohio EPA allows sources to consume less than one half the available increment for CO and PM_{10}. Sunoco has demonstrated, through dispersion modeling, that the CO and PM_{10} impacts from the source will not exceed the Ohio Acceptable Incremental Impact levels. Proposed new sources also can not cause or significantly contribute to violations of the National Ambient Air Quality Standard (NAAQS). Based on the estimated significant impact for CO and PM_{10}, NAAQS analysis was not required. Based on the PSD and NAAQS analyses, Sunoco complies with both the Federal and State modeling requirement for CO and PM_{10}.

A public hearing on the draft air permit is scheduled at 6:30 p.m., Tuesday, August 22, 2006, at Oregon City Council Chambers, 5330 Seaman Road, Oregon, Ohio 43616. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

All interested persons are entitled to attend or be represented and give written or oral comments on the draft permit at the hearing. Written comments must be received by Ohio EPA/Toledo Division of

Environmental Services by the close of business on August 31, 2006. Comments received after August 31, 2006 may not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to Pam Barnhart, Toledo Division of Environmental Services, 348 South Erie Street, Toledo, Ohio, 43602. Fax number: (419) 936-3959.

Further information concerning this application, which is available for public inspection, may be secured from Pam Barnhart, Toledo Division of Environmental Services at the above address during normal business hours. Telephone number: (419) 936-3015.

STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS FOR THE MODIFICATION OF THE TWO CRUDE UNITS AND THE FLUID CATALYTIC CRACKING UNIT AT SUNOCO, INC. - TOLEDO REFINERY, LUCAS COUNTY, OHIO PTI NO. 04-01447

The Clean Air Act and regulations promulgated thereunder require that major air pollution sources undergoing construction or modification comply with all applicable Prevention of Significant Deterioration (PSD) provisions and nonattainment area New Source Review requirements. The federal PSD rules govern emission increases in attainment areas for major sources, which are sources with the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act, or 100 tons per year or more if the source is included in one of 28 source categories. In nonattainment areas, the definition of major source is one having at least 100 tons per year potential emissions. A major modification is one resulting in a contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the PSD and NSR requirements by rule under OAC 3745-31.

Both PSD and nonattainment rules require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new source or major modification to a major source. The principal requirements of the PSD regulations are:

1) Best Available Control Technology (BACT) review - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new source is a major source.

2) Ambient Air Quality Review - An analysis must be completed to ensure the continued maintenance of the National Ambient Air Quality Standards (NAAQS) and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the Clean Air Act.

For nonattainment areas, the requirements are:

1) Lowest Achievable Emissions Rate (LAER) - New major sources must install controls that represent the lowest emission levels (highest control efficiency) that has been achieved in practice.

2) The emissions from the new major source must be offset by a reduction of existing emissions of the same pollutant by at lease the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 CFR Part 51.
3) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing State Implementation Plan (SIP) or are on an approved schedule resulting in full compliance with the SIP.

For rural ozone nonattainment areas, the requirements are:

1) LAER - New major sources must install controls that represent the lowest emissions levels (highest control efficiency) that has been achieved in practice.

2) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, New Source Performance Standards (NSPS), SIP emission standards and public participation requirements must be followed in all cases.

Site Description

Sunoco, Inc. (Sunoco) is located in Oregon, Lucas County, Ohio. This area is classified as an attainment for the following criteria pollutants: total suspended particulates, particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides and carbon monoxide and nonattainment for ozone (volatile organic compounds).

Facility Description

Sunoco owns and operates a petroleum refinery in Oregon, Lucas County, Ohio (Toledo Refinery). The refinery processes crude oils into petroleum products including gasoline, distillate, jet fuel, and some chemicals including benzene, toluene and xylene.

The purpose of this project is to modify the two crude units and the Fluid Catalytic Cracking Unit (FCCU) in order to allow for the additional production of petroleum products including gasoline and distillates. Sunoco is proposing to expand the capacity of the FCCU in conjunction with the installation of the additional pollution control equipment required by the Sunoco global Consent Decree entered March 14, 2006. The Consent Decree institutes equipment specific limitations, plant-wide limitations, applicability of certain regulations, additional control equipment and procedures on a specific schedule. Sunoco has been developing a plan to meet the Consent Decree requirements and Sunoco will undertake many of the actions necessary to meet the requirements applicable to the Toledo Refinery in 2008, over 18 months ahead of the Consent Decree schedule.

Additional throughput in the crude units will increase the feed material for the FCCU. Increasing crude unit throughput impacts many of the downstream processing units, storage and transportation operations at the refinery. A simplified refinery process flow diagram is provided in Figure 1 of the PTI application to indicate the flow of feed materials, intermediates and products through the refinery.

Fluid Catalytic Cracking Unit (FCCU) (P011)

This project will install the latest technologies to increase the efficiency and utilization of the unit. The changes will increase the capacity of the FCCU to 100,000 barrels per day (BPD).

The FCCU is used in the refinery to convert heavy gas oil and residual oil to produce high-octane gasoline, C3/C4 olefins, and isobutanes. The primary components of the FCCU are the reactor and the regenerator. To begin the process, feed is vaporized and reacted with catalyst in a vertical transfer line (riser). The material then moves to the reactor where cyclones separate the catalyst particles from the gaseous reaction products. The reaction products then move through the system to be further refined to petroleum products. The spent catalyst leaves the reactor bottom, is steam stripped, and then passes through the spent catalyst standpipe and slide valve before entering the regenerator. In the regenerator, the coke deposited on the catalyst from the cracking reaction is partially burned off and the catalyst is collected by internal cyclones for reuse in the system. The flue gas from the regenerator is sent to a third-stage separator (TSS) prior to passing through the

expander turbines. Currently, the effluent gas

is sent to the CO boiler for combustion followed by an electrostatic precipitator (ESP) to collect any catalyst fines before it is exhausted to the atmosphere. The FCCU operates the regenerator under partial burn with the CO boilers because it helps maintain the temperature of the FCCU within the design specifications.

The equipment changes include the following:

Reactor/Regenerator - Add new feed nozzles, "close coupled" cyclones and new catalyst stripper, update riser, increase size of overhead line, replace air grid, modify third stage separator, air blower and expander, and place all 12 regenerator cyclones in service.

Main Fractionation Tower - Pack tower and modify or relocate draw-off nozzles.

Pumps and Exchangers - Replace or add three pumps and modify seven pumps. Add seven new heat exchange bundles and new air coolers.

New Source Review (NSR)/PSD Applicability

Sunoco is currently classified as a PSD "major" stationary source because it is one of the 28 source categories (Petroleum Refineries) with potential PM, CO, SO2, VOCs, and NOx emissions exceeding 100 tons per year in an attainment/nonattainment area. Sunoco is located in Lucas County which is classified as an attainment for the following criteria pollutants: total suspended particulates, particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides and carbon monoxide and nonattainment for ozone (volatile organic compounds).

This project will generate criteria pollutant emissions of particulate, VOC, NO_x, CO, and SO_2. A PSD or LAER analysis is required for any increase in emissions of a pollutant exceeding the threshold emissions level, or the significance levels.

Table 1 shows the contemporaneous increases and decreases in emissions (from the netting analysis) from the project:

Table 1

Pollutant	Net increases	PSD Significance Level
CO	**+366.63 (increase)**	**100**
NOx	**-418.6 (decrease)**	**40**
SO_2	**-8331.66 (decrease)**	**40**
VOC	**+30.65 (increase)**	**40**
PM_{10}	**+82.94**	**15**

Based upon the above information, a PSD review is required for PM_{10} and CO.

Control Technology Review [BACT]

As part of the application for any source regulated under the PSD requirements, an analysis must be conducted that demonstrates that Best Available Control Technology (BACT) will be employed by the source. Sunoco is subject to PSD regulations which mandate a case-by-case BACT analysis be performed for PSD triggering pollutants. The application used a "top-down" approach to determine the latest demonstrated control techniques and select an appropriate control.

The basic steps to be followed are:

A. Identify all available potential control options;

B. Eliminate technically infeasible options;

C. Rank remaining technologies by control effectiveness;

D. Evaluate most effective controls and document results; and

E. Select BACT i.e., the most effective control based on energy, environmental and economic impacts (generally, the feasible technology that is also considered to be cost effective).

The main source subject to PSD review is FCCU (P011).

A. Identify all available potential control options:

Carbon Monoxide (CO)

Carbon monoxide generation in the FCCU regenerator occurs from the incomplete thermal oxidation of carbon on the spent catalyst. Because the oxidation of CO to carbon dioxide (CO2) generates significantly more heat than that of carbon (C) to CO, refiners typically operate regenerators under partial burn conditions to maintain temperatures of the FCCU within the design specifications. The following technologies were identified as CO control options for FCCUs based on information obtained from the RACT/BACT/LAER Clearinghouse (RBLC) database and other sources:

· Catalytic Oxidation,

· High-Temperature Regeneration (Full Burn),

· Thermal Oxidation – CO Boiler/Incinerator (Partial Burn),

· Combustion Promoter, and

· CLEARAIR PlusTM Combustion Enhancement (From NEET)

1. Catalytic Oxidation

In catalytic oxidation, a catalyst enables the oxidation reaction to occur at much lower temperatures and at shorter residence times. These conditions reduce operating costs, enable a smaller-sized system than thermal oxidation (incineration), and reduce construction material requirements. The most efficient catalysts are precious metal dispersed on high surface area washcoats that are bonded to ceramic honeycomb blocks. These catalysts are designed to operate between 600°F to 1,200°F and operating pressures up to 300 psig. Catalytic oxidation systems typically destroy 95% to 99% of CO and VOCs.

2. High Temperature Regeneration

High temperature regeneration (HTR), also known as full burn combustion regeneration, uses excess oxygen to achieve nearly complete removal (combustion) of carbon, including CO, from the regenerated catalyst. High temperature regeneration is characterized by low CO effluent concentrations of 50 to 500 ppmvd.

3. Thermal Oxidation (CO Boiler)

A CO Boiler is essentially a thermal oxidizer that converts pollutant gas CO to CO2 by combusting the stream with refinery fuel gas or other fossil fuel. A temperature of 1,200 ^{0}F to 2,000 ^{0}F is required to ensure efficient conversion of CO to CO2. Thermal oxidation is characterized by low CO effluent concentrations of 50 to 500 ppmvd. Only refineries that operate partial combustion FCCUs utilize CO boilers because CO concentrations are typically less than 500 ppmvd in high temperature regeneration FCCUs making a CO boiler unnecessary. The FCCU is currently equipped with a CO boiler to control CO emission from the regenerator.

4. Combustion Promoter

Combustion promoter is an additive injected into the circulating catalyst on an as-needed basis primarily to control regenerator afterburn and increase combustion efficiency. As a secondary benefit, combustion promoters slightly increase CO oxidation, thereby reducing CO emissions from the regenerator under certain conditions. The promoter is an alumina or silica-alumina powder typically impregnated with platinum and/or palladium to catalyze the oxidation of CO to CO2. Used in conjunction with high temperature regeneration or thermal oxidation, combustion promoters can result in CO effluent concentrations of 50 to 150 ppmvd.

5. CLEARAIR PlusTM Combustion Enhancement

CLEARAIR PlusTM is a technology designed to improve fuel combustion through magnetic polarization of particles. Fuel is passed through a "cone area" and then a magnetic flux area to modify the fuel molecules for better combustion. This technology requires a retrofit of the combustion source. The vendor estimates 37% reduction in CO emissions from this technology.

Particulate Matter (PM) and PM10

PM10 emissions from the FCCU regenerator are a mixture of catalyst fines that have not been captured by the FCCU or hopper cyclone systems and PM from the combustion of coke on spent catalyst. The PM10 emissions include condensable PM and may also include trace organic compounds and sulfuric acid mist.

The following technologies were identified as PM/PM10 control options for FCCUs based on information obtained from the RACT/BACT/LAER Clearinghouse (RBLC) database and other sources:

· Baghouse/Fabric Filter,

· Cyclone,

· Wet Gas Scrubber,

· Wet or Dry Electrostatic Precipitator, and

· CLEARAIR PlusTM Combustion Enhancement (From NEET)

1. Baghouse/Fabric Filter

A baghouse uses fabric filtration to remove particles from a gas stream. An air stream flows through a number of filter bags in parallel, where particulate collects on the fabric. The fabric serves primarily as a medium for a layer of particulate to collect. It is primarily the layer of particulate that collects small particles from the stream.

Baghouses are commonly used for industrial applications because of their high collection efficiencies even for small particles. The units are modular in design, allowing the addition of units to accommodate changes in operation, and the units require a relatively low pressure drop.

2. Cyclone

Cyclones are used extensively for particle collection in industrial applications. Cyclones work by forcing particle-contaminated gas into a downward spiral within the unit. Centrifugal force and inertia force the particles in the gas outward toward the outer wall. Upon contact with the outer wall, the particles slide down and out the bottom of the cyclone. Due to the shape of the cyclone, gas changes direction to move upward in a smaller inner spiral. The cleaned gas exits through the top of the device, and the separated particles exit through the bottom of the device.

Cyclones are commonly used because they are inexpensive, and the lack of moving parts keeps the maintenance requirements lower than other pollution control devices. However, because cyclones are inefficient for removal of small particles, they are used primarily for large particle-size streams or to pre-clean streams prior to treatment by another pollution control device. The FCCU regenerator currently contains three stages of cyclones for removing large particles that are abrasive to the expansion turbines. The particulate stream is then returned to the CO Boiler, so no overall particulate control occurs from these cyclones.

3. Wet Gas Scrubber

Wet gas scrubbers (WGS) are used to reduce particulates (including SOx when using a caustic solution as the scrubbing liquid) downstream of the FCCU heat recovery system. Flue gas enters the scrubbers where intensive gas/liquid contacting removes particulates by inertial impaction and/or condensation of liquid droplets on particles in the gas stream.

4. Wet or Dry Electrostatic Precipitator

Electrostatic precipitation of particles involves four steps:

a. Conditioning the air stream to make it amenable to the ESP;

b. Ionizing particles in the air stream;

c. Collecting the charged particles on collector plates; and

d. Removing the charged particles from the plates, usually by rapping.

The FCCU gas stream must be both collected and treated to remove SOx to make it amenable to the dry ESP. Cooling is necessary to prevent plate warping. SOx removal is recommended

to prevent acid condensation and subsequent corrosion. All ESPs can be designed with either wet or dry walls. In wet ESPs, the water flow may be applied intermittently or continuously to wash the collected particles into a sump for disposal. Wet ESPs have fewer problems with corrosive materials, as they are not allowed to accumulate on the walls. The disadvantage of wet ESPs compared to dry ESPs is that handling the water slurry adds additional environmental concerns and operational costs.

ESPs are commonly used on large utility and industrial boilers, and produce a high level of efficiency in practice. They also have the advantage of a high efficiency rate for small particles, and are effective for wet or dry streams, and over a wide range of gas temperatures.

5. CLEARAIR PlusTM Combustion Enhancement

See the description of this technology above. The vendor estimates a 60% reduction in particulate emissions using this combustion enhancement.

B. Eliminate Technically Infeasible Options

This step of the top-down BACT analysis eliminates from consideration technically infeasible options, a control technology is not considered technically feasible unless it is both available and applicable for application to the particular exhaust stream under consideration. To be considered available, a technology must have reached the licensing and commercial demonstration phase of its development. Applicability is based on source-specific factors and physical, chemical, and engineering principles that preclude safe and successful operation of a control option at a specific location.

1. *Carbon Monoxide (CO)*

a. *Catalytic Oxidation*

One main drawback to catalytic oxidation is that it cannot be used for streams with high particulate loading. Elevated particulate levels cause the catalyst to foul. FCCU regenerator flue gas contains a significant amount of entrained particulate matter. Fouling decreases the catalyst's ability to oxidize CO. Plugging of the catalyst matrix also increases the pressure drop across the system which can adversely impact the other control devices in series with the catalytic oxidizer.

Catalytic oxidation is primarily used to control CO emissions resulting from natural gas-fired gas turbines or internal combustion engines (natural gas and diesel) which have minimal particulate concentrations. With expected particulate loading of ~1500 pounds/hr from the FCCU, this stream contains high particulate loading, making the technology feasible for controlling CO.

The infeasibility of catalytic oxidation for control of CO from FCCU regenerators is supported by a search of the RACT/BACT/LAER Clearinghouse (RBLC) Database. The RBLC contains no record of catalytic oxidation being successfully used as a CO control for FCCU regenerators.

b. CLEARAIR PlusTM Combustion Enhancement

The vendor was contacted regarding FCCU applications of this technology. The vendor stated that the percent control listed in the NEET Database was calculated on

internal combustion engines, a very different application. This technology has been traditionally employed with diesel and gasoline fired engines, and the vendor had no precedent for an FCCU application. Because this technology has never been demonstrated to be feasible for this application, and because the percent control of CO is low, this technology is considered unfeasible and removed from further BACT analysis.

2. Particulate Matter (PM) and PM10

a. Baghouse/Fabric Filter

A baghouse is considered a technically infeasible option for control of FCCU or CO Boiler particulate matter because of temperature and moisture.

Normal exit gas temperatures from the FCCU regenerator and the CO Boiler stack are 1,100°F and 900°F, respectively. The most readily available fabrics become damaged at temperatures over 500°F. While some ceramic filters withstand higher temperatures, no precedence for controlling FCCU air streams with ceramic filters has been found. A review of the RBLC database revealed no facilities with baghouse/fabric filter control for FCCUs.

Moisture is the most significant problem for bag filters, because it causes "blinding" of the bags. Additionally, with all synthetic fibers except polypropylene, hydrolysis can occur in the presence of heat and moisture. This is a chemical absorption of water that changes the polymeric structure. In the process, the fiber shrinks and looses almost all strength. According to vendor testing, moisture has been documented to cause shrinking even in the high temperature ceramic filters mentioned above. The moisture level in the air stream from the FCCU is 11%. As baghouses are designed to operate at minimal moisture, this moisture content makes the technology unfeasible for this application.

b. Cyclones

Although cyclones achieve high control efficiencies (95-99%) on streams with large particle sizes, they do not control small particles well. Approximately 65% of the particulate emissions from an FCCU consist of particles less than 10 µm, and approximately 17% of particles are less than 2 µm. At these particle sizes, cyclones are not expected to provide high efficiency particulate removal for this application. Based on this, cyclones are being removed from further BACT consideration.

c. *CLEARAIR PlusTM Combustion Enhancement*

As described in above, this technology is considered unfeasible because it has never been used in an FCCU application and has an alleged reduction for PM/PM10 of 60% which is low for an FCCU application.

C. Evaluate the control technologies and Rank Remaining Technologies by Control Effectiveness

1. Carbon Monoxide (CO)

a. Combustion Promoter

Combustion promoters are only used in conjunction with high temperature regeneration or with partial regeneration controlled by a CO boiler. They are not a "stand-alone" control technology. Using combustion promoters has several significant drawbacks. Promoter is frequently added to the regenerator two to three times per day at a rate of 3 to 5 pounds per ton of fresh FCCU catalyst. It increases the requirement for combustion air and raises the regenerator temperature, which subsequently increases the thermal deactivation of the catalyst.

An additional drawback related to CO combustion promoters is that they oxidize intermediate compounds formed in the FCCU to form NOx. Low NOx combustion promoters are commercially available, but these should be used in conjunction with a NOx reducing additive.

A review of the RBLC database shows only one facility, a ConocoPhillips refinery in Oklahoma, listing CO combustion promoters as a control device. A detailed review of this facility's permit application found that the refinery is only using the combustion promoter when their FCCUs are operated outside of design parameters. The combustion promoter is then used to help meet their CO permit limit. Combustion promoters are not used at the facility as part of the standard operating procedure.

Sunoco has evaluated the use of combustion promoters in the FCCU process and anticipates that the CO boiler can be operated within design parameters, so that the use of a CO combustion promoter will not be necessary. Additionally, by not using combustion promoters the facility will not unduly increase NOx emissions. Because combustion promoters are not used as part of a standard operating procedure, this technology is being removed from further consideration for BACT control.

b. High Temperature Regeneration

This operating method is feasible for controlling CO emissions from an FCCU. A review of the RBLC Database indicated that several other refineries have utilized this control method.

c. Thermal Oxidation (CO Boiler)

The facility currently operates the FCCU under partial burn with a CO boiler. Sunoco prefers to operate the FCCU under partial burn because the oxidation of CO to carbon dioxide generates significantly more heat than that of carbon to CO, and operating the regenerator under partial burn maintains the temperature of the FCCU within the design specifications. As high temperature regeneration and partial burn controlled by a CO boiler yield similar CO emissions, there is no environmental benefit to switch to high temperature regeneration.

2. Particulate Matter (PM) and PM10

a. Wet Gas Scrubber

A wet gas scrubber (WGS) would control particulate emissions at 90-95% efficiency. One of the main advantages of using a WGS is that in addition to providing particulate control, they also control the H2SO4 and SOx present in the stream. WGSs are ideal for controlling streams with complex gas streams with high moisture like that from the FCCU.

The main disadvantages with a WGS system are that they increase the pressure drop across the system and add a sludge waste stream that must be treated or disposed.

b. Electrostatic Precipitator

Although many of the early high efficiency control requirements for FCCUs were met

using dry electrostatic precipitators, more recent projects have tended to use wet scrubbers. ESPs have several disadvantages including increased maintenance requirements, safety

hazards associated with high voltage, and inefficiency in collection of low or high resistivity particles. In addition, ESPs do not control SOx emissions.

Wet electrostatic precipitators have high capital costs compared to a wet gas scrubber, but have similar control efficiencies. Electrostatic precipitators in general are not suited for use in processes that are highly variable because they are very sensitive to fluctuations in gas stream conditions. Relatively sophisticated maintenance personnel are required and special precautions to safeguard personnel and the equipment must be taken. Resulting slurries from wet electrostatic precipitators may require additional treatment. Wet electrostatic precipitators constructed of non-corrosive materials are limited to operating at temperatures under 190 °F.

All feasible control technologies have been ranked by control efficiency in the Table below.

Feasible Control Technologies for CO and PM/PM10 for FCCUs.

Pollutant	Control Technology	Percent Control	Basis
	Partial Burn with CO Boiler(s)	99%	1
CO	High Temperature Regeneration (Full Burn)	99%	1
	Dry Electrostatic Precipitator	95%	2
PM/PM10	Wet Electrostatic Precipitator	95%	2
	Wet Gas Scrubber	95%	3

1. Control efficiencies listed in RBLC Database.
2. Control efficiency from industry standard values.
3. Control efficiency from vendor.

D. Evaluate Most Effecitve Controls and Document Results

1. CO Control

As can be seen in the above table, the uses of both high temperature regeneration and CO boilers to control CO emission have been estimated to provide 99% efficiency. However, the current FCCU at the Toledo refinery is not designed to operate in high temperature regeneration mode. Because there is no environmental benefit to use high temperature regeneration over partial burn with CO boilers, Sunoco proposes operating in partial burn mode with CO boilers as BACT for CO.

2. *PM/PM10 Control*

Wet gas scrubbers, dry ESPs, and wet ESPs all provide a high level of control for PM/PM10. While all three devices control PM/PM10 at 95%, the wet ESP and wet gas scrubber will also control SOx and H2SO4 from the FCCU. Recent permits issued and signed consent decrees have indicated that wet scrubbers are the preferred PM10 control devices since they also control SOx and H2SO4 emissions and provide better condensable PM10 control than an ESP.

The cost effectiveness for these PM/PM10 control technologies is provided in the below table.

Cost Comparison of Feasible PM/PM10 Technologies

Pollutant	Control Technology	Percent Control	Capital Costs	Operating Costs[1]	Emissions Controlled (ton/yr)	Cost Effectiveness($/ton controlled)
	Wet Electrostatic Precipitator	95%	$63,067,200	$24,200	6308	$1004
PM/PM10	Wet Gas Scrubber	95%	$28,900,000	$24,200	6308	$462
	Dry Electrostatic Precipitator	95%	$29,940,000	$24,200	6308	$478

Notes:
[1]Detailed operating costs of $24,200/yr were calculated for the wet gas scrubber. The operating costs of the wet and dry ESPs were assumed to be within the same range, so the WGS value was used.

The wet ESPs provide reduction levels of up to 95% for particulate matter. As shown in the above table, the cost per ton of controlled emissions is over $1000 per ton of PM/PM10 removed with a wet ESP. This cost effectiveness in greater than 2X the cost effectiveness of the wet gas scrubber or dry ESP. This control cost is not considered practical when other control technologies, like a wet gas scrubber, offer a similar level of control at considerably less cost. This cost infeasibility is supported by the fact that a review of the RBLC database showed no FCCUs being controlled by wet ESPs.
In the Consent Decree with Sunoco entered March 14, 2006, the US EPA requires Sunoco to install a wet gas scrubber for control of emissions from the FCCU. As shown in the above table, the level of PM/PM10 control achieved with either a dry ESP or WGS is identical and the costs are comparable.

E. Selection of BACT

A review of the RBLC for control technologies for FCCUs was conducted for this analysis. A listing of the RBLC results back 5 years is provided in Table 5-2-1 of the PTI application.

1. *Carbon Monoxide (CO)*

Facilities have used both high temperature regeneration and partial burn with a CO boiler to achieve the greatest reduction of CO from FCCUs. Therefore, Sunoco proposes to meet BACT requirements for the FCCU using a CO Boiler and to meet a CO limit of 180 ppmvd, at 0% O2, 365-day of operation rolling average. This limit is based on stack testing Sunoco conducted in 2004 on the existing system. The level of CO reduction in a CO Boiler is a function of the firebox dimensions. No CO Boiler firebox modifications will be undertaken during this project. Sunoco can achieve the proposed level using the existing CO boiler without the use of combustion promoter. The proposed CO limit is also below the NSPS limit of 500 ppmvd, in Subpart J for FCCUs. The Consent Decree and Refinery MACT II limitation is 500 ppmvd, at 0% O2, 1-hour average. Sunoco will also be replacing the burners in the CO boilers with low NOx burners. This upgrade is not required for BACT, but will provide an additional

environmental benefit to the system.

2. *Particulate Matter (PM and PM10)*

Sunoco is proposing the wet gas scrubber system as BACT for PM/PM10 emissions. A wet gas scrubber is the most effective commercially available and appropriate control device for the FCCU regenerators at the Refinery. The RBLC database shows that the most recent analyses have proposed wet scrubbers as BACT for PM/PM10. The control efficiency for PM/PM10 from a wet gas scrubber is 95%. This unit will also provide control of SOx and H2SO4 emissions from the FCCU. Based on these controls, Sunoco is requesting permit limitations of 0.45 lb PM/PM10 /1000 lb coke burn-off based on the manufacturer's guarantee and the results of the modeling analysis.

At the FCCU, a selective catalytic reduction (SCR) unit will be installed to control NOx which will be monitored by a NOx CEM. The SCR has an approximately 80% control efficiency and will meet BAT requirements for NOx.

Sunoco proposed to meet BACT requirements for the FCCU using a CO boiler to control CO emissions at 99% efficiency and by meeting a CO limit of 180 ppmvd, at 0% O_2, 365-day of operation rolling average. BACT is 99% control and 500 ppmvd, at 0% O_2, 1-hour average for FCCUs.

The wet gas scrubber (WGS) will control particulate, sulfuric acid mist and sulfur dioxide emissions from the FCC Regenerator and CO Boiler fuel combustion emissions. The scrubber liquid is a caustic solution. Particulate control levels of 95%, and SO_2 control levels of 96.5%, are predicted. Sunoco is requesting a 0.45 lb filterable PM per 1000 pounds of coke burn-off based on the manufacturer's guarantee. BACT for PM_{10} is double the PM limit, 0.90 lb filterable PM_{10} per 1000 pounds of coke burn-off. Once the SCR and WGS units are installed, the existing electrostatic precipitators will be removed from service. The WGS will meet the BAT/BACT requirements for PM and PM_{10} for the FCCU.

There is an existing opacity limit of 20%.

Ambient Air Quality Monitoring Requirements

The Sunoco facility to be modified is located in AQCR 124. The area is attainment for all criteria pollutants. U.S. EPA regulations require the establishment of baseline air quality in the vicinity of the proposed project. This is normally accomplished using representative air quality monitoring data. Air quality monitoring can be utilized to demonstrate that the project will have less than a threshold impact. This threshold impact is identified as the PSD monitoring de minimus level. If the projected impact from the proposed project exceeds this level, ambient data must be collected or existing representative data must be identified.

Sunoco has conducted ambient air quality modeling to determine the potential impact due to the proposed modification. The following are the projected impacts:

Pollutant	Averaging Period	Predicted Concentration	Monitoring De minimus Concentration
PM10	24-hour	4.94 ug/m3	10 ug/m3

CO	8-hour	133.32 ug/m3	575 ug/m3

Modeling

Air quality dispersion was conducted to assess the effect of this modification on the national ambient air quality standards (NAAQS), PSD increments and Hazardous Air Pollutants (HAPs). ISCST3 (version 02035) was used in the regulatory default, urban

mode. Five years of meteorological data (Toledo/Flint, 1985-1987, 1990-1991) were used. Building downwash was incorporated into the ISCST3 estimates.

Predicted impacts of CO and SO2 were not above their corresponding PSD significant impact increments. Therefore, additional modeling for a NAAQS analysis is not required.

Increment

All areas surrounding the Sunoco Toledo Refinery are Class II PSD areas. It is the Ohio EPA policy that no individual project consumes more than 50% of the available PSD increment. For CO and Pb, projects are constrained to no more than 25% of the NAAQS. The following is the summary of the impact of increment consuming sources:

Main Case

Pollutant	Averaging Period	Predicted Concentration	PSD Increment Concentration
PM10	24-hour	4.94 ug/m3	30 ug/m3
	Annual	0.84 ug/m3	17 ug/m3
CO	1-hour	235.68 ug/m3	10000 ug/m3*
	8-hour	133.32 ug/m3	2500 ug/m3*

Alternative Case

Pollutant	Averaging Period	Predicted Concentration	PSD Increment Concentration
PM10	24-hour	4.06 ug/m3	30 ug/m3
	Annual	0.60 ug/m3	17 ug/m3
CO	1-hour	43.56 ug/m3	10000 ug/m3*
	8-hour	23.84 ug/m3	2500 ug/m3*

* 25% of the NAAQS, Ohio Acceptable Incremental Impact

Hazardous Air Pollutants (HAPs)

Hazardous Air Pollutants emitted by the facility must meet established MAGLIC limits set forth by the Ohio EPA in the Air Toxics Policy Option A. The MAGLIC limit is derived from the chemical Threshold Limit Values (TLV) equation also found in the Air Toxics Policy Option A. The following is

a summary of the hazardous air pollutants.

Pollutant	Averaging Period	Predicted Concentration	MAGLIC
Propylene	1 Hour	80.52 ug/m3	495.21 ug/m3
Ammonia	1 Hour	1.92 ug/m3	24.76 ug/m3

Conclusions

Based upon our review of the Permit to Install application for the proposed modification and its supporting documentation, the Ohio EPA staff have determined that the proposed modification will comply with all applicable State and Federal air pollution control regulations. In particular, the applicant has successfully satisfied both the PSD increment consumption/NAAQS analysis and the BACT analysis requirements of the PSD regulations. Consequently, the Ohio EPA staff recommends that a Permit to Install be issued to Sunoco for the modification of the emission units referenced herein.

☐ **Synthetic Minor Determination and/or** ☒ **Netting Determination**

Permit To Install: "04-01447"

A. Source Description

Sunoco Incorporated (Sunoco) owns and operates a petroleum refinery in Oregon, Lucas County, Ohio (the Toledo Refinery). The refinery processes crude oils into petroleum products including gasoline, distillate, jet fuel, and some chemicals including benzene, toluene and xylene.

The two crude units and the Fluid Catalytic Cracking Unit (FCCU) will be expanded to allow for additional production of petroleum products including gasoline and distillates. The Toledo Refinery is proposing to expand the capacity of the FCCU in conjunction with the installation of the additional pollution control equipment required by the Sunoco global Consent Decree entered March 20, 2006.

B. Facility Emissions and Attainment Status

This facility is major for all criteria pollutants and is a major source of HAPs.

Pollutant	NSR/PSD Trigger Levels	Attainment Status
$PM_{2.5}$	----------	attainment
PM_{10}	15 TPY	unclassifiable
PM	25 TPY	n/a
SO_2	40 TPY	attainment
VOC	40 TPY	non-attainment
NOx	40 TPY	unclassifiable/attainment
CO	100 TPY	unclassifiable/attainment
H_2SO_4	7 TPY	---------
H_2S	10 TPY	---------

Emissions of air toxics greater than 1 ton/yr for this permit are ammonia and propylene.

C. Source Emissions

A summary of the total estimated net emissions from the 2008 Expansion project is listed on the next two pages. Table 3-7 from the PTI application, as submitted by the company, shows the total emissions and the contemporaneous emissions.

The provisions of the Consent Decree allow one-time reductions from the FCCU expansion to be used only in conjunction with this project. The remaining NOx and SO_2 credits from the WGS and SRU/TGTU will return to zero after the expansion.

Emissions of the following pollutants have increased as a result of this project: particulate emissions, carbon monoxide and volatile organic compounds. Air toxics that require modeling are ammonia and propylene. There will be increased emissions of HAPs but none are greater than 1 ton per year. Tables C-4 and C-7 of the PTI application lists the incremental emissions from HAPs and the air toxics. The increase of ammonia is due to the operation of the SCR.

This PTI is PSD for PM_{10} and CO. The permittee has netted out of nonattainment new source review (NNSR) for VOC.

D. Conclusion

The net emission increase associated with this Permit to Install results in a significant net emissions increase for CO and PM_{10} and is subject to PSD review for these pollutants. Due to netting of VOC emissions, the increase in VOC emissions is less than 40 tons per year and does not trigger NNSR.

Table 3-7 Total Estimated Net Project Emissions

ton/yr

	SO_2	NO_x	PM_{10}	CO	VOC	H_2SO_4	Ammonia	Propylene	Comments
New and Modified Sources									Future Potential minus Past Actual Basis
FCC WGS Stack	-7,527.36		-675.02		90.19	281.81		See CO Boiler	-46.35 18.72 CO at 180 ppm.
CO Boiler worst case fuel combination (emitted through WGS Stack)							Included in FCC WGS		Included in FCC WGS -4.35 Included in FCC WGS 12.52 NA NA
New SRU, including combustion			56.71	1.23	0.23	2.52	0.17	NA NA	
Plant 4 Flare	2.82	20.55	1.56	17.26	1.13	NA	NA		
Fugitive components	NA	NA	NA	NA	10.15	NA	NA		
New Cooling Tower	NA	NA	5.03	NA	3.77	NA	NA		
PP Mix Railcar Loading Rack Additional Loading Arms				NA	NA	NA	NA	1.55	NA NA 1.55
Emissions from Associated Units									Future Projected Actual minus Past Actual Basis
Existing SRU, including combustion			-886.84		0.64	0.05	0.54	0.04 NA NA	
Heater combustion	19.70	195.42		10.89	120.40		7.88	NA NA	
Plant 6 and Plant 8 Cooling Towers			NA	NA	3.44	NA	0.64	NA NA	
Storage Tanks	NA	NA	NA	NA	8.08	NA	NA		
Loading Racks (other than PP Mix Railcar Loading)				NA	NA	NA	NA	1.22 NA	NA
Naphtha Simplification Project			3.30	38.58	4.54	49.02	3.81	NA NA	Naphtha Simplification Project increases in SO_2 are included in the FCC and SRU net emissions analysis.
Expansion Project Total			-8,331.66		-418.60		111.58	471.56	50.97 -46.35 18.72 1.55

ton/yr

	SO_2	NO_x	PM_{10}	CO	VOC	H_2SO_4	Ammonia	Propylene			Comments
Contemporaneous Emissions											Listed for pollutants that are significant for the project: PM_{10}, CO, VOC.
New Removed Equipment Components							NA	NA	-9.35		Fugitive components associated with the hydrogen heater
New Boiler #10 shutdown						-4.57	-50.49	-3.31			2004/2005 Baseline used for reduction calculation.
New Hydrogen plant heater H-9101 shutdown								-7.86	-86.82	-5.68	2004/2005 Baseline used for reduction calculation.
LSG Heater H-9501 (B053)						8.50	37.57	2.46			
LSG Heater H-9502 (B054)						4.64	20.53	1.34			
LSG - New Tank					NA	NA	8.41				
LSG - New Tank					NA	NA	-8.41				Tank not installed. PTI expired.
LSG Fugitive Components						NA	NA	5.96			
LSG Flare			NA		1.07	0.40					Flare not built, header was installed.
LSG Associated - Cooling Tower							4.25	NA	0.97		
LSG Associated - Incremental Steam from #10 Boiler									3.16	20.16	1.32
LSG Associated - Incremental firing hydrogen plant heater									5.08	0.34	1.47
LSG Associated - Incremental firing at SRU Incinerator									0.07	0.29	0.02
Tank 199 (T162)					NA	NA	2.6				Startup date Nov. 30, 2001.
Removed equipment components							NA	NA	-15.47		Fugitive components PDA unit shutdown in 2002.
Heater Shutdowns, B002, B004, B011, B013.								-5.89	-65.05	-4.26	
Restricted fuel oil firing at #10 Boiler							-36.02	17.48	1.21		
Vacuum Tower Shutdown						NA	NA	NA			
Total net emissions	-8,331.66		-418.60				82.94	366.63	30.65	-46.35	18.72	1.55

State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL **CERTIFIED MAIL**
LUCAS COUNTY

Street Address: Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329 Mailing Address: Lazarus Gov. Center

Application No: 04-01447
Fac ID: 0448010246

DATE: 7/18/2006

Sunoco, Inc.
Elaine Moore
1819 Woodville Rd.
Oregon, OH 43616

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed of final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **$11700** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: **USEPA** **TDES** **Toledo Metropolitan Area Council of Governments** **IN** **MI**

LUCAS COUNTY

PUBLIC NOTICE

OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF DRAFT PERMIT TO INSTALL
SUBJECT TO PREVENTION OF SIGNIFICANT DETERIORATION REVIEW
TO SUNOCO INC. - TOLEDO REFINERY

Public Notice is hereby given that the Staff of the Ohio Environmental Protection Agency (EPA) has recommended to the Director that the Ohio EPA issue a draft action of a Permit to Install (PTI) to Sunoco Inc. (Sunoco), located in Lucas County, Ohio. The draft action (PTI no. 04-01447) was issued on July 18, 2006. This draft permit proposes to modify the two crude units and the Fluid Catalytic Cracking Unit (FCCU) in order to allow the additional production of petroleum products including gasoline and distillates.

The purpose of this project is to expand the capacity of the FCCU in conjunction with the installation of the additional pollution control equipment required by the Sunoco global Consent Decree entered March 14, 2006. The Consent Decree institutes equipment specific limitations, plant-wide limitations, applicability of certain regulations, additional control equipment and procedures on a specific schedule. Sunoco has been developing a plan to meet the Consent Decree requirements and Sunoco will undertake many of the actions necessary to meet the requirements applicable to the Toledo Refinery in 2008, over 18 months ahead of the Consent Decree schedule.

Due to the proposed modifications, increases or decreses in allowable air emissions of several pollutants will result as listed below:

Pollutant	Net Change	PSD Significance Level
CO	+366.63	100
NO_x	-418.6	40
SO_2	-8331.66	40
VOC	+30.657	40
PM_{10}	+82.94	15

This facility is subject to the applicable attainment provisions of the Ohio EPA permit to install requirements (OAC 3745-31).

U.S EPA allows sources to consume no more than the maximum available ambient PSD increments for each PSD pollutant. Ohio EPA allows sources to consume less than one half the available increment for CO and PM_{10}. Sunoco has demonstrated, through dispersion modeling, that the CO and PM_{10} impacts from the source will not exceed the Ohio Acceptable Incremental Impact levels. Proposed new sources also can not cause or significantly contribute to violations of the National Ambient Air Quality Standard (NAAQS). Based on the estimated significant impact for CO and PM_{10}, NAAQS analysis was not required. Based on the PSD and NAAQS analyses, Sunoco complies with both the Federal and State modeling requirement for CO and PM_{10}.

A public hearing on the draft air permit is scheduled at 6:30 p.m., Tuesday, August 22, 2006, at Oregon City Council Chambers, 5330 Seaman Road, Oregon, Ohio 43616. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

All interested persons are entitled to attend or be represented and give written or oral comments on the draft permit at the hearing. Written comments must be received by Ohio EPA/Toledo Division of Environmental Services by the close of business on August 31, 2006. Comments received after August 31, 2006 may not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to Pam Barnhart, Toledo Division of Environmental Services, 348 South Erie Street, Toledo, Ohio, 43602. Fax number: (419) 936-3959.

Further information concerning this application, which is available for public inspection, may be secured from Pam Barnhart, Toledo Division of Environmental Services at the above address during normal business hours. Telephone number: (419) 936-3015.

Permit To Install **Issue Date: To be entered upon final issuance**
Terms and Conditions **Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 04-01447

Application Number:	04-01447
Facility ID:	0448010246
Permit Fee:	**To be entered upon final issuance**
Name of Facility:	Sunoco, Inc.
Person to Contact:	Elaine Moore
Address:	1819 Woodville Rd. Oregon, OH 43616

Location of proposed air contaminant source(s) [emissions unit(s)]:
1819 Woodville Rd.
Oregon, Ohio

Description of proposed emissions unit(s):
Significant modifications to an existing refinery to increase capacity of the crude units and the FCC unit.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.

ii. The date(s) analyses were performed.

iii. The company or entity that performed the analyses.

iv. The analytical techniques or methods used.

v. The results of such analyses.

vi. The operating conditions existing at the time of sampling or measurement.

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and

October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06**.**

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification

b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d. This permit does not convey any property rights of any sort, or any exclusive privilege.

e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more

frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this

permit.

B. State Only Enforceable Permit-To-Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or

modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

7. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of <u>Federally Enforceable</u> Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit-To-Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PM	199.86
PM_{10}	365.82
	(82.94 increase)
CO	1406.24
	(366.63 increase)
NOx	403.60
	(418.60 decrease)
SO_2	505.90
	(8,331.66 decrease)
VOC	518.95
	(30.65 increase)
H_2S	1.23
$H_2 SO_4$	(46.35 decrease)
Ammonia	(18.72 increase)

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. The permittee shall monitor the emissions of VOC that is emitted by any emissions units associated with the FCCU expansion permit to install (B046, B047, J006, P009, P011, P012, P017, P040, P041, P801, refinery fuel burning equipment, Plant 6 and Plant 8 cooling towers, storage tanks, loading racks and Naptha Simplification Project); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the change, or for a period of ten years following resumption of regular operations after the change if the NSR project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.

2. If the unit is an existing unit, the permittee shall submit a report to the Toledo Division of Environmental Services if the annual emissions, in tons per year, from the FCCU expansion project (PTI 04-01447), exceed the baseline actual emissions (as documented and maintained pursuant to paragraph (C)(1)(c) of OAC rule 3745-31-10, by a significant amount for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to paragraph (C)(1)(c) of OAC rule 3745-31-10. The permittee's pre-construction projection is listed in Table 1 below. Such report shall be submitted to the Toledo Division of Environmental Services within 60 days after the end of such year. The report shall contain the following:

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

   b. The annual emissions as calculated pursuant to Section A.1; and

   c. Any other information that the permittee wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

Sunoco, Inc. **Facility ID: 0448010246**

PTI Application: 04-01447

Issued: To be entered upon final issuance

Table 1 NSR for VOC - Baseline Actual Emissions vs Potential/Projected Actual Emissions

	Baseline Actual Emis. (tons/yr)	*Potential Emissions **Proj. Actual Emis. (tons/yr)	Incremental Difference (tons/yr)
	VOC	VOC	VOC
New & Modified Sources *			
FCC WGS Stack (P011)	see CO boiler	see CO boiler	0.00
CO Boiler worst case fuel combination (emitted through WGS Stack) (B046 & B047)	5.15	17.69	12.54
New SRU, including combustion (P041)	0	0.17	0.17
Plant 4 Flare (P009)	3.53	4.66	1.13
Fugitive components (P801)	375.28	385.43	10.15
Cooling Towers (P040)	0	3.77	3.77
PP Mix Railcar Loading Rack Additional Loading Arms (J006)	0.03	1.58	1.55
Emissions from Associated Units **			
Existing SRU, including combustion (P012)	0.06	0.09	0.04
Heater combustion			
H-6306 (H-64 New)	0.61	0.95	0.34
H-603 (B017)	0.38	0.44	0.00
H-604 (B018)	1.10	1.77	0.67
H-6104	1.87	2.36	0.49
H-311 (B051)	5.72	6.50	0.78
H-501-4 (B006)	3.05	3.90	0.85
H-507 (B010)	2.50	2.99	0.49
H-601A (B014)	0.50	0.95	0.45
H-601B (B015)	0.51	0.97	0.45
H-602 (B016)	0.42	0.80	0.38
H-6305 (B023) will be demolished	0.06	0.00	0.00
H-9101 (B025) not operated post exp.	5.69	0.00	0.00
H-9201 (B026)	1.38	1.74	0.36
H-9202 (B027)	0.81	1.03	0.22
H-9203 (B028)	0.10	0.13	0.03
H-9251 B029)	0.80	1.01	0.21
H-9252A&B (B030 & B031)	2.76	3.49	0.73
H-9302 (B032)	2.25	2.64	0.38
H-9301 (B033)	4.81	5.63	0.82
H-9303 (B034)	1.06	1.24	0.18
H-9304 (B035	0.40	0.47	0.07
H-1910 (#10 Boiler) not operated post exp.	3.31	0.00	0.00
H-9501	0.00	0.00	0.00
H-9502	0.00	0.00	0.00
Plant 6 Cooling Towers	3.13	3.39	0.27
Plant 8 Cooling Towers	4.99	5.36	0.38
Storage Tanks - based on storage material			
Crude	7.65	11.81	4.16
Gasoline - finished	0.94	1.41	0.47
Gasoline - components	1.42	2.13	0.71
Diesel	0.48	0.88	0.40
Jet	1.22	2.84	1.62
FCC Feed - Heavy Gas Oil*	1.67	1.74	0.07

9-2 Feed - Light Gas Oil*	0.50	0.96	0.45
Naphtha*	0.00	0.09	0.09
Benzene	0.03	0.08	0.048
Toluene	0.14	0.17	0.028
Xylene	0.06	0.09	0.023
Slurry	0.01	0.01	0.01
Loading Racks (other than PP Mix Railcar Loading)			
HARF/SLURRY/CSO, truck and rail	0.18	0.30	0.13
Benzene, rail	0.16	0.16	0.00
Toluene, rail	11.32	11.33	0.01
xylene, rail	2.20	2.20	0.00
propane, truck	9.44	10.53	1.09
Naphtha Simplification Project	2.06	5.87	3.81
Expansion Project Totals	**471.75**	**513.76**	**51.00**

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Emissions Unit ID: B046

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (B046) - 340 million Btu/hr Babcock and Wilcox [H-021-03] CO boiler fired with refinery fuel gas, a mixture of refinery process gas, landfill gas and natural gas; residual (#6) fuel oil, and CO (from the FCC unit) with ultra low NOx burners.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
While operating as a control unit for the FCCU unit, the following emission limitations apply:	
OAC rule 3745-31-05(A)(3)	The combined filterable particulate matter (PM) emissions from the FCCU (Emissions Unit P011) and the CO Boilers (B046 and B047) shall not exceed 0.45 pound per thousand pounds of coke-burnoff; The combined sulfur dioxide (SO_2) emissions from P011, B046 and B047 shall not exceed 316 pounds per hour; The combined volatile organic compound (VOC) emissions from the FCCU (Emissions Unit P011) and the CO Boilers (Emissions Units B046 and B047) shall not exceed 3.67 pounds per hour; The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 10 ppmvd and 215.84 tons per year, based upon a rolling, 365-day summation of the daily emissions; and See sections A.I.2.a, and A.I.2.b.

Emissions Unit ID: B046

OAC rule 3745-31-05(C)	The combined nitrogen oxides (NOx) emissions from P011, B046 and B047 shall not exceed 198.51 tons per year, based upon a rolling, 365-day summation of the daily emissions; The combined filterable particulate matter (PM) emissions from P011, B046 and B047 shall not exceed 165.96 tons per year; The combined sulfur dioxide ($SO_{2)}$ emissions from P011, B046 and B047 shall not exceed 345.71 tons per year, based upon a rolling, 365-day summation of the daily emissions; The combined volatile organic compounds (VOC) emissions from the FCCU (Emissions Unit P011) and the CO Boilers (Emissions Units B046 and B047) shall not exceed 16.07 tons per year, based upon a rolling, 365-day summation of the daily emissions; See sections A.I.2.a, A.I.2.b, and A.I.2.c.
OAC rule 3745-31-10 through 20	The combined CO emissions from P011, B046 and B047 shall be reduced by a minimum of 99% control efficiency and shall not exceed 500 parts per million by volume dry (ppmvd) at 0% oxygen as a 1-hour average, or 180 ppmvd at 0% oxygen as a rolling, 365-day average, or 1,087.28 tons per year, based upon a rolling, 365-day summation of the daily emissions; and The combined PM_{10} emissions from P011, B046 and B047 shall be controlled by a minimum of 95% and shall not exceed 0.90 pound per thousand pounds of coke-burnoff or 331.92 tons per year, based upon a rolling, 365-day summation of the daily emissions. See section A.I.2.a.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this unit shall not exceed 20 % opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(C)(1)	0.14 pound of filterable PM emissions per million Btu of actual heat input
OAC rule 3745-18-54(O)(3)	The combined emissions from P011, B046 and B047 shall not exceed 3.00 pounds of SO_2 per thousand pounds of fresh feed.
OAC rule 3745-21-07(B)	See section A.I.2.d.
OAC rule 3745-21-08(B)	See section A.I.2.e.
OAC rule 3745-21-08(E)	See section A.I.2.f.
OAC rule 3745-23-06(B)	See section A.I.2.g.

Emissions Unit ID: B046

When the FCCU unit has a malfunction or is in startup or shutdown, the following emission limitations apply when emissions are vented to the existing CO boiler stack:	
OAC rule 3745-31-05(A)(3)	Filterable plus condensable particulate matter emissions (PM) shall not exceed 2.53 pounds per hour and 11.10 tons per year as a rolling 12-month summation of the monthly emissions; Sulfur dioxide (SO_2) emissions shall not exceed 9.15 pounds per hour (based on NSPS limit of 0.027 lb SO2/mmBtu) and 40.06 tons per year as a rolling 12-month summation of the monthly emissions; Nitrogen oxides (NOx) emissions shall not exceed 13.60 pounds per hour and 59.57 tons per year as a rolling 12-month summation of the monthly emissions; Volatile organic compounds (VOC) shall not exceed 1.83 pounds per hour and 8.03 tons per year as a rolling 12-month summation of the monthly emissions; and See sections A.I.2.b and A.I.2.h.
OAC rule 3745-31-05(C)	Particulate matter emissions less than 10 microns in diameter (PM_{10}) shall not exceed 2.53 pounds per hour and 11.10 tons per year as a rolling 12-month summation of the monthly emissions; Carbon monoxide (CO) emissions shall not exceed 28.00 pounds per hour and 122.64 tons per year as a rolling 12-month summation of the monthly emissions; See sections A.I.2.b and A.I.2.h.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this unit shall not exceed 20 % opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(C)(1)	See section A.I.2.f.
OAC rule 3745-18-06(D)	See section A.I.2.f.
OAC rule 3745-21-07(B)	See section A.I.2.d.
OAC rule 3745-21-08(B)	See section A.I.2.e.
OAC rule 3745-21-08(E)	See section A.I.2.f.
OAC rule 3745-23-06(B)	See section A.I.2.g.

2. Additional Terms and Conditions

2.a The CO Boilers (Emission Units B046 and B047) operate as control for the FCCU

unit (Emissions Unit P011) and have combined emission limitations when the FCCU is operating. The monitoring, recordkeeping, reporting and testing requirements for the combined emission limits for P011, B046 and B047 are included in the terms and conditions for emissions unit (P011). The combined stack emissions are from the new wet gas scrubber stack.

2.b The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-10(C)(1), 3745-18-54(O)(3), 3745-21-08(E), 3745-21-07(B), OAC rule 3745-31-05(A), OAC rule 3745-31-05(C), and OAC rules 3745-31-10 through 20.

2.c Beginning at startup after the FCCU expansion and by no later than December 31, 2009, the combined SO_2 emissions from the P011, B046 and B047 shall not exceed 25 ppmvd based on a 365-day rolling average or 50 ppmvd based on a 7-day rolling average, each at 0% oxygen.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

2.e The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.f The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.g The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 by committing to comply with the best available technology (BAT) requirements established pursuant to OAC

rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, this rule is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.h The hourly and annual emission limitations for PM, PM_{10}, NOx, CO and VOC were established for PTI purposes to reflect the potential to emit for this emissions unit if it operated for 8760 hours per year while the FCCU (P011) is in a malfunction, startup or shutdown . Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

II. Operational Restrictions

1. The permittee shall burn only the off-gases from the regeneration of the catalyst in emissions unit P011, natural gas, refinery fuel gas and/or residual fuel oil in this emissions unit.

2. The permittee shall not burn oil in this emissions unit during periods when emissions are vented to the existing CO Boiler stack.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than the off gases from the regeneration of the catalyst in P011, natural gas, refinery fuel gas, and/or residual fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall perform daily checks, when the emissions unit is in operation and emissions are vented to the existing CO Boiler stack and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

3. REFINERY FUEL GAS SAMPLING:
The permittee shall collect samples of the refinery fuel gas system Monday through Friday (except holidays) for gas chromatographic analysis or other approved analytical method. Each normal sample point shall be collected at least two times per week in accordance with the schedule developed by the permittee. Each sample shall be collected in a sample bag, bomb, cylinder or similar device suitable for the designated analytical method.

4. The permittee shall maintain daily records of the actual heating value of the refinery fuel gas. The actual heating value (H) of the refinery fuel gas shall be calculated from the results of a fuel gas compositional analysis using gas chromatography and the results maintained in units of Btu/scf.

5. The permittee shall maintain records on the laboratory method used to conduct compositional analysis of the refinery fuel gas. The method shall be reported to the Toledo Division of Environmental Services in the periodic report. Any standard ASTM method may be used.

6. The permittee shall maintain records of the average H_2S content (in ppmv) for the refinery fuel gas for each day, and which hydrogen sulfide continuous emissions monitoring system (H_2S CEMS) was used to obtain the data (i.e., from which of the following emissions units: B048, B050, B051, B053, or B054).

7. The permittee shall maintain daily records (Monday through Friday) of the average SO_2 emission rate for the refinery fuel gas. The SO_2 emission rate shall be calculated as follows, in accordance with OAC rule 3745-18-04(F)(3):

ERG = ((14.696)*S*(32)*(1.998))/(H*(10.73)*(520))

Where:

ERG = average SO_2 emission rate, in pounds SO_2 per mmBtu for each day;
14.696 = standard pressure, psia;
S = daily average H_2S content of refinery fuel gas, ppmv;
32 = molecular weight of sulfur, lb per lb-mole;
1.998 = lb of SO_2 per lb sulfur, as calculated in accordance with OAC rule 3745-18-04(F)(3);
H = daily average heat content, Btu/scf (STP at 14.696 psia and 520^oR);
10.73 = ideal gas constant, psia-cubic feet/lb-mole ^oR);
520 = standard temperature, ^oR.

8. For each day during which the permittee burns a fuel other than off gases from the regeneration of the catalyst in P011, natural gas, refinery fuel gas, and residual fuel oil, the permittee shall maintain a record of the type, quantity, sulfur content in pound(s) of sulfur per mmdscf, and heating value in Btu/dscf of the fuel burned.

9. The permittee shall maintain a record of the dates and times emissions from this emissions unit were vented to the existing CO Boiler stack.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than off gases from the regeneration of the catalyst in P011, refinery fuel gas and residual fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month periods.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each average SO_2 emission rate, as calculated in section A.III. (under REFINERY FUEL GAS), that exceeded the SO_2 daily average emission limitation of 0.027 pound of SO_2 per mmBtu of actual heat input for the burning of refinery fuel gas.

4. The permittee shall submit deviation (excursion) reports that identify each day when fuel oil was burned in this emissions unit during periods when emissions were vented to the existing CO Boiler stack. Each report shall be submitted within 30 days after the deviation occurs.

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5. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      20 percent opacity as a 6-minute average

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon the visible particulate emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures of 40 CFR 60.11.

   b. Emission Limitation:

      2.53 pounds of filterable PM per hour.

      Applicable Compliance Method:

      If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9).

   c. Emission Limitation:

      11.10 tons of PE per year as a rolling 12-month summation of the monthly emissions.
      Applicable Compliance Method:

      This emission limitation was developed by multiplying the hourly allowable PM limitation (1.94 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

   d. Emission Limitation:

9.15 pounds of SO_2 per hour.

Applicable Compliance Method:

This emission limitation was based on the NSPS H_2S limitation of 0.01 gr/dscf and converted to 0.027 lb SO_2/mmBtu of heat input times the maximum heat input capacity of the boiler (340 mmBtu/hr). If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04.

e. Emission Limitation:

40.06 tons of SO_2 per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable SO_2 emission limitation (9.15 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

13.60 pounds of NOx per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 7 of 40 CFR Part 60 Appendix A.

g. Emission Limitation:

59.57 tons of NOx per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable NOx emission limitation (13.60 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission

limitation.

h. Emission Limitation:

1.83 pounds of VOC per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10.

i. Emission Limitation:

8.03 tons of VOC per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable VOC emission limitation (1.83 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

j. Emission Limitation:

2.53 pounds of PM_{10} per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9).

k. Emission Limitation:

11.10 tons of PE per year as a rolling 12-month summation of the monthly emissions.

Emissions Unit ID: B046

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable PM limitation (2.53 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

l. Emission Limitation:

28.00 pounds of CO per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 10 of 40 CFR Part 60 Appendix A.

m. Emission Limitation:

122.64 tons of CO per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable CO emission limitation (28.00 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

n. Emission Limitation:

SO2 emissions shall not exceed 0.027 lb/mmBtu of actual heat input.

Applicable Compliance Method:
Compliance with this emissions limitation shall be demonstrated by the monitoring and recordkeeping requirements of section A.III.

o. Emission Limitation:

The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 10 ppmvd.

Applicable Compliance Method:

This emission limitation is based on a manufacturer's guaranteed emission rate supplied by the permittee. If required, the permittee shall demonstrate compliance with this emission limitation using Method 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

p. The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 215.84 tons per year, based upon a rolling, 365-day summation of the daily emissions.

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the maximum stack flow rate (317,989 dscfm) by 60 minutes per hour, multiplied by 24 hours/day, multiplied by 365 days/year, multiplied by the maximum H_2SO_4 mist concentration (10 ppmvd), divided by 1,000,000 parts, multiply by the molecular weight of (98 lb/lb-mole), and divide by the molar volume (379.43 ft^3/lb-mole), divided by 2000 pounds per ton.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - **(B046) - 340 million Btu/hr Babcock and Wilcox [H-021-03] CO boiler fired with refinery fuel gas, a mixture of refinery process gas, landfill gas and natural gas; residual (#6) fuel oil, and CO (from the FCC unit) with ultra low NOx burners.**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (B047) - 340 million Btu/hr Babcock and Wilcox [H-021-04] CO boiler fired with refinery fuel gas, a mixture of refinery process gas, landfill gas and natural gas; residual (#6) fuel oil, and CO (from the FCC unit) with ultra low NOx burners.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
While operating as a control unit for the FCCU unit, the following emission limitations apply:	
OAC rule 3745-31-05(A)(3)	The combined filterable particulate matter (PM) emissions from the FCCU (Emissions Unit P011) and the CO Boilers (B046 and B047) shall not exceed 0.45 pound per thousand pounds of coke-burnoff; The combined sulfur dioxide (SO_2) emissions from P011, B046 and B047 shall not exceed 316 pounds per hour; The combined volatile organic compound (VOC) emissions from the FCCU (Emissions Unit P011) and the CO Boilers (Emissions Units B046 and B047) shall not exceed 3.67 pounds per hour; The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 10 ppmvd and 215.84 tons per year, based upon a rolling, 365-day summation of the daily emissions; and See sections A.I.2.a, and A.I.2.b.

Emissions Unit ID: B047

OAC rule 3745-31-05(C)	The combined nitrogen oxides (NOx) emissions from P011, B046 and B047 shall not exceed 198.51 tons per year, based upon a rolling, 365-day summation of the daily emissions; The combined filterable particulate matter (PM) emissions from P011, B046 and B047 shall not exceed 165.96 tons per year; The combined sulfur dioxide ($SO_{2)}$ emissions from P011, B046 and B047 shall not exceed 345.71 tons per year, based upon a rolling, 365-day summation of the daily emissions; The combined volatile organic compounds (VOC) emissions from the FCCU (Emissions Unit P011) and the CO Boilers (Emissions Units B046 and B047) shall not exceed 16.07 tons per year, based upon a rolling, 365-day summation of the daily emissions; See sections A.I.2.a, A.I.2.b, and A.I.2.c.
OAC rule 3745-31-10 through 20	The combined CO emissions from P011, B046 and B047 shall be reduced by a minimum of 99% control efficiency and shall not exceed 500 parts per million by volume dry (ppmvd) at 0% oxygen as a 1-hour average, or 180 ppmvd at 0% oxygen as a rolling, 365-day average, or 1,087.28 tons per year, based upon a rolling, 365-day summation of the daily emissions; and The combined PM_{10} emissions from P011, B046 and B047 shall be controlled by a minimum of 95% and shall not exceed 0.90 pound per thousand pounds of coke-burnoff or 331.92 tons per year, based upon a rolling, 365-day summation of the daily emissions. See section A.I.2.a.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this unit shall not exceed 20 % opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(C)(1)	0.14 pound of filterable PM emissions per million Btu of actual heat input
OAC rule 3745-18-54(O)(3)	The combined emissions from P011, B046 and B047 shall not exceed 3.00 pounds of SO_2 per thousand pounds of fresh feed.
OAC rule 3745-21-07(B)	See section A.I.2.d.
OAC rule 3745-21-08(B)	See section A.I.2.e.
OAC rule 3745-21-08(E)	See section A.I.2.f.
OAC rule 3745-23-06(B)	See section A.I.2.g.

When the FCCU unit has a malfunction or is in startup or shutdown, the following emission limitations apply when emissions are vented to the existing CO boiler stack:	
OAC rule 3745-31-05(A)(3)	Filterable plus condensable particulate matter emissions (PM) shall not exceed 2.53 pounds per hour and 11.10 tons per year as a rolling 12-month summation of the monthly emissions; Sulfur dioxide (SO_2) emissions shall not exceed 9.15 pounds per hour (based on NSPS limit of 0.027 lb SO2/mmBtu) and 40.06 tons per year as a rolling 12-month summation of the monthly emissions; Nitrogen oxides (NOx) emissions shall not exceed 13.60 pounds per hour and 59.57 tons per year as a rolling 12-month summation of the monthly emissions; Volatile organic compounds (VOC) shall not exceed 1.83 pounds per hour and 8.03 tons per year as a rolling 12-month summation of the monthly emissions; and See sections A.I.2.b and A.I.2.h.
OAC rule 3745-31-05(C)	Particulate matter emissions less than 10 microns in diameter (PM_{10}) shall not exceed 2.53 pounds per hour and 11.10 tons per year as a rolling 12-month summation of the monthly emissions; Carbon monoxide (CO) emissions shall not exceed 28.00 pounds per hour and 122.64 tons per year as a rolling 12-month summation of the monthly emissions; See sections A.I.2.b and A.I.2.h.
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this unit shall not exceed 20 % opacity, as a 6-minute average, except as provided by the rule.
OAC rule 3745-17-10(C)(1)	See section A.I.2.f.
OAC rule 3745-18-06(D)	See section A.I.2.f.
OAC rule 3745-21-07(B)	See section A.I.2.d.
OAC rule 3745-21-08(B)	See section A.I.2.e.
OAC rule 3745-21-08(E)	See section A.I.2.f.
OAC rule 3745-23-06(B)	See section A.I.2.g.

Emissions Unit ID: B047

2. Additional Terms and Conditions

2.a The CO Boilers (Emission Units B046 and B047) operate as control for the FCCU unit (Emissions Unit P011) and have combined emission limitations when the FCCU is operating. The monitoring, recordkeeping, reporting and testing requirements for the combined emission limits for P011, B046 and B047 are included in the terms and conditions for emissions unit (P011). The combined stack emissions are from the new wet gas scrubber stack.

2.b The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-10(C)(1), 3745-18-54(O)(3), 3745-21-08(E), 3745-21-07(B), OAC rule 3745-31-05(A), OAC rule 3745-31-05(C), and OAC rules 3745-31-10 through 20.

2.c Beginning at startup after the FCCU expansion and by no later than December 31, 2009, the combined SO_2 emissions from the P011, B046 and B047 shall not exceed 25 ppmvd based on a 365-day rolling average or 50 ppmvd based on a 7-day rolling average, each at 0% oxygen.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

2.e The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.f The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.g The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and

the technology associated with the current operating practices satisfy the BAT requirements.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, this rule is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.h The hourly and annual emission limitations for PM, PM_{10}, NOx, CO and VOC were established for PTI purposes to reflect the potential to emit for this emissions unit if it operated for 8760 hours per year while the FCCU (P011) is in a malfunction, startup or shutdown . Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

II. Operational Restrictions

1. The permittee shall burn only the off-gases from the regeneration of the catalyst in emissions unit P011, natural gas, refinery fuel gas and/or residual fuel oil in this emissions unit.

2. The permittee shall not burn oil in this emissions unit during periods when emissions are vented to the existing CO Boiler stack.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than the off gases from the regeneration of the catalyst in P011, natural gas, refinery fuel gas, and/or residual fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall perform daily checks, when the emissions unit is in operation and emissions are vented to the existing CO Boiler stack and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

3. REFINERY FUEL GAS SAMPLING:
The permittee shall collect samples of the refinery fuel gas system Monday through Friday (except holidays) for gas chromatographic analysis or other approved analytical method. Each normal sample point shall be collected at least two times per week in accordance with the schedule developed by the permittee. Each sample shall be collected in a sample bag, bomb, cylinder or similar device suitable for the designated analytical method.

4. The permittee shall maintain daily records of the actual heating value of the refinery fuel gas. The actual heating value (H) of the refinery fuel gas shall be calculated from the results of a fuel gas compositional analysis using gas chromatography and the results maintained in units of Btu/scf.

5. The permittee shall maintain records on the laboratory method used to conduct compositional analysis of the refinery fuel gas. The method shall be reported to the Toledo Division of Environmental Services in the periodic report. Any standard ASTM method may be used.

6. The permittee shall maintain records of the average H_2S content (in ppmv) for the refinery fuel gas for each day, and which hydrogen sulfide continuous emissions monitoring system (H_2S CEMS) was used to obtain the data (i.e., from which of the following emissions units: B048, B050, B051, B053, or B054).

7. The permittee shall maintain daily records (Monday through Friday) of the average SO_2 emission rate for the refinery fuel gas. The SO_2 emission rate shall be calculated as follows, in accordance with OAC rule 3745-18-04(F)(3):

ERG = ((14.696)*S*(32)*(1.998))/(H*(10.73)*(520))

Where:

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ERG = average SO_2 emission rate, in pounds SO_2 per mmBtu for each day;
14.696 = standard pressure, psia;
S = daily average H_2S content of refinery fuel gas, ppmv;
32 = molecular weight of sulfur, lb per lb-mole;
1.998 = lb of SO_2 per lb sulfur, as calculated in accordance with OAC rule 3745-18-04(F)(3);
H = daily average heat content, Btu/scf (STP at 14.696 psia and 520^{o}R);
10.73 = ideal gas constant, psia-cubic feet/lb-mole ^{o}R);
520 = standard temperature, ^{o}R.

8. For each day during which the permittee burns a fuel other than off gases from the regeneration of the catalyst in P011, natural gas, refinery fuel gas, and residual fuel oil, the permittee shall maintain a record of the type, quantity, sulfur content in pound(s) of sulfur per mmdscf, and heating value in Btu/dscf of the fuel burned.

9. The permittee shall maintain a record of the dates and times emissions from this emissions unit were vented to the existing CO Boiler stack.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than off gases from the regeneration of the catalyst in P011, refinery fuel gas and residual fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month periods.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each average SO_2 emission rate, as calculated in section A.III. (under REFINERY FUEL GAS), that exceeded the SO_2 daily average emission limitation of 0.027 pound of SO_2 per mmBtu of actual heat input for the burning of refinery fuel gas.

4. The permittee shall submit deviation (excursion) reports that identify each day when fuel oil was burned in this emissions unit during periods when emissions were vented to the existing CO Boiler stack. Each report shall be submitted within 30 days after the deviation occurs.

5. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      20 percent opacity as a 6-minute average

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon the visible particulate emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures of 40 CFR 60.11.

   b. Emission Limitation:

      2.53 pounds of filterable PM per hour.

      Applicable Compliance Method:

      If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9).

   c. Emission Limitation:

      11.10 tons of PE per year as a rolling 12-month summation of the monthly emissions.
      Applicable Compliance Method:

      This emission limitation was developed by multiplying the hourly allowable PM limitation (1.94 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

   d. Emission Limitation:

      9.15 pounds of SO_2 per hour.

      Applicable Compliance Method:

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This emission limitation was based on the NSPS H_2S limitation of 0.01 gr/dscf and converted to 0.027 lb SO_2/mmBtu of heat input times the maximum heat input capacity of the boiler (340 mmBtu/hr). If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04.

e. Emission Limitation:

40.06 tons of SO_2 per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable SO_2 emission limitation (9.15 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

13.60 pounds of NOx per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 7 of 40 CFR Part 60 Appendix A.

g. Emission Limitation:

59.57 tons of NOx per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable NOx emission limitation (13.60 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

h. Emission Limitation:

1.83 pounds of VOC per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-

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10.

i. Emission Limitation:

8.03 tons of VOC per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable VOC emission limitation (1.83 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

j. Emission Limitation:

2.53 pounds of PM_{10} per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9).

k. Emission Limitation:

11.10 tons of PE per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable PM limitation (2.53 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

l. Emission Limitation:

28.00 pounds of CO per hour.

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Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 10 of 40 CFR Part 60 Appendix A.

m. Emission Limitation:

122.64 tons of CO per year as a rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable CO emission limitation (28.00 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

n. Emission Limitation:

SO2 emissions shall not exceed 0.027 lb/mmBtu of actual heat input.

Applicable Compliance Method:
Compliance with this emissions limitation shall be demonstrated by the monitoring and recordkeeping requirements of section A.III.

o. Emission Limitation:

The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 10 ppmvd.

Applicable Compliance Method:

This emission limitation is based on a manufacturer's guaranteed emission rate supplied by the permittee. If required, the permittee shall demonstrate compliance with this emission limitation using Method 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

p. The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 215.84 tons per year, based upon a rolling, 365-day summation of the daily emissions.

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the maximum

Emissions Unit ID: B047

stack flow rate (317,989 dscfm) by 60 minutes per hour, multiplied by 24 hours/day, multiplied by 365 days/year, multiplied by the maximum H_2SO_4 mist concentration (10 ppmvd), divided by 1,000,000 parts, multiply by the molecular weight of (98 lb/lb-mole), and divide by the molar volume (379.43 ft^3/lb-mole), divided by 2000 pounds per ton.

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VI. Miscellaneous Requirements

None

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (B047) - 340 million Btu/hr Babcock and Wilcox [H-021-04] CO boiler fired with refinery fuel gas, a mixture of refinery process gas, landfill gas and natural gas; residual (#6) fuel oil, and CO (from the FCC unit) with ultra low NOx burners.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

Issued: To be entered upon final issuance

None

Issued: To be entered upon final issuance
Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (J006) (formerly P021) - Propylene-Propane railcar load rack with 6 loading arms using pressurized loading

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	1.60 tons per year volatile organic compounds (VOC) per rolling 12-month summation of the monthly emissions see section A.I.2.a and 2.b
OAC rule 3745-21-07(E)(1)(c)	see section A.I.2.g
Equipment Leaks	
40 CFR 63, subpart A	see sections A.I.2.c and 2.d
40 CFR 63, subpart CC	see sections A.I.2.d and 2.e
OAC rule 3745-21-09(T)	see section A.I.2.f

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(T) and 40 CFR part 63 subparts A and C.

2.b This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the VOC emissions, upon issuance of this permit. The emissions of VOC from this emissions unit shall not exceed 1.58 tons per year, based upon a rolling, 12-month summation of the VOC emissions.

2.c 40 CFR part 63 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR part 63.

2.d Table 6 of 40 CFR part 63 subpart CC specifies the provisions of 40 CFR part 63 subpart A that apply and those that do not apply to permittees of sources subject to subpart CC of 40 CFR part 63.

2.e Refer to Part III, emissions unit P801, of this permit for the applicable equipment leak provisions found in sections A.I.2., A.II., A.III., A.IV. and A.V., referencing 40 CFR part 60, subpart VV.

2.f i. The monitoring, recordkeeping and reporting requirements of 40 CFR part 63, subpart CC contain a degree of compliance and control greater than this applicable regulation. Compliance with this applicable regulation may be demonstrated by maintaining compliance with 40 CFR part63, subpart CC for those components affected by both regulations.

ii. Refer to Part III, emissions unit P801, of this permit for the state requirements for equipment leaks found in sections A.I.2., A.II., A.III., A.IV. and A.V., referencing OAC 3745-21-09(T).

2.g The volatile photochemically reactive material is loaded under pressure and is loaded in pressurized railroad tank cars. Under normal operating conditions, there are no vapors displaced from the tank cars during loading and, therefore, complies with this rule by design.

II. Operational Restrictions

1. See the applicable sections in Part III, emissions unit P801, for equipment leaks in section A.II., referencing 40 CFR part 60, subpart VV. and OAC rule 3745-21-09(T).

III. Monitoring and/or Recordkeeping Requirements

1. See the applicable sections in Part III, emissions unit P801, for equipment leaks in section A.III., referencing 40 CFR part 60, subpart VV and OAC rule 3745-21-09(T).

2. The permittee shall monitor and record the monthly throughput (in gallons) of this emissions unit.

3. The permittee shall calculate and record monthly, the emissions of VOC from this emissions unit as a rolling, 12-month summation of the monthly emissions (in tons per year).

IV. Reporting Requirements

Emissions Unit ID: J006

1. See the applicable sections in Part III, source P801, for equipment leaks in A.IV., referencing 40 CFR part 60, subpart VV. and OAC rule 3745-21-09(T).

2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for J006. These reports shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

V. Testing Requirements

1. See the applicable sections in Part III, emissions unit P801, for equipment leaks in A.V., referencing 40 CFR part 60, subpart VV and OAC rule 3745-21-09(T).

2. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following methods(s):

   a. Emission limitation:
   1.60 tons of VOC per year, based upon a rolling, 12-month summation of the monthly emissions

   Applicable compliance method:
   Compliance with the annual emission limitation shall be demonstrated through the monitoring and record keeping requirements of section A.III. While loading the propane-propylene (PP) mix, the annual emissions shall be calculated using the company supplied emission factor of 0.0935 lb VOC per 1000 gallons multiplied by the annual throughput and divide by 2000 lbs per ton. While loading number 2 fuel oil, the annual emissions shall be calculated using the company supplied emission factor of 0.01 lb VOC per 1000 gallons loaded multiplied by the annual throughput and divide by 2000 lbs per ton and added to the previous calculated emissions for the PP mix.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this Permit to Install for emissions unit J006 (formerly P021) supercedes all requirements for P021 contained in PTI 04-0302 issued February 20, 1986.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (J006) (formerly P021) - Propylene-Propane railcar load rack with 6 loading arms using pressurized loading

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

Emissions Unit ID: J006

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Add rows as necessary

Operations, Property, and/or Equipment - (P009) - Plant 4 Flare, steam assisted; used as a control device for hydrocarbon emissions to the atmosphere from process vents, malfunctions, and emergency relief.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Nitrogen oxides (NO_x) emissions shall not exceed 19.34 pounds per hour and 84.72 tons per year, based upon a rolling, 365-day summation of the daily emissions; Filterable plus condensable particulate matter (PM) emissions shall not exceed 1.47 pounds per hour and 6.44 tons per year, based upon a rolling, 365-day summation of the daily emissions; Sulfur dioxide (SO_2) emissions shall not exceed 5.33 pounds per hour and 23.35 tons per year, based upon a rolling, 365-day summation of the daily emissions; Volatile organic compounds (VOC) emissions shall not exceed 1.06 pounds per hour and 4.66 tons per year, based upon a rolling, 365-day summation of the daily emissions; and See sections A.I.2.g and A.I.2.h.
OAC rule 3745-31-05(C)	See sections A.I.2.d and A.I.2.e.
OAC rule 3745-17-11(A)(2)	See section A.I.2.i.
OAC rule 3745-18-06(E)	See section A.I.2.i.
OAC rule 3745-21-07(B)	See section A.I.2.j.
OAC rule 3745-21-07(J)(3)	See section A.I.2.b
OAC rule 3745-21-08(B)	See section A.I.2.k.

OAC rule 3745-23-06(B)	See section A.I.2.l.
40 CFR Part 63, Subpart A	The flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. See section A.I.2.a
40 CFR Part 63, Subpart CC	See section A.I.2.c
40 CFR Part 60, Subpart A	See section A.I.2.c
40 CFR Part 60, Subpart J	See section A.I.2.f
40 CFR Part 60, Subpart GGG	See section A.I.2.b
OAC rule 3745-31-10 through 20	CO emissions shall not exceed 16.25 pounds per hour, 0.082 pound per million Btu of heat input, and 71.16 tons per year, based upon a rolling, 365-day summation of the daily emissions; Particulate matter emissions less than 10 microns in diameter (PM10) shall not exceed 1.47 pounds per hour, 0.0074 pound per million Btu of heat input, and 6.44 tons per year, based upon a rolling, 365-day summation of the daily emissions; and See section A.I.2.g.

2. Additional Terms and Conditions

2.a The permittee shall comply with the flare control device requirements found in 40 CFR Part 63.11, Subpart A [See section A.II.].

2.b The requirements specified by this rule are equivalent to or less stringent than those specified by 40 CFR Part 63.11, Subpart A [See section A.II.].

2.c Pursuant to 40 CFR Part 63.640(p), because this flare is a control device for an emissions unit that is subject to 40 CFR Part 60, Subparts A and GGG, the flare will be required to comply only with the provisions of 40 CFR Part 63, Subpart CC with respect to the Control Device Requirements under 40 CFR Part 60, Subpart A, Section 60.11.

2.d The permittee shall comply with the NSPS Subpart J requirements for hydrocarbon flaring devices by December 31, 2009.

2.e Compliance with the emission limitation under NSPS Subpart J, 40 CFR. 60.104(a)(1).

i. Continuous or Intermittent, Routinely-Generated Refinery Fuel Gases
For continuous or intermittent, routinely-generated refinery gases that are combusted in any of the NSPS Hydrocarbon Flaring Devices, the permittee shall comply with the emission limit at 40 CFR 60.104(a)(1) [See Section A.I.2.f] by December 31, 2009.

ii. Non-Routinely Generated Gases
The combustion of gases generated by the startup, shutdown, or malfunction of a refinery process unit or released to an NSPS Flaring Device as a result of relief valve leakage or other emergency malfunction are exempt from the requirement to comply with 40 CFR 60.104(a)(1).

2.f [60.104(a)(1)]
The permittee shall not burn in any fuel gas combustion device any fuel gas that contains a hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this paragraph.

2.g The hourly and annual emission limitations for CO, NOx, PM, PM10, and VOC were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

2.h The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(J)(3), 3745-31-10 through 20, 40 CFR Part 60, Subparts A and J, and 40 CFR Part 63, Subparts A and CC.

2.i The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.j The requirements established pursuant to this rule are equivalent to the VOC requirements established by OAC rule 3745-31-05(A)(3).

2.k The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

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On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.l The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, this rule is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The permittee shall meet the NSPS Subparts A and J requirements by using one or any combination of the following methods:

   a. Operating and maintaining a flare gas recovery system to prevent continuous or routine combustion in this emissions unit. Use of a flare gas recovery system on a flare obviates the need to continuously monitor emissions as otherwise required by 40 CFR 60.105(a)(4);

   b. Eliminating the routes of continuous or intermittent, routinely-generated refinery fuel gases to this emissions unit and operating the flaring device such that it only receives non-routinely generated gases, process upset gases, fuel gas released as a result of relief valve leakage or gases released due to other emergency malfunctions; or

   c. Operating this emissions unit as a fuel gas combustion device, monitoring it for the continuous or intermittent, routinely-generated refinery fuel gas streams put into the flare header, with:

      i. a CEMS as required by 40 CFR 60.105(a)(4);

      ii. a parametric monitoring system approved by U.S. EPA under 40 CFR 60.13(i);

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iii. an alternative monitoring system approved by U.S. EPA under 40 CFR 60.13(i).

The permittee shall identify the options that were implemented for each NSPS Hydrocarbon Flaring Device in the first report due after compliance with this section is achieved.

2. [63.11] FLARE REQUIREMENTS - 40 CFR Part 63, Subpart A

a. [63.11(a)]
Control device requirements. Applicability. 40 CFR Part 63.11 contains requirements for control devices used to comply with provisions in relevant standards. These requirements apply only to affected emissions units covered by relevant standards referring directly or indirectly to this section.

b. [63.11(b)]

i. [63.11(b)(1)]
Permittees using flares to comply with the provisions of 40 CFR Part 63, Subpart A, shall monitor these control devices to assure that they are operated and maintained in conformance with their designs.

ii. [63.11(b)(2)] and [60.18(c)(6)]
Flares shall be steam-assisted, air-assisted, or non-assisted.

iii. [63.11(b)(3)] and [60.18(e)]
Flares shall be operated at all times when emissions may be vented to them.

iv. [63.11(b)(5)] and [60.18(c)(2)]
Flares shall be operated with a flame present at all times. 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.

v. [63.11(b)(6)]
The permittee has the choice of adhering to the heat content specifications in 40 CFR Part 63.11(b)(6)(ii) [See section A.II], and the maximum tip velocity specifications in 63.11(b)(7) [See section A.II] or adhering to the requirements in 63.11(b)(6)(i) [See section A.II].

(a) [63.11(b)(6)(i)]
Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity V_{max}, as determined by the following equation:

$$V_{max}=(X_{H2}-K_1)* K_2$$

where:

V_{max}= maximum permitted velocity, m/sec;
K_1 = constant, 6.0 volume-percent hydrogen;
K_2 = constant, 3.9(m/sec)/volume-percent hydrogen; and
X_{H2} = the volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77 (Incorporated by reference as specified in 40 CFR Part 63.14).

The actual exit velocity of a flare shall be determined by the method specified in 40 CFR Part 63.11(b)(7)(i) [See section A.II].

(b) [63.11(b)(6)(ii)], [60.18(c)(3)] and [60.18(f)(3)]
Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 M/scm (200 Btu/scf) or greater if the flares is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the equation found in 40 CFR Part 63.11(b)(6)(ii).

vi. [63.11(b)(7)]

(a) [63.11(b)(7)(i)], [60.18(c)(4)(i)] and [60.18(f)(4)]
Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR Part 63.11(b)(7)(ii) and (b)(7)(iii) [See section A.II]. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR Part 60, of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(b) [63.11(b)(7)(ii)] and [60.18(c)(4)(ii)]
Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 40 CFR Part 63.11(b)(7)(i) [See section A.II], equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater

than 37.3 MJ/scm (1,000 Btu/scf).

(c) [63.11(b)(7)(iii)] and [60.18(e)(5)]
Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 40 CFR Part 63.11(b)(7)(i) [See section A.II], less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$$Log_{10}(V_{max})=(H_T+28.8)/31.7$$

where:

V_{max} = maximum permitted velocity, m/sec;
28.8 = constant;
31.7 = constant; and
H_T = the net heating value as determined in 40 CFR Part 63.11(b)(6) [See section A.II].

3. The permittee shall at all times and to the extent practicable, including during periods of Startup, Shutdown, upset and/or Malfunction of refinery process units, implement good air pollution control practices to minimize emissions from its Hydrocarbon Flaring Devices consistent with 40 CFR. 60.11(d). The permittee shall implement such good air pollution control practices to minimize Hydrocarbon Flaring Incidents by investigating, reporting and correcting all Hydrocarbon Flaring Incidents in accordance with the procedures in Paragraph 64.

"Hydrocarbon Flaring Incident" or "HC Flaring Incident" shall mean the continuous or intermittent Hydrocarbon Flaring, except for Acid Gas or Sour Water Stripper Gas or Tail Gas, at a Hydrocarbon Flaring Device that results in the emission of sulfur dioxide equal to, or greater than five-hundred 500 pounds in any 24-hour period; provided, however, that if 500 pounds or more of sulfur dioxide have been emitted in any 24-hour period and flaring continues into subsequent, contiguous, non-overlapping 24-hour period(s), each period of which results in emissions equal to, or in excess of 500 pounds of sulfur dioxide, then only one HC Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the HC Flaring Incident.

III. Monitoring and/or Recordkeeping Requirements

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1. The permittee shall maintain records which provide the following information for each known relief which results in non-smokeless operation of the flare:

   a. the date, time, and duration of the relief;

   b. the flare involved;

   c. the process unit(s) associated with the relief;

   d. the cause of the relief; and

   e. the corrective actions taken.

2. The permittee shall record the following information each day:

   a. all periods during which there was no pilot flame; and

   b. the operating times for the flare, monitoring equipment, and the associated emissions unit.

3. Periodic maintenance may be required for properly designed and operated flare gas recovery systems. The permittee shall take all reasonable measures to minimize emissions while such periodic maintenance on a flare gas recovery system is being performed.

4. The permittee shall at all times and to the extent practicable, including during periods of Startup, Shutdown, upset and/or Malfunction of refinery process units, implement good air pollution control practices to minimize emissions from its Hydrocarbon Flaring Devices consistent with 40 CFR. 60.11(d). The permittee shall implement such good air pollution control practices to minimize Hydrocarbon Flaring Incidents by investigating, reporting and correcting all Hydrocarbon Flaring Incidents.

5. The permittee shall install, calibrate, maintain, and operate continuous monitoring systems as follows:

   a. an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device.

      i. The span value for this instrument is 425 mg/dscm H_2S.

      ii. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned.

      iii. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c)

shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

b. The permittee shall maintain records of data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

i. emissions of hydrogen sulfide in parts per million on an instantaneous (one-minute) basis;

ii. emissions of hydrogen sulfide, in all units of the applicable standard(s) and in the appropriate averaging period;

iii. results of quarterly cylinder gas audits;

iv. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

v. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

vi. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

vii. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

viii. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

ix. the reason (if known) and the corrective actions taken (if any) for each such event in (vii) and (viii).

In lieu of installing a hydrogen sulfide continuous monitoring system specified under 40 CFR 60.105(a)(4), the permittee may request pursuant to 40 CFR 60.13(i) permission from U.S. EPA to use an alternative monitoring plan.

6. Acid Gas Flaring Incidents.

"Acid Gas Flaring Incident" or "AG Flaring Incident" shall mean the continuous or

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intermittent combustion of Acid Gas and/or Sour Water Stripper Gas that results in the emission of sulfur dioxide equal to, or in excess of, 500 pounds in any 24-hour period; provided, however, that if 500 pounds or more of sulfur dioxide have been emitted in a 24-hour period and flaring continues into subsequent, contiguous, non-overlapping 24-hour period(s), each period of which results in emissions equal to, or in excess of 500 pounds of sulfur dioxide, then only one AG Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the AG Flaring Incident.

a. The permittee shall investigate the cause of Acid Gas Flaring, take reasonable steps to correct the conditions that have caused or contributed to such Acid Gas Flaring, and minimize Acid Gas Flaring. The permittee shall follow the procedures in this section "Acid Gas Flaring Incidents" to evaluate whether Acid Gas/Sour Water Stripper Gas Flaring Incidents are due to Malfunctions.

b. Corrective Action.

i. In response to any AG Flaring Incident, the permittee shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all significant contributing causes of that AG Flaring Incident.

"Root Cause" shall mean the primary cause(s) of an AG Flaring Incident(s), or Hydrocarbon Flaring Incident as determined through a process of investigation.

ii. If EPA does not notify the permittee in writing within 45 days of receipt of the report(s) required by Section A.IV.3 that it objects to one or more aspects of the proposed corrective action(s) and schedule(s) of implementation, if any, then that (those) action(s) and schedule(s) shall be deemed acceptable for purposes of compliance with this paragraph. EPA does not, however, by its failure to object to any corrective action that the permittee may take in the future, warrant or aver in any manner that any corrective actions in the future shall result in compliance with the provisions of the Clean Air Act or its implementing regulations.

iii. If EPA objects, in whole or in part, to the proposed corrective action(s) and/or the schedule(s) of implementation or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify the permittee and explain the basis for its objection (s) in writing within 45 days following receipt of the report(s) required by Section A.IV.3. The permittee shall respond within 45 days to EPA’s objection(s).

iv. Nothing in sections A.III.6 or A.IV.3 shall be construed to limit the right of the permittee to take such corrective actions as it deems necessary and

appropriate immediately following an Acid Gas Flaring Incident or in the period during preparation and review of any reports required under this Paragraph.

d. Emission Calculations.

i. Calculation of the Quantity of Sulfur Dioxide Emissions Resulting from AG Flaring.

The quantity of SO_2 emissions resulting from AG Flaring Incident shall be calculated by the following formula:

Tons of SO_2 = [FR][TD][ConcH_2S][8.44x10-5].

Where:

FR = Average Flow Rate to Flaring Device(s) during Flaring Incident in standard cubic feet per hour

TD = Total Duration of Flaring Incident in hours

ConcH_2S = Average Concentration of Hydrogen Sulfide in gas during Flaring Incident (or immediately prior to Flaring Incident if all gas is being flared) expressed as a volume fraction (scf H_2S/scf gas)

8.44 x 10-5 = [lb mole H_2S/379 scf H_2S][64 lbs SO_2/lb mole H_2S][Ton/2000 lbs]

The quantity of SO_2 emitted shall be rounded to one decimal point. (Thus, for example, for a calculation that results in a number equal to 10.050 tons, the quantity of SO_2 emitted shall be rounded to 10.1 tons, and less than 10.050 shall be rounded to 10.0.) For purposes of determining the occurrence of, or the total quantity of SO_2 emissions resulting from, an AG Flaring Incident that is comprised of intermittent AG Flaring, the quantity of SO_2 emitted shall be equal to the sum of the quantities of SO_2 flared during each 24-hour period starting when the Acid Gas was first flared.

ii. Calculation of the Rate of SO_2 Emissions During AG Flaring

The rate of SO_2 emissions resulting from AG Flaring Incident shall be expressed in terms of pounds per hour and shall be calculated by the following formula:

ER = [FR][ConcH_2S][0.169].

Where:

ER = Emission Rate in pounds of SO_2 per hour

0.169 = [lb mole H_2S/379 scf H_2S][1.0 lb mole SO_2/1 lb mole H_2S][64 lb SO_2/1.0 lb mole SO_2]

The emission rate shall be rounded to one decimal point. (Thus, for example, for a calculation that results in an emission rate of 19.95 pounds of SO_2 per hour, the emission rate shall be rounded to 20.0 pounds of SO_2 per hour; for a calculation that results in an emission rate of 20.05 pounds of SO_2 per hour, the emission rate shall be rounded to 20.1.)

The flow of gas to the AG Flaring Device(s) ("FR") shall be as measured by the relevant flow meter or reliable flow estimation parameters. Hydrogen sulfide concentration ("ConcH_2S") shall be determined from the Sulfur Recovery Plant feed gas analyzer, from knowledge of the sulfur content of the process gas being flared, by direct measurement by tutwiler or draeger tube analysis or by any other method approved by EPA or the Ohio EPA. In the event that any of these data points is unavailable or inaccurate, the missing data point(s) shall be estimated according to best engineering judgment. The report required under Section A.IV.3 shall include the data used in the calculation and an explanation of the basis for any estimates of missing data points.

7. Within 180 days of installing the H_2S continuous monitoring system, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

   The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that summarize the information in items a. through e. in section A.III.1. for each relief. These reports shall be submitted to the Toledo Division of Environmental Services by January 31 and July 31 of each year

and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports identifying all periods of time during which there was no pilot flame. These reports shall be submitted to the Toledo Division of Environmental Services by January 31, April 31, and July 31, and October 31 of each year and shall cover the previous calendar quarter.

3. Acid Gas Flaring Incident Investigation and Reporting

   No later than 45 days following the end of an Acid Gas Flaring Incident, the permittee shall submit to EPA, the Ohio EPA, and the Toledo Division of Environmental Services a report that sets forth the following:

   a. The date and time that the Acid Gas Flaring Incident started and ended.

      To the extent that the Acid Gas Flaring Incident involved multiple releases either within a 24-hour period or within subsequent, contiguous, non-overlapping 24-hour periods, the permittee shall set forth the starting and ending dates and times of each release;

   b. An estimate of the quantity of sulfur dioxide that was emitted and the calculations that were used to determine that quantity;

   c. The steps, if any, that the permittee took to limit the duration and/or quantity of sulfur dioxide emissions associated with the Acid Gas Flaring Incident;

   d. A detailed analysis that sets forth the Root Cause and all significant contributing causes of that Acid Gas Flaring Incident, to the extent determinable;

   e. An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of an Acid Gas Flaring Incident resulting from the same Root Cause or significant contributing causes in the future. If two or more reasonable alternatives exist to address the Root Cause, the analysis shall discuss the alternatives that are available, the probable effectiveness and cost of the alternatives, and whether or not an outside consultant should be retained to assist in the analysis. Possible design, operation and maintenance changes shall be evaluated. If the permittee concludes that corrective action(s) is (are) required under this paragraph, the report shall include a description of the action(s) and, if not already completed, a schedule for its (their) implementation, including proposed commencement and completion dates. If the permittee concludes that corrective action is not required under this paragraph, the report shall explain the basis for that conclusion;

f. To the extent that investigations of the causes and/or possible corrective actions still are underway on the due date of the report, a statement of the anticipated date by which a follow-up report fully conforming to the requirements of d. and e. of this paragraph shall be submitted. Nothing in this Paragraph shall be deemed to excuse the permittee from its investigation, reporting, and corrective action obligations under this Section for any Acid Gas Flaring Incident which occurs after an Acid Gas Flaring Incident for which the permittee has requested an extension of time under this Paragraph; and

g. To the extent that completion of the implementation of corrective action(s), if any, is not finalized at the time of the submission of the report required under this paragraph, then, by no later than 30 days after completion of the implementation of corrective action(s), the permittee shall submit a report identifying the corrective action(s) taken and the dates of commencement and completion of implementation.

4. Prior to the installation of the continuous hydrogen sulfide monitoring system required by Section A.III, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 7. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous hydrogen sulfide monitoring system meets the requirements of Performance Specification 7. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request.

   Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

5. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system after installation of the monitoring system required in Section A.III:

   a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. the location of the continuous hydrogen sulfide monitor;

iv. the exceedance report as detailed in (a) above;

v. the total hydrogen sulfide emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction* of the continuous hydrogen sulfide monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime* of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

Issued: To be entered upon final issuance

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following method:

   a. Emission Limitation:
   No visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours

   Applicable Compliance Method:
   If required, compliance shall be demonstrated through visible emission observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A. The observation period shall be 2 hours.

   b. Emission Limitation:

   Carbon monoxide (CO) emissions shall not exceed 16.25 pounds per hour.

   Applicable Compliance Method:

   Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply the result by the maximum heat input capacity of 197.29 mmBtu per hour.

   A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

   c. Emission Limitation:

   CO emissions shall not exceed 71.16 tons per year tons per year, based upon a rolling, 365-day summation of the daily emissions.

   Applicable Compliance Method:

   This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations based on

emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot, multiply by the maximum heat input capacity of 197.29 mmBtu per hour, multiply by the maximum annual hours of operation (8,760 hrs/yr) and divide by 2,000 pounds per ton.

d. Emission Limitation:

NOx emissions shall not exceed 19.34 pounds per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on the low-NOx burner emission factor supplied by the permittee as follows: multiply the emission factor of 0.04 pound of NOx emissions per million Btu by the maximum heat input capacity of 197.29 mmBtu per hour.

A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

e. Emission Limitation:

NOx emissions shall not exceed 84.72 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 19.34 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

f. Emission Limitation:

Filterable plus condensable PM emissions shall not exceed 1.47 pounds per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 7.6 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 197.29 mmBtu per hour.

A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

g. Emission Limitation:

Filterable plus condensable PM emissions shall not exceed 6.44 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 1.47 pound of PE per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

h. Emission Limitation:

PM_{10} emissions shall not exceed 1.47 pounds per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 7.6 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 197.29 mmBtu per hour.

A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

i. Emission Limitation:

Filterable plus condensable PM_{10} emissions shall not exceed 6.44 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

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This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 1.47 pounds of PE per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

j. Emission Limitation:

The permittee shall not burn in any fuel gas combustion device any fuel gas that contains a hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf)

Applicable Compliance Method:

The monitoring and recordkeeping requirements of Section III shall be used to demonstrate compliance. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(a) and (e)(1). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

k. Emission Limitation:

SO_2 emissions shall not exceed 5.33 pounds per hour.

Applicable Compliance Method:

This emission limitation was established by the following emission calculation using the SO_2 emission factor of 0.027 pound per million Btu of heat input derived from the NSPS H_2S limitation of 0.01 gr/dscf: multiply the emission factor of 0.027 pound of SO_2 emissions per million Btu by the maximum heat input capacity of 197.29 mmBtu per hour.

A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

l. Emission Limitation:

SO_2 emissions shall not exceed 23.35 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 5.33 pounds of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

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m. Emission Limitation:

VOC emissions shall not exceed 1.06 pounds per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 197.29 mmBtu per hour.

A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

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n. Emission Limitation:

VOC emissions shall not exceed 4.66 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot, multiply by the maximum heat input capacity of 197.29 mmBtu per hour, multiply by the maximum annual hours of operation (8,760 hours/yr), and divide by 2,000 pounds per ton.

o. Emission Limitation:

PM_{10} emissions shall not exceed 0.0074 pound per million Btu of heat input

Applicable Compliance Method:

This emission limitation was established based on the emission factor contained in AP-42 Table 1.4-2 dated 7/98. A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

p. Emission Limitation:

CO emissions shall not exceed 0.082 pound per million Btu of heat input

Applicable Compliance Method:

This emission limitation was established based on the emission factor contained in AP-42 Table 1.4-1 dated 7/98. A stack emission testing compliance method is not included, since this emissions unit is an open flare that does not have a stack that can be used to conduct a standard EPA emissions test.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

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a. The emission testing shall be conducted within 90 days after bringing this emissions unit into compliance with NSPS Subparts A and J, in accord with the provisions of Section A.II.1.

b. The emission testing shall be conducted to demonstrate compliance with the visible emission limitation and the operational restrictions of Sections A.II.2.b.v and vi for velocity and heating value.

c. The following test method(s) shall be employed to demonstrate compliance with the visible emission limitation and the operational restrictions of Sections A.II.2.b.v and vi:

Compliance with the visible emission limitations shall be demonstrated through visible emission observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A. The observation period shall be 2 hours.

The procedures of 40 CFR Part 63.11(b)(7)(i) shall be used to determine the exit velocity. In lieu of conducting the velocity test, the permittee may submit velocity calculations which demonstrate that the NSPS Hydrocarbon Flaring Device meets the performance specification required by Section A.II.2.b.v and vi.

The procedures of 40 CFR Part 63.11(b)(6)(ii) shall be used to determine the heating value.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Toledo Division of Environmental Services' refusal to accept the results of the emission test(s).

f. Personnel from the Toledo Division of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

3. Within 60 days of installing the continuous H_2S monitoring system required by Section A.III, the effective date of this permit, the permittee shall conduct certification tests of the continuous hydrogen sulfide monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 7 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous hydrogen sulfide monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7 and ORC section 3704.03(I).

Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P009) - Plant 4 flare (198 mmBtu/hr) with new flare tips

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05	Limit(s)

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P011) - fluidized catalytic cracking (FCC) unit with a processing capacity of 100,000 barrels per day; emissions controls consist of two CO boilers (B046 and B047), SCR system for NOx control, and a wet gas scrubber for SO_2 and particulate control.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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OAC rule 3745-31-05(A)(3)	The combined filterable particulate matter (PM) emissions from the FCCU (Emissions unit P011) and the CO Boilers (B046 and B047) shall not exceed 0.45 pound per thousand pounds of coke-burnoff; The combined sulfur dioxide (SO_2) emissions from P011, B046, and B047 shall not exceed 316 pounds per hour; The combined volatile organic compound (VOC) emissions from the FCCU (Emissions Unit P011) and the CO Boilers (Emissions Units B046 and B047) shall not exceed 3.67 pounds per hour; The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 10 ppmvd and 215.84 tons per year, based upon a rolling, 365-day summation of the daily emissions; and See sections A.I.2.a, A.I.2.n.

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OAC rule 3745-31-05(C)	The combined nitrogen oxides (NOx) emissions from P011, B046 and B047 shall not exceed 198.51 tons per year, based upon a rolling, 365-day summation of the daily emissions; The combined filterable PM emissions from P011, B046 and B047 shall not exceed 165.96 tons per year; The combined SO_2 emissions from P011, B046 and B047 shall not exceed 345.71 tons per year, based upon a rolling, 365-day summation of the daily emissions; The combined VOC emissions from the FCCU (Emissions Unit P011) and the CO Boilers (Emissions Units B046 and B047) shall not exceed 16.07 tons per year, based upon a rolling, 365-day summation of the daily emissions; See sections A.I.2.b, A.I.2.d, A.I.2.o through A.I.2.r and A.I.2.t
OAC rule 3745-17-07(A)	Visible emissions shall not exceed 20% opacity, unless otherwise specified by the rule.
OAC rule 3745-17-11(B)(1)	See section A.I.2.e.
OAC rule 3745-18-54(O)(3)	The combined emissions from P011, B046 and B047 shall not exceed 3.00 pounds of sulfur dioxide (SO_2) per thousand pounds of fresh feed.
OAC rule 3745-21-07(B)	See section A.I.2.h.
OAC rule 3745-21-08(B)	See section A.I.2.f.
OAC rule 3745-21-08(E)	See section A.I.2.e.
OAC rule 3745-21-09(T)	See section A.I.2.n.
OAC rule 3745-23-06(B)	See section A.I.2.g.
40 CFR Part 60, Subpart A	See section and A.I.2.s.
40 CFR Part 60, Subpart J	See section A.I.2.u.
40 CFR Part 63, Subpart A	See section A.I.2.k.
40 CFR Part 63, Subpart UUU	See sections A.2.i, A.I.2.j, A.I.2.l, and A.I.2.m.

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OAC rule 3745-31-10 through 20	The combined CO emissions from P011, B046 and B047 shall be reduced by a minimum of 99% control efficiency and shall not exceed and 500 parts per million by volume dry (ppmvd) at 0% oxygen as a 1-hour average, or 180 ppmvd at 0% oxygen as a rolling, 365-day average, or 1,087.28 tons per year, based upon a rolling, 365-day summation of the daily emissions; and The combined PM_{10} emissions from P011, B046 and B047 shall be controlled by a minimum of 95% and shall not exceed 0.90 pound per thousand pounds of coke-burnoff or 331.92 tons per year, based upon a rolling, 365-day summation of the daily emissions.

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-11(A)(4), 3745-18-54(O)(3), 3745-21-08(E), 3745-21-07(B), 3745-21-09(T), 3745-31-05(C), and 3745-31-10 through 20, 40 CFR Part 60, Subparts A and J, and 40 CFR Part 63, Subpart UUU.

2.b Beginning at initial startup after the FCCU expansion, the permittee shall operate its FCCU so that the combined NOx emissions from P011, B046 and B047 do not exceed 20 ppmvd based on a 365-day rolling average or 40 ppmvd based on a 7-day rolling average, each at 0% oxygen.

2.c The permittee's FCCU Regenerators shall be affected facilities subject to the requirements of NSPS Subparts A and J for each relevant pollutant by the dates specified below:

CO	3/14/2008
Opacity	12/31/2009
PM	3/14/2006
SO_2	12/31/2009

2.d Beginning at startup after the FCCU expansion and by no later than December 31, 2009, the combined SO_2 emissions from the P011, B046 and B047 shall not exceed 25 ppmvd based on a 365-day rolling average or 50 ppmvd based on a 7-day rolling average, each at 0% oxygen.

2.e The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.f The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the

BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.g The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, this rule is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.h The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

2.i METAL HAP EMISSIONS
The permittee must meet each emission limitation in Table 1 [see section A.VI.] of 40 CFR Part 63, Subpart UUU that applies to this emissions unit. The permittee can choose from the four following options:

i. [63.1564(a)(1)(i)]
The permittee can elect to comply with the NSPS requirements (Option 1);

ii. [63.1564(a)(1)(ii)]
The permittee can elect to comply with the PM emission limit (Option 2);

iii. [63.1564(a)(1)(iii)]
The permittee can elect to comply with the Nickel (Ni) lb/hr emission limit

(Option 3); or

iv. [63.1564(a)(1)(iv)]
The permittee can elect to comply with the Ni lb/1,000 lbs of coke burn-off emission limit (Option 4).

2.j ORGANIC HAP EMISSIONS
The permittee shall meet each emission limitation in Table 8 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit for organic HAP emissions. The permittee can choose from the following two options:

i. [63.1565(a)(1)(i)]
The permittee can elect to comply with the NSPS requirements (Option 1); or

ii. [63.1565(a)(1)(ii)]
The permittee can elect to comply with the CO emission limit (Option 2).

2.k Table 44 of 40 CFR Part 63, Subpart UUU [see section A.VI.] shows which parts of the General Provisions in 40 CFR Part 63.1 through 63.15 apply to this emissions unit.

2.l HAP EMISSIONS FROM BYPASS LINES
The permittee must meet each work practice standard in Table 36 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit. The permittee can choose from the four following options:

i. [63.1569(a)(1)(i)]
The permittee can elect to install an automated system (Option 1);

ii. [63.1569(a)(1)(ii)]
The permittee can elect to use a manual lock system (Option 2);

iii. [63.1569(a)(1)(iii)]
The permittee can elect to seal the line (Option 3); or

iv. [63.1569(a)(1)(iv)]
The permittee can elect to vent to a control device (Option 4).

2.m [63.1569(a)(2)]
As provided in 40 CFR Part 63.6(g), the EPA, may choose to grant the permittee permission to use an alternative to the work practice standard in 40 CFR Part 63.1569(a)(1) [see section A.I.2.].

2.n Refer to Emissions Unit P801 in Section III of this permit for the terms and conditions associated with equipment leaks. The VOC emissions from equipment leaks from this emissions unit are contained in the total refinery equipment leak emissions contained in P801.

2.o Within 180 days of March 14, 2008, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous CO monitoring system, designed to ensure continuous valid and representative readings of CO emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

2.p Within 180 days after initial startup after the FCCU expansion, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NOx monitoring system, designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

2.q The permittee shall develop and maintain a written quality assurance/quality control plan for the continuous opacity monitoring system, designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60. The plan shall include, at a minimum, procedures for conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring accurate operation of the continuous opacity monitoring system on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.

2.r Within 180 days after initial startup after the FCCU expansion, the permittee shall

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develop and maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

2.s 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

2.t Pursuant to 40 CFR 60.13(i)(1), the permittee has applied to the U.S. EPA for use of the following alternative monitoring plan instead of using a continuous opacity monitor as specified by 40 CFR 60.105(a)(1). If the U.S. EPA approves the alternative monitoring plan, the permittee does not have to comply continuous opacity monitoring, recordkeeping and reporting requirements of Sections A.I, A.III, A.IV, and A.V beginning with the date of approval of the alternative monitoring plan by the U.S. EPA.

2.u The opacity limitation specified by this rule is less stringent than the limitation specified by OAC rule 3745-17-07(A). The SO_2 emission limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(C). The PM limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3). The ppm CO emission limitation specified by this rule is equivalent to the emission limitation established pursuant to OAC rules 3745-31-10 through 20.

II. Operational Restrictions

1. [63.1564(a)(2)] OPERATING LIMITS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS - 40 CFR Part 63, Subpart UUU
The permittee must comply with each operating limit in Table 2 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit.

[63.1565(a)(2)] OPERATING LIMITS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS (CCU) - 40 CFR Part 63, Subpart UUU
The permittee must comply with each site-specific operating limit in Table 9 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit.

2. The combined emissions of CO, NOx, PM_{10}, SO_2, and VOC from P011, B046 and B047 shall not exceed 1,087.28, 198.51, 332.95, 345.71, and 16.07 tons per year respectively,

based upon a rolling, 365-day summation of the daily emissions.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Emissions of CO (Tons)	Maximum Allowable Cumulative Emissions of NOx (Tons)	Maximum Allowable Cumulative Emissions of PM_{10}	Maximum Allowable Cumulative Emissions of SO_2	Maximum Allowable Cumulative Emissions of VOC
1	250	30	28	58	1.4
1-2	500	60	56	116	2.8
1-3	750	90	84	174	4.2
1-4	1,000	120	112	232	5.6
1-5	1,087.28	150	140	290	7
1-6	1,087.28	180	168	345.71	8.4
1-7	1,087.28	198.51	196	345.71	9.8
1-8	1,087.28	198.51	224	345.71	11.2
1-9	1,087.28	198.51	252	345.71	12.6
1-10	1,087.28	198.51	280	345.71	14
1-11	1,087.28	198.51	308	345.71	15.4
1-12	1,087.28	198.51	331.92	345.71	16.07

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual emission limitation for CO, NOx, PM10, SO_2, and VOC shall be based upon a 365-day summation of the daily emissions.

3. Prior to the initial test demonstrating compliance with the 0.45 lb filterable PM per thousand pounds of coke-burnoff emission limitation:

   a. the pressure of the water supplied at the discharge of the recirculation pumps supplying water to the Agglo-Filtering modules shall be continuously maintained at a value of not less than that suggested by the manufacturer as appropriate for the design control efficiency at all times while the FCCU is in operation;

   b. the flue gas static pressure drop across the Agglo-Filtering modules shall be continuously maintained at a value of not less than that suggested by the manufacturer as appropriate for the design control efficiency at all times while the FCCU is in operation.

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Within 30 days prior to startup of the wet gas scrubber, the permittee shall report in writing to the Toledo Division of Environmental Services the minimum values for the pressure of the water supplied at the discharge of the recirculation pumps supplying water to the Agglo-Filtering modules, and the flue gas static pressure drop across the Agglo-Filtering modules.

4. After the initial test demonstrating compliance with the 0.45 lb filterable PM per thousand pounds of coke-burnoff emission limitation:

   a. the permittee shall maintain the pressure of the water supplied at the discharge of the recirculation pumps supplying water to the Agglo-Filtering modules at a value of not less than the pressure as determined during the initial compliance test demonstrating compliance at all times while the FCCU is in operation.

   b. the flue gas static pressure drop across the Agglo-Filtering modules shall be continuously maintained at a value of not less than that determined during the initial compliance test demonstrating compliance at all times while the FCCU is in operation.

5. The permittee shall maintain an ammonia slip rate from the SCR unit of less than 5 ppmv.

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III. Monitoring and/or Recordkeeping Requirements

1. Prior to conducting performance tests for CO under Section A.V.2, the permittee shall install a continuous CO emissions monitoring system. Prior to the installation of the continuous CO monitoring system, the permittee shall submit information to the Toledo Division of Environmental Services and to the Ohio EPA, Central Office, detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a, as appropriate, for approval by the Ohio EPA, Central Office.

   Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

2. Prior to conducting performance tests for CO under Section A.V.2, the permittee shall operate and maintain equipment to continuously monitor and record CO emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60. The span value for this instrument shall be 1,000 ppm CO.

   The permittee shall maintain records of data obtained by the continuous CO monitoring system including, but not limited to:

   a. emissions of CO in parts per million on an instantaneous (one-minute) basis;

   b. emissions of CO in all units of the applicable standard(s) in the appropriate averaging period (ppmvd at 0% O_2 1-hr average and ppmvd at 0% O_2 as a rolling, 365-day average);

   c. results of quarterly cylinder gas audits;

   d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

   e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

   f. hours of operation of the emissions unit, continuous CO monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

3. Prior to conducting performance tests for NOx under Section A.V.2, the permittee shall install a continuous NOx emissions monitoring system. Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

   Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

4. Prior to conducting performance tests for NOx under Section A.V.2, the permittee shall operate, and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

   The permittee shall maintain records of data obtained by the continuous NOx monitoring system including, but not limited to:

   a. emissions of NOx in parts per million on an instantaneous (one-minute) basis;

   b. emissions of NOx in all units of the applicable standard(s) in the appropriate averaging period (ppmvd at 0% O_2 as a 7-day, rolling average and ppmvd at 0% O_2 as a rolling, 365-day summation of the daily emissions);

   c. results of quarterly cylinder gas audits;

   d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

   e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

   f. hours of operation of the emissions unit, continuous NOx monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NOx monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NOx monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

5. Pursuant to 40 CFR 60.13(i)(1), the permittee has applied to the U.S. EPA for use of the following alternative monitoring plan instead of using a continuous opacity monitor as specified by 40 CFR 60.105(a)(1). If U.S. EPA approves the alternative monitoring plan, the permittee shall comply with the monitoring and recordkeeping requirements of this section.

   a. The permittee shall continuously monitor and record the pressure of the water supplied to at the discharge of the recirculation pumps supplying water to the EDV-6000 Agglo-Filtering modules. Pressure below the specified range will indicate a decrease in the filtering module efficiency.

   b. The permittee shall continuously monitor and record the flue gas pressure drop across the Agglo-Filtering modules. A pressure differential below the specified range will indicate a decrease in the filtering module efficiency.

   If the above alternative monitoring plan is approved by U.S. EPA, the permittee shall implement the above monitoring plan, and is not required to install and operate a continuous opacity monitoring system as specified in 40 CFR 60.105(a)(1).

6. The permittee shall maintain on-site documentation from the U.S. EPA or the Ohio EPA's Central Office verifying that the continuous opacity monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

   Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

7. The permittee shall operate and maintain the continuous opacity monitoring system to

continuously monitor and record the opacity of the particulate emissions from this emissions unit. The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60. The continuous opacity monitoring system shall be spanned at 60, 70, or 80 percent opacity.

The permittee shall maintain records of data obtained by the continuous opacity monitoring system including, but not limited to:

a. percent opacity on an instantaneous (one-minute) and 6-minute block average basis;

b. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

c. hours of operation of the emissions unit, continuous opacity monitoring system, and control equipment;

d. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous opacity monitoring system;

e. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous opacity monitoring system; as well as,

f. the reason (if known) and the corrective actions taken (if any) for each such event in (d) and (e).

8. The permittee shall obtain a daily (Monday through Friday, except for holidays) sample of the FCC fresh feed and have it analyzed for density and sulfur content in accordance with the applicable ASTM methods. The permittee may assume that the fraction emitted (FE) is the same as was determined in the most recent stack test performed on the unit. (In the stack test performed September 12, 2002, the FE was 0.175.) Using this method, the SO_2 emission rate from the FCC regenerator shall be calculated as follows:

F * d * S * FE * 8.33 lb/gal * 42 gal/bbl = SO_2 emission rate from FCC regenerator, lb/day

where:

F = daily average feed rate to the FCC, bbl/day;
d = specific gravity of the FCC fresh feed; and
S = sulfur weight fraction in the feed of the FCC unit, in pounds of sulfur per pound of feed.

9. The permittee shall maintain daily records of the calculated SO_2 emission rate in pounds of sulfur dioxide per 1000 pounds of fresh feed. The SO_2 emission rate shall be

calculated as follows:

(SO_2 emission rate from the FCC regenerator + the SO_2 emission rate from B046 + the SO_2 emission rate from B047)/ FCC fresh feed rate in thousands of pounds of fresh feed per day.

10. If on any day the calculated SO_2 emission rate exceeds 3.00 lb SO_2 per 1000 lbs fresh feed, the permittee shall immediately take another FCC fresh feed sample and retest the feed sulfur and density. If the second sample results show a value above 3.00 lb SO_2 per 1000 lbs fresh feed, the permittee shall immediately take steps to reduce the amount of sulfur in the FCC fresh feed. These steps include, but are not limited to: crude diet changes, feed composition changes, or other appropriate methods to stay below 3.00 lb SO_2 per 1000 lbs fresh feed.

11. Prior to conducting performance tests for SO_2 under Section A.V.2, the permittee shall install a continuous SO_2 emissions monitoring system. The span value of the monitor shall be set at 50 percent of the maximum estimated hourly potential sulfur dioxide emission concentration of the control device. Prior to the installation of the continuous SO_2 monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

    Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

12. Prior to conducting performance tests for SO_2 under Section A.V.2, the permittee shall operate, and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

    The permittee shall maintain records of data obtained by the continuous SO_2 monitoring system including, but not limited to:

    a. emissions of SO_2 in parts per million on an instantaneous (one-minute) basis;

    b. emissions of SO_2 in all units of the applicable standard(s) in the appropriate averaging period (pounds per thousand barrels of fresh feed, ppmvd at 0% O_2 as a 7-day, rolling average and ppmvd at 0% O_2 as a rolling, 365-day summation of the daily emissions);

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous SO_2 monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO_2 monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (k) and (l).

13. When SO_2 emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using one of the following methods to provide emission data for a minimum of 18 hours a day in at least 22 out of 30 rolling consecutive calendar days.

    a. The test methods as described in 40 CFR 60.106(k);

    b. A spare continuous monitoring system; or

    c. Other monitoring systems as approved by the Administrator of U.S. EPA.

14. The permittee shall record daily the average coke burn-off rate (Mg (tons) per hour) using the procedures of 40 CFR 60.106(b)(3) and the hours of operation. The Federal Register of August 8, 2005 proposed change to the equation contained in 40 CFR 60.106(B)(3) as listed below:

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15. The permittee shall record daily the rate of combustion of liquid fossil-fuels and the hours of operation during which liquid fossil-fuels are combusted in the CO Boilers (Emissions Units B046 and B047) and exhaust gases from the catalyst regenerator are combusted in the CO Boilers.

16. The permittee shall monitor the ammonia slip emissions from the SCR system by an emission calculation using the inlet ammonia injection concentration and the inlet NOx concentration upstream of the SCR and the outlet NOx out of the stack to calculate an ammonia slip concentration.

    NH_3 (ppmv @ 15% O_2) = ((a-b*(c/1E6))*1E6/b)*d

    Where:
    a = NH3 injection rate(lb/hr)/17(lb/lbmol),
    b = dry exhaust gas flow rate (lb/hr)/(29(lb/lbmol), or
    b = dry exhaust flow rate (scf/hr) / 385.5 (scf/lbmol),
    c = change in measured NOx concentration ppmv corrected to 15% O_2 across catalyst, and
    d = correction factor.
    The correction factor shall be derived through compliance testing by comparing the measured and calculated ammonia slip.

17. [63.1564] REQUIREMENTS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS - 40 CFR Part 63, Subpart UUU

    a. [63.1564(a)]

        i. [63.1564(a)(3)]
        The permittee must prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR Part 63.1574(f) [see section A.IV.] and operate at all times according to the procedures in the plan.

ii. [63.1564(a)(4)]
The emission limitations and operating limits for metal HAP emissions from catalytic cracking units required in 40 CFR Part 63.1564(a)(1) and (2) [see sections A.I.2. and A.II.] of this section do not apply during periods of planned maintenance pre-approved by the applicable permitting authority according to the requirements in 40 CFR Part 63.1575(j).

18. [63.1565(a)(3) and (4)] WORK PRACTICE STANDARDS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS (CCU) - 40 CFR Part 63, Subpart UUU

a. [63.1565(a)(3)]
The permittee must prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR Part 63.1574(f) [see section A.IV.] and operate at all times according to the procedures in the plan.

19. [63.1569(a)(3)] WORK PRACTICE STANDARDS FOR HAP EMISSIONS FOR BYPASS LINES - 40 CFR Part 63, Subpart UUU
The permittee must prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR Part 63.1574(f) [see section A.IV.] and operate at all times according to the procedures in the plan.

20. [63.1570] GENERAL COMPLIANCE REQUIREMENTS - 40 CFR Part 63, Subpart UUU

a. [63.1570(a)]
The permittee must be in compliance with all of the non-opacity standards in this subpart during the times specified in 40 CFR Part 63.6(f)(1).

b. [63.1570(b)]
The permittee must be in compliance with the opacity and visible emission limits in this subpart during the times specified in 40 CFR Part 63.6(h)(1).

c. [63.1570(c)]
The permittee must always operate and maintain the affected emissions unit, including air pollution control and monitoring equipment, according to the provisions in 40 CFR Part 63.6(e)(1)(i). During the period between April 11, 2005 and the date upon which continuous monitoring systems have been installed and validated and any applicable operating limits have been set, the permittee must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

d. [63.1570(d)]
The permittee must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR 63.6(e)(3).

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e. [63.1570(f)]
The permittee must report each instance in which each emission limitation that was not met and each applicable operating limit in 40 CFR Part 63, Subpart UUU that was not met. This includes periods of startup, shutdown, and malfunction. The permittee also must report each instance in which the applicable work practice standards in 40 CFR Part 63, Subpart UUU that were not met. These instances are deviations from the emission limitations and work practice standards in this subpart. These deviations must be reported according to the requirements in 40 CFR Part 63.1575 [see section A.IV.].

f. [63.1570(g)]
Consistent with 40 CFR Part 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if the permittee demonstrates to the Administrator's satisfaction that the permittee was operating in accordance with 40 CFR 63.6(e)(1). The SSMP must include elements designed to minimize the frequency of such periods (i.e., root cause analysis). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in 40 CFR Part 63.6(e).

21. [63.1572] MONITORING, INSTALLATION, OPERATION, AND MAINTENANCE REQUIREMENTS [Tables 40 and 41] - 40 CFR Part 63, Subpart UUU

a. [63.1572(a)]
The permittee must install, operate, and maintain each continuous emission monitoring system according to the requirements in 40 CFR Part 63.1572(a)(1) through (4).

i. [63.1572(a)(1)]
The permittee must install, operate, and maintain each continuous emission monitoring system according to the requirements in Table 40 of 40 CFR Part 63 Subpart UUU [see section A.VI.].

ii. [63.1572(a)(2)]
If the permittee uses a continuous emission monitoring system to meet the NSPS CO or SO_2 limit, the permittee must conduct a performance evaluation of each continuous emission monitoring system according to the requirements in 40 CFR Part 63.8. This requirement does not apply to an affected emissions unit subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification.

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iii. [63.1572(a)(3)]
As specified in 40 CFR Part 63.8(c)(4)(ii), each continuous emission monitoring system must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

iv. [63.1572(a)(4)]
Data must be reduced as specified in 40 CFR Part 63.8(g)(2).

b. [63.1572(b)]
The permittee must install, operate, and maintain each continuous opacity monitoring system according to the requirements in 40 CFR Part 63.1572(b)(1) through (3).

i. [63.1572(b)(1)]
Each continuous opacity monitoring system must be installed, operated, and maintained according to the requirements in Table 40 of 40 CFR Part 63 Subpart UUU [see section A.VI.].

ii. [63.1572(b)(2)]
If the permittee uses a continuous opacity monitoring system to meet the NSPS opacity limit, the permittee must conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in 40 CFR Part 63.8 and Table 40 of 40 CFR Part 63 Subpart UUU [see section A.VI.]. This requirement does not apply to an affected emissions unit subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification.

iii. [63.1572(b)(3)]
As specified in 40 CFR Part 63.8(c)(4)(i), each continuous opacity monitoring system must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

c. [63.1572(c)]
The permittee must install, operate, and maintain each continuous parameter monitoring system according to the following paragraphs of this section.

i. [63.1572(c)(1)]
The permittee shall install, operate, and maintain each continuous parameter monitoring system in a manner consistent with the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. The permittee shall also meet the equipment specifications in Table 41 of 40 CFR Part 63, Subpart UUU if pH strips or colormetric tube sampling systems are used.

ii. [63.1572(c)(2)]

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The continuous parameter monitoring system must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four successive cycles of operation to have a valid hour of data (or at least two if a calibration check is performed during that hour or if the continuous parameter monitoring system is out-of-control).

iii. [63.1572(c)(3)]
Each continuous parameter monitoring system must have valid hourly average data from at least 75 percent of the hours during which the process operated.

iv. [63.1572(c)(4)]
Each continuous parameter monitoring system must determine and record the hourly average of all recorded readings and if applicable, the daily average of all recorded readings for each operating day. The daily average must cover a 24-hour period if operation is continuous or the number of hours of operation per day if operation is not continuous.

v. [63.1572(c)(5)]
Each continuous parameter monitoring system must record the results of each inspection, calibration, and validation check.

d. [63.1572(d)]
The permittee must monitor and collect data according to the requirements in 40 CFR Part 63.1572(d)(1) and (d)(2) [see paragraph d.i. and d.ii. of this section].

i. [63.1572(d)(1)]
Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected unit is operating.

ii. [63.1572(d)(2)]
The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

22. [63.1573] MONITORING ALTERNATIVES - 40 CFR Part 63, Subpart UUU

a. i. [63.1573(a)(1)] APPROVED ALTERNATIVE FOR MONITORING GAS FLOW RATE
The permittee may use this alternative to a continuous parameter monitoring system for the catalytic regenerator exhaust gas flow rate for the catalytic

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cracking unit if the unit does not introduce any other gas streams into the catalyst regeneration vent (i.e., complete combustion units with no additional combustion devices). If this alternative is used, the permittee must use the same procedure for the performance test and for monitoring after the performance test. The permittee shall:

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(a) [63.1573(a)(1)(i)]
Install and operate a continuous parameter monitoring system to measure and record the hourly average volumetric air flow rate to the catalytic cracking unit regenerator. Or, the permittee may determine and record the hourly average volumetric air flow rate to the catalytic cracking unit regenerator using the catalytic cracking unit using the appropriate control room instrumentation.

(b) [63.1573(a)(1)(ii)]
Install and operate a continuous parameter monitoring system to measure and record the temperature of the gases entering the control device (or exiting the catalyst regenerator if the permittee does not use an add-on control device).

(c) [63.1573(a)(1)(iii)]
Calculate and record the hourly average actual exhaust gas flow rate using Equation 1 of this section as follows:

$$Q_{gas} = (1.12 \text{ scfm/dscfm}) \times (Q_{air} + Q_{other}) \times \left(\frac{Temp_{gas}}{293°K}\right) \times \left(\frac{1 \text{ atm.}}{P_{vent}}\right) \quad \textit{(Eq. 1)}$$

where:

Q_{gas} = Hourly average actual gas flow rate, acfm;
1.12 = Default correction factor to convert gas flow from dry standard cubic feet per minute (dscfm) to standard cubic feet per minute (scfm);
Q_{air} = Volumetric flow rate of air to regenerator, as determined from the catalytic cracking unit control room instrumentations, dscfm;
Q_{other} = Volumetric flow rate of other gases entering the regenerator as determined from the control room instrumentations, dscfm. (Examples of "other" gases include an oxygen-enriched air stream to catalytic cracking unit regenerators);
$Temp_{gas}$ = Temperature of gas stream in vent measured as near as practical to the control device or opacity monitor, °K. For wet scrubbers, temperature of gas prior to the wet scrubber; and
P_{vent} = Absolute pressure in the vent measured as near as practical to

the control device or opacity monitor, atm. When used to assess the gas flow rate in the final atmospheric vent stack, it can be assumed that P_{vent} = 1 atm.

ii. [63.1573(a)(2)]

The permittee may use this alternative to calculating Q_r, the volumetric flow rate of exhaust gas for the catalytic cracking regenerator as required in Equation 1 of 40 CFR 63.1564 [See section A.V.], if a gas analyzer installed in the catalytic cracking regenerator exhaust vent prior to the addition of air or other gas streams. The permittee may measure upstream or downstream of an electrostatic precipitator, but shall measure upstream of a carbon monoxide boiler. The permittee shall:

(a) [40 CFR 63.1573(a)(2)(i)]

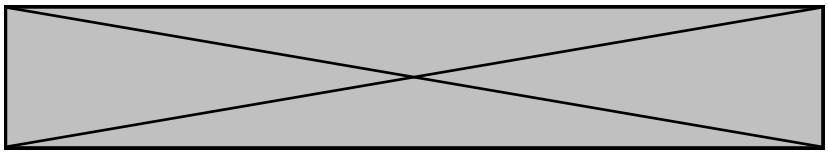
Install and operate a continuous parameter monitoring system to measure and record the hourly average volumetric air flow rate to the catalytic cracking unit regenerator. Or, the permittee can determine and record the hourly average volumetric air flow rate to the catalytic cracking unit regenerator using the catalytic cracking unit control room instrumentation.

(b) [40 CFR 63.1573(a)(2)(ii)]

Install and operate a continuous gas analyzer to measure and record the concentration of carbon dioxide, carbon monoxide, and oxygen of the catalytic cracking regenerator exhaust.

(c) [40 CFR 63.1573(a)(2)(iii)]

Calculate and record the hourly average flow rate using Equation 2 of this section as follows:



Where:

Q_r = Volumetric flow rate of exhaust gas from the catalyst regenerator before adding air or gas streams, dscm/min (dscf/min);

79 = Default concentration of nitrogen and argon in dry air, percent by volume (dry basis);

$\%O_{xy}$ = Oxygen concentration in oxygen-enriched air stream, percent by volume (dry basis);

Q_{oxy} = Volumetric flow rate of oxygen-enriched air stream to regenerator as determined from the catalytic cracking unit control room instrumentations, dscm/min (dscf/min);

$\%CO_2$ = Carbon dioxide concentration in regenerator exhaust, percent by volume (dry basis);

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CO = Carbon monoxide concentration in regenerator exhaust, percent by volume (dry basis); and
$\%O_2$ = Oxygen concentration in regenerator exhaust, percent by volume (dry basis).

b. [63.1573(c)] USING ANOTHER TYPE OF MONITORING SYSTEM
The permittee may request approval from the permitting authority to use an automated data compression system. An automated data compression system does not record monitored operating parameter values at a set frequency (e.g., once every hour) but records all values that meet set criteria for variation from previously recorded values. The permittee's request must contain a description of the monitoring system and data recording system, including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all of the criteria in 40 CFR Part 63.1576(c)(1) through (5) [paragraphs c.i. through c.v. of this section}:

i. [63.1573(c)(1)]
The system measures the operating parameter value at least once every hour;

ii. [63.1573(c)(2)]
The system records at least 24 values each day during periods of operation;

iii. [63.1573(c)(3)]
The system records the date and time when monitors are turned off or on;

iv. [63.1573(c)(4)]
The system recognizes unchanging data that may indicate the monitor is not functioning properly, alerts the operator, and records the incident; and

v. [63.1573(c)(5)]
The system computes daily average values of the monitored operating parameter based on recorded data.

c. [63.1573(d)] REQUESTING MONITORING ALTERNATIVES
The permittee may request approval to monitor parameters other than those required in this subpart. The permittee must request approval if:

i. [63.1573(d)(1)]
The permittee uses a control device other than a thermal incinerator, boiler, process heater, flare, electrostatic precipitator, or wet scrubber;

ii. [63.1573(d)(2)]
The permittee uses a combustion control device (e.g., incinerator, flare, boiler or process heater with a design heat capacity of at least 44 MW,

boiler or process heater where the vent stream is introduced into the flame zone), electrostatic precipitator, or scrubber but wants to monitor a parameter other than those specified; or

iii. [63.1573(d)(3)]
The permittee wishes to use another type of continuous emission monitoring system that provides direct measurement of a pollutant (i.e., a PM or multi-metals HAP continuous emission monitoring system, a carbonyl sulfide/carbon disulfide continuous emission monitoring system, a TOC continuous emission monitoring system, or HCl continuous emission monitoring system).

d. [63.1573(e)] REQUESTING MONITOR ALTERNATIVE PARAMETERS
The permittee must submit a request for review and approval or disapproval to the Administrator of the EPA. The request must include the information in 63.1573 (e)(1) through (5) [paragraphs e.i. through e.v. of this section].

i. [63.1573(e)(1)]
A description of each affected emissions unit and the parameter(s) to be monitored to determine whether the affected emissions unit will continuously comply with the emission limitations and an explanation of the criteria used to select the parameter(s).

ii. [63.1573(e)(2)]
A description of the methods and procedures that will be used to demonstrate that the parameter can be used to determine whether the affected emissions unit will continuously comply with the emission limitations and the schedule for this demonstration. The permittee must certify that an operating limit will be established for the monitored parameter(s) that represents the conditions in existence when the control device is being properly operated and maintained to meet the emission limitation.

iii. [63.1573(e)(3)]
The frequency and content of monitoring, recording, and reporting, if monitoring and recording are not continuous. The permittee also must include the rationale for the proposed monitoring, recording, and reporting requirements.

iv. [63.1573(e)(4)]
Supporting calculations.

v. [63.1573(e)(5)]
Averaging time for the alternative operating parameter.

23. [63.1573(f)]
The following terms explain how the permittee is to apply for alternative monitoring requirements for a catalytic cracking unit equipped with a wet scrubber and the permittee has approved alternative monitoring requirements under the new source performance standards for petroleum refineries.

a. [63.1573(f)(1)]
The permittee may request alternative monitoring requirements according to the procedures in this paragraph if each of the conditions in paragraphs (f)(1)(i) through (iii) of 40 CFR 63.1573 are met:

i. [63.1573(f)(1)(i)]
The fluid catalytic cracking unit regenerator vent is subject to the PM limit in 40 CFR 60.102(a)(1) and uses a wet scrubber for PM emissions control;

ii. [63.1573(f)(1)(ii)]
The permittee has alternative monitoring requirements for the continuous opacity monitoring system requirement in 40 CFR 60.105(a)(1) have been approved by the Administrator; and

iii. [63.1573(f)(1)(iii)]
The permittee is required by 40 CFR Part 63, Subpart UUU to install, operate, and maintain a continuous opacity monitoring system for the same catalytic cracking unit regenerator vent for which the permittee has approved alternative monitoring requirements.

b. [63.1573(f)(2)]
The permittee can request approval to use an alternative monitoring method prior to submitting the notification of compliance status, in the notification of compliance status, or at any time.

c. [63.1573(f)(3)]
The permittee must submit a copy of the approved alternative monitoring requirements along with a monitoring plan that includes a description of the continuous monitoring system or method, including appropriate operating parameters that will be monitored, test results demonstrating compliance with the opacity limit used to establish an enforceable operating limit(s), and the frequency of measuring and recording to establish continuous compliance. If applicable, the permittee must also include operation and maintenance requirements for the continuous monitoring system.

d. [63.1573(f)(4)]
The permittee will be contacted within 30 days of receipt of the application to inform the permittee of approval or of the intent to disapprove the permittee's request.

24. [63.1576] RECORD KEEPING REQUIREMENTS - 40 CFR Part 63, Subpart UUU

a. [63.1576(a)]
The permittee must keep the records specified in 40 CFR 63.1576(a)(1) through (3) [paragraphs a.i through a.iii. of this section].

i. [63.1576(a)(1)]

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A copy of each notification and report that the permittee submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status that the permittee submitted, according to the requirements in 40 CFR Part 63.10(b)(2)(xiv).

ii. [63.1576(a)(2)]
The records in 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

iii. [63.1576(a)(3)]
Records of performance tests, performance evaluations, and visible emission observations as required in 40 CFR Part 63.10(b)(2)(viii).

b. [63.1576(b)]
For each continuous emission monitoring system and continuous opacity monitoring system, the permittee must keep the records required in 63.1576(b)(1) through (5) [paragraphs b.i. through b.v. of this section].

i. [63.1576(b)(1)]
Records described in 40 CFR Part 63.10(b)(2)(vi) through (xi) of Subpart A.

ii. [63.1576(b)(2)]
Monitoring data for continuous opacity monitoring systems during a performance evaluation as required in 40 CFR Part 63.6(h)(7)(i) and (ii) of Subpart A.

iii. [63.1576(b)(3)]
Previous (i.e., superceded) versions of the performance evaluation plan as required in 40 CFR Part 63.8(d)(3) of Subpart A.

iv. [63.1576(b)(4)]
Requests for alternatives to the relative accuracy test for continuous emission monitoring systems as required in 40 CFR Part 63.8(f)(6)(i) of Subpart A.

v. [63.1576(b)(5)]
Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

c. [63.1576(c)]
The permittee must keep the records in 40 CFR Part 63.6(h) for visible emission observations.

d. [63.1576(d)]
The permittee must keep records required by Tables 6, 7, 13, and 14 of 40 CFR

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Part 63 Subpart UUU [see section A.VI.] (for catalytic cracking units) and Table 39 of 40 CFR Part 63 Subpart UUU [see section A.VI.] (for bypass lines) to show continuous compliance with each emission limitation that applies to this emissions unit.

e. [63.1576(e)]
The permittee must keep a current copy of the operation, maintenance, and monitoring plan onsite and available for inspection. The permittee also must keep records to show continuous compliance with the procedures in the operation, maintenance, and monitoring plan.

f. [63.1576(f)]
The permittee also must keep the records of any changes that affect emission control system performance including, but not limited to, the location at which the vent stream is introduced into the flame zone for a boiler or process heater.

g. [63.1576(g)]
The records must be in a form suitable and readily available for expeditious review according to 40 CFR Part 63.10(b)(1).

h. [63.1576(h)]
As specified in 40 CFR Part 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

i. [63.1576(i)]
The permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR Part 63.10(b)(1). The permittee can keep the records offsite for the remaining 3 years.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitations for CO, NOx, PM10, SO_2, and VOC and, for the first 12 calendar months of operation after the FCCU expansion, all exceedances of the maximum allowable cumulative emission levels. These quarterly reports shall be submitted to the Toledo Division of Environmental Services (TDOES) by January 30, April 30, July 30, and October 30 of each year.

2. Beginning with the calendar quarter occurring during initial startup after the FCCU expansion, the permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO monitoring system:

   a. Pursuant to the monitoring, record keeping, and reporting requirements for

continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the TDOES, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

b. These quarterly reports shall be submitted to the TDOES by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous CO and other associated monitors;

iii. the location of the continuous CO monitor;

iv. the exceedance report as detailed in (a) above;

v. the total CO emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous CO monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. the results of any relative accuracy test audit showing the continuous CO monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction* of the continuous CO

monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime* of the continuous CO monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit.

3. Beginning with the calendar quarter occurring during initial startup after the FCCU expansion, the permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NOx emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

b. These quarterly reports shall be submitted to the TDOES by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NOx and other associated monitors;

iii. the location of the continuous NOx monitor;

iv. the exceedance report as detailed in (a) above;

v. the total NOx emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NOx monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. the results of any relative accuracy test audit showing the continuous NOx monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction* of the continuous NOx monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime* of the continuous NOx monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

4. The permittee shall submit written quarterly deviation (excursion) reports to the TDOES that identify each deviation from the:

a. minimum pressure drop requirement for the water supplied at the discharge of the recirculation pumps supplying water to the Agglo-Filtering modules specified in Section A.II;

b. the minimum flue gas static pressure drop across the Agglo-Filtering modules specified in Section A.II;

c. the maximum ammonia slip limitation specified in Section A.II; and

d. combined emission limitation of 3.00 pounds SO_2 per thousand pounds of fresh feed for P011, B046 and B047.

If no deviations occurred during a calendar quarter, then a statement shall be submitted to that effect.

5. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous opacity monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of opacity values in excess of any limitation specified in this permit, 40 CFR Part 60, OAC rule 3745-17-07, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude (percent opacity) of each 6-minute block average exceeding the applicable opacity limitation(s), as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. If there are no exceedances during the calendar quarter, the permittee shall submit a statement to that effect.

b. These quarterly reports shall be submitted to the Toledo Division of Environmental Services by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous opacity monitor;

iii. the location of the continuous opacity monitor;

iv. the exceedance report as detailed in (a) above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous opacity monitoring system while the emissions unit was in operation;

vii. the date, time, and duration of any/each malfunction* of the continuous opacity monitoring system, emissions unit, and/or control equipment;

viii. the date, time, and duration of any downtime* of the continuous opacity monitoring system and/or control equipment while the emissions unit was in operation; and

ix. the reason (if known) and the corrective actions taken (if any) for each event in (b)(vii) and (viii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of the opacity limit

6. Beginning with the calendar quarter occurring during initial startup after the FCCU expansion, the permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

b. These quarterly reports shall be submitted to the Toledo Division of Environmental Services by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. the location of the continuous SO_2 monitor;

iv. the exceedance report as detailed in (a) above;

v. the total SO_2 emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction* of the continuous SO_2 monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime* of the continuous SO_2 monitoring system and/or control equipment while the emissions unit was in operation;

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii);

xiv. the dates for which and brief explanations as to why fewer than 18 valid hours of data were obtained for the continuous monitoring system;

xv. identification of times when hourly averages have been obtained based on manual sampling methods;

xvi. identification of the times when the pollutant concentration exceeded the full span of the continuous monitoring system; and

xvii. description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3.

Each report shall address the operations conducted and data obtained during the previous calendar quarter. For any periods for which sulfur dioxide or oxides emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data

unavailability.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

7. [63.1574] NOTIFICATION SUBMITTAL - 40 CFR Part 63, Subpart UUU

a. [63.1574(a)]
Except as allowed in paragraphs (a)(1) through (3) of 40 CFR 63.1574, the permittee must submit all of the notifications in 40 CFR 63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h)that apply by the dates specified.

i. [63.1574(a)(1)]
The permittee must submit the notification of intention to construct or reconstruct according to 40 CFR 63.9(b)(5). This deadline also applies to the application for approval of construction or reconstruction and approval of construction or reconstruction based on State preconstruction review required in 40 CFR 63.5(d)(1)(i) and 63.5(f)(2).

ii. [63.1574(a)(2)]
The permittee must submit the notification of intent to conduct a performance test required in 40 CFR 63.7(b) at least 30 calendar days before the performance test is scheduled to begin (instead of 60 days).

iii. [63.1574(a)(3)]
If the permittee is required to conduct a performance test, performance evaluation, design evaluation, opacity observation, visible emission observation, or other initial compliance demonstration, the permittee must submit a notification of compliance status according to 40 CFR 63.9(h)(2)(ii). The permittee can submit this information in an operating permit application, in an amendment to an operating permit application, in a separate submission, or in any combination. If the required information has been submitted previously, the permittee does not have to provide a separate notification of compliance status. Just refer to the earlier submissions instead of duplicating and resubmitting the previously submitted information.

(a) [63.1574(a)(3)(i)]
For each initial compliance demonstration that does not include a performance test, the permittee must submit the Notification of Compliance Status no later than 30 calendar days following completion of the initial compliance demonstration..

(b) [63.1574(a)(3)(ii)]

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For each initial compliance demonstration that includes a performance test, the permittee must submit the notification of compliance status, including the performance test results, no later than 150 calendar days after the compliance date specified for the affected source in 40 CFR 63.1563.

b. [63.1574(c)]
If the startup of a new or reconstructed affected source occurs on or after April 11, 2002, the permittee must submit the initial notification no later than 120 days after you become subject to this subpart.

c. [63.1574(d)]
The permittee also must include the information in Table 42 of 40 CFR Part 63, Subpart UUU [see section A.VI.] of this subpart in the notification of compliance status.

d. [63.1574(f)]
As required by this subpart, the permittee must prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. The purpose of this plan is to detail the operation, maintenance, and monitoring procedures that will be followed.

i. [63.1574(f)(1)]
The permittee must submit the plan to your permitting authority for review and approval along with the notification of compliance status. While the permittee does not have to include the entire plan in the 40 CFR part 70 or 71 permit, the permittee must include the duty to prepare and implement the plan as an applicable requirement in the 40 CFR part 70 or 71 operating permit. The permittee must submit any changes to the permitting authority for review and approval and comply with the plan until the change is approved.

ii. [63.1574(f)(2) and (f)(2)(i) through (x))]
Each plan must include, at a minimum, the information specified in paragraphs (f)(2)(i) through (xii) of 40 CFR 63.1574.

(a) [63.1574(f)(2)(i)]
Process and control device parameters to be monitored for each affected source, along with established operating limits.

(b) [63.1574(f)(2)(ii)]
Procedures for monitoring emissions and process and control device operating parameters for each affected source.

(c) [63.1574(f)(2)(iii)]
Procedures that the permittee will use to determine the coke burn-rate, the volumetric flow rate (if process data is used rather than direct measurement), and the rate of combustion of liquid or solid fossil fuels if the permittee uses an incinerator-waste heat boiler to burn the exhaust gases from a catalyst regenerator.

(d) [63.1574(f)(2)(iv)]
Procedures and analytical methods the permittee will use to determine the equilibrium catalyst Ni concentration, the equilibrium catalyst Ni concentration monthly rolling average, and the hourly or hourly average Ni operating value.

(e) [63.1574(f)(2)(v)]
Procedures the permittee will use to determine the pH of the water (or scrubbing liquid) exiting a wet scrubber if you use pH strips.

(f) [63.1574(f)(2)(vii)]
Procedures the permittee will use to determine the gas flow rate for a catalytic cracking unit if an alternative procedure based on air flow rate and temperature is used.

(g) [63.1574(f)(2)(viii)]
Monitoring schedule, including when the permittee will monitor and will not monitor an affected source (e.g., during the coke burn-off, regeneration process).

(h) [63.1574(f)(2)(ix)]
Quality control plan for each continuous opacity monitoring system and continuous emission monitoring system the permittee uses to meet an emission limit in this subpart. This plan must include procedures the permittee will use for calibrations, accuracy audits, and adjustments to the system needed to meet applicable requirements for the system.

(i) [63.1574(f)(2)(x)]
Maintenance schedule for each monitoring system and control device for each affected source that is generally consistent with the manufacturer's instructions for routine and long-term maintenance.

8. [63.1575] REPORTS FOR 40 CFR Part 63, Subpart UUU

a. [63.1575(a)]
The permittee must submit each report in Table 43 of 40 CFR Part 63, Subpart

UUU [see section A.VI.] that applies to this emissions unit.

b. [63.1575(b)]
Unless the Administrator has approved a different schedule, the permittee must submit each report by the date in Table 43 of 40 CFR Part 63, Subpart UUU [see section A.VI.] and according to the requirements in 40 CFR Part 63.1575(b)(3) through (b)(5).

i. [63.1575(b)(3)]
Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

iii. [63.1575(b)(4)]
Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

iii. [63.1575(b)(5)]
For each affected emissions unit that is subject to permitting regulations pursuant to 40 CFR Part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in 63.1575(b)(3) through (b)(4).

c. 63.1575(c)]
The compliance report must contain the following information:

i. [63.1575(c)(1)]
Company name and address.

ii. [63.1575(c)(2)]
Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

iii. [63.1575(c)(3)]
Date of report and beginning and ending dates of the reporting period.

iv. [63.1575(c)(4)]
If there are no deviations from any emission limitation that applies to this emissions unit and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system or continuous opacity

monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

d. [63.1575(d)]
For each deviation from an emission limitation and for each deviation from the requirements for work practice standards that occurs at an affected emissions unit where a continuous opacity monitoring system or a continuous emission monitoring system is not used to comply with the emission limitation or work practice standard in 40 CFR Part 63, Subpart UUU, the compliance report must contain the information in 40 CFR 63.1575(c)(1) through (c)(3) [paragraphs c.i. through c.iii. of this section] and the information in 40 CFR 63.1575(d)(1) through (d)(3) [paragraphs d.i. through d.iii. of this section].

i. [63.1575(d)(1)]
The total operating time of each affected emissions unit during the reporting period.

ii. [63.1575(d)(2)]
Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

iii. [63.1575(d)(3)]
Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks).

e. [63.1575(e)]
For each deviation from an emission limitation occurring at an affected emissions unit where a continuous opacity monitoring system or a continuous emission monitoring system is used to comply with the emission limitation, the permittee must include the information in 40 CFR Part 63.1575(d)(1) through(3) [paragraphs d.i. through d.iii. of this section] and the information in 63.1575(e)(1) through (13) [paragraphs e.i through e.xiii. of this section].

i. [63.1575(e)(1)]
The date and time that each malfunction started and stopped.

ii. [63.1575(e)(2)]
The date and time that each continuous opacity monitoring system or continuous emission monitoring system was inoperative, except for zero (low-

level) and high-level checks.

iii. [63.1575(e)(3)]
The date and time that each continuous opacity monitoring system or continuous emission monitoring system was out-of-control, including the information in 40 CFR Part 63.8(c)(8) of Subpart A.

iv. [63.1575(e)(4)]
The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

v. [63.1575(e)(5)]
A summary of the total duration of the deviation during the reporting period (recorded in minutes for opacity and hours for gases and in the averaging period specified in the regulation for other types of emission limitations), and the total duration as a percent of the total emissions unit operating time during that reporting period.

vi. [63.1575(e)(6)]
A breakdown of the total duration of the deviations during the reporting period and into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

vii. [63.1575(e)(7)]
A summary of the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system during the reporting period (recorded in minutes for opacity and hours for gases and in the averaging time specified in the regulation for other types of standards), and the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system as a percent of the total emissions unit operating time during that reporting period.

viii. [63.1575(e)(8)]
A breakdown of the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

ix. [63.1575(e)(9)]
An identification of each HAP that was monitored at the affected emissions unit.

x. [63.1575(e)(10)]
A brief description of the process units.

xi. [63.1575(e)(11)]
The monitoring equipment manufacturer(s) and model number(s).

xii. [63.1575(e)(12)]
The date of the latest certification or audit for the continuous opacity monitoring system or continuous emission monitoring system.

xiii. [63.1575(e)(13)]
A description of any change in the continuous emission monitoring system or continuous opacity monitoring system, processes, or controls since the last reporting period.

f. [63.1575(f)]
The permittee also must include the information required in 63.1575(f)(1) through (f)(2) [paragraphs f.i. and f.ii. of this section] in each compliance report, if applicable.

i. [63.1575(f)(1)]
A copy of any performance test done during the reporting period on any affected unit. The report may be included in the next semiannual report. The copy must include a complete report for each test method used for a particular kind of emission point tested. For additional tests performed for a similar emission point using the same method, the permittee must submit the results and any other information required, but a complete test report is not required. A complete test report contains a brief process description; a simplified flow diagram showing affected processes, control equipment, and sampling point locations; sampling site data; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; documentation of calculations; and any other information required by the test method.

ii. [63.1575(f)(2)]
Any requested change in the applicability of an emission standard (e.g., changing from the PM standard to the Ni standard for catalytic cracking units or from the HCl concentration standard to percent reduction for catalytic reforming units) in the periodic report. The permittee must include all information and data necessary to demonstrate compliance with the new emission standard selected and any other associated requirements.

g. [63.1575(g)]
The permittee may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.

h. [63.1575(h)]
The reporting requirements in paragraphs 63.1575(h)(1) and (2) [paragraphs h.i. and h.ii. of this section] apply to startups, shutdowns, and malfunctions:

i. [63.1575(h)(1)]
When actions taken to respond are consistent with the plan, the permittee is not required to report these events in the semiannual compliance report and the reporting requirements in 40 CFR Part 63.6(e)(3)(iii) and 63.10(d)(5) do not apply.

ii. [63.1575(h)(2)]
When actions taken to respond are not consistent with the plan, the permittee must report these events and the response taken in the

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semiannual compliance report. In this case, the reporting requirements in 40 CFR Part 63.6(e)(3)(iv) and 63.10(d)(5) do not apply.

9. [63.1563(f)]
The permittee must meet the notification requirements in 40 CFR Part 63.1574 [see section A.IV.] according to the schedule in 40 CFR Part 63.1574 and in 40 CFR Part 63,

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Subpart A. Some of the notifications must be submitted before the date the permittee is required to comply with the emission limitations and work practice standards in Subpart UUU.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      20 percent opacity as a 6-minute average

      Applicable Compliance Method:

      Compliance shall be demonstrated based upon the visible particulate emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures of 40 CFR 60.11.

   b. Emission Limitation:

      The combined CO emissions from P011, B046 and B047 shall be reduced by a minimum of a 99% control efficiency

      Applicable Compliance Method:

      If required, the permittee shall demonstrate compliance with this emission limitation using Methods 1 through 4 of 40 CFR Part 60, Appendix A and the methods and procedures of 40 CFR 60.106(d) to determine both the uncontrolled and controlled CO emissions. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

   c. Emission Limitation:

      The combined CO emissions from P011, B046 and B047 shall not exceed 1,087.28 tons per year, based upon a rolling, 365-day summation of the daily emissions.

      Applicable Compliance Method:

      The annual emission limitation was developed by multiplying the maximum oxygen free stack flow rate (311,470 dscfm) by 60 minutes per hour, multiplied by 24

hours/day, multiplied by 365 days/year, multiplied by the allowable annual CO concentration (180 parts CO by volume dry at 0% O_2), divided by 1,000,000 parts, multiply by the molecular weight of CO (28 lb/lb-mole), and divide by the molar volume (379.43 ft^3/lb-mole), divided by 2000 pounds per ton. The monitoring and recordkeeping requirements of Section III. shall be used to demonstrate compliance with this emission limitation.

d. Emission Limitation:

The combined CO emissions from P011, B046 and B047 shall not exceed 500 ppmvd at 0% O_2 on a 1-hour average basis

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(d). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

e. Emission Limitation:

The combined CO emissions from P011, B046 and B047 shall not exceed 180 ppmvd at 0% O_2 based upon a rolling, 365-day average

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated by the monitoring and recordkeeping requirements for the continuous CO emissions monitoring system and continuous flow monitoring system required in Section A.III.

e. Emission Limitation:

The combined NOx emissions from P011, B046 and B047 shall not exceed 198.51 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum oxygen free stack flow rate (311,470 dscfm) by 60 minutes per hour, multiplied by 24 hours/day, multiplied by 365 days/year, multiplied by the annual average NOx concentration (20 parts NOx by volume dry at 0% O_2), divided by 1,000,000 parts,

multiply by the molecular weight of NO_2 (46.01 lb/lb-mole), and divide by the molar volume (379.43 ft^3/lb-mole), divided by 2000 pounds per ton. The monitoring and recordkeeping requirements of Section III. shall be used to demonstrate compliance with this emission limitation.

g. Emission Limitation:

The combined NOx emissions from P011, B046 and B047 shall not exceed 40 ppmvd based on a 7-day rolling average, at 0% oxygen

Applicable Compliance Method:

The following calculation procedure shall be used along with the monitoring and recordkeeping requirements in Section III. for determining compliance.

i. Calculate each 1-hour average concentration (dry, zero percent oxygen, ppmv) of NOx at the outlet to the add-on control device as specified in 40 CFR 60.13(h). These calculations are made using the emission data collected by the NOx CEMS required in Section III.

ii. Calculate a 7-day average (arithmetic mean) concentration of NOx for the outlet to the add-on control device using all of the 1-hour average concentration values obtained during 7 successive 24-hour periods.

iii. If supplemental sampling data are used for determining the 7-day averages under this section and such data are not hourly averages, then the value obtained for each supplemental sample shall be assumed to represent the hourly average for each hour over which the sample was obtained.

iv. For the purpose of adjusting pollutant concentrations to zero percent oxygen, the following equation shall be used:

Cadj=Cmeas[20.9c/(20.9- %O2)]

where:

Cadj=pollutant concentration adjusted to zero percent oxygen, ppm or g/dscm

Cmeas=pollutant concentration measured on a dry basis, ppm or g/dscm

20.9c=20.9 percent oxygen-0.0 percent oxygen (defined oxygen correction basis), percent

20.9=oxygen concentration in air, percent

%O2=oxygen concentration measured on a dry basis, percent

h. Emission Limitation:

The combined NOx emissions from P011, B046 and B047 shall not exceed 20 ppmvd based on a 365-day rolling average, at 0% oxygen

Applicable Compliance Method:

The following calculation procedure shall be used along with the monitoring and recordkeeping requirements in Section III. for determining compliance.

i. Calculate each 1-hour average concentration (dry, zero percent oxygen, ppmv) of NOx at the outlet to the add-on control device as specified in 40 CFR 60.13(h). These calculations are made using the emission data collected by the NOx CEMS required in Section III.

ii. Calculate a 365-day average (arithmetic mean) concentration of NOx for the outlet to the add-on control device using all of the 1-hour average concentration values obtained during 365 successive 24-hour periods.

iii. If supplemental sampling data are used for determining the 365-day averages under this section and such data are not hourly averages, then the value obtained for each supplemental sample shall be assumed to represent the hourly average for each hour over which the sample was obtained.

iv. For the purpose of adjusting pollutant concentrations to zero percent oxygen, the following equation shall be used:

Cadj=Cmeas[20.9c/(20.9- %O2)]

where:

Cadj=pollutant concentration adjusted to zero percent oxygen, ppm or g/dscm

Cmeas=pollutant concentration measured on a dry basis, ppm or g/dscm

20.9c=20.9 percent oxygen-0.0 percent oxygen (defined oxygen correction basis), percent

20.9=oxygen concentration in air, percent

%O2=oxygen concentration measured on a dry basis, percent

i. Emission Limitation:

The combined filterable PM emissions from P011, B046 and B047 shall not exceed 0.45 pound per thousand pounds of coke burn-off

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(a) and (b). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

j. Emission Limitation:

The combined filterable PM emissions from P011, B046 and B047 shall not exceed 165.96 tons per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term filterable PM emission limitation (0.45 pound per 1,000 pounds of coke burn-off) by the maximum coke burn-off rate (84,200 pounds of coke burnoff per hour) multiplied by the maximum annual hours of operation (8,760 hours/year) and divided by 2,000 pounds per ton.

k. Emission Limitation:

The combined PM_{10} emissions from P011, B046 and B047 shall not exceed 0.90 pound per thousand pounds of coke burn-off.

Applicable Compliance Method:

This emission limitation was based on an emission factor submitted by the permittee based on the permittee's best available information. If required, the permittee shall demonstrate compliance through emissions testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio

EPA.

l. Emission Limitation:

The combined PM_{10} emissions from P011, B046 and B047 shall not exceed 331.92 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the allowable PM_{10} emission rate (0.90 lb/1,000 pounds of coke burn-off) by the maximum coke burn-off rate(84,200 pounds of coke burn-off per hour) multiplied by the maximum annual hours of operation (8760 hrs/yr), and then dividing by 2000 pounds per ton.

m. Emission Limitation:

The combined emissions from P011, B046, and B047 shall not exceed 3.00 pounds of sulfur dioxide (SO_2) per thousand pounds of fresh feed.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 6 or 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA Approved test methods may be used with prior approval from the Ohio EPA.

n. Emission Limitation:

The combined SO_2 emissions from P011, B046 and B047 shall not exceed 316 pounds per hour.

Applicable Compliance Method:

This emission limitation is based on the following calculation using the permittee-supplied emission factor of 100 ppmvd SO_2 at 0% oxygen. Multiply the maximum oxygen free stack flow rate (311,470 dscfm) by 60 minutes per hour, multiply by the maximum SO_2 concentration (100 parts SO_2 by volume dry at 0% O_2), divided by 1,000,000 parts, multiply by the molecular weight of SO_2 (64.1 lb/lb-mole), and divide by the molar volume (379.43 ft^3/lb-mole).

If required, compliance shall be demonstrated using the methods and procedures of OAC rule 3745-18-04(E)(1). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio the EPA.

o. Emission Limitation:

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The combined SO_2 emissions from P011, B046 and B047 shall not exceed 345.71 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum oxygen free stack flow rate (311,470 dscfm) by 60 minutes per hour, multiplied by 24 hours/day, multiplied by 365 days/year, multiplied by the annual average SO_2 concentration (25 parts SO_2 by volume dry at 0% O_2), divided by 1,000,000 parts, multiply by the molecular weight of SO_2 (64.1 lb/lb-mole), and divide by the molar volume (379.43 ft^3/lb-mole), divided by 2000 pounds per ton. The monitoring and recordkeeping requirements of Section III. shall be used to demonstrate compliance with this emission limitation.

p. Emission Limitation:

The combined SO_2 emissions from P011, B046 and B047 shall not exceed 25 ppmvd, based upon a rolling, 365-day summation of the daily emissions, at 0% oxygen

Applicable Compliance Method:

The following calculation procedure shall be used for determining compliance.

i. Calculate each 1-hour average concentration (dry, zero percent oxygen, ppmv) of sulfur dioxide at the outlet to the add-on control device as specified in 40 CFR 60.13(h). These calculations are made using the emission data collected under 40 CFR 60.105(a).

ii. Calculate a 365-day average (arithmetic mean) concentration of sulfur dioxide for the outlet to the add-on control device using all of the 1-hour average concentration values obtained during 365 successive 24-hour periods.

iii. If supplemental sampling data are used for determining the 365-day averages under this section and such data are not hourly averages, then the value obtained for each supplemental sample shall be assumed to represent the hourly average for each hour over which the sample was obtained.

iv. For the purpose of adjusting pollutant concentrations to zero percent oxygen, the following equation shall be used:

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Cadj=Cmeas[20.9c/(20.9- %O2)]

where:

Cadj=pollutant concentration adjusted to zero percent oxygen, ppm or g/dscm

Cmeas=pollutant concentration measured on a dry basis, ppm or g/dscm

20.9c=20.9 percent oxygen-0.0 percent oxygen (defined oxygen correction basis), percent

20.9=oxygen concentration in air, percent

%O2=oxygen concentration measured on a dry basis, percent

q. Emission Limitation:

The combined SO_2 emissions from P011, B046 and B047 shall not exceed 50 ppmvd based on a 7-day rolling average, at 0% oxygen

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emissions limitation using the methods and procedures of 40 CFR 60.106(h).

r. Emission Limitation:

The combined PM_{10} emissions from P011, B046 and B047 shall be controlled by a minimum of 95%

Applicable compliance method:

If required, the permittee shall demonstrate compliance through emissions testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M at both the inlet to and the outlet of the wet gas scrubber. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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s. Emission Limitation:

The combined VOC emissions from P011, B046 and B047 shall not exceed 3.67 pounds per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

t. Emission Limitation:

The combined VOC emissions from P011, B046 and B047 shall not exceed 16.07 tons per year, based upon a rolling, 365-day summation of the daily emissions

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term VOC emission limitation (3.67 pounds per hour) by the maximum annual hours of operation (8,760 hours/year) and divided by 2,000 pounds per ton.

u. Emission Limitation:

Ammonia slip emissions shall not exceed 5 ppmv

Applicable Compliance Method:

The monitoring and recordkeeping requirements of Section A.III shall serve as demonstration of compliance.

If required, the permittee shall demonstrate compliance using U.S. EPA Conditional Test Method (CTM) 027. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

v. Emission Limitation:

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The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 10 ppmv.

Applicable Compliance Method:

This emission limitation is based on a manufacturer's guaranteed emission rate supplied by the permittee. If required, the permittee shall demonstrate compliance with this emission limitation using Method 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

w. Emission Limitation:

The combined sulfuric acid (H_2SO_4) mist emissions from the FCCU (P011) and CO Boilers (B046 and B047) shall not exceed 215.84 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the maximum stack flow rate (317,989 dscfm) by 60 minutes per hour, multiplied by 24 hours/day, multiplied by 365 days/year, multiplied by the maximum H_2SO_4 mist concentration (10 ppmvd), divided by 1,000,000 parts, multiply by the molecular weight of (98 lb/lb-mole), and divide by the molar volume (379.43 ft^3/lb-mole), divided by 2000 pounds per ton.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emissions testing shall be conducted:

i. within 60 days of achieving the maximum production rate after initial startup after the FCCU expansion, but no later than 180 days after initial startup after the FCCU expansion to demonstrate compliance with the allowable:

(a) concentrations: ammonia (1-hr average); CO (1-hour average); NOx and SO_2 (7-day rolling average); H_2SO_4 (1-hr average);

(b) mass emissions rates for filterable PM (lb/1000 pounds of coke burn-off), PM10 (lb/hr and lb/1000 pounds of coke burnoff), SO_2 (lb/hr), and VOC (lb/hr);

(c) CO control efficiency (testing shall include a determination of both the

uncontrolled and controlled CO emissions to determine the control efficiency); and

(d) PM_{10} control efficiency (testing shall include a determination of both the uncontrolled and controlled PM_{10} emissions to determine the control efficiency).

b. The following test method(s) shall be employed to demonstrate compliance with the allowable concentrations, mass emission rate(s) and control efficiency:

i. Methods 1 through 4 of 40 CFR Part 60, Appendix A and the methods and procedures of 40 CFR 60.106(d) for CO (uncontrolled and controlled emissions);

ii. See section A.V.1 for determining the 7-day rolling average NOx concentrations;

iii. 40 CFR 60.106(a) and (b) for filterable PM (lb/ton of coke burnoff);

iv. Methods 201 and 202 of 40 CFR Part 51, Appendix M for lb/hr PM_{10} (uncontrolled and controlled emissions);

v. Methods 1-4 and 6 or 6C of 40 CFR Part 60, Appendix A for determining lb/hr SO_2 emissions;

vi. 40 CFR 60.106(h) for 7-day rolling average SO_2 concentrations;

vii. Methods 1 through 4 and 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents;

viii. U.S. EPA Conditional Test Method (CTM) 027 for ammonia emissions; and

ix. Method 8 of 40 CFR Part 60, Appendix A for H_2SO_4 emissions.

c. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES for all emission tests. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s) and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES refusal to accept the results of the emission test.

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of any emissions tests shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the tests.

3. Within 60 days of initial startup after the FCCU expansion, the permittee shall conduct certification tests of the continuous CO monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate); and ORC section 3704.03(I).

   Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

   Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 4 or 4a (as appropriate) and ORC section 3704.03(I). The letter/document of certification of the continuous CO monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

   Ongoing compliance with the CO emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

4. Within 60 days of initial startup after the FCCU expansion, the permittee shall conduct certification tests of the continuous NOx monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(I).

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Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous NOx monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(I). The letter/document of certification of the continuous NOx monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the NOx emissions limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

5. Ongoing compliance with the opacity limitation contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

6. Within 60 days of initial startup after the FCCU expansion, the permittee shall conduct certification tests of the continuous SO_2 monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(I).

   Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

   Certification of the continuous SO_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(I). The letter/document of certification of the continuous SO_2 monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

   Ongoing compliance with the SO_2 emission limitations contained in this permit, 40 CFR

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Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

7. [63.1564(b)] DEMONSTRATING INITIAL COMPLIANCE WITH THE METAL HAP EMISSIONS AND WORK PRACTICE STANDARDS FOR CATALYTIC CRACKING UNITS - 40 CFR Part 63, Subpart UUU

   a. [63.1564(b)(1)]
   The permittee must install, operate, and maintain a continuous monitoring system(s) according to the requirements in 40 CFR Part 63.1572 [see section A.III.] and Table 3 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

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b. [63.1564(b)(3)]
The permittee must establish each site-specific operating limit in Table 2 [see section A.VI.] that applies to this emissions unit according to the procedures in Table 4 [see section A.VI.].

c. [63.1564(b)(4)]
The permittee must use the procedures in 40 CFR Part 63.1564(b)(4)(i) through (iv) to determine initial compliance with the emission limitations.

i. [63.1564(b)(4)(i)]
If Option 1 is elected in 40 CFR Part 63.1564(a)(1)(i) [see section A.I.2.], the NSPS requirements, compute the PM emission rate (lb/1,000 lbs of coke burn-off) for each run using Equations 1, 2, and 3 (if applicable) of this section as follows:

(Eq.1)

$$R_c = K_{SUB1} Q_{SUBr} (\%CO_{SUB2} + \%CO) + K_{SUB2} Q_{SUBa} \quad \text{(Eq.2)}$$

where:

R_c = Coke burn-off rate, kg/hr (lb/hr);

Q_r = Volumetric flow rate of exhaust gas from catalyst regenerator before adding air or gas streams. Example: The permittee may measure upstream or downstream of an electrostatic precipitator, but the permittee must measure upstream of a carbon monoxide boiler, dscm/min (dscf/min). The permittee may use the alternative in either 40 CFR 63.1573(a)(1) or (a)(2), as applicable, to calculate Qr;

Q_a = Volumetric flow rate of air to catalytic cracking unit catalyst regenerator, as determined from instruments in the catalytic cracking unit control room, dscm/min (dscf/min);

$\%CO_2$ = Carbon dioxide concentration in regenerator exhaust, percent by volume (dry basis);

%CO = Carbon monoxide concentration in regenerator exhaust, percent by volume (dry basis);

$\%O_2$ = Oxygen concentration in regenerator exhaust, percent by volume (dry basis);

K_1 = Material balance and conversion factor, 0.2982 (kg-min)/(hr-dscm-%) (0.0186 (lb-min)/(hr-dscf-%));

K_2 = Material balance and conversion factor, 2.088 (kg-min)/(hr-dscm) (0.1303 (lb-min)/(hr-dscf));

K_3 = Material balance and conversion factor, 0.0994 (kg-min)/(hr-dscm-%) (0.0062 (lb-min)/(hr-dscf-%));

Q_{oxy} = Volumetric flow rate of oxygen-enriched air stream to regenerator, as determined from instruments in the catalytic cracking unit control room, dscm/min (dscf/min); and

$\%O_{xy}$ = Oxygen concentration in oxygen-enriched air stream, percent by volume (dry basis).

$$E = \{K_3 \times C_s \times Q_{oxy} \times (\%O_{xy} - \%O_2)\} \times K_c \quad \text{(Eq.3)}$$

where:

E = Emission rate of PM, kg/1,000 kg (lb/1,000 lb) of coke burn-off;
C_s = Concentration of PM, g/dscm (lb/dscf);
Q_{sd} = Volumetric flow rate of the catalytic cracking unit catalyst regenerator flue gas as measured by Method 2 in 40 CFR Part 60, Appendix A, dscm/hr (dscf/hr);
R_c = Coke burn-off rate, kg coke/hr (1,000 lb coke/hr); and
K = Conversion factor, 1.0 (kg ^{2}/g)/(1,000 kg) (1,000 lb/(1,000 lb)).

E SUB s~=~1.0~+~A~(H/R SUB c)~K'

(Eq.3)

where:

E_s = Emission rate of PM allowed, kg/1,000 kg (1 lb/1,000 lb) of coke burn-off in catalyst regenerator;
1.0 = Emission limitation, kg coke/1,000 kg (lb coke/1,000 lb);
A = Allowable incremental rate of PM emissions, 0.18 g/million cal (0.10 lb/million Btu); and
H = Heat input rate from solid or liquid fossil fuel, million cal/hr (million Btu/hr). Make sure the Toledo Division of Environmental Services approves procedures for determining the heat input rate.
R_c = Coke burn-off rate, kg coke/hr (1,000 lb coke/hr) determined using Equation 1 of this section; and
K' = Conversion factor to units to standard, 1.0 (kg ^{2}/g)/(1,000 kg) (10^3 lb/(1,000 lb)).

ii. [63.1564(b)(4)(ii)]
If Option 2 is elected in 40 CFR Part 63.1564(a)(1)(ii) [see section A.I.2.], the PM emission limit, compute the PM emission rate (lb/1,000 lbs of coke burn-off) using Equations 1 and 2 of this section and the site-specific opacity operating limit (if a continuous opacity monitoring system is used) using Equation 4 of this section as follows:

Opacity~ Limit~ = ~Opacity_st ~×~left({1~ lb/klb~ coke~ burn} over {PMEmR_st} right)

(Eq. 4)

where:

Opacity limit = Maximum permissible hourly average opacity, percent, or 10 percent, whichever is greater;
$Opacity_{st}$ = Hourly average opacity measured during the emissions unit test runs, percent; and
$PMEmR_{st}$ = PM emission rate measured during the emissions unit test, lb/1,000 lbs coke burn.

iii. [63.1564(b)(4)(iii)]
If Option 3 is elected in 40 CFR 63.1564(a)(1)(iii) [see section A.I.2.], the Ni lb/hr emission limit, compute the Ni emission rate using Equation 5 of this section and the site-specific Ni operating limit (if the permittee uses a continuous opacity monitoring system) using Equations 6 and 7 of this section as follows:

FUNC {
{E SUB Ni SUB 1~=~C SUB

(Eq. 5)

where:

E_{Ni1} = Mass emission rate of Ni, mg/hr (lb/hr); and
C_{Ni} = Ni concentration in the catalytic cracking unit catalyst regenerator flue gas as measured by Method 29 in Appendix A of 40 CFR Part 60, mg/dscm (lbs/dscf).

Opacity SUB 1~ =~ {{13~ g~ Ni/hr} over {NiEmR1_st }}~x~Opacity SUB st

(Eq. 6)

where:

$Opacity_I$ = Opacity value for use in Equation 7 of this section, percent, or 10 percent, whichever is greater; and
$NiEmR1_{st}$ = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 5 of this section for each of the performance test runs, g Ni/hr.

(Eq. 7)

FUNC {Ni~Operating ~Limit SUB 1~
=~Opacity_I ~×~ Q_{mon,st}~×~E-Cat_st
}

where:

Ni operating limit$_1$ = Maximum permissible hourly average Ni operating limit, percent-acfm-ppmw, i.e., your site-specific Ni operating limit;
$Q_{mon,st}$ = Hourly average actual gas flow rate as measured by the continuous parameter monitoring system during the performance test or using the alternative procedure in 40 CFR Part 63.1573 [see section A.III.], acfm; and
E-Cat$_{st}$ = Ni concentration on equilibrium catalyst measured during emissions unit test, ppmw.

iv. [63.1564(b)(4)(iv)]
If Option 4 is elected in 40 CFR 63.1564(a)(1)(iv) [see section A.I.2.], the Ni lbs/1,000 lbs of coke burn-off emission limit, compute the Ni emission rate using Equations 1 and 8 of this section and the site-specific Ni operating limit (if the permittee use a continuous opacity monitoring system) using Equations 9 and 10 of this section as follows:

FUNC {
E SUB Ni SUB 2~=~{C SUB Ni~x~Q SUB sd} OVER R SUB c
}

(Eq. 8)

where:

E_{Ni2} = Normalized mass emission rate of Ni, mg/kg coke (lb/1,000 lbs coke).

Opacity SUB 2 =~ {{1.0~mg/kg~coke}over {NiEmR2 SUB st}~x~Opacity SUB st}

(Eq. 9)

where:

$Opacity_2$ = Opacity value for use in Equation 10 of this section, percent, or 10 percent, whichever is greater; and
$NiEmR2_{st}$ = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 8 of this section for each of the performance test runs, mg/kg coke.

FUNC { Ni~Operating ~Limit SUB 2 ~ =~Opacity_2 ~×~E-Cat_st~x~Q SUB {mon,st} OVER R SUB {c,st}

(Eq. 10)

where:

Ni operating $limit_2$ = Maximum permissible hourly average Ni operating limit, percent-ppmw-acfm-hr/kg coke, i.e., the site-specific Ni operating limit; and
$R_{c,st}$ = Coke burn rate from Equation 1 of this section, as measured during the initial performance test, kg coke/hr.

d. [63.1564(b)(5)]
The permittee must demonstrate initial compliance with each emission limitation that applies to this emissions unit according to Table 5 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

e. [63.1564(b)(6)]
The permittee must demonstrate initial compliance with the work practice standard in 40 CFR 63.1564(a)(3) [see section A.III.] by submitting the operation, maintenance, and monitoring plan to the TDOES as part of the Notification of Compliance Status.

f. [63.1564(b)(7)]
The permittee must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40

CFR Part 63.1574 [see section A.IV.].

8. [63.1564(c)] DEMONSTRATING CONTINUOUS COMPLIANCE WITH THE METAL HAP EMISSIONS AND WORK PRACTICE STANDARDS FOR CATALYTIC CRACKING UNITS - 40 CFR Part 63, Subpart UUU

   a. [63.1564(c)(1)]
   The permittee must demonstrate continuous compliance with each emission limitation in Tables 1 and 2 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit according to the methods specified in Tables 6 and 7 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

   b. [63.1564(c)(2)]
   The permittee must demonstrate continuous compliance with the work practice standard in 40 CFR Part 63.1564(a)(3) [see section A.III.] by maintaining records to document conformance with the procedures in the operation, maintenance, and monitoring plan.

   c. [63.1564(c)(3)]
   If the permittee uses a continuous opacity monitoring system and elects to comply with Option 3 in 40 CFR Part 63.1564(a)(1)(iii) [see section A.I.2.], the permittee must determine continuous compliance with the site-specific Ni operating limit by using Equation 11 of this section as follows:

(Eq. 11)

$$\text{Ni operating value}_1 = \text{Operating Value}_{SUB1} = \text{Opacity}_{SUB} \times Q_{SUB\,mon} \times \text{E-Cat}$$

where:

Ni operating value$_1$ = Maximum permissible hourly average Ni standard operating value, %-acfm-ppmw;
Opacity = Hourly average opacity, percent;
Q_{mon} = Hourly average actual gas flow rate as measured by continuous parameter monitoring system or calculated by alternative procedure in 40 CFR Part 63.1573 [see section A.III.], acfm; and
E-Cat = Ni concentration on equilibrium catalyst from weekly or more recent measurement, ppmw.

d. [63.1564(c)(4)]
If the permittee uses a continuous opacity monitoring system and elects to comply with Option 4 in 40 CFR Part 63.1564(a)(1)(iv) [see section A.I.2.], the permittee must

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determine continuous compliance with the site-specific Ni operating limit by using Equation 12 of this section as follows:

(Eq. 12)

where:

Ni operating value$_2$ = Maximum permissible hourly average Ni standard operating value, percent-acfm-ppmw-hr/kg coke.

9. [63.1565(b)] DEMONSTRATING INITIAL COMPLIANCE WITH THE ORGANIC HAP EMISSIONS AND WORK PRACTICE STANDARDS FOR CATALYTIC CRACKING UNITS - 40 CFR Part 63, Subpart UUU

   a. [63.1565(b)(1)] The permittee must install, operate, and maintain a continuous monitoring system according to the

Operating~ValueSUB2~=~{Opacity~×~E-Cat~x~QSUBmon

requirements in 40 CFR Part 63.1572 [see section A.III.] and Table 10 [see section A.VI.]. Except:

i. [63.1565)(b)(1)(i)]
Whether or not the catalytic cracking unit is subject to the NSPS for CO in 40 CFR Part 60.103, the permittee doesn't have to install and operate a continuous emission monitoring system if its shown that CO emissions from the vent average less than 50 parts per million (ppm), dry basis. The permittee must get an exemption from the permitting authority, based on the permittee's written request. To show that the emissions average is less than 50 ppm (dry basis), the permittee must continuously monitor CO emissions for 30 days using a CO continuous emission monitoring system that meets the requirements in 40 CFR Part 63.1572 [see section A.III.].

b. [63.1565(b)(3)]
The permittee must establish each site-specific operating limit in Table 9 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit according to the procedures in Table 11 [see section A.VI.].

c. [63.1565(b)(4)]
The permittee must demonstrate initial compliance with each emission limitation that applies to this emissions unit according to Table 12 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

d. [63.1565(b)(5)]
The permittee must demonstrate initial compliance with the work practice standard in 40 CFR Part 63.1656(a)(3) [see section A.I.2.] by submitting the operation, maintenance, and monitoring plan to the TDOES as part of the Notification of Compliance Status according to 40 CFR Part 63.1574 [see section A.IV.].

e. [63.1565(b)(6)]
The permittee must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR Part 63.1574 [see section A.IV.].

10. [63.1565(c)] DEMONSTRATING CONTINUOUS COMPLIANCE WITH THE ORGANIC HAP EMISSIONS AND WORK PRACTICE STANDARDS FOR CATALYTIC CRACKING UNITS - 40 CFR Part 63, Subpart UUU

a. [63.1565(c)(1)]
The permittee must demonstrate continuous compliance with each emission

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limitation in Tables 8 and 9 of 40 CFR Part 63, Subpart UUU [see section A.VI.] of this subpart that applies to this emissions unit according to the methods specified in Tables 13 and 14 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

b. [63.1565(c)(2)]
The permittee must demonstrate continuous compliance with the work practice standard in 40 CFR Part 63.1565(a)(3) [see section A.III.] by complying with the procedures in the operation, maintenance, and monitoring plan.

11. [63.1569(b)] DEMONSTRATING INITIAL COMPLIANCE WITH THE WORK PRACTICE STANDARDS FOR BYPASS LINES - 40 CFR Part 63, Subpart UUU

a. [63.1569(b)(1)]
If the permittee elects the option in 40 CFR 63.1569(a)(1)(i) [see section A.I.2.], the permittee must conduct each performance test for a bypass line according to the requirements in 40 CFR Part 63.1571 [see section A.V.] and under the conditions specified in Table 37 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

b. [63.1569(b)(2)]
The permittee must demonstrate initial compliance with each work practice standard in Table 36 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit according to Table 38 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

c. [63.1569(b)(3)]
The permittee must demonstrate initial compliance with the work practice standard in 63.1569(a)(3) [see section A.III.] by submitting the operation, maintenance, and monitoring plan to the TDOES as part of the notification of compliance status.

d. [63.1569(b)(4)]
The permittee must submit the notification of compliance status containing the results of the initial compliance demonstration according to the requirements in 40 CFR Part 63.1574 [see section A.IV.].

12. [63.1569(c)] DEMONSTRATING CONTINUOUS COMPLIANCE WITH THE WORK PRACTICE STANDARDS FOR BYPASS LINES - 40 CFR Part 63, Subpart UUU

a. [63.1569(c)(1)]
The permittee must demonstrate continuous compliance with each work practice standard in Table 36 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit according to the requirements in Table 39 of 40 CFR Part 63, Subpart UUU [see section A.VI.].

b. [63.1569(c)(2)]
The permittee must demonstrate continuous compliance with the work practice standard in 40 CFR 63.1569(a)(2) [see section A.I.2.] by complying with the procedures in the operation, maintenance, and monitoring plan.

13. [63.1571] PERFORMANCE TEST AND OTHER INITIAL COMPLIANCE DEMONSTRATION - 40 CFR Part 63, Subpart UUU

a. [63.1571(b)] GENERAL REQUIREMENTS FOR PERFORMANCE TESTS AND PERFORMANCE EVALUATIONS
The permittee must:

i. [63.1571(b)(1)]
Conduct each performance test according to the requirements in 40 CFR Part 63.7(e)(1).

ii. [63.1571(b)(2)]
Except for opacity and visible emission observations, conduct three separate test runs for each performance test as specified in 40 CFR Part 63.7(e)(3). Each test run must last at least 1 hour.

iii. [63.1571(b)(3)]

Conduct each performance evaluation according to the requirements in 40 CFR Part 63.8(e).

iv. [63.1571(b)(4)]
Not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR Part 63.7(e)(1).

v. [63.1571(b)(5)]
Calculate the average emission rate for the performance test by calculating the emission rate for each individual test run in the units of the applicable emission limitation using Equation 2, 5, or 8 of 40 CFR Part 63.1564 [see section A.V.], and determining the arithmetic average of the calculated emission rates.

b. [63.1571(c)] ENGINEERING ASSESSMENT
The permittee may choose to use an engineering assessment to calculate the process vent flow rate, net heating value, TOC emission rate, and total organic HAP emission rate expected to yield the highest daily emission rate when determining the emission reduction or outlet concentration for the organic HAP standard for catalytic reforming units. If an engineering assessment is used, the permittee must document all data, assumptions, and procedures to the satisfaction of the TDOES. An engineering assessment may include the approaches listed in 40 CFR Part 63.1571(c)(1) through (c)(4) [paragraphs c.i. through c.iv. of this section]. Other engineering assessments may be used but are subject to review and approval by the TDOES.

i. [63.1571(c)(1)]
The permittee may use previous test results provided the tests are representative of current operating practices at the emissions unit, and provided EPA methods or approved alternatives were used;

ii. [63.1571(c)(2)]
The permittee may use bench-scale or pilot-scale test data representative of the process under representative operating conditions;

iii. [63.1571(c)(3)]
The permittee may use maximum flow rate, TOC emission rate, organic HAP emission rate, or organic HAP or TOC concentration specified or implied within a permit limit applicable to the process vent; or

iv. [63.1571(c)(4)]

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The permittee may use design analysis based on engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

(a) [63.1571(c)(4)(i)]
Use of material balances based on process stoichiometry to estimate maximum TOC concentrations;

(b) [63.1571(c)(4)(ii)]
Calculation of hourly average maximum flow rate based on physical equipment design such as pump or blower capacities; and

(c) [63.1571(c)(4)(iii)]
Calculation of TOC concentrations based on saturation conditions.

c. [63.1571(d)] ADJUSTING THE PROCESS OR CONTROL DEVICE MEASURED VALUES WHEN ESTABLISHING AN OPERATING LIMIT
If the permittee does a performance test to demonstrate compliance, the permittee must base the process or control device operating limits for continuous parameter monitoring systems on the results measured during the performance test. The permittee may adjust the values measured during the performance test according to the criteria in 40 CFR Part 63.1571(d)(1) through (d)(3) [paragraphs d.i. through d.iii. of this section].

i. [63.1571(d)(1)]
If the permittee elects the option in 40 CFR Part 63.1564(a)(1)(iii) [see section A.I.2.] (Ni lb/hr), and uses continuous parameter monitoring systems, the permittee must establish an operating limit for the equilibrium catalyst Ni concentration based on the laboratory analysis of the equilibrium catalyst Ni concentration from the initial performance test. 40 CFR Part 63.1564(b)(2) [see section A.V.] allows the permittee to adjust the laboratory measurements of the equilibrium catalyst Ni concentration to the maximum level. The permittee must make this adjustment using Equation 1 of this section as follows:

(Eq.1)

FUNC {Ecat-Limit~=~{13~g~Ni/hr} OVER {NiEmR1 SUB st}~x~Ecat SUB st
}

where:

Ecat-Limit = Operating limit for equilibrium catalyst Ni concentration, mg/kg;
$NiEmR1_{st}$ = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 5 of this section for each performance test run, g Ni/hr; and
$Ecat_{st}$ = Average equilibrium Ni concentration from laboratory test results, mg/kg.

ii. [63.1571(d)(2)]
If the permittee elects the option in 40 CFR Part 63.1564(a)(1)(iv) [see section A.I.2.] (Ni lb/1,000 lb of coke burn-off), and use continuous parameter monitoring systems, the permittee must establish an operating limit for the equilibrium catalyst Ni concentration based on the laboratory analysis of the equilibrium catalyst Ni concentration from the initial performance test. 40 CFR 63.1464(b)(2) [see section A.V.] allows the permittee to adjust the laboratory measurements of the equilibrium catalyst Ni Ecat-Limit~=~{1.0~mg/kg~coke~burn-off} OVER {NiEmR2 SUB co st}~x~Ecat SUB st nc entration to the maximum level. The permittee must make this adjustment using Equation 2 of this section as follows:

(Eq. 2)

where:

$NiEmR2_{st}$ = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 8 of 40 CFR Part 63.1564 [see section A.V.] for each performance test run, mg/kg coke burn-off.

iii. [63.1571(d)(3)]
If the permittee chooses to adjust the equilibrium catalyst Ni concentration to the maximum level, the permittee can't adjust any other monitored operating parameter (i.e., gas flow rate, voltage, pressure drop, liquid-to-gas ratio).

iv. [63.1571(d)(4)]
If the permittee uses continuous parameter monitoring systems, the permittee may adjust one of the monitored operating parameters (flow rate, voltage and secondary current, pressure drop, liquid-to-gas ratio) from the average of measured values during the performance test to the maximum value (or minimum value, if applicable) representative of worst-case operating conditions, if necessary. This adjustment of measured values may be done using control device design specifications, manufacturer recommendations, or other applicable information. The permittee must

provide supporting documentation and rationale in the Notification of Compliance Status, demonstrating to the satisfaction of the TDOES, that the affected emissions unit complies with the applicable emission limit at the operating limit based on adjusted values.

d. [63.1571(e)]
The permittee may change the established operating limit by meeting the requirements in 40 CFR Part 63.1571(e)(1) through (3) [paragraphs e.i. through e.iii. of this section].

i. [63.1571(e)(1)]
The permittee may change the established operating limit for a continuous parameter monitoring system by doing an additional performance test, a performance test in conjunction with an engineering assessment, or an engineering assessment to verify that, at the new operating limit, the permittee is in compliance with the applicable emission limitation.

ii. [63.1571(e)(2)]
The permittee must establish a revised operating limit for the continuous parameter monitoring system if changes are made in the process or operating conditions that could affect control system performance or designated conditions are changed after the last performance or compliance tests were done. The permittee can establish the revised operating limit as described in 40 CFR Part 63.1571(e)(1) [paragraph e.i. of this section].

iii. [63.1571(e)(3)]
The permittee may change the site-specific opacity operating limit or Ni operating limit only by doing a new performance test.

VI. Miscellaneous Requirements

1. The following tables from 40 CFR 63 subpart UUU are attached:
Tables 1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 36; 37; 38; 39; 40; 41; 42; 43 and 44.

TABLE 1 TO SUBPART UUU OF PART 63.—METAL HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

[As stated in § 63.1564(a)(1), you must meet each emission limitation in the following table that applies to you]

For each new or existing catalytic cracking unit	You shall meet the following emission limits for each catalyst regenerator vent ....

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1. Subject to the new source performance standard (NSPS) for PM in 40 CFR 60.102.	PM emissions must not the exceed 1.0 kilogram (kg) per 1,000 kg (1.0 lb/1,000 lb) of coke burn-off in the catalyst regenerator; if the discharged gases pass through an incinerator or waste heat boiler in which you burn auxiliary or in supplemental liquid or solid fossil fuel, the incremental rate of PM emissions must not exceed 43.0 grams per Gigajoule (g/GJ) or 0.10 pounds per million British thermal units (lb/million Btu) of heat input attributable to the liquid or solid fossil fuel; and the opacity of emissions must not exceed 30 percent, except for one 6-minute average opacity reading in any 1-hour period.
2. Option 1: NSPS requirements not subject to the NSPS for PM in 40 CFR 60.102.	PM emissions must not exceed 1.0 kg/1,000 kg (1.0 lb/1,000 lb) of coke burn-off in the catalyst regenerator; if the discharged gases pass through an incinerator or waste heat boiler in which you burn auxiliary or supplemental liquid or solid fossil fuel, the incremental rate of PM must not exceed 43.0 g/GJ (0.10 lb/million Btu) of heat input attributable to the liquid or solid fossil fuel; and the opacity of emissions must not exceed 30 percent, except for one 6-minute average opacity reading in any 1-hour period.
3. Option 2: PM limit not subject to the NSPS for PM in 40 CFR 60.102.	PM emissions must not exceed 1.0 kg/1,000 kg (1.0 lb/1,000 lbs) of coke burn-off in the catalyst regenerator.
4. Option 3: Ni lb/hr not subject to the NSPS for PM in 40 CFR 60.102.	Nickel (Ni) emissions must not exceed 13,000 milligrams per hour (mg/hr) (0.029 lb/hr).
5. Option 4: Ni Lb/1,000 lbs of coke burn-off not subject to the NSPS for PM in 40 CFR 60.102.	Ni emissions must not exceed 1.0 mg/kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator.

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TABLE 2 TO SUBPART UUU OF PART 63.—OPERATING LIMITS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(a)(2), you shall meet each operating limit in the following table that applies to you]

For each new or existing catalytic cracking unit	For this type of continuous monitoring system	For this type of control device.....	You shall meet this operating limit .....

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1. Subject to the NSPS for PM in 40 CFR 60.102.	Continuous opacity monitoring system.	Not applicable	Not applicable.
2. Option 1: NSPS requirements not subject to the NSPS for PM in 40 CFR 60.102.	Continuous opacity monitoring system.	Not applicable	Not applicable.
3. Option 2: PM limit not subject to the NSPS for PM in 40 CFR 60.102.	a. Continuous opacity monitoring system.	Electrostatic precipitator	Maintain the hourly average opacity of emissions from your catalyst regenerator vent no higher than the site-specific opacity limit established during the performance test.
	b. Continuous parameter monitoring systems.	Electrostatic precipitator	Maintain the daily average gas flow rate no higher than the limit established in the performance test; and maintain the daily average voltage and secondary current (or total power input) above the limit established in the performance test.
	c. Continuous parameter monitoring systems.	Wet scrubber	Maintain the daily average pressure drop above the limit established in the performance test (not applicable to a wet scrubber of the non-venturi jet-ejector design); and maintain the daily average liquid-to-gas ratio above the limit established in the performance test.
4. Option 3: Ni lb/hr not subject to the NSPS for PM in 40 CFR 60.102.	a. Continuous opacity monitoring system.	Electrostatic precipitator	Maintain the daily average Ni operating value no higher than the limit established during the performance test.
	b. Continuous parameter monitoring systems.	i. Electrostatic precipitator	Maintain the daily average gas flow rate no higher than the limit established during the performance test; maintain the monthly rolling average of the equilibrium catalyst Ni concentration no higher than the limit established during the performance test; and maintain the daily average voltage and secondary current (or total power input) above the established during the performance test.

(Continued)

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(Cont.) TABLE 2 TO SUBPART UUU OF PART 63.—OPERATING LIMITS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(a)(2), you shall meet each operating limit in the following table that applies to you]

For each new or existing catalytic cracking unit	For this type of continuous monitoring system	For this type of control device	You shall meet this operating limit .....
		ii. Wet scrubber	Maintain the monthly rolling average of the equilibrium catalyst Ni concentration no higher than the limit established during the performance test; maintain the daily average pressure drop above the limit established during the performance test (not applicable to a non-venturi wet scrubber of the jet-ejector design);and maintain the daily average liquid-to-gas ratio above the limit established during the performance test.
5. Option 4: Ni lb/1,000 lbs of coke burn-off not subject to the NSPS for PM in 40 CFR 60.102.	a. Continuous opacity monitoring system	Electrostatic precipitator	Maintain the daily average Ni operating value no higher than the Ni operating limit established during the performance test.
	b. Continuous parameter monitoring systems.	i. Electrostatic precipitator	Maintain the monthly rolling average of the equilibrium catalyst Ni concentration no higher than the limit established during the performance test; and maintain the daily average voltage and secondary current for total power input) above the limit established during the performance test.
		ii. Wet scrubber	Maintain the monthly rolling average of the equilibrium catalyst Ni concentration no higher than the limit established during the performance test; maintain the daily average pressure drop above the limit established during the performance test (not applicable to a non-venturi wet scrubber of the jet-ejector design); and maintain the daily average liquid-to-gas ratio above the limit established during the performance test.

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TABLE 3 TO SUBPART UUU OF PART 63.—CONTINUOUS MONITORING SYSTEMS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(b)(1), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit	If your catalytic cracking unit is	And you use this type of control device for your vent	You shall install, operate, and maintain a .....

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1. Subject to the NSPS for PM in 40 CFR 60.102.	Any size	Electrostatic precipitator or wet scrubber or no control device.	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent.
2. Option 1: NSPS limits not subject to the NSPS for PM in 40 CFR 60.102.	Any size	Electrostatic precipitator or wet scrubber or no control device.	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent.
3. Option 2: PM limit not subject to the NSPS for PM in 40 CFR 60.102.	a. Over 20,000 barrels per day fresh feed capacity.	Electrostatic precipitator	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent.
	b. Up to 20,000 barrels per day fresh feed capacity.	Electrostatic precipitator	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent; or continuous parameter monitoring systems to measure and record the gas flow rate entering or exiting the control device 1 and the voltage and secondary current (or total power input) to the control device.
	c. Any size	i. Wet scrubber	(1) Continuous parameter monitoring system to measure and record the pressure drop across the scrubber, gas flow rate entering or exiting the control device 1, and total liquid (or scrubbing liquor) flow rate to the control device. (2) If you use a wet scrubber of the non-venturi jet-ejector design, you're not required to install and operate a continuous parameter monitoring system for pressure drop.
	d. Any size	No electrostatic precipitator or wet scrubber.	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent.
4. Option 3: Ni lb/hr not subject to the NSPS for PM in 40 CFR 60.102.	a. Over 20,000 barrels per day fresh feed capacity.	Electrostatic precipitator	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent and continuous parameter monitoring system to measure and record the gas flow rate entering or exiting the control device1.

(Continued)

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Continued) TABLE 3 TO SUBPART UUU OF PART 63.—CONTINUOUS MONITORING SYSTEMS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(b)(1), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit	If your catalytic cracking unit is	And you use this type of control device for your vent	You shall install, operate, and maintain a .....

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	b. Up to 20,000 barrels per day fresh feed capacity.	Electrostatic precipitator	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent and continuous parameter monitoring system to measure and record the gas flow rate entering or exiting the control device [1]; or continuous parameter monitoring systems to measure and record the gas flow rate entering or exiting the control device [1] and the voltage and secondary current (or total power input) to the control device.
	c. Any size	Wet scrubber	(1) Continuous parameter monitoring system to measure and record the pressure drop across the scrubber, gas flow rate entering or exiting the control device [1], and total liquid (or scrubbing liquor) flow rate to the control device. (2) If you use a wet scrubber of the non-venturi jet-ejector, design, you're not required to install and operate a continuous parameter monitoring system for pressure drop.
	d. Any size	No electrostatic precipitator or wet scrubber.	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent and continuous parameter monitoring system to measure and record the gas flow rate [1].
5. Option 4: Ni lb/1,000 lbs of coke burn-off not subject to the NSPS for PM in 40 CFR 60.102.	a. Over 20,000 barrels per day fresh feed capacity.	Electrostatic precipitator	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent and continuous parameter monitoring system to measure and record the gas flow rate [1].
	b. Up to 20,000 barrels per day fresh feed capacity.	Electrostatic precipitator	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent and continuous parameter monitoring system to measure and record the gas flow rate [1]; or continuous parameter monitoring systems to measure and record the gas flow rate [1] and the voltage and secondary current (or total power

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Continued) TABLE 3 TO SUBPART UUU OF PART 63.—CONTINUOUS MONITORING SYSTEMS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(b)(1), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit	If your catalytic cracking unit is	And you use this type of control device for your vent	You shall install, operate, and maintain a .....
	c. Any size	Wet scrubber	Continuous parameter monitoring system to measure and record the pressure drop across the scrubber, gas flow rate entering or exiting the control device [1], and total liquid (or scrubbing liquor) flow rate to the control device.
	d. Any size	No electrostatic precipitator or wet scrubber	Continuous opacity monitoring system to measure and record the opacity of emissions from each catalyst regenerator vent and continuous parameter monitoring system to measure and record the gas flow rate [1].

TABLE 4 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARD (NSPS) FOR PARTICULATE MATTER (PM)

[As stated in § 63.1564(b)(2), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit catalyst regenerator vent	You shall	Using	According to these requirements ...

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1. If you elect Option 1 in item 2 of Table 1, Option 2 in item 3 of Table 1, Option 3 in item 4 of Table 1, or Option 4 in item 5 of Table 1 of this subpart.	a. Select sampling port's location and the number of traverse ports.	Method 1 or 1A in appendix A to part 60 of this chapter.	Sampling sites must be located at the outlet of the control device or the outlet of the regenerator, as applicable, and prior to any releases to the atmosphere.
	b. Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter, as applicable.	
	c. Conduct gas molecular weight analysis.	Method 3, 3A, or 3B in appendix A to part 60 of this chapter, as applicable.	
	d. Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	
	e. If you use an electro-static precipitator, record the total number of fields in the control system and how many operated during the applicable performance test.		
	f. If you use a wet scrubber, record the total amount (rate) of water (or scrubbing liquid) and the amount (rate) of makeup liquid to the scrubber during each test run.		
	a. Measure PM emissions		
2. Option 1: Elect NSPS		Method 5B or 5F (40 CFR part 60, appendix A) to determine PM emissions and associated moisture content for units without wet scrubbers. Method 5B (40 CFR part 60, appendix A) to determine PM emissions and associated moisture content for unit with wet scrubber.	You must maintain a sampling rate of at least 0.15 dry standard cubic meters per minute (dscm/min) (0.53 dry standard cubic feet per minute (dscf/min)).
	b. Compute PM emission rate (lbs/1,000 lbs) of coke burn-off.	Equations 1, 2, and 3 of § 63.1564 (if applicable).	
	c. Measure opacity of emissions.	Continuous opacity monitoring system.	You must collect opacity monitoring data every 10 seconds during the entire period of the Method 5B or 5F performance test and reduce the data to 6-minute averages.
	a. Measure PM emissions		
3. Option 2: PM limit	b. Compute coke burn-off rate and PM emission rate.	See item 2. of this table	See item 2. of this table.
		Equations 1 and 2 of § 63.1564	

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(Continued) TABLE 4 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARD (NSPS) FOR PARTICULATE MATTER (PM)

[As stated in § 63.1564(b)(2), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit catalyst regenerator vent	You shall	Using	According to these requirements.....

	c. Establish your site-specific opacity operating limit if you use a continuous opacity monitoring system.	Data from the continuous opacity monitoring system.	You must collect opacity monitoring data every 10 seconds during the entire period of the Method 5B or 5F performance test and reduce the data to 6-minute averages; determine and record the hourly average opacity from all the 6-minute averages; and compute the site-specific limit using Equation 4 of § 63.1564.
4. Option 3: Ni lb/hr	a. Measure concentration of Ni and total metal HAP. b. Compute Ni emission rate (lb/hr). c. Determine the equilibrium catalyst Ni concentration.	Method 29 (40 CFR part 60, appendix A). Equation 5 of § 63.1564 XRF procedure in appendix A to this subpart1; or EPA Method 6010B or 6020 or EPA Method 7520 or 7521 in SW–8462; or an alternative to the SW-846 method satisfactory to the Administrator..	You must obtain 1 sample for each of the 3 runs; determine and record the average equilibrium catalyst Ni concentration for each of the 3 runs; and you may adjust the results for an individual run to the maximum value using Equation 2 of § 63.1571.
	d. If you use a continuous opacity monitoring system, establish your site-specific Ni operating limit.	i. Equations 6 and 7 of § 63.1564 using data from continuous opacity monitoring system, gas flow rate, results of equilibrium catalyst Ni concentration analysis, and Ni emission rate from Method 29 test.	(1) You must collect opacity monitoring data every 10 seconds during the entire period of the initial Ni performance test; reduce the data to 6-minute averages; and determine and record the hourly average opacity from all the 6-minute averages. (2) You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial Ni performance test; measure the gas flow as near as practical to the continuous opacity monitoring system; and determine and record the hourly average actual gas flow rate from all the readings.
5. Option 4: Ni lbs/1,000 lbs of coke burn-off.	a. Measure concentration of Ni and total metal HAP. b. Compute Ni emission rate (lb/ 1,000 lbs of coke burn-off). c. Determine the equilibrium	Method 29 (40 CFR part 60, appendix A). Equations 1 and 8 of § 63.1564.	

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(Continued) TABLE 4 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARD (NSPS) FOR PARTICULATE MATTER (PM)

[As stated in § 63.1564(b)(2), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit catalyst regenerator vent	You shall	Using	According to these requirements .....

	d. If you use a continuous opacity monitoring system, establish your site-specific Ni operating limit.	i. Equations 9 and 10 of § 63.1564 with data from continuous opacity monitoring system, coke burn-off rate, results of equilibrium catalyst Ni concentration analysis, and Ni emission rate from Method 29 test.	(1) You must collect opacity monitoring data every 10 seconds during the entire period of the initial Ni performance test; reduce the data to 6-minute averages; and determine and record the hourly average opacity from all the 6-minute averages. (2) You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial Ni performance test; measure the gas flow rate as near as practical to the continuous opacity monitoring system; and determine and record the hourly average actual gas flow rate from all the readings.
	e. Record the catalyst addition rate for each test and schedule for the 10-day period prior to the test.		
6. If you elect Option 2 in Entry 3 in Table 1, Option 3 in Entry 4 in Table 1, or Option 4 in Entry 5 in Table 1 of this subpart and you use continuous parameter monitoring systems.	a. Establish each operating limit in Table 2 of this subpart that applies to you.	Data from the continuous parameter monitoring systems and applicable performance test methods.	
	b. Electrostatic precipitator or wet scrubber: gas flow rate.	Data from the continuous parameter monitoring systems and applicable performance test methods.	You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial performance test; and determine and record the maximum hourly average gas flow rate from all the readings.
	c. Electrostatic precipitator: voltage and secondary current (or total power input).	Data from the continuous parameter monitoring systems and applicable performance test methods.	You must collect voltage and secondary current (or total power input) monitoring data every 15 minutes during the entire period of the initial performance test; and determine and record the minimum hourly average voltage and secondary current (or total power input) from all the readings.
	d. Electrostatic precipitator or wet scrubber: equilibrium catalyst Ni concentration.	Results of analysis for equilibrium catalyst Ni concentration.	You must determine and record the average equilibrium catalyst Ni concentration for the 3 runs based on the laboratory results. You may adjust the value using Equation 1 or

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(Continued) TABLE 4 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARD (NSPS) FOR PARTICULATE MATTER (PM)

[As stated in § 63.1564(b)(2), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit catalyst regenerator vent	You shall	Using	According to these requirements .....
	f. Wet scrubber: liquid-to-gas ratio	Data from the continuous parameter monitoring systems and applicable performance test methods.	You must collect gas flow rate and total water (or scrubbing liquid) flow rate monitoring data every 15 minutes during the entire period of the initial performance test; determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate from all the readings; and determine and record the minimum liquid-to-gas ratio
	g. Alternative procedure for gas flow rate.	Data from the continuous parameter monitoring systems and applicable performance test methods.	You must collect air flow rate monitoring data or determine the air flow rate using control room instrumentation every 15 minutes during the entire period of the initial performance test; determine and record the hourly average rate of all the readings; and determine and record the maximum gas flow rate using Equation 1 of § 63.1573.

1 Determination of Metal Concentration on Catalyst Particles (Instrumental Analyzer Procedure).

2 EPA Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry, EPA Method 6020, Inductively Coupled Plasma-Mass Spectrometry, EPA Method 7520, Nickel Atomic Absorption, Direct Aspiration, and EPA Method 7521, Nickel Atomic Absorption, Direct Aspiration are included in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW–846, Revision 5 (April 1998). The SW– 846 and Updates (document number 955–001–00000–1) are available for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800; and from the National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487–4650. Copies may be inspected at the EPA Docket Center (Air Docket), EPA West, Room B–108, 1301 Constitution Ave., NW., Washington, DC; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

TABLE 5 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH METAL HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

[As stated in § 63.1564(b)(5), you shall meet each requirement in the following table that applies to you]

Emissions Unit ID: P011

For each new and existing catalytic cracking unit catalyst regen	For the following emission limit.	You have demonstrated initial compliance if. . . . .

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1. Subject to the NSPS for PM in 40 CFR 60.1020.	PM emissions must not exceed 1.0 kg/1,000 kg (1.0 lb/1,000 lb) of charge	You have already conducted a performance test to demonstrate initial compliance with the PM limit.

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(Cont.) TABLE 5 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH METAL HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

[As stated in § 63.1564(b)(5), you shall meet each requirement in the following table that applies to you]

For each new and existing catalytic cracking unit catalyst regenerator vent.....	For the following emission limit	You have demonstrated initial compliance if .....
3. Option 2: not subject to the NSPS for PM	PPM emissions must not exceed 1.0 kg/1,000 kg (1.0 lb/1,000 lb) of coke burn-off in the catalyst regenerator.	The average PM emission rate, measured using EPA Method 5B or 5F (for a unit without a wet scrubber) or Method 5B (for a unit with a wet scrubber), over the period of the initial performance test, is less than or equal to 1.0 kg/1,000 kg (1.0 lb/1,000 lb) of coke burn-off in the catalyst regenerator. The PM emission rate is calculated using Equations 1 and 2 of § 63.1564; and if you use a continuous opacity monitoring system, your performance evaluation shows the system meets the applicable requirements in § 63.1572.
4. Option 3: not subject to the NSPS for PM	Nickel (Ni) emissions from your catalyst regenerator vent must not exceed 13,000 mg/ hr (0.029 lb/hr).	The average Ni emission rate, measured using Method 29 over the period of the initial performance test, is not more than 13,000 mg/hr (0.029 lb/hr). The Ni emission rate is calculated using Equation 5 of § 63.1564; and if you use a continuous opacity monitoring system, your performance evaluation shows the system meets the applicable requirements in § 63.1572.
5. Option 4: Ni lb/1,000 lbs of coke burn-off not subject to the NSPS for PM.	Ni emissions from your catalyst regenerator vent must not exceed 1.0 mg/kg (0.001 lb/ 1,000 lbs) of coke burn-off in the catalyst regenerator.	The average Ni emission rate, measured using Method 29 over the period of the initial performance test, is not more than 1.0 mg/kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator. The Ni emission rate is calculated using Equation 8 of § 63.1564; and if you use a continuous opacity monitoring system, your performance evaluation shows the system meets the applicable requirements in § 63.1572.

Emissions Unit ID: P011

TABLE 6 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH METAL HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

[As stated in § 63.1564(c)(1), you shall meet each requirement in the following table that applies to you]

For each new and existing catalytic cracking unit	Subject to this emission limit for your catalyst regenerator vent	You shall demonstrate continuous compliance by .....

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1. Subject to the NSPS for PM in 40 CFR 60.102.	a. PM emissions must not exceed 1.0 lb/ 1,000 lbs of coke burn-off in the catalyst regenerator; if the discharged gases pass through an incinerator or waste heat boiler in which you burn auxiliary or supplemental liquid or solid fossil fuel, incremental rate of PM can't exceed 43.0 g/MJ (0.10 lb/million Btu) of heat input attributable to the liquid or solid fossil fuel; and opacity of emissions can't exceed 30 percent, except for one 6-minute average opacity reading in any 1-hour period.	i. Determining and recording each day the average coke burn-off rate (thousands of kilograms per hour) using Equation 1 in § 63.1564 and the hours of operation for each catalyst regenerator; maintaining PM emission rate below 1.0 kg/1,000 kg (1.0 lb/1,000 lbs) of coke burn-off; if applicable, determining and recording each day the rate of combustion of liquid or solid fossil fuels (liters/hour or kilograms/hour) and the hours of operation during which liquid or solid fossil-fuels are combusted in the incinerator-waste heat boiler; if applicable, maintaining the PM rate incinerator below 43 g/GJ (0.10 lb/million Btu) of heat input attributable to the solid or liquid fossil fuel; collecting the continuous opacity monitoring data for each catalyst regenerator vent according to § 63.1572; and maintaining each 6-minute average at or below 30 percent except that one 6-minute average during a 1-hour period can exceed 30 percent. See item 1.a.i. of this table.
2. Option 1: Elect NSPS not subject to the NSPS for PM in 40 CFR 60.102.	See item 1.a. of this table	Determining and recording each day the average coke burn-off rate (thousands of kilograms per hour) and the hours of operation for each catalyst regenerator by Equation 1 of § 63.1564. You can use process data to determine the volumetric flow rate; and maintaining PM emission rate below 1.0 kg/ 1,000 kg (1.0 lb/1,000 lbs) of coke burn-off. Maintaining Ni emission rate below 13,000 mg/hr (0.029 lb/hr).
3. Option 2: PM limit not subject to the NSPS for PM.	PM emissions must not exceed 1.0 lb/1,000 lbs of coke burn-off in the catalyst regenerator.	
4. Option 3: Ni lb/hr not subject to the NSPS for PM.	Ni emissions must not exceed 13,000 mg/hr (0.029 lb/hr).	Determining and recording each day the average coke burn-off rate (thousands of kilograms per hour) and the hours of operation for each catalyst regenerator by Equation 1 of § 63.1564. You can use process data to determine the volumetric flow rate; and maintaining Ni emission rate below 1.0 mg/ kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator.
5. Option 4: Ni lb/1,000 lbs of coke burn-off not subject to the NSPS for PM.	Ni emissions must not exceed 1.0 mg/kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator.	

Emissions Unit ID: P011

TABLE 7 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(c)(1), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit	If you use	For this operating limit	You shall demonstrate continuous compliance by . . . . .

Emissions Unit ID: P011

1. Subject to NSPS for PM in 40 CFR 60.102. 2. Option 1: Elect NSPS no	Continuous opacity monitoring system. Continuous opacity moni	Not applicable. Not applicable	Complying with Table 6 of this subpart. Complying with Table 6 of t

(Cont.) TABLE 7 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(c)(1), you shall meet each requirement in the following table that applies to you]

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For each new or existing catalytic cracking unit.....	If you use....	For this operating limit.....	You shall demonstrate continuous compliance by.....

4. Option 3: Nil lb/hr not subject to the NSPS for PM in 40 CFR 60.102.	a. Continuous opacity monitoring system.	The daily average Nil operating value must not exceed the site specific	Collecting the hourly average continuous opacity monitoring system
	b. Co		

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(Cont.) TABLE 7 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1564(c)(1), you shall meet each requirement in the following table that applies to you

Sunoco, Inc. **Facility ID: 0448010246**

PTI Application: 04-01447

Emissions Unit ID: P011

For each new or existing catalytic cracking unit	If you use	For this operating limit	You shall demonstrate continuous compliance by . . . . .

5. Option 4: Nil lb/ton of coke burn off not subject to the NSPS for PM	a. Continuous opacity monitoring system.	The daily average Nil operating value must not exceed the site specific	Collecting the hourly average continuous opacity monitoring system
	b. Co		

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1 If applicable, you can use the alternative in § 63.1573 for gas flow rate instead of a continuous parameter monitoring system if you used the alternative method in the initial performance test. If so, you must continuously monitor and record the air flow rate to the regenerator and the temperature of the gases entering the control device as described in § 63.1573. You must determine and record the hourly average gas flow rate using Equation 1 of § 63.1573 and the daily average gas flow rate. You must maintain the daily average gas flow rate below the operating limit established during the performance test.

2 The equilibrium catalyst Ni concentration must be measured by the procedure, Determination of Metal Concentration on Catalyst Particles (Instrumental Analyzer Procedure) in appendix A to this subpart; or by EPA Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry, EPA Method 6020, Inductively Coupled Plasma-Mass Spectrometry, EPA Method 7520, Nickel Atomic Absorption, Direct Aspiration, or EPA Method 7521, Nickel Atomic Absorption, Direct Aspiration; or by an alternative to EPA Method 6010B, 6020, 7520, or 7521 satisfactory to the Administrator. The EPA Methods 6010B, 6020, 7520, and 7521 are included in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW–846, Revision 5 (April 1998). The SW–846 and Updates (document number 955–001–00000–1) are available for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800; and from the National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487–4650. Copies may be inspected at the EPA Docket Center (Air Docket), EPA West, Room B–108, 1301 Constitution Ave., NW., Washington, DC; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. These methods are also available at http://www.epa.gov/epaoswer/hazwaste/ test/main.htm.

TABLE 8 TO SUBPART UUU OF PART 63.—ORGANIC HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

[As stated in § 63.1565(a)(1), you shall meet each emission limitation in the following table that applies to you]

For each new and existing catalytic cracking unit	You shall meet the following emission limit for each catalyst regenerator vent .....
1. Subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103.	CO emissions from the catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 parts per million volume (ppmv) (dry basis).
2. Not subject to the NSPS for CO in 40 CFR 60.103.	a. CO emissions from the catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis). b. If you use a flare to meet the CO limit, the flare must meet the requirements for control devices in § 63.11(b): visible emissions must not exceed a total of 5 minutes during any 2 consecutive hours.

TABLE 9 TO SUBPART UUU OF PART 63.—OPERATING LIMITS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1565(a)(2), you shall meet each operating limit in the following table that applies to you]

For each new or existing catalytic cracking unit	For this type of continuous monitoring system	For this type of control device	You shall meet this operating limit .....

Emissions Unit ID: P011

1. Subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103.	Continuous emission monitoring system.	Not applicable	Not applicable.
2. Not subject to the NSPS for CO in 40 CFR 60.103.	a. Continuous emission monitoring system.	Not applicable	Not applicable.
		i. Thermal incinerator	Maintain the daily average combustion zone temperature above the limit established during the performance test; and maintain the daily average oxygen concentration in the vent stream (percent, dry basis) above the limit established during the performance test.
	b. Continuous parameter monitoring systems.	ii. Boiler or process heater with a design heat input capacity under 44 MW or a boiler or process heater in which all vent streams are not introduced into the flame zone.	Maintain the daily average combustion zone temperature above the limit established in the performance test.
		iii. Flare	The flare pilot light must be present at all times and the flare must be operating at all times that emissions may be vented to it.

TABLE 10 TO SUBPART UUU OF PART 63.—CONTINUOUS MONITORING SYSTEMS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS—Continued

[As stated in § 63.1565(b)(1), you shall meet each requirement in the following table that applies to you]

For each new or existing catalytic cracking unit	And you use this type of control device for your vent	You shall install, operate, and maintain this type of continuous monitoring system .....

1. Subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103.	Not applicable	Continuous emission monitoring system to measure and record the concentration by volume (dry basis) of CO emissions from each catalyst regenerator vent.
2. Not subject to the NSPS for CO in 40 CFR 60.103.	a. Thermal incinerator	Continuous emission monitoring system to measure and record the concentration by volume (dry basis) of CO emissions from each catalyst regenerator vent; or continuous parameter monitoring systems to measure and record the combustion zone temperature and oxygen content (percent, dry basis) in the incinerator vent stream.
	b. Process heater or boiler with a design heat input capacity under 44 MW or process heater or boiler in which all vent streams are not introduced into the flame zone.	Continuous emission monitoring system to measure and record the concentration by volume (dry basis) of CO emissions from each catalyst regenerator vent; or continuous parameter monitoring systems to measure and record the combustion zone temperature.
	c. Flare	Monitoring device such as a thermocouple, an ultraviolet beam sensor, or infrared sensor to continuously detect the presence of a pilot flame.
	d. No control device	Continuous emission monitoring system to measure and record the concentration by volume (dry basis) of CO emissions from each catalyst regenerator vent.

TABLE 11 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS NOT SUBJECT TO NEW SOURCE PERFORMANCE STANDARD (NSPS) FOR CARBON MONOXIDE (CO)

[As stated in § 63.1565(b)(2) and (3), you shall meet each requirement in the following table that applies to you]

Emissions Unit ID: P011

For.....	You shall.....	Using.....	According to these requirements.....

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1. Each new or existing catalytic cracking unit catalyst regenerator	a. Select sample point's location and the number of trave sepor	Method 1 or 1A in appendix A to part 60 of this chapter.	Sampling sites must be located at the outlet of the control device
		Method 2	

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(Continued) TABLE 11 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS NOT SUBJECT TO NEW SOURCE PERFORMANCE STANDARD (NSPS) FOR CARBON MONOXIDE (CO)

[As stated in § 63.1565(b)(2) and (3), you shall meet each requirement in the following table that applies to you]

For	You shall	Using	According to these requirements .....
	f. If you use a flare, conduct visible emission observations.	Method 22 (40 CFR part 60, appendix A).	Maintain a 2-hour observation period; and record the presence of a flame at the pilot light over the full period of the test.
	g. If you use a flare, determine that the flare meets the requirements for net heating value of the gas being combusted and exit velocity.	40 CFR 60.11(b)(6)through(8).	

TABLE 12 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH ORGANIC HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

[As stated in § 63.1565(b)(4), you shall meet each requirement in the following table that applies to you]

For each new and existing catalytic cracking unit	For the following emission limit	You have demonstrated initial compliance if.....

Emissions Unit ID: P011

1. Subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103.	CO emissions from your catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis).	You have already conducted a performance test to demonstrate initial compliance with the NSPS and the measured CO emissions are less than or equal to 500 ppm (dry basis). As part of the Notification of Compliance Status, you must certify that your vent meets the CO limit. You are not required to conduct another performance test to demonstrate initial compliance. You have already conducted a performance evaluation to demonstrate initial compliance with the applicable performance specification. As part of your Notification of Compliance Status, you must certify that your continuous emission monitoring system meets the applicable requirements in § 63.1572. You are not required to conduct another performance evaluation to demonstrate initial compliance.
2. Not subject to the NSPS for CO in 40 CFR 60.103.	a. CO emissions from your catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis).	i. If you use a continuous parameter monitoring system, the average CO emissions measured by Method 10 over the period of the initial performance test are less than or equal to 500 ppmv (dry basis). ii. If you use a continuous emission monitoring system, the hourly average CO emissions over the 24-hour period for the initial performance test are not more than 500 ppmv (dry basis); and your performance evaluation shows your continuous emission monitoring system meets the applicable requirements in § 63.1572.
	b. If you use a flare, visible emissions must not exceed a total of 5 minutes during any 2 operating hours.	Visible emissions, measured by Method 22 during the 2-hour observation period during the initial performance test, are no higher than 5 minutes.

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TABLE 13 TO SUBPART UUU OF PART 63—CONTINUOUS COMPLIANCE WITH ORGANIC HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

[As stated in § 63.1565(c)(1), you shall meet each requirement in the following table that applies to you]

For each new and existing catalytic cracking unit	Subject to this emission limit for your catalyst regenerator vent	If you must	You shall demonstrate continuous compliance by .....
1. Subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103.	CO emissions from your catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis).	Continuous emission monitoring system.	Collecting the hourly average CO monitoring data according to § 63.1572; and maintaining the hourly average CO concentration at or below 500 ppmv (dry basis).
2. Not subject to the NSPS for CO in 40 CFR 60.103.	i. CO emissions from your catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis).	Continuous emission monitoring system.	Same as above.
	ii. CO emissions from your catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis).	Continuous parameter monitoring system.	Maintaining the hourly average CO concentration below 500 ppmv (dry basis).
	iii. Visible emissions from a flare must not exceed a total of 5 minutes during any 2-hour period.	Control device-flare	Maintaining visible emissions below a total of 5 minutes during any 2-hour operating period.

TABLE 14 TO SUBPART UUU OF PART 63—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

[As stated in § 63.1565(c)(1), you shall meet each requirement in the following table that applies to you]

For each new existing catalytic cracking unit	If you use	For this operating limit	You shall demonstrate continuous compliance by .....

Emissions Unit ID: P011

1. Subject to NSPS for carbon monoxide (CO) in 40 CFR 60.103.	Continuous emission monitoring system.	Not applicable	Complying with Table 13 of this subpart.
2. Not subject to the NSPS for CO in 40 CFR 60.103.	a. Continuous emission monitoring system.	Not applicable	Complying with Table 13 of this subpart.
	b. Continuous parameter monitoring systems—thermal incinerator.	i. The daily average combustion zone temperature must not fall below the level established during the performance test.	Collecting the hourly and daily average temperature monitoring data according to § 63.1572; and maintaining the daily average combustion zone temperature above the limit established during the performance test.
		ii. The daily average oxygen concentration in the vent stream (percent, dry basis) must not fall below the level established during the performance test.	Collecting the hourly and daily average oxygen concentration monitoring data according to § 63.1572; and maintaining the daily average oxygen concentration above the limit established during the performance test.
	c. Continuous parameter monitoring systems—boiler or process heater with a design heat input capacity under 44 MW or boiler or process heater in which all vent streams are not introduced into the flame zone.	The daily combustion zone temperature must not fall below the level established in the performance test.	Collecting the average hourly and daily temperature monitoring data according to § 63.1572; and maintaining the daily average combustion zone temperature above the limit established during the performance test.
	d. Continuous parameter monitoring system—flare.	The flare pilot light must be present at all times and the flare must be operating at all times that emissions may be vented to it.	Collecting the flare monitoring data according to § 63.1572; and recording for each 1-hour period whether the monitor was continuously operating and the pilot light was continuously present during each 1-hour period.

TABLE 36 TO SUBPART UUU OF PART 63.—WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(a)(1), you shall meet each work practice standard in the following table that applies to you]

Option	You shall meet one of these equipment standards .....

1. Option 1	Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to demonstrate, either continuously or at least every hour, whether flow is present in the by bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
2. Option 2	Install a car-seal or lock-and-key device placed on the mechanism by which the bypass device flow position is controlled (e.g., valve handle, damper level) when the bypass device is in the closed position such that the bypass line valve cannot be opened without breaking the seal or removing the device.
3. Option 3	Seal the bypass line by installing a solid blind between piping flanges.
4. Option 4	Vent the bypass line to a control device that meets the appropriate requirements in this subpart.

TABLE 37 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR BYPASS LINES

[As stated in § 63.1569(b)(1), you shall meet each requirement in the following table that applies to you]

For this standard . . .	You shall . . .
1. Option 1: Install and operate a flow indicator, level recorder, or electronic valve position monitor.	Record during the performance test for each type of control device whether the flow indicator, level recorder, or electronic valve position monitor was operating and whether flow was detected at any time during each hour of level the three runs comprising the performance test.

TABLE 38 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(b)(2), you shall meet each requirement in the following table that applies to you]

For	For this work practice standard	You have demonstrated initial compliance if ....

Emissions Unit ID: P011

1. Each new or existing bypass line associated with a catalytic cracking unit, catalytic reforming unit, or sulfur recovery unit.	a. Option 1: Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to continuously detect, at least every hour, whether flow is present in the bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.	The installed equipment operates properly during each run of the performance test and no flow is present in the line during the test.
	b. Option 2: Install a car-seal or lock-and-key device placed on the mechanism by which the bypass device flow position is controlled (e.g., valve handle, damper level) when the bypass device is in the closed position such that the bypass line valve cannot be opened without breaking the seal or removing the device.	As part of the notification of compliance status, you certify that you installed the equipment, the equipment was operational by your compliance date, and you identify what equipment was installed.
	c. Option 3: Seal the bypass line by installing a solid blind between piping flanges.	See item 1.b. of this table.
	d. Option 4: Vent the bypass line to a control device that meets the appropriate requirements in this subpart.	See item 1.b. of this table.

TABLE 39 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(c)(1), you shall meet each requirement in the following table that applies to you]

If you elect this standard	You shall demonstrate continuous compliance by .....

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1. Option 1: Flow indicator, level recorder, or electronic valve position monitor.	Monitoring and recording on a continuous basis or at least every hour whether flow is present in the bypass line; visually inspecting the device at least once every hour if the device is not equipped with a recording system that provides a continuous record; and recording whether the device is operating properly and whether flow is present in the bypass line.
2. Option 2: Car-seal or lock-and-key device	Visually inspecting the seal or closure mechanism at least once every month; and recording whether the bypass line valve is maintained in the closed position and whether flow is present in the line.
3. Option 3: Solid blind flange	Visually inspecting the blind at least once a month; and recording whether the blind is maintained in the correct position such that the vent stream cannot be diverted through the bypass line.
4. Option 4: Vent to control device	Monitoring the control device according to appropriate subpart requirements.
5. Option 1, 2, 3, or 4	Recording and reporting the time and duration of any bypass.

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TABLE 40 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE OF CONTINUOUS OPACITY MONITORING SYSTEMS AND CONTINUOUS EMISSION MONITORING SYSTEMS

[As stated in § 63.1572(a)(1) and (b)(1), you shall meet each requirement in the following table that applies to you]

This type of continuous opacity or emission monitoring system	Shall meet these requirements .....
1. Continuous opacity monitoring system	Performance specification 1 (40 CFR part 60, appendix B).
2. CO continuous emission monitoring system	Performance specification 4 (40 CFR part 60, appendix B); span value of 1,000 ppm; and procedure 1 (40 CFR part 60, appendix F) except relative accuracy test audits are required annually instead of quarterly.
3. CO continuous emission monitoring system used to demonstrate emissions average under 50 ppm (dry basis).	Performance specification 4 (40 CFR part 60, appendix B); and span value of 100 ppm.
4. SO_2 continuous emission monitoring for sulfur recovery unit with oxidation control system or reduction control system; this monitor must include an O_2 monitor for correcting the data for excess air.	Performance specification 2 (40 CFR part 60, appendix B); span value of 500 ppm SO2; use Methods 6 or 6C and 3A or 3B (40 CFR part 60, appendix A) for certifying O2 monitor; and procedure 1 (40 CFR part 60, appendix F) except relative accuracy test audits are required annually instead of quarterly.
5. Reduced sulfur and O_2 continuous emission monitoring system for sulfur recovery unit with reduction control system not followed by incineration; this monitor must include an O_2 monitor for correcting the data for excess air unless exempted.	Performance specification 5 (40 CFR part 60, appendix B), except calibration drift specification is 2.5 percent of the span value instead of 5 percent; 450 ppm reduced sulfur; use Methods 15 or 15A and 3A or 3B (40 CFR part 60, appendix A) for certifying O2monitor; if Method 3A or 3B yields O2 concentrations below 0.25 percent during the performance evaluation, the O2 concentration can be assumed to be zero and the O2 monitor is not required; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.
6. Instrument with an air or O_2 dilution and oxidation system to convert reduced sulfur to SO_2 for continuously monitoring the concentration of SO_2 instead of reduced sulfur monitor and O_2 monitor.	Performance specification 5 (40 CFR part 60, appendix B); span value of 375 ppm SO2; use Methods 15 or 15A and 3A or 3B for certifying O2 monitor; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.
7. TRS continuous emission monitoring system for sulfur recovery unit; this monitor must include an O_2 monitor for correcting the data for excess air.	Performance specification 5 (40 CFR part 60, appendix B).
8. O_2 monitor for oxygen concentration	If necessary due to interferences, locate the oxygen sensor prior to the introduction of any outside gas stream; performance specification 3 (40 CFR part 60, appendix B; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.

TABLE 41 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE OF CONTINUOUS PARAMETER MONITORING SYSTEMS—Continued

[As stated in § 63.1572(c)(1), you shall meet each requirement in the following table that applies to you]

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If you use	You shall .....
1. pH strips	Use pH strips with an accuracy of ± 10 percent.
2. Colormetric tube sampling system	Use a colormetric tube sampling system with a printed numerical scale in ppmv, a standard measurement range of 1 to 10 ppmv (or 1 to 30 ppmv if applicable), and a standard deviation for measured values of no more than ± 15 percent. System must include a gas detection pump and hot air probe if needed for the measurement range.

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TABLE 42 TO SUBPART UUU OF PART 63.—ADDITIONAL INFORMATION FOR INITIAL NOTIFICATION OF COMPLIANCE STATUS

[As stated in § 63.1574(d), you shall meet each requirement in the following table that applies to you]

For	You shall provide this additional information .....
1. Identification of affected sources and emission points.	Nature, size, design, method of operation, operating design capacity of each affected source; identify each emission point for each HAP; identify any affected source or vent associated with an affected source not subject to the requirements of subpart UUU.
2. Initial compliance	Identification of each emission limitation you will meet for each affected source, including any option you select (i.e., NSPS, PM or Ni, flare, percent reduction, concentration, options for bypass lines); if applicable, certification that you have already conducted a performance test to demonstrate initial compliance with the NSPS for an affected source; certification that the vents meet the applicable emission limit and the continuous opacity or that the emission monitoring system meets the applicable performance specification; if applicable, certification that you have installed and verified the operational status of equipment by your compliance date for each bypass line that meets the requirements of Option 2, 3, or 4 in § 63.1569 and what equipment you installed; identification of the operating limit for each affected source, including supporting documentation; if your affected source is subject to the NSPS, certification of compliance with NSPS emission limitations and performance specifications; a brief description of performance test conditions (capacity, feed quality, catalyst, etc.); an engineering assessment (if applicable); and if applicable, the flare design (e.g., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the Method 22 test.
3. Continuous compliance	Each monitoring option you elect; and identification of any unit or vent for which monitoring is not required; and the definition of ‘‘operating day.’’ (This definition, subject to approval by the applicable permitting authority, must specify the times at which a 24-hr operating day begins and ends.)

TABLE 43 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR REPORTS

[As stated in § 63.1575(a), you shall meet each requirement in the following table that applies to you]

You must submit a(n)	The report must contain	You shall submit the report .....
1. Compliance report	If there are not deviations from any emission limitation or work practice standard that applies to you, a statement that there were no deviations from the standards during the reporting period and that no continuous opacity monitoring system or continuous emission monitoring system was inoperative, inactive, out-of-control, repaired, or adjusted; and if you have a deviation from any emission limitation or work practice standard during the reporting period, the report must contain the information in § 63.1575(d) or (e)	Semiannually according to the requirements in § 63.1575(b).

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Table 44 to Subpart UUU of Part 63 - Applicability of NESHAP General Provisions to Subpart UUU
As stated in §63.1577, you shall each requirement in the following table that applies to you.

Citation	Subject	Applies to Subpart UUU	Explanation
§63.1	Applicability	Yes	Except that subpart UUU specifies calendar or operating day.
§63.2	Definitions	Yes	
§63.3	Units and Abbreviations	Yes	
§63.4	Prohibited Activities	Yes	
§63.5(a)-(c)	Construction and Reconstruction	Yes	In §63.5(b)(4), replace the reference to §63.9 with §63.9(b)(4) and (5).
§63.5(d)(1)(i)	Application for Approval of Construction or Reconstruction - General Application Requirements	Yes	Except, subpart UUU specifies the application is submitted as soon as practicable before startup but no later than 90 days (rather than 60) after the promulgation date where construction or reconstruction had commenced and initial startup had not occurred before promulgation.
§63.5(d)(1)(ii)		Yes	Except that emission estimates specified in §63.5(d)(1) (ii)(H) are not required.
§63.5(d)(1)(iii)		No	Subpart UUU specifies submission of notification of compliance status.
§63.5(d)(2)		No	
§63.5(d)(3)		Yes	Except that §63.5(d)(3)(ii) does not apply.
§63.5(d)(4)		Yes	
§63.5(e)	Approval of Construction or Reconstruction	Yes	
§63.5(f)(1)	Approval of Construction or Reconstruction Based on State Review	Yes	
§63.5(f)(2)		Yes	Except that 60 days is changed to 90 days and cross-reference to 53.9(B)(2) does not apply.
§63.6(a)	Compliance with Standards and Maintenance - Applicability	Yes	
§63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Yes	
§63.6(b)(5)		Yes	Except that subpart UUU specifies different compliance dates for sources.
§63.6(b)(6)	[Reserved]	Not applicable	
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Yes	

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§63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Yes	Except that subpart UUU specifies different compliance dates for sources subject to Tier II gasoline sulfur control requirements.
§63.6(c)(3)-(4)	[Reserved]	Not applicable	
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Yes	
§63.6(d)	[Reserved]	Not applicable	
§63.6(e)(1)-(2)	Operation and Maintenance Requirements	Yes	
§63.6(e)(3)(i)-(iii)	Startup, Shutdown, and Malfunction Plan	Yes	
§63.6(e)(3)(iv)		Yes	Except that reports of actions not consistent with plan are not required within 2 and 7 days of action but rather must be included in next periodic report.
§63.6(e)(3)(v)-(viii)		Yes	The owner or operator is only required to keep the latest version of the plan.
§63.6(e)(3)(ix)		Yes	
§63.6(f)(1)-(2)(iii)(C)	Compliance with Emission Standards	Yes	
§63.6(f)(2)(iii)(D)		No	
§63.6(f)(2)(iv)-(v)		Yes	
§63.6(f)(3)		Yes	
§63.6(g)	Alternative Standard	Yes	
§63.6(h)	Opacity/VE Standards	Yes	
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	No	Subpart UUU specifies methods.
§63.6(h)(2)(ii)	[Reserved]	Not applicable	
§63.6(h)(2)(iii)		Yes	
§63.6(h)(3)	[Reserved]	Not applicable	
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Yes	Applies to Method 22 tests.
§63.6(h)(5)	Conducting Opacity/VE Observations	No	
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Yes	Applies to Method 22 observations.
§63.6(h)(7)(i)	Report COM Monitoring Data from Performance Test	Yes	
§63.6(h)(7)(ii)	Using COM Instead of Method 9	No	
§63.6(h)(7)(iii)	Averaging Time for COM during Performance Test	Yes	
§63.6(h)(7)(iv)	COM Requirements	Yes	
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Yes	
§63.6(h)(9)	Adjusted Opacity Standard	Yes	
§63.6(i)(1)-(14)	Extension of Compliance	Yes	Except that 60 days is changed to 90 days and cross-reference to 53.9(B)(2) does not apply.
§63.6(i)(15)	[Reserved]	Not applicable	

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§63.6(i)(16)		Yes	
§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7(a)(1)	Performance Test Requirements-Applicability	Yes	Except that subpart UUU specifies the applicable test and demonstration procedures.
§63.7(a)(2)	Performance Test Dates	No	Test results must be submitted in the Notification of Compliance Status report due 150 days after the compliance date.
§63.7(a)(3)	Section 114 Authority	Yes	
§63.7(b)	Notifications	Yes	Except that subpart UUU specifies notification at least 30 days prior to the scheduled test date rather than 60 days.
§63.7(c)	Quality Assurance Program/Site-Specific Test Plan	Yes	
§63.7(d)	Performance Test Facilities	Yes	
§63.7(e)	Conduct of Tests	Yes	
§63.7(f)	Alternative Test Method	Yes	
§63.7(g)	Data Analysis, Recordkeeping, Reporting	Yes	Except performance test reports must be submitted with notification of compliance status due 150 days after the compliance date.
§63.7(h)	Waiver of Tests	Yes	
§63.8(a)(1)	Monitoring Requirements - Applicability	Yes	
§63.8(a)(2)	Performance Specifications	Yes	
§63.8(a)(3)	[Reserved]	Not applicable	
§63.8(a)(4)	Monitoring with Flares	Yes	
§63.8(b)(1)	Conduct of Monitoring	Yes	
§63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Yes	Subpart UUU specifies the required monitoring locations.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Yes	
§63.8(c)(1)(i)-(ii)	Startup, Shutdown, and Malfunctions	Yes	Except that subpart UUU specifies that reports are not required if actions are consistent with the SSM plan, unless requested by the permitting authority. If actions are not consistent, actions must be described in next compliance report.
§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Yes	

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§63.8(c)(2)-(3)	Monitoring System Installation	Yes	Except that subpart UUU specifies that for continuous parameter monitoring systems, operational status verification includes completion of manufacturer written specifications or installation operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment will monitor accurately.
§63.8(c)(4)	Continuous Monitoring System Requirements	No	Subpart UUU specifies operational requirements.
§63.8(c)(4)(i)-(ii)	Continuous Monitoring System Requirements	Yes	Except that these requirements apply only to a continuous opacity monitoring system or a continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(c)(5)	COM Minimum Procedures	Yes	
§63.8(c)(6)	CMS Requirements	No	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(c)(7)-(8)	CMS Requirements	Yes	
§63.8(d)	Quality Control Program	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(e)	CMS Performance Evaluation	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits. Results are to be submitted as part of the Notification of Compliance Status due 150 days after the compliance date.
§63.8(f)(1)-(5)	Alternative Monitoring Method	Yes	Except that subpart UUU specifies procedures for requesting alternative monitoring systems and alternative parameters.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Yes	Applicable to continuous emission monitoring systems if performance specification requires a relative accuracy test audit.
§63.8(g)(1)-(4)	Reduction of Monitoring Data	Yes	Applies to a continuous opacity monitoring system or continuous emission monitoring system.
§63.8(g)(5)	Data Reduction	No	Subpart UUU specifies requirements.

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§63.9(a)	Notification Requirements - Applicability	Yes	Duplicate Notification of Compliance Status report to the Regional Administrator may be required.
§63.9(b)(1)-(5)	Initial Notifications	Yes	Except that notification of construction or reconstruction is to be submitted as soon as practicable before startup but no later than 30 days (rather than 60 days) after the effective date if construction or reconstruction had commenced but startup had not occurred before the effective date.
§63.9(c)	Request for Extension of Compliance	Yes	
§63.9(d)	New Source Notification for Special Compliance Requirements	Yes	
§63.9(e)	Notification of Performance Test	Yes	Except that notification is required at least 30 days before test.
§63.9(f)	Notification of VE/Opacity Test	Yes	
§63.9(g)	Additional Notification Requirements for Sources with Continuous Monitoring Systems	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.9(h)	Notification of Compliance Status	Yes	Except that subpart UUU specifies the notification is due no later than 150 days after compliance date.
§63.9(i)	Adjustment of Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	
§63.10(a)	Recordkeeping and Reporting-Applicability	Yes	
§63.10(b)	Records	Yes	Except that §63.10(b)(2)(xiii) applies if you use a continuous emission monitoring system to meet the NSPS or you elect to meet the NSPS, CO, or SO_2 reduced sulfur limit and the performance evaluation requires a relative accuracy test audit.
§63.10(c)(1)-(6), (9)-(15)	Additional Records for Continuous Monitoring Systems	Yes	Except that these requirements apply if you use a continuous opacity monitoring system or a continuous emission monitoring system to meet the NSPS or elect to meet the NSPS opacity, CO, or SO_2 limits.
§63.10(c)(7)-(8)	Records of Excess Emissions and Exceedances	No	Subpart UUU specifies requirements.
§63.10(d)(1)	General Reporting Requirements	Yes	

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§63.10(d)(2)	Performance Test Results	No	Subpart UUU requires performance test results to be reported as part of the Notification of Compliance Status due 150 days after the compliance date.
§63.10(d)(3)	Opacity or VE Observations	Yes	
§63.10(d)(4)	Progress Reports	Yes	
§63.10(d)(5)(i)	Startup, Shutdown, and Malfunction Reports	Yes	Except that reports are not required if actions are consistent with the SSM plan, unless requested by permitting authority.
§63.10(d)(5)(ii)		Yes	Except that actions taken during a startup, shut- down, or malfunction that are not consistent with the plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report.
§63.10(e)(1)-(2)	Additional CMS Reports	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits. Reports of performance evaluations must be submitted in Notification of Compliance Status.
§63.10(e)(3)	Excess Emissions/CMS Performance Reports	No	Subpart UUU specifies the applicable requirements.
§63.10(e)(4)	COMS Data Reports	Yes	
§63.10(f)	Recordkeeping/ Reporting Waiver	Yes	
§63.11	Control Device Requirements	Yes	Applicable to flares.
§63.13	Addresses	Yes	
§63.14	Incorporation by Reference	Yes	
§63.15	Availability of Information	Yes	

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P011) - fluidized catalytic cracking (FCC) unit with a processing capacity of 100,000 barrels per day; emissions controls consist of two CO boilers (B046 and B047), SCR system for NOx control, and a wet gas scrubber for SO_2 and particulate control.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit [P011] was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

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Pollutant: ammonia
TLV (mg/m3): 17.41
Maximum Hourly Emission Rate (lbs/hr): 4.05
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.587
MAGLC (ug/m3): 414.5

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

   a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");

   b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

   c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

   The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

   a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P012) - Claus sulfur recovery unit No. 1 and sulfur pit with tail gas unit and incinerator. Emissions from the Claus sulfur recovery unit can be vented to the number 1 tail gas treater with incinerator and/or the number 2 tail gas treater with 7 mmBtu/hr incinerator.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	See sections A.I.2.a, A.I.2.f, and A.I.2.g.
OAC rule 3745-18-54(O)(9)	0.07 pounds of sulfur dioxide per pound of sulfur processed
OAC rule 3745-21-09(T)	See section A.I.2.h.
40 CFR Part 60, Subpart A	See sections A.I.2.a and A.I.2.c.
40 CFR Part 60, Subpart J	See sections A.I.2.a and A.I.2.b.
40 CFR Part 63, Subpart A	See section A.I.2.d.
40 CFR Part 63, Subpart UUU	See section A.I.2.e.

2. Additional Terms and Conditions

2.a Effective March 20, 2006, this emissions unit shall be an affected facility under NSPS, 40 CFR Part 60, Subparts A and J. Sections A.II.1 through 4 set forth a compliance plan and interim compliance requirements for this emissions unit to comply with 40 CFR Part 60, Subpart J. The permittee shall comply with the requirements of 40 CFR Part 60, Subparts A and J applicable to this emissions unit by no later than December 31, 2009. If during the interim period between the issuance date of this Permit to Install and the date the permittee comes into compliance with the requirements of 40 CFR Part 60, Subparts A and J the permittee complies with the requirements of Sections A.II.1 through 4, the U.S. EPA and Ohio EPA will consider this emissions unit to be in compliance with the requirements of 40 CFR Part 60, Subparts A and J.

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Compliance with Sections A.II.1 through 4 shall satisfy the notice requirements of 40 CFR 60.7(a) and the initial performance test requirements of 40 CFR 60.8.

2.b The permittee shall not discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of 250 ppm by volume (dry basis) of sulfur dioxide (SO_2) at zero percent excess air as a rolling, 12-hour average. The permittee shall comply with this emission limitation by no later than December 31, 2009.

2.c 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

2.d 40 CFR Part 63, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 63. Table 44 of 40 CFR Part 63, Subpart UUU [see section A.VI.] shows which parts of the General Provision in 40 CFR Part 63.1 through 63.15 apply to this emissions unit.

2.e The permittee shall comply with the applicable emission limitations and work practice standards for existing emissions units in 40 CFR Part 63, Subpart UUU.

2.f The permittee shall maintain a preventive maintenance and malfunction plan (PMMAP) as described in the Consent Decree dated May 2, 1995. The permittee shall follow the control plan to minimize air quality impacts during SRU turnarounds and malfunctions.

2.g Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring systems, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring systems must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60 Subparts A and J.

2.h The permittee shall comply with the applicable equipment leak monitoring requirements found in sections A.I, A.II, A.III, A,IV, and A.V, referencing OAC rule 3745-21-09(T) in Part III for emissions unit P801.

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II. Operational Restrictions

1. The permittee shall implement the following interim control measures at this emissions unit:

   a. The permittee shall maintain and operate an SO_2 continuous emissions monitoring system (CEMS) for monitoring the emissions from the sulfur recovery plant (SRP) in accordance with 40 CFR Part 60, Subpart A and 40 CFR 60.13, and shall comply, during the interim period, with the specific monitoring and reporting provisions established in A.II.1.c below.

   b. By 180 days after March 20, 2006, the permittee shall complete or shall have completed an optimization study to minimize emissions and to maximize sulfur recovery efficiencies and shall submit a copy of that study to the U.S. EPA, Ohio EPA Central Office, and the Toledo Division of Environmental Services (TDOES). The permittee shall implement the results of the optimization study that could reasonably optimize the performance of the sulfur recovery plant by no later than March 20, 2007.

   c. By no later than March 20, 2007, the permittee shall submit a report to U.S. EPA, Ohio EPA Central Office, and TDOES that proposes an appropriate interim performance standard (a range of percent recovery or other performance standard), appropriate monitoring and reporting requirements for the proposed interim performance standard and, if necessary, a schedule for implementing additional optimization study recommendations that would ensure that the SRP comply with the permittee's proposed standard. Beginning with the date of such submission, The permittee shall comply with its proposed interim performance standard and, if necessary, implement its proposed schedule for additional optimization study recommendations.

   d. If EPA determines, based on the results of the study and other available and relevant information, that a more stringent interim performance standard and/or a different implementation schedule is appropriate and can be achieved with a reasonable certainty of compliance, after an opportunity for consultation with Ohio EPA, EPA shall so notify The permittee.

      Unless The permittee disputes EPA’s determination(s) within 90 days of its receipt of that notice, it shall comply with such new standard within 90 days or, if necessary, such other period as may be established by EPA consistent with any implementation schedule for additional optimization study recommendations proposed by The permittee. The permittee shall continue to comply with the appropriate interim performance standard until such time as The permittee completes installation of the tail gas units (TGUs) in accord with the schedules under Section A.II.1 through 4 and operates the Toledo SRP in compliance with NSPS Subpart J.

2. The sulfur recovery plant optimization study shall meet the following requirements:

   a. a detailed evaluation of the Claus plant design and capacity, of the operating parameters and of the conversion and recovery efficiencies across the reaction furnace, waste heat boiler and each catalytic converter – including assessment of catalytic activity and determinations of material balances;

   b. an analysis of the composition and variability of the acid gas and sour water stripper gas resulting from the processing of the crude slate actually used, or expected to be used, in those Claus train(s);

   c. a review of each critical piece of process equipment and instrumentation within the Claus train to correct problems that have prevented the Claus train from achieving its optimal sulfur recovery efficiency;

   d. establishment of baseline data through testing and measurement of key parameters throughout the Claus train;

   e. establishment of a thermodynamic process model of the Claus train;

   f. for any key parameters that have been determined to be at less than optimal levels, initiation of logical, sequential, or stepwise changes designed to move such parameters toward their optimal values;

   g. verification through testing, analysis of continuous emission monitoring data or other means, of incremental and cumulative improvements in sulfur recovery efficiency, if any;

   h. establishment of new operating procedures for long-term efficient operation; and

   i. the study shall be conducted to optimize the performance of the Claus train in light of the actual characteristics of the feeds to the train.

3. The permittee shall route all sulfur pit emissions so that they are eliminated, controlled, or included and monitored as part of the sulfur recovery plant's emissions subject to the 40 CFR Part 60, Subpart J limitation for SO_2, 40 CFR 60.104(a)(2), by no later than the first turnaround of the Claus train that occurs on or after March 20, 2007 or by December 31, 2008 (whichever first occurs).

4. By no later than 180 days from March 20, 2006, the permittee shall submit or shall have

submitted to the U.S. EPA, Ohio EPA, and the Toledo Division of Environmental Services a summary of the plans, implemented or to be implemented, at the Toledo Refinery for enhanced maintenance and operation of the sulfur recovery plant (SRP), and tail gas units (TGUs), including any supplemental control devices, and the appropriate upstream process units. This plan shall be termed a Preventive Maintenance and Malfunction Abatement Plan (PMMAP). The PMMAP shall be a compilation of the permittee's approaches for exercising good air pollution control practices and for minimizing SO_2 emissions (including the PMMAP described under Section A.I.2.f) at the Toledo Refinery. The PMMAP shall have as its goal the elimination of Acid Gas Flaring and the continuous operation of the SRP, between scheduled maintenance turnarounds, with a minimization of emissions. The PMMAP shall include, but not be limited to, sulfur shedding procedures, startup and shutdown procedures, emergency procedures and schedules to coordinate maintenance turnarounds of the SRP Claus trains and associated TGUs to coincide, if necessary to minimize emissions, with scheduled turnarounds of major Upstream Process Units. The permittee shall operate consistent with the PMMAP at all times, including periods of startup, shutdown and malfunction of its SRP. Changes to a PMMAP related to minimizing acid gas flaring and/or SO_2 emissions shall be summarized and reported by the permittee to U.S. EPA, Ohio EPA and the Toledo Division of Environmental Services on an annual basis.

5. U.S. EPA, Ohio EPA and the Toledo Division of Environmental Services do not, by their review of a PMMAP and/or by their failure to comment on a PMMAP, warrant or aver in any manner that any of the actions that the permittee may take pursuant to such PMMAP will result in compliance with the provisions of the Clean Air Act or any other applicable federal, state, or local law or regulation. Notwithstanding the review by EPA or any state agency of a PMMAP, the permittee shall remain solely responsible for compliance with the Clean Air Act and such other laws and regulations.

6. [63.1568(a)] REQUIREMENTS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

   a. [63.1568(a)(2)]
   The permittee must meet each operating limit in Table 30 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit.

   b. [63.1568(a)(3)]
   The permittee must prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR Part 63.1574(f) [see section A.IV.] and operate at all times according to the procedures in the plan.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain on-site documentation from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2.

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The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

2. The permittee shall operate, and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

   The permittee shall maintain records of data obtained by the continuous SO_2 monitoring system including, but not limited to:

   a. emissions of SO_2 in parts per million on an instantaneous (one-minute) basis;

   b. emissions of SO_2 in all units of the applicable standard(s) in the appropriate averaging period;

   c. results of quarterly cylinder gas audits;

   d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

   e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

   f. hours of operation of the emissions unit, continuous SO_2 monitoring system, and control equipment;

   g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO_2 monitoring system;

   h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

   i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

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3. a. The permittee shall maintain daily records of the following information, while the emissions unit is in operation:

   i. the total amount of sulfur processed (see A.III.2.b);

   ii. the total SO2 emissions, in pounds, from the Claus unit and the flare(s); and

   iii. the average SO2 emission rate, in pound of SO2 per pound of sulfur processed.

   b. For a specific period of time, the amount of sulfur processed is equal to the amount of sulfur entering the Claus unit plus the amount of any sulfur bypassed to the flare(s) from the amine unit and/or the sour water stripper.

4. [63.1570] GENERAL COMPLIANCE REQUIREMENTS - 40 CFR Part 63, Subpart UUU

   a. [63.1570(a)]
   The permittee must be in compliance with all of the non-opacity standards in this subpart during the times specified in 40 CFR Part 63.6(f)(1).

b. [63.1570(b)]
The permittee must be in compliance with the opacity and visible emission limits in this subpart during the times specified in 40 CFR Part 63.6(h)(1).

c. [63.1570(c)]
The permittee must always operate and maintain the affected emissions unit, including air pollution control and monitoring equipment, according to the provisions in 40 CFR Part 63.6(e)(1)(i). During the period between April 11, 2005 and the date upon which continuous monitoring systems have been installed and validated and any applicable operating limits have been set, the permittee must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

d. [63.1570(d)]
The permittee must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR Part 63.6(e)(3).

e. [63.1570(f)]

The permittee must report each instance in which each emission limitation that was not met and each applicable operating limit in 40 CFR Part 63, Subpart UUU that was not met. This includes periods of startup, shutdown, and malfunction. The permittee also must report each instance in which the applicable work practice standards in 40 CFR Part 63, Subpart UUU that were not met. These instances are deviations from the emission limitations and work practice standards in this subpart. These deviations must be reported according to the requirements in 40 CFR Part 63.1575 [see section A.IV.].

ii. [63.1572(a)(2)]
If the permittee uses a continuous emission monitoring system to meet the NSPS CO or SO_2 limit, the permittee must conduct a performance evaluation of each continuous emission monitoring system according to the requirements in 40 CFR Part 63.8. This requirement does not apply to an affected emissions unit subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification.

iii. [63.1572(a)(3)]
As specified in 40 CFR Part 63.8(c)(4)(ii), each continuous emission monitoring system must complete a minimum of one cycle of

operation (sampling, analyzing, and data recording) for each successive 15-minute period.

iv. [63.1572(a)(4)]
Data must be reduced as specified in 40 CFR Part 63.8(g)(2).

b. [63.1572(d)]
The permittee must monitor and collect data according to the requirements in 40 CFR Part 63.1572(d)(1) and (d)(2) [see paragraph d.i. and d.ii. of this section].

i. [63.1572(d)(1)]
Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected unit is operating.

ii. [63.1572(d)(2)]
The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

6. [63.1576] RECORD KEEPING REQUIREMENTS - 40 CFR Part 63, Subpart UUU

a. [63.1576(a)]
The permittee must keep the records specified in 63.1576(a)(1) through (3) [paragraphs a.i through a.iii. of this section].

i. [63.1576(a)(1)]
A copy of each notification and report that the permittee submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status that the permittee submitted, according to the requirements in 40 CFR Part 63.10(b)(2)(xiv).

ii. [63.1576(a)(2)]
The records in 40 CFR Part 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

iii. [63.1576(a)(3)]
Records of performance tests, performance evaluations, and visible emission observations as required in 40 CFR Part 63.10(b)(2)(viii).

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b. [63.1576(b)]
For each continuous emission monitoring system and continuous opacity monitoring system, the permittee must keep the records required in 63.1576(b)(1) through (5) [paragraphs b.i. through b.v. of this section].

i. [63.1576(b)(1)]
Records described in 40 CFR Part 63.10(b)(2)(vi) through (xi) of Subpart A.

ii. [63.1576(b)(2)]
Monitoring data for continuous opacity monitoring systems during a performance evaluation as required in 40 CFR Part 63.6(h)(7)(i) and (ii) of Subpart A.

iii. [63.1576(b)(3)]
Previous (i.e., superceded) versions of the performance evaluation plan as required in 40 CFR Part 63.8(d)(3) of Subpart A.

iv. [63.1576(b)(4)]
Requests for alternatives to the relative accuracy test for continuous emission monitoring systems as required in 40 CFR Part 63.8(f)(6)(i) of Subpart A.

v. [63.1576(b)(5)]
Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

c. [63.1576(d)]
The permittee must keep records required by Tables 34 and 35 of 40 CFR Part 63, Subpart UUU [see section A.VI.] (for sulfur recovery units) and Table 39 of 40 CFR Part 63, Subpart UUU [see section A.VI.] (for bypass lines) to show continuous compliance with each emission limitation that applies to this emissions unit.

d. [63.1576(e)]
The permittee must keep a current copy of the operation, maintenance, and monitoring plan onsite and available for inspection. The permittee also must keep records to show continuous compliance with the procedures in the operation, maintenance, and monitoring plan.

e. [63.1576(f)]
The permittee also must keep the records of any changes that affect emission

control system performance including, but not limited to, the location at which the vent stream is introduced into the flame zone for a boiler or process heater.

f. [63.1576(g)]
The records must be in a form suitable and readily available for expeditious review according to 40 CFR Part 63.10(b)(1).

g. [63.1576(h)]
As specified in 40 CFR Part 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

h. [63.1576(i)]
The permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR Part 63.10(b)(1). The permittee can keep the records offsite for the remaining 3 years.

IV. Reporting Requirements

1. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

   a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Toledo Division of Environmental Services, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance.

      Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

   b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

      i. the facility name and address;

      ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

      iii. the location of the continuous SO_2 monitor;

      iv. the exceedance report as detailed in (a) above;

      v. the total SO_2 emissions for the calendar quarter (tons);

      vi. the total operating time (hours) of the emissions unit;

      vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction* of the continuous SO_2 monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime* of the continuous SO_2 monitoring system and/or control equipment while the emissions unit was in operation;

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii);

xiv. percent availability of the SRU;

xv. amounts (tons), and points of emission of excess sulfur dioxide emissions that are caused by malfunctions or shutdowns of the amine unit, sour water stripper, or the SRU;

xvi. an analysis of the cause of and corrective action taken for each malfunction (including any bypassing of the amine-claus SRU to the refinery flare system) or shutdown; and

xvii. the date, time, and duration of any/each malfunction* of the emissions unit(including any bypassing of the amine-claus SRU to the refinery flare system) or shutdown.

Each report shall address the operations conducted and data obtained during the previous calendar quarter. For any periods for which sulfur dioxide or oxides emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of

the control system and affected facility before and following the period of data unavailability.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

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2. 40 CFR Part 63, Subpart UUU Notifications

a. [63.1574(a)]
Except as allowed in paragraphs (a)(1) through (3) of 40 CFR 63.1574, the permittee must submit all of the notifications in 40 CFR 63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h)that apply by the dates specified.

i. [63.1574(a)(1)]
The permittee must submit the notification of your intention to construct or reconstruct according to 40 CFR 63.9(b)(5). This deadline also applies to the application for approval of construction or reconstruction and approval of construction or reconstruction based on State preconstruction review required in 40 CFR 63.5(d)(1)(i) and 63.5(f)(2).

ii. [63.1574(a)(2)]
The permittee must submit the notification of intent to conduct a performance test required in 40 CFR 63.7(b) at least 30 calendar days before the performance test is scheduled to begin (instead of 60 days).

iii. [63.1574(a)(3)]
If the permittee is required to conduct a performance test, performance evaluation, design evaluation, opacity observation, visible emission observation, or other initial compliance demonstration, the permittee must submit a notification of compliance status according to 40 CFR 63.9(h)(2)(ii). This information can be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submission, or in any combination. If the required information has been submitted previously, the permittee does not have to provide a separate notification of compliance status. Just refer to the earlier submissions instead of duplicating and resubmitting the previously submitted information.

(a) [63.1574(a)(3)(i)]
For each initial compliance demonstration that does not include a performance test, the permittee must submit the Notification of Compliance Status no later than 30 calendar days following completion of the initial compliance demonstration.

(b) [63.1574(a)(3)(ii)]
For each initial compliance demonstration that includes a performance test, the permittee must submit the notification of compliance status, including the performance test results, no later than 150 calendar days after the compliance date specified for your affected source in §63.1563.

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b. [63.1574(c)]
If the startup of a new or reconstructed affected source occurs on or after April 11, 2002, the permittee must submit the initial notification no later than 120 days after you become subject to this subpart.

c. [63.1574(d)]
The permittee also must include the information in Table 42 of 40 CFR Part 63, Subpart UUU in the notification of compliance status.

d. [63.1574(f)]
As required by 40 CFR Part 63, Subpart UUU, the permittee must prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. The purpose of this plan is to detail the operation, maintenance, and monitoring procedures that will be followed.

i. [63.1574(f)(1)]
The permittee must submit the plan to the permitting authority for review and approval along with the notification of compliance status. While the permittee does not have to include the entire plan in the 40 CFR part 70 or 71 permit, the permittee must include the duty to prepare and implement the plan as an applicable requirement in the 40 CFR part 70 or 71 operating permit. The permittee must submit any changes to the permitting authority for review and approval and comply with the plan until the change is approved.

ii. [63.1574(f)(2)]
Each plan must include, at a minimum, the information specified in paragraphs (f)(2)(i) through (xii) of this section.

(a) [63.1574(f)(2)(i)]
Process and control device parameters to be monitored for each affected source, along with established operating limits.

(b) [63.1574(f)(2)(ii)]
Procedures for monitoring emissions and process and control device operating parameters for each affected source.

(c) [63.1574(f)(2)(viii)]
Monitoring schedule, including when the permittee will monitor and will not monitor an affected source (e.g., during the coke burn-off, regeneration process).

(d) [63.1574(f)(2)(ix)]

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Quality control plan for each continuous opacity monitoring system and continuous emission monitoring system the permittee uses to meet an emission limit in 40 CFR Part 63, Subpart UUU. This plan must include procedures the permittee will use for calibrations, accuracy audits, and adjustments to the system needed to meet applicable requirements for the system.

(e) [63.1574(f)(2)(x)]
Maintenance schedule for each monitoring system and control device for each affected source that is generally consistent with the manufacturer's instructions for routine and long-term maintenance.

3. [63.1575] REPORTS FOR 40 CFR Part 63, Subpart UUU

a. [63.1575(a)]
The permittee must submit each report in Table 43 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit.

b. [63.1575(b)]
Unless the Administrator has approved a different schedule, the permittee must submit each report by the date in Table 43 [see section A.VI.] and according to the requirements in 40 CFR Part 63.1575(b)(1) through (b)(5) [see paragraphs b.i. through b.v. of this section].

i. [63.1575(b)(3)]
Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

ii. [63.1575(b)(4)]
Each compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

iii. [63.1575(b)(5)]
For each affected emissions unit that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in 63.1575(b)(1) through (b)(4) [see paragraphs b.i. through b.iv. of this section].

c. 63.1575(c)]
The compliance report must contain the following information:

i. [63.1575(c)(1)]
Company name and address.

ii. [63.1575(c)(2)]
Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

iii. [63.1575(c)(3)]
Date of report and beginning and ending dates of the reporting period.

iv. [63.1575(c)(4)]
If there are no deviations from any emission limitation that applies to this emissions unit and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system or continuous opacity monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

d. [63.1575(e)]
For each deviation from an emission limitation occurring at an affected emissions unit where a continuous opacity monitoring system or a continuous emission monitoring system is used to comply with the emission limitation, the permittee must include the information in 40 CFR Part 63.1575(d)(1) through(3) [paragraphs d.i. through d.iii. of this section] and the information in 63.1575(e)(1) through (13) [paragraphs e.i through e.xiii. of this section].

i. [63.1575(e)(1)]
The date and time that each malfunction started and stopped.

ii. [63.1575(e)(2)]
The date and time that each continuous opacity monitoring system or continuous emission monitoring system was inoperative, except for zero (low-level) and high-level checks.

iii. [63.1575(e)(3)]
The date and time that each continuous opacity monitoring system or continuous emission monitoring system was out-of-control, including the information in 40 CFR Part 63.8(c)(8) of Subpart A.

iv. [63.1575(e)(4)]
The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

v. [63.1575(e)(5)]
A summary of the total duration of the deviation during the reporting period

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(recorded in minutes for opacity and hours for gases and in the averaging period specified in the regulation for other types of emission limitations), and the total duration as a percent of the total emissions unit operating time during that reporting period.

vi. [63.1575(e)(6)]
A breakdown of the total duration of the deviations during the reporting period and into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

vii. [63.1575(e)(7)]
A summary of the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system during the reporting period (recorded in minutes for opacity and hours for gases and in the averaging time specified in the regulation for other types of standards), and the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system as a percent of the total emissions unit operating time during that reporting period.

viii. [63.1575(e)(8)]
A breakdown of the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

ix. [63.1575(e)(9)]
An identification of each HAP that was monitored at the affected emissions unit.

x. [63.1575(e)(10)]
A brief description of the process units.

xi. [63.1575(e)(11)]
The monitoring equipment manufacturer(s) and model number(s).

xii. [63.1575(e)(12)]
The date of the latest certification or audit for the continuous opacity monitoring system or continuous emission monitoring system.

xiii. [63.1575(e)(13)]
A description of any change in the continuous emission monitoring system or continuous opacity monitoring system, processes, or controls since the

last reporting period.

e. [63.1575(f)]
The permittee also must include the information required in 63.1575(f)(1) through (f)(2) [paragraphs f.i. and f.ii. of this section] in each compliance report, if applicable.

i. [63.1575(f)(1)]
A copy of any performance test done during the reporting period on any affected unit. The report may be included in the next semiannual report. The copy must include a complete report for each test method used for a particular kind of emission point tested. For additional tests performed for a similar emission point using the same method, the permittee must submit the results and any other information required, but a complete test report is not required. A complete test report contains a brief process description; a simplified flow diagram showing affected processes, control equipment, and sampling point locations; sampling site data; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; documentation of calculations; and any other information required by the test method.

ii. [63.1575(f)(2)]
Any requested change in the applicability of an emission standard (e.g., changing from the PM standard to the Ni standard for catalytic cracking units or from the HCl concentration standard to percent reduction for catalytic reforming units) in the periodic report. The permittee must include all information and data necessary to demonstrate compliance with the new emission standard selected and any other associated requirements.

f. [63.1575(g)]
The permittee may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.

g. [63.1575(h)]
The reporting requirements in paragraphs 63.1575(h)(1) and (2) [paragraphs h.i. and h.ii. of this section] apply to startups, shutdowns, and malfunctions:

i. [63.1575(h)(1)]
When actions taken to respond are consistent with the plan, the permittee is

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not required to report these events in the semiannual compliance report and the reporting requirements in 40 CFR Part 63.6(e)(3)(iii) and 63.10(d)(5) do not apply.

ii. [63.1575(h)(2)]
When actions taken to respond are not consistent with the plan, the permittee must report these events and the response taken in the semiannual compliance report. In this case, the reporting requirements in 40 CFR Part 63.6(e)(3)(iv) and 63.10(d)(5) do not apply.

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V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:

      250 ppmvd SO_2 at 0% O_2 as a rolling, 12-hr average

      Applicable Compliance Method:

      The monitoring and recordkeeping requirements of Section III. shall be used to demonstrate compliance. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f)(1).

      Alternative U.S. EPA Approved test methods may be used with prior approval from the Ohio EPA.

   b. Emission Limitation:

      0.07 pounds of sulfur dioxide per pound of sulfur processed

      Applicable Compliance Method:

      The test methods and procedures used for determining compliance with this emission limit are those specified in OAC rule 3745-18-04(B), which refers to 40 CFR 60.46.

      Alternative U.S. EPA Approved test methods may be used with prior approval from the Ohio EPA.

2. Ongoing compliance with the SO_2 emission limitations contained in this permit, 40 CFR Parts 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with a quality assurance/quality control plan which meets the requirements of 40 CFR Part 60.

VI. Miscellaneous Requirements

1. The following tables from 40 CFR 63 subpart UUU are attached:

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Tables 29; 30; 31; 32; 33; 34; 35; 36; 37; 38; 39; 40; 41; 42; 43 and 44.

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TABLE 29 TO SUBPART UUU OF PART 63.—HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(a)(1), you shall meet each emission limitation in the following table that applies to you]

For	You shall meet this emission limit for each process vent .....
1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) of sulfur dioxide (SO_2) at zero percent excess air if you use an oxidation or reduction control system followed by incineration. b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.
2. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2): Option 1 (Elect NSPS).	a. 250 ppmv (dry basis) of SO_2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration. b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.
3. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in paragraph (a)(2) of 40 CFR 60.104: Option 2 (TRS limit).	300 ppmv of total reduced sulfur (TRS) compounds, expressed as an equivalent SO_2 concentration (dry basis) at zero percent oxygen.

TABLE 30 TO SUBPART UUU OF PART 63.—OPERATING LIMITS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

[As stated in § 63.1568(a)(2), you shall meet each operating limit in the following table that applies to you]

For	If use this type of control device	You shall meet this operating limit .....
1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	Not applicable	Not applicable.
2. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2): Option 1 (Elect NSPS).	Not applicable	Not applicable.
3. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2): Option 2 (TRS limit).	Thermal incinerator	Maintain the daily average combustion zone temperature above the limit established during the performance test; and maintain the daily average oxygen concentration in the vent stream (percent, dry basis) above the limit established during the performance test.

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TABLE 31 TO SUBPART UUU OF PART 63.—CONTINUOUS MONITORING SYSTEMS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

[As stated in § 63.1568(b)(1), you shall meet each requirement in the following table that applies to you]

For	For this limit	You shall install and operate this continuous monitoring system .....

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1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2)..	a. 250 ppmv (dry basis) of SO_2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of SO_2 (dry basis) at zero percent excess air for each exhaust stack. This system must include an oxygen monitor for correcting the data for excess air.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of reduced sulfur and oxygen (O_2) emissions. Calculate the reduced sulfur emissions as SO_2 (dry basis) at zero percent excess air. *Exception:* You can use an instrument having an air or SO_2 dilution and oxidation system to convert the reduced sulfur to SO_2 for continuously monitoring and recording the concentration (dry basis) at zero percent excess air of the resultant SO_2 instead of the reduced sulfur monitor. The monitor must include an oxygen monitor for correcting the data for excess oxygen.
2. Option 1: Elect NSPS. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in paragraph (a) (2) of 40 CFR 60.104.	a. 250 ppmv (dry basis) of SO_2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of SO_2 (dry basis), at zero percent excess air for each exhaust stack. This system must include an oxygen monitor for correcting the data for excess air.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of reduced sulfur and O_2 emissions for each exhaust stack. Calculate the reduced sulfur emissions as SO_2 (dry basis), at zero percent excess air. *Exception:* You can use an instrument having an air or O_2 dilution and oxidation system to convert the reduced sulfur to SO_2 for continuously monitoring and recording the concentration (dry basis) at zero percent excess air of the resultant SO_2 instead of the reduced sulfur monitor. The monitor must include an oxygen monitor for correcting the data for excess oxygen.
3. Option 2: TRS limit. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	300 ppmv of total reduced sulfur (TRS) compounds, expressed as an equivalent SO2 concentration (dry basis) at zero percent oxygen.	i. Continuous emission monitoring system to measure and record the hourly average concentration of TRS for each exhaust stack; this monitor must include an oxygen monitor for correcting the data for excess oxygen; or ii. Continuous parameter monitoring systems to measure and record the combustion zone temperature of each thermal incinerator and the oxygen content (percent, dry basis) in

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TABLE 32 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARDS FOR SULFUR OXIDES

[As stated in § 63.1568(b)(2) and (3), you shall meet each requirement in the following table that applies to you]

For	You shall	Using	According to these requirements....

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1. Each new and existing sulfur recovery unit: Option 1 (Elect NSPS).	Measure SO_2 concentration (for an oxidation or reduction system followed by incineration) or the concentration of reduced sulfur (or SO_2 if you use an instrument to convert the reduced sulfur to SO_2) for a reduction control system without incineration.	Data from continuous emission monitoring system.	Collect SO_2 monitoring data every 15 minutes for 24 consecutive operating hours. Reduce the data to 1-hour averages computed from four or more data points equally spaced over each 1-hour period.
2. Each new and existing sulfur recovery unit: Option 2 (TRS limit).	a. Select sampling port's location and the number of traverse ports.	Method 1 or 1A appendix A to part 60 of this chapter.	Sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere.
	b. Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter, as applicable.	
	c. Conduct gas molecular weight analysis; obtain the oxygen concentration needed to correct the emission rate for excess air.	Method 3, 3A, or 3B in appendix A to part 60 of this chapter, as applicable.	Take the samples simultaneously with reduced sulfur or moisture samples.
	d. Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	Make your sampling time for each Method 4 sample equal to that for 4 Method 15 samples.
	e. Measure the concentration of TRS.	Method 15 or 15A in appendix A to part 60 of this chapter, as applicable.	If the cross-sectional area of the duct is less than 5 square meters (m_2) or 54 square feet, you must use the centroid of the cross section as the sampling point. If the cross-sectional area is 5 m_2 or more and the centroid is more than 1 meter (m) from the wall, your sampling point may be at a point no closer to the walls than 1 m or 39 inches. Your sampling rate must be at least 3 liters per minute or 0.10 cubic feet per minute to ensure minimum residence time for the sample inside the sample lines.
	f. Calculate the SO_2 equivalent for each run after correcting for moisture and oxygen.	The arithmetic average of the SO2 equivalent for each sample during the run.	
	g. Correct the reduced sulfur samples to zero percent excess air.	Equation 1 of § 63.1568.	
	h. Establish each operating limit in Table 30 of this subpart that applies to you.	Data from the continuous parameter monitoring system.	

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(Cont.) TABLE 32 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARDS FOR SULFUR OXIDES

[As stated in § 63.1568(b)(2) and (3), you shall meet each requirement in the following table that applies to you]

For	You must	Using	According to these requirements .....
	i. Measure thermal incinerator: combustion zone temperature.	Data from the continuous parameter monitoring system.	Collect temperature monitoring data every 15 minutes during the entire period of the performance test; and determine and record the minimum hourly average temperature from all the readings.
	j. Measure thermal incinerator: oxygen concentration (percent, dry basis) in the vent stream.	Data from the continuous parameter monitoring system.	Collect oxygen concentration (percent, dry basis) data every 15 minutes during the entire period of the performance test; and determine and record the minimum hourly average percent excess oxygen concentration.
	k. If you use a continuous emission monitoring system, measure TRS concentration.	Data from continuous emission monitoring system.	Collect TRS data every 15 minutes for 24 consecutive operating hours. Reduce the data to 1-hour averages computed from four or more data points equally spaced over each 1-hour period.

TABLE 33 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(b)(5), you shall meet each requirement in the following table that applies to you]

For	For the following emission limit	You have demonstrated initial compliance if.....

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1. Each new or existing Clause sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) SO2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	You have already conducted a performance test to demonstrate initial compliance with the NSPS and each 12-hour rolling average concentration of SO2 emissions measured by the continuous emission monitoring system is less than or equal to 250 ppmv (dry basis) at zero percent excess air. As part of the Notification of Compliance Status, you must certify that your vent meets the SO2 limit. You are not required to do another performance test to demonstrate initial compliance. You have already conducted a performance evaluation to demonstrate initial compliance with the applicable performance specification. As part of your Notification of Compliance Status, you must certify that your continuous emission monitoring system meets the applicable requirements in § 63.1572. You are not required to do another performance evaluation to demonstrate initial compliance.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	You have already conducted a performance test to demonstrate initial compliance with the NSPS and each 12-hour rolling average concentration of reduced sulfur compounds measured by your continuous emission monitoring system is less than or equal to 300 ppmv, calculated as ppmv SO2 (dry basis) at zero percent excess air. As part of the Notification of Compliance Status, you must certify that your vent meets the SO2 limit. You are not required to do another performance test to demonstrate initial compliance. You have already conducted a performance evaluation to demonstrate initial compliance with the applicable performance specification. As part of your Notification of Compliance Status, you must certify that your continuous emission monitoring system meets the applicable requirements in § 63.1572. You are not required to do another performance evaluation to demonstrate initial compliance.
2. Option 1: Elect NSPS. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) of SO2 at zero percent excess air if you use an oxidation control system followed by incineration.	Each 12-hour rolling average concentration of SO2 emissions measured by the continuous emission monitoring system during the initial performance test is less than or equal to 250 ppmv (dry basis) at zero percent excess air; and your performance evaluation shows the monitoring system meets the applicable requirements in § 63.1572. Each 12-hour rolling average concentration of

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(Cont.) TABLE 33 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(b)(5), you shall meet each requirement in the following table that applies to you]

For	For the following emission limit	You have demonstrated initial compliance if .....
3. Option 2: TRS limit. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	300 ppmv of TRS compounds expressed as an equivalent SO_2 concentration (dry basis) at zero percent oxygen.	If you use continuous parameter monitoring systems, the average concentration of TRS emissions measured using Method 15 during the initial performance test is less than or equal to 300 ppmv expressed as equivalent SO2 concentration (dry basis) at zero percent oxygen. If you use a continuous emission monitoring system, each 12-hour rolling average concentration of TRS emissions measured by the continuous emission monitoring system during the initial performance test is less than or equal to 300 ppmv expressed as an equivalent SO2 (dry basis) at zero percent oxygen; and your performance evaluation shows the continuous emission monitoring system meets the applicable requirements in § 63.1572.

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TABLE 34 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(c)(1), you shall meet each requirement in the following table that applies to you.]

For	For this emission limit	You shall demonstrate compliance by

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1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) SO2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	Collecting the hourly average SO2 monitoring data (dry basis, percent excess air) according to § 63.1572; determining and recording each 12-hour rolling average concentration of SO2; maintaining each 12-hour rolling average concentration of SO2 at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of SO2 greater than the applicable emission limitation in the compliance report required by § 63.1575.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv (dry basis) SO2 at zero percent excess air if you use a reduction control system without incineration.	Collecting the hourly average reduced sulfur (and air or O2 dilution and oxidation) monitoring data according to § 63.1572; determining and recording each 12-hour rolling average concentration of reduced sulfur; maintaining each 12-hour rolling average concentration of reduced sulfur at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of reduced sulfur greater than the applicable emission limitation in the compliance report required by § 63.1575.
2. Option 1: Elect NSPS Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) of SO2 at zero percent excess air (for oxidation or reduction system followed by incineration).	Collecting the hourly average SO2 data (dry basis, percent excess air) according to § 63.1572; maintaining the hourly average SO2 concentration at or below the applicable limit; determining and recording each 12-hour average SO2 concentration; and reporting any 12-hour average SO2 concentration greater than the applicable emission limitation in the compliance report required in § 63.1575.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	Collecting the hourly average reduced sulfur (and air or O2 dilution and oxidation) monitoring data according to § 63.1572; determining and recording each 12-hour rolling average concentration of reduced sulfur; maintaining each 12-hour rolling average concentration of reduced sulfur at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of reduced sulfur greater than the applicable emission limitation in the compliance report required by § 63.1575.
3. Option 2: TRS limit Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	300 ppmv of TRS compounds, expressed as an SO2 concentration (dry basis) at zero percent oxygen or reduced sulfur compounds calculated as ppmv SO2 (dry basis) at zero percent excess air.	i. If you use continuous parameter monitoring systems, collecting the hourly average TRS monitoring data according to § 63.1572 and maintaining each 12-hour average concentration of TRS at or below the applicable emission limitation; or ii. If you use a continuous emission monitoring system, collecting the hourly average TRS monitoring data according to § 63.1572, determining and recording each 12-hour rolling average concentration of TRS; maintaining each

TABLE 35 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

[As stated in § 63.1568(c)(1), you shall meet each requirement in the following table that applies to you]

For	For this operating limit	You must demonstrate continuous compliance by .....
1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in paragraph 40 CFR 60.104(a)(2).	Not applicable	Meeting the requirements of Table 34 of this subpart.
2. Option 1: Elect NSPS Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	Not applicable	Meeting the requirements of Table 34 of this subpart.
3. Option 2: TRS limit Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2)	a. Maintain the daily average combustion zone temperature above the level established during the performance test.	Collecting the hourly and daily average temperature monitoring data according to § 63.1572; and maintaining the daily average combustion zone temperature at or above the limit established during the performance test.
	b. The daily average oxygen concentration in the vent stream (percent, dry basis) must not fall below the level established during the performance test.	Collecting the hourly and daily average O_2 monitoring data according to § 63.1572; and maintaining the average O_2 concentration above the level established during the performance test.

TABLE 36 TO SUBPART UUU OF PART 63.—WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(a)(1), you shall meet each work practice standard in the following table that applies to you]

Option	You shall meet one of these equipment standards .....

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1. Option 1	Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to continuously detect, at least every hour, whether flow is present in the bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
2. Option 2	Install a car-seal or lock-and-key device placed on the mechanism by which the bypass device flow position is controlled (e.g., valve handle, damper level) when the bypass device is in the closed position such that the bypass line valve cannot be opened without breaking the seal or removing the device.
3. Option 3	
4. Option 4	Seal the bypass line by installing a solid blind between piping flanges. Vent the bypass line to a control device that meets the appropriate requirements in this subpart.

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TABLE 37 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR BYPASS LINES

[As stated in § 63.1569(b)(1), you shall meet each requirement in the following table that applies to you]

For this standard . . .	You must . . .
1. Option 1: Install and operate a flow indicator, level recorder, or electronic valve position monitor.	Record during the performance test for each type of control device whether the flow indicator, level recorder, or electronic valve position monitor was operating and whether flow was detected at any time during each hour of level the three runs comprising the performance test.

TABLE 38 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(b)(2), you shall meet each requirement in the following table that applies to you]

For	For this work practice standard	You have demonstrated initial compliance if .....
1. Each new or existing bypass line associated with a catalytic cracking unit, catalytic reforming unit, or sulfur recovery unit.	a. Option 1: Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to continuously detect, at least every hour, whether flow is present in the bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.	The installed equipment operates properly during each run of the performance test and no flow is present in the line during the test.
	b. Option 2: Install a car-seal or lock-and-key device placed on the mechanism by which the bypass device flow position is controlled (e.g., valve handle, damper level) when the bypass device is in the closed position such that the bypass line valve cannot be opened without breaking the seal or removing the device.	As part of the notification of compliance status, you certify that you installed the equipment, the equipment was operational by your compliance date, and you identify what equipment was installed.
	c. Option 3: Seal the bypass line by installing a solid blind between piping flanges.	See item 1.b. of this table.
	d. Option 4: Vent the bypass line to a control device that meets the appropriate requirements in this subpart.	See item 1.b. of this table.

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TABLE 39 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(c)(1), you shall meet each requirement in the following table that applies to you]

If you elect this standard	You shall demonstrate continuous compliance by .....
1. Option 1: Flow indicator, level recorder, or electronic valve position monitor.	Continuously monitoring and recording whether flow is present in the bypass line; visually inspecting the device at least once every hour if the device is not equipped with a recording system that provides a continuous record; and recording whether the device is operating properly and whether flow is present in the bypass line.
2. Option 2: Car-seal or lock-and-key device	Visually inspecting the seal or closure mechanism at least once every month; and recording whether the bypass line valve is maintained in the closed position and whether flow is present in the line.
3. Option 3: Solid blind flange	Visually inspecting the blind at least once a month; and recording whether the blind is maintained in the correct position such that the vent stream cannot be diverted through the bypass line.
4. Option 4: Vent to control device	Monitoring the control device according to appropriate subpart requirements.
5. Option 1, 2, 3, or 4	Recording and reporting the time and duration of any bypass.

TABLE 40 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE OF CONTINUOUS OPACITY MONITORING SYSTEMS AND CONTINUOUS EMISSION MONITORING SYSTEMS

[As stated in § 63.1572(a)(1) and (b)(1), you shall meet each requirement in the following table that applies to you]

This type of continuous opacity or emission monitoring system	Must meet these requirements .....

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1. Continuous opacity monitoring system	Performance specification 1 (40 CFR part 60, appendix B).
2. CO continuous emission monitoring system	Performance specification 4 (40 CFR part 60, appendix B); span value of 1,000 ppm; and procedure 1 (40 CFR part 60, appendix F) except relative accuracy test audits are required annually instead of quarterly.
3. CO continuous emission monitoring system used to demonstrate emissions average under 50 ppm (dry basis).	Performance specification 4 (40 CFR part 60, appendix B); and span value of 100 ppm.
4. SO_2 continuous emission monitoring for sulfur recovery unit with oxidation control system or reduction control system; this monitor must include an O_2 monitor for correcting the data for excess air.	Performance specification 2 (40 CFR part 60, appendix B); span value of 500 ppm SO2; use Methods 6 or 6C and 3A or 3B (40 CFR part 60, appendix A) for certifying O2 monitor; and procedure 1 (40 CFR part 60, appendix F) except relative accuracy test audits are required annually instead of quarterly.
5. Reduced sulfur and O_2 continuous emission monitoring system for sulfur recovery unit with reduction control system not followed by incineration; this monitor must include an O_2 monitor for correcting the data for excess air unless exempted.	Performance specification 5 (40 CFR part 60, appendix B), except calibration drift specification is 2.5 percent of the span value instead of 5 percent; 450 ppm reduced sulfur; use Methods 15 or 15A and 3A or 3B (40 CFR part 60, appendix A) for certifying O2monitor; if Method 3A or 3B yields O2 concentrations below 0.25 percent during the performance evaluation, the O2 concentration can be assumed to be zero and the O2 monitor is not required; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.
6. Instrument with an air or O2 dilution and oxidation system to convert reduced sulfur to SO_2 for continuously monitoring the concentration of SO_2 instead of reduced sulfur monitor and O_2 monitor.	Performance specification 5 (40 CFR part 60, appendix B); span value of 375 ppm SO2; use Methods 15 or 15A and 3A or 3B for certifying O2 monitor; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.
7. TRS continuous emission monitoring system for sulfur recovery unit; this monitor must include an O_2 monitor for correcting the data for excess air.	Performance specification 5 (40 CFR part 60, appendix B).
8. O_2 monitor for oxygen concentration	If necessary due to interferences, locate the oxygen sensor prior to the introduction of any outside gas stream; performance specification 3 (40 CFR part 60, appendix B; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.

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TABLE 41 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE OF CONTINUOUS PARAMETER MONITORING SYSTEMS—Continued

[As stated in § 63.1572(c)(1), you shall meet each requirement in the following table that applies to you]

If you use.....	You shall.....
1. pH strips.....	Use pH strips with an accuracy of ± 10 percent.
2. Colormetric tube sampling system.	Use a colormetric tube sampling system with a printed numerical scale in ppmv, a standard measurement range of 1 to 10 ppmv (or 1 to 30 ppmv if applicable), and a standard deviation for measured values of no more than ± 15 percent. System must include a gas detection pump and hot air probe if needed for the measurement range.

TABLE 42 TO SUBPART UUU OF PART 63.—ADDITIONAL INFORMATION FOR INITIAL NOTIFICATION OF COMPLIANCE STATUS

[As stated in § 63.1574(d), you shall meet each requirement in the following table that applies to you]

For	You shall provide this additional information .....
1. Identification of affected sources and emission points.	Nature, size, design, method of operation, operating design capacity of each affected source; identify each emission point for each HAP; identify any affected source or vent associated with an affected source not subject to the requirements of subpart UUU.
2. Initial compliance	Identification of each emission limitation you will meet for each affected source, including any option you select (i.e., NSPS, PM or Ni, flare, percent reduction, concentration, options for bypass lines); if applicable, certification that you have already conducted a performance test to demonstrate initial compliance with the NSPS for an affected source; certification that the vents meet the applicable emission limit and the continuous opacity or that the emission monitoring system meets the applicable performance specification; if applicable, certification that you have installed and verified the operational status of equipment by your compliance date for each bypass line that meets the requirements of Option 2, 3, or 4 in § 63.1569 and what equipment you installed; identification of the operating limit for each affected source, including supporting documentation; if your affected source is subject to the NSPS, certification of compliance with NSPS emission limitations and performance specifications; a brief description of performance test conditions (capacity, feed quality, catalyst, etc.); an engineering assessment (if applicable); and if applicable, the flare design (e.g., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the Method 22 test.
3. Continuous compliance	Each monitoring option you elect; and identification of any unit or vent for which monitoring is not required; and the definition of ‘‘operating day.’’ (This definition, subject to approval by the applicable permitting authority, must specify the times at which a 24-hr operating day begins and ends.)

TABLE 43 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR REPORTS

[As stated in § 63.1575(a), you shall meet each requirement in the following table that applies to you]

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You must submit a(n)	The report must contain	You shall submit the report .....
1. Compliance report	If there are not deviations from any emission limitation or work practice standard that applies to you, a statement that there were no deviations from the standards during the reporting period and that no continuous opacity monitoring system or continuous emission monitoring system was inoperative, inactive, out-of-control, repaired, or adjusted; and if you have a deviation from any emission limitation or work practice standard during the reporting period, the report must contain the information in § 63.1575(d) or (e)	Semiannually according to the requirements in § 63.1575(b).

Table 44 to Subpart UUU of Part 63 - Applicability of NESHAP General Provisions to Subpart UUU
As stated in §63.1577, you shall meet each requirement in the following table that applies to you.

Citation	Subject	Applies to Subpart UUU	Explanation
§63.1	Applicability	Yes	Except that subpart UUU specifies calendar or operating day.
§63.2	Definitions	Yes	
§63.3	Units and Abbreviations	Yes	
§63.4	Prohibited Activities	Yes	
§63.5(a)-(c)	Construction and Reconstruction	Yes	In §63.5(b)(4), replace the reference to §63.9 with §63.9(b)(4) and (5).
§63.5(d)(1)(i)	Application for Approval of Construction or Reconstruction - General Application Requirements	Yes	Except, subpart UUU specifies the application is submitted as soon as practicable before startup but no later than 90 days (rather than 60) after the promulgation date where construction or reconstruction had commenced and initial startup had not occurred before promulgation.
§63.5(d)(1)(ii)		Yes	Except that emission estimates specified in §63.5(d)(1) (ii)(H) are not required.
§63.5(d)(1)(iii)		No	Subpart UUU specifies submission of notification of compliance status.
§63.5(d)(2)		No	
§63.5(d)(3)		Yes	Except that §63.5(d)(3)(ii) does not apply.
§63.5(d)(4)		Yes	
§63.5(e)	Approval of Construction or Reconstruction	Yes	
§63.5(f)(1)	Approval of Construction or Reconstruction Based on State Review	Yes	
§63.5(f)(2)		Yes	Except that 60 days is changed to 90 days and cross-reference to 53.9(B)(2) does not apply.

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§63.6(a)	Compliance with Standards and Maintenance - Applicability	Yes	
§63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Yes	
§63.6(b)(5)		Yes	Except that subpart UUU specifies different compliance dates for sources.
§63.6(b)(6)	[Reserved]	Not applicable	
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Yes	
§63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Yes	Except that subpart UUU specifies different compliance dates for sources subject to Tier II gasoline sulfur control requirements.
§63.6(c)(3)-(4)	[Reserved]	Not applicable	
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Yes	
§63.6(d)	[Reserved]	Not applicable	
§63.6(e)(1)-(2)	Operation and Maintenance Requirements	Yes	
§63.6(e)(3)(i)-(iii)	Startup, Shutdown, and Malfunction Plan	Yes	
§63.6(e)(3)(iv)		Yes	Except that reports of actions not consistent with plan are not required within 2 and 7 days of action but rather must be included in next periodic report.
§63.6(e)(3)(v)-(viii)		Yes	The owner or operator is only required to keep the latest version of the plan.
§63.6(e)(3)(ix)		Yes	
§63.6(f)(1)-(2)(iii)(C)	Compliance with Emission Standards	Yes	
§63.6(f)(2)(iii)(D)		No	
§63.6(f)(2)(iv)-(v)		Yes	
§63.6(f)(3)		Yes	
§63.6(g)	Alternative Standard	Yes	
§63.6(h)	Opacity/VE Standards	Yes	
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	No	Subpart UUU specifies methods.
§63.6(h)(2)(ii)	[Reserved]	Not applicable	
§63.6(h)(2)(iii)		Yes	
§63.6(h)(3)	[Reserved]	Not applicable	
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Yes	Applies to Method 22 tests.
§63.6(h)(5)	Conducting Opacity/VE Observations	No	
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Yes	Applies to Method 22 observations.

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§63.6(h)(7)(i)	Report COM Monitoring Data from Performance Test	Yes	
§63.6(h)(7)(ii)	Using COM Instead of Method 9	No	
§63.6(h)(7)(iii)	Averaging Time for COM during Performance Test	Yes	
§63.6(h)(7)(iv)	COM Requirements	Yes	
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Yes	
§63.6(h)(9)	Adjusted Opacity Standard	Yes	
§63.6(i)(1)-(14)	Extension of Compliance	Yes	Except that 60 days is changed to 90 days and cross-reference to 53.9(B)(2) does not apply.
§63.6(i)(15)	[Reserved]	Not applicable	
§63.6(i)(16)		Yes	
§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7(a)(1)	Performance Test Requirements-Applicability	Yes	Except that subpart UUU specifies the applicable test and demonstration procedures.
§63.7(a)(2)	Performance Test Dates	No	Test results must be submitted in the Notification of Compliance Status report due 150 days after the compliance date.
§63.7(a)(3)	Section 114 Authority	Yes	
§63.7(b)	Notifications	Yes	Except that subpart UUU specifies notification at least 30 days prior to the scheduled test date rather than 60 days.
§63.7(c)	Quality Assurance Program/Site-Specific Test Plan	Yes	
§63.7(d)	Performance Test Facilities	Yes	
§63.7(e)	Conduct of Tests	Yes	
§63.7(f)	Alternative Test Method	Yes	
§63.7(g)	Data Analysis, Recordkeeping, Reporting	Yes	Except performance test reports must be submitted with notification of compliance status due 150 days after the compliance date.
§63.7(h)	Waiver of Tests	Yes	
§63.8(a)(1)	Monitoring Requirements - Applicability	Yes	
§63.8(a)(2)	Performance Specifications	Yes	
§63.8(a)(3)	[Reserved]	Not applicable	
§63.8(a)(4)	Monitoring with Flares	Yes	
§63.8(b)(1)	Conduct of Monitoring	Yes	
§63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Yes	Subpart UUU specifies the required monitoring locations.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Yes	

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§63.8(c)(1)(i)-(ii)	Startup, Shutdown, and Malfunctions	Yes	Except that subpart UUU specifies that reports are not required if actions are consistent with the SSM plan, unless requested by the permitting authority. If actions are not consistent, actions must be described in next compliance report.
§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Yes	
§63.8(c)(2)-(3)	Monitoring System Installation	Yes	Except that subpart UUU specifies that for continuous parameter monitoring systems, operational status verification includes completion of manufacturer written specifications or installation operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment will monitor accurately.
§63.8(c)(4)	Continuous Monitoring System Requirements	No	Subpart UUU specifies operational requirements.
§63.8(c)(4)(i)-(ii)	Continuous Monitoring System Requirements	Yes	Except that these requirements apply only to a continuous opacity monitoring system or a continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(c)(5)	COM Minimum Procedures	Yes	
§63.8(c)(6)	CMS Requirements	No	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(c)(7)-(8)	CMS Requirements	Yes	
§63.8(d)	Quality Control Program	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(e)	CMS Performance Evaluation	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits. Results are to be submitted as part of the Notification of Compliance Status due 150 days after the compliance date.
§63.8(f)(1)-(5)	Alternative Monitoring Method	Yes	Except that subpart UUU specifies procedures for requesting alternative monitoring systems and alternative parameters.

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§63.8(f)(6)	Alternative to Relative Accuracy Test	Yes	Applicable to continuous emission monitoring systems if performance specification requires a relative accuracy test audit.
§63.8(g)(1)-(4)	Reduction of Monitoring Data	Yes	Applies to a continuous opacity monitoring system or continuous emission monitoring system.
§63.8(g)(5)	Data Reduction	No	Subpart UUU specifies requirements.
§63.9(a)	Notification Requirements - Applicability	Yes	Duplicate Notification of Compliance Status report to the Regional Administrator may be required.
§63.9(b)(1)-(5)	Initial Notifications	Yes	Except that notification of construction or reconstruction is to be submitted as soon as practicable before startup but no later than 30 days (rather than 60 days) after the effective date if construction or reconstruction had commenced but startup had not occurred before the effective date.
§63.9(c)	Request for Extension of Compliance	Yes	
§63.9(d)	New Source Notification for Special Compliance Requirements	Yes	
§63.9(e)	Notification of Performance Test	Yes	Except that notification is required at least 30 days before test.
§63.9(f)	Notification of VE/Opacity Test	Yes	
§63.9(g)	Additional Notification Requirements for Sources with Continuous Monitoring Systems	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.9(h)	Notification of Compliance Status	Yes	Except that subpart UUU specifies the notification is due no later than 150 days after compliance date.
§63.9(i)	Adjustment of Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	
§63.10(a)	Recordkeeping and Reporting-Applicability	Yes	
§63.10(b)	Records	Yes	Except that §63.10(b)(2)(xiii) applies if you use a continuous emission monitoring system to meet the NSPS or you elect to meet the NSPS, CO, or SO_2 reduced sulfur limit and the performance evaluation requires a relative accuracy test audit.

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§63.10(c)(1)-(6), (9)-(15)	Additional Records for Continuous Monitoring Systems	Yes	Except that these requirements apply if you use a continuous opacity monitoring system or a continuous emission monitoring system to meet the NSPS or elect to meet the NSPS opacity, CO, or SO_2 limits.
§63.10(c)(7)-(8)	Records of Excess Emissions and Exceedances	No	Subpart UUU specifies requirements.
§63.10(d)(1)	General Reporting Requirements	Yes	
§63.10(d)(2)	Performance Test Results	No	Subpart UUU requires performance test results to be reported as part of the Notification of Compliance Status due 150 days after the compliance date.
§63.10(d)(3)	Opacity or VE Observations	Yes	
§63.10(d)(4)	Progress Reports	Yes	
§63.10(d)(5)(i)	Startup, Shutdown, and Malfunction Reports	Yes	Except that reports are not required if actions are consistent with the SSM plan, unless requested by permitting authority.
§63.10(d)(5)(ii)		Yes	Except that actions taken during a startup, shut- down, or malfunction that are not consistent with the plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report.
§63.10(e)(1)-(2)	Additional CMS Reports	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits. Reports of performance evaluations must be submitted in Notification of Compliance Status.
§63.10(e)(3)	Excess Emissions/CMS Performance Reports	No	Subpart UUU specifies the applicable requirements.
§63.10(e)(4)	COMS Data Reports	Yes	
§63.10(f)	Recordkeeping/ Reporting Waiver	Yes	
§63.11	Control Device Requirements	Yes	Applicable to flares.
§63.13	Addresses	Yes	
§63.14	Incorporation by Reference	Yes	
§63.15	Availability of Information	Yes	

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P012) - Claus sulfur recovery unit No. 1 and sulfur pit with tail gas unit and incinerator. Emissions from the Claus sulfur recovery unit can be vented to the number 1 tail gas treater with incinerator and/or the number 2 tail gas treater with 7 mmBtu/hr incinerator.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

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None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P017) - All wastewater streams; cooling towers; wastewater tanks and storm water systems within the refinery

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	volatile organic compounds (VOC) emissions shall not exceed 91.19 tons per year see sections A.I.2.a and 2.b
40 CFR Part 63, Subpart CC	See sections A.I.2.c and A.I.2.d
40 CFR Part 63, Subpart A	See section A.I.2.e
40 CFR Part 61, Subpart FF	See section A.I.2.c
Enhanced BWON Program	
OAC rule 3745-31-05(C)	See section A.I.2.h and A.I.2.i
40 CFR 60, subpart QQQ	See section 2.d and 2.j
Equipment Leaks	
40 CFR Part 63, Subpart CC	See sections A.I.2.e and A.I.2.f
OAC rule 3745-21-09(T)	See section A.I.2.g

2. Additional Terms and Conditions

2.a Modifications of the equipment at this facility shall not require a PTI modification that results solely in increases in fugitive equipment leaks unless and until the calculated facility-wide potential to emit (PTE) for fugitive emissions equals or exceeds the allowable fugitive emission limit stated in section A.I.1.

2.b The permittee shall consider only those fugitive emissions from the equipment being installed or modified (i.e., not the facility-wide fugitive equipment limit) when determining applicability under OAC rule 3745-31-11 through OAC rule 3745-31-20.

2.c Pursuant to 40 CFR Part 63.647(a), the permittees of Group 1 wastewater streams shall comply with the requirements of 40 CFR Part 61.340 through 61.355 of 40 CFR Part 61, Subpart FF for each stream that meets the definition for Group 1 wastewater streams as stated in 63.641 (stated below).

A *Group 1 wastewater stream* means a wastewater stream at a petroleum refinery with a total annual benzene loading of 10 megagrams per year or greater as calculated according to the procedures in 40.CFR 61.342 of Subpart FF that has a flow rate of 0.02 liters per minute or greater, a benzene concentration of 10 parts per million by weight or greater, and is not exempt from control requirements under the provisions of 40 CFR Part 61, Subpart FF. A *Group 2 wastewater stream* means a wastewater stream that does not meet the definition of Group 1 wastewater stream.

2.d Pursuant to 40 CFR Part 63.640(o), Group 1 wastewater streams that were subject to 40 CFR Part 60, Subpart QQQ shall comply only with the provisions of 40 CFR Part 63, Subpart CC. Also, Group 1 or Group 2 wastewater streams that were subject to 40 CFR Part 63, Subpart G, shall comply with 40 CFR Part 63, Subpart CC. Group 2 wastewater streams are subject to 40 CFR 60, Subpart QQQ as necessary.

2.e Refer to the Miscellaneous Requirements in Part II, section A.VI. of the TV permit for terms that may be applicable in regards to 40 CFR Part 63, Subpart A.

2.f Refer to Part III, source P801 of this permit for the applicable equipment leak provisions found in sections A.I.2., A.II., A.III., A.IV. and A.V., referencing 40 CFR Part 60, Subpart VV.

2.g Refer to Part III, source P801 of this permit for the state requirements for equipment leaks found in sections A.I.2., A.II., A.III., A.IV. and A.V., referencing OAC rule 3745-21-09(T).

2.h An enhanced Benzene Waste Operations NESHAP (BWON) program is required by the consent decree as entered on March 14, 2006. The requirements established by the consent decree are as stringent or more stringent than the

requirements of 40 CFR 63, subpart CC and OAC rule 3745-21-09(T).

2.i [Consent Decree (CD), section M.] - BENZENE WASTE NESHAP PROGRAM ENHANCEMENTS
In addition to continuing to comply with all applicable requirements of 40 CFR Part 61, Subpart FF (the "Benzene Waste Operations NESHAP," "BWON," or "Subpart FF"), Sunoco agrees to undertake, at the Covered Refinery, the measures set forth in Section M. of the Consent Decree to ensure enhanced compliance with Subpart FF and to minimize or eliminate fugitive benzene waste emissions. For purposes of this Section ("Benzene Waste NESHAP Program Enhancements"), "Covered Refinery" means the Toledo Refinery.

2.j Group 2 wastewater streams are subject to 40 CFR Part 60, Subpart QQQ and shall comply with the requirements of 40 CFR 60, Subpart QQQ as follows:

i. [60.690(a)(1)]
The provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction commenced after May 4, 1987.

ii. [60.690(a)(2)]
An individual drain system is a separate affected facility. Individual drain system means all process drains connected to the first common downstream junction box. The term includes all such drains and common junction box, together with their associated sewer lines and other junction boxes, down to the receiving oil-water separator.

iii. [60.690(a)(3)]
An oil-water separator is a separate affected facility. Oil-water separator means wastewater treatment equipment used to separate oil from water consisting of a separation tank, which also includes the forebay and other separator basins, skimmers, weirs, grit chambers, and sludge hoppers. Slop oil facilities, including tanks, are included in this term along with storage vessels and auxiliary equipment located between individual drain systems and the oil-water separator. This term does not include storage vessels or auxiliary equipment which do not come in contact with or store oily wastewater.

iv. [60.690(a)(4)]
An aggregate facility is a separate affected facility. Aggregate facility means an individual drain system together with ancillary downstream sewer lines

and oil-water separators, down to and including the secondary oil-water separator, as applicable.

II. Operational Restrictions

1. [63.642(k)] GENERAL STANDARDS - 40 CFR Part 63, Subpart CC
The permittee of an existing emissions unit may comply, and the permittee of a new emissions unit shall comply with the wastewater provisions in 40 CFR Part 63.647 [see section A.II.] of this subpart.

   a. [63.642(k)(1)]
   The permittee using this compliance approach shall also comply with the requirements of 40 CFR Part 63.654 [see section A.IV.] as applicable.

   b. [63.642(k)(2)]
   The permittee using this compliance approach is not required to calculate the annual emission rate specified in 40 CFR Part 63.642(g) of Subpart CC.

2. [63.647] WASTEWATER PROVISIONS - 40 CFR Part 63, Subpart CC

   a. [63.647(a)]
   Except as provided in 63.647(b) [paragraph b. of this section], each permittee of a Group 1 wastewater stream shall comply with the requirements of 40 CFR Part 61.340 through 61.355 of Subpart FF for each process wastewater stream that meets the definition in 40 CFR Part 63.641 [see section A.I.2.].

   b. [63.647(b)]
   As used in this section, all terms not defined in 40 CFR Part 63.641 shall have the meaning given them in the Clean Air Act or in 40 CFR Part 61.341, of Subpart FF.

   c. [63.647(c)]
   Each permittee required under 40 CFR Part 61, Subpart FF to perform periodic measurement of benzene concentration in wastewater, or to monitor process or control device operating parameters shall operate in a manner consistent with the minimum or maximum (as appropriate) permitted concentration or operating parameter values. Operation of the process, treatment unit, or control device resulting in a measured concentration or operating parameter value outside the permitted limits shall constitute a violation of the emission standards. Failure to perform required leak monitoring for closed vent systems and control devices or failure to repair leaks within the time period specified in 40 CFR Part 61, Subpart FF, shall constitute a violation of the standard.

3. [61.342] GENERAL STANDARDS - 40 CFR Part 61, Subpart FF

   a. [61.342(a)]
   The total annual benzene quantity from facility waste is the sum of the annual

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benzene quantity for each waste stream at the facility that has a flow-weighted annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10 percent. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream. Other specific requirements for calculating the total annual benzene waste quantity are as follows:

i. [61.342(a)(1)]
Wastes that are exempted from control under 40 CFR Part 61.342(c)(2) and 61.342(c)(3) [see paragraph b.ii. and b.iii. of this section] are included in the calculation of the total annual benzene quantity if they have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.

ii. [61.342(a)(2)]
The benzene in a material subject to this subpart that is sold is included in the calculation of the total annual benzene quantity if the material has an annual average water content greater than 10 percent.

iii. [61.342(a)(3)]
Benzene in wastes generated by remediation activities conducted at the facility, such as the excavation of contaminated soil, pumping and treatment of groundwater, and the recovery of product from soil or groundwater, are not included in the calculation of total annual benzene quantity for that facility. If the facility's total annual benzene quantity is 10 Mg/yr (11 ton/yr) or more, wastes generated by remediation activities are subject to the requirements of paragraphs 40 CFR Part 61.342(c) through (h) of Subpart FF [see section A.II.] of this section. If the facility is managing remediation waste generated offsite, the benzene in this waste shall be included in the calculation of total annual benzene quantity in facility waste, if the waste streams have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.

iv. [61.342(a)(4)]
The total annual benzene quantity is determined based upon the quantity of benzene in the waste before any waste treatment occurs to remove the benzene except as specified in 40 CFR Part 61.355(c)(1)(i)(A) through (C) [see section A.V.].

b. [61.342(c)]
Each permittee of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in 61.347(a) [paragraph a. of this section] shall manage and treat the facility waste as follows:

i. [61.342(c)(1)]
For each waste stream that contains benzene, including (but not limited to) organic waste streams that contain less than 10 percent water and aqueous waste streams, even if the wastes are not discharged to an individual drain system, the owner or operator shall:

(a) [61.342(c)(1)(i)]
Remove or destroy the benzene contained in the waste using a treatment process or wastewater treatment system that complies with the standards specified in 61.348 [see section A.III.] of this subpart.

(b) [61.342(c)(1)(ii)]
Comply with the standards specified in 40 CFR Part 61.343 through 61.347 [see sections A.II. and A.III.] of this subpart for each waste management unit that receives or manages the waste stream prior to and during treatment of the waste stream in accordance with 40 CFR Part 61.342(c)(1)(i) [paragraph b.i.(a) of this section].

(c) [61.342(c)(1)(iii)]
Each waste management unit used to manage or treat waste streams that will be recycled to a process shall comply with the standards specified in 40 CFR Part 61.343 through 61.347 [see sections A.II. and A.III.]. Once the waste stream is recycled to a process, including to a tank used for the storage of production process feed, product, or product intermediates, unless this tank is used primarily for the storage of wastes, the material is no longer subject to 40 CFR Part 61.342(c) [see paragraph b. of this section].

ii. [61.342(c)(2)]
A waste stream is exempt from 40 CFR Part 61.342(c)(1) [paragraph b.i. of this section] provided that the permittee demonstrates initially and, thereafter, at least once per year that the flow-weighted annual average benzene concentration for the waste stream is less than 10 ppmw as determined by the procedures specified in 40 CFR Part 61.355(c)(2) or 61.355(c)(3) [see section A.V.].

iii. [61.342(c)(3)]
A waste stream is exempt from 40 CFR Part 61.342(c)(1) [paragraph b.i. of this section] provided that the owner or operator demonstrates initially and, thereafter, at least once per year that the conditions specified in either 40 CFR Part 61.342(c)(3)(i) or (c)(3)(ii) [paragraphs b.iii.(a) or b.iii.(b) of this section] are met.

(a) [61.342(c)(3)(i)]
The waste stream is process wastewater that has a flow rate less than 0.02 liters per minute (0.005 gallons per minute) or an annual wastewater quantity of less than 10 Mg/yr (11 ton/yr); or

(b) [61.342(c)(3)(ii)]
All of the following conditions are met:

(i) [61.342(c)(3)(i)(A)]
The permittee does not choose to exempt process wastewater under 61.342(c)(3)(i) [paragraph b.iii.(a) of this section];

(ii) [61.342(c)(3)(i)(B)]
The total annual benzene quantity in all waste streams chosen for exemption in 40 CFR Part 61.342(c)(3)(ii) [paragraph b.iii.(b) of this section] does not exceed 2.0 Mg/yr (2.2 ton/yr) as determined in the procedures in 40 CFR Part 61.355(j) [see section A.V.]; and

(iii) [61.342(c)(3)(i)(C)]
The total annual benzene quantity in a waste stream chosen

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for exemption, including process unit turnaround waste, is determined for the year in which the waste is generated.

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4. [61.343] STANDARDS: TANKS - 40 CFR Part 61, Subpart FF

a. [61.343(a)]
Except as provided in 40 CFR Part 61.343(b) [paragraph b. of this section] and in 40 CFR Part 61.351 [see section A.II.], the permittee shall meet the following standards for each tank in which the waste stream is placed in accordance with 40 CFR Part 61.342(c)(1)(ii) [see section A.II.]. The standards in this section apply to the treatment of the waste stream in a tank, including dewatering.

i. [61.343(a)(1)]
The permittee shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device.

(a) [61.343(a)(1)(i)]
The fixed-roof shall meet the following requirements:

(i) The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR Part 61.355(h) [see section A.V.] of this subpart.

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

(iii) If the cover and closed-vent system operate such that the tank is maintained at a pressure less than atmospheric pressure, then paragraph (a)(1)(i)(B) of this section does not apply to any opening that meets all of the following conditions:

(A) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(B) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR Part 61.355(h) [see section A.V.]; and

(C) The pressure is monitored continuously to ensure that the pressure in the tank remains below atmospheric pressure.

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(b) [61.343(a)(1)(ii)]
The closed-vent system and control device shall be designed and operated in accordance with the requirement of 40 CFR Part 61.349 [see section A.III.] of this subpart.

b. [61.343(b)]
For a tank that meets all the conditions specified in 40 CFR Part 61.343(b)(1) [paragraph b.i. of this section], the permittee may elect to comply with 40 CFR Part 61.343(b)(2) [paragraph b.ii. of this section] as an alternative to the requirements specified in 40 CFR Part 61.343(a)(1) [paragraph a.i. of this section].

i. [61.343(b)(1)]
The waste managed in the tank complying with 40 CFR Part 61.343(b)(2) [paragraph b.ii. of this section] shall meet all of the following conditions:
(a) [61.343(b)(1)(i)]
Each waste stream managed in the tank must have a flow-weighted annual average water content less than or equal to 10 percent water, on a volume basis as total water.
(b) [61.343(b)(1)(ii)]
The waste managed in the tank either has a maximum organic vapor pressure less than 5.2 kilopascals (kPa) (0.75 pounds per square inch (psi)); has a maximum organic vapor pressure less than 27.6 kPa (4.0 psi) and is managed in a tank having design capacity less than 151 m^3 (40,000 gal); or has a maximum organic vapor pressure less than 76.6 kPa (11.1 psi) and is managed in a tank having a design capacity less than 75 m^3 (20,000 gal).

ii. [61.343(b)(2)]
The permittee shall install, operate, and maintain a fixed roof as specified in 40 CFR Part 61.343(a)(1)(i) [paragraph a.i.(a) of this section].

iii. [61.343(b)(3)]
For each tank complying with 40 CFR Part 61.343(b) [paragraph b. of this section], one or more devices which vent directly to the atmosphere may be used on the tank provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the tank or cover resulting from filling or emptying the tank, diurnal temperature changes, atmospheric pressure changes or malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.

5. [61.345] STANDARDS: CONTAINERS - 40 CFR Part 61, Subpart FF
a. [61.345(a)]
The permittee shall meet the following standards for each container in which waste

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is placed in accordance with 40 CFR Part 61.342(c)(1)(ii) [see section A.II.] of this subpart:

i. [61.345(a)(1)]
The permittee shall install, operate, and maintain a cover on each container used to handle, transfer, or store waste in accordance with the following requirements:
(a) [61.345(a)(1)(i)]
The cover and all openings (e.g., bungs, hatches, and sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in 40 CFR Part 61.355(h) [see section A.V.] of this subpart.
(b) [61.345(a)(1)(ii)]
Except as provided in 40 CFR Part 61.345(a)(4) [paragraph a.iv. of this section], each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the container except when it is necessary to use the opening for waste loading, removal, inspection, or sampling.

ii. [61.345(a)(2)]
When a waste is transferred into a container by pumping, the permittee shall perform the transfer using a submerged fill pipe. The submerged fill pipe outlet shall extend to within two fill pipe diameters of the bottom of the container while the container is being loaded. During loading of the waste, the cover shall remain in place and all openings shall be maintained in a closed, sealed position except for those openings required for the submerged fill pipe, those openings required for venting of the container to prevent physical damage or permanent deformation of the container or cover, and any openings complying with 40 CFR Part 61.345(a)(4) [paragraph a.iv. of this section].

iii. [61.345(a)(3)]
Treatment of a waste in a container, including aeration, thermal or other treatment, shall be performed by the permittee in a manner such that whenever it is necessary for the container to be open while the waste is being treated, the container is located under a cover (e.g. enclosure) with a closed-vent system that routes all organic vapors vented from the container to a control device, except for cover and closed-vent systems that meet the requirements in 40 CFR Part 61.345(a)(4) [paragraph a.iv.of this section].
(a) [61.345(a)(3)(i)]
The cover and all openings (e.g., doors, hatches) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in 40 CFR

Part 61.355(h) [see section A.V.] of this subpart.

(b) [61.345(a)(3)(ii)]
The closed-vent system and control device shall be designed and operated in accordance with 40 CFR Part 61.349 [see section A.III.] of this subpart.

iv. [61.345(a)(4)]
If the cover and closed-vent system operate such that the container is maintained at a pressure less than atmospheric pressure, the permittee may operate the system with an opening that is not sealed and kept closed at all times if the following conditions are met:

(a) [61.345(a)(4)(i)]
The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(b) [61.345(a)(4)(ii)]
The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by methods specified in 40 CFR Part 61.355(h) [see section A.V.]; and

(c) [61.345(a)(4)(iii)]
The pressure is monitored continuously to ensure that the pressure in the container remains below atmospheric pressure.

6. [61.351] ALTERNATIVE STANDARDS FOR TANKS - 40 CFR Part 61, Subpart FF

a. [61.351(a)]
As an alternative to the standards for tanks specified in 40 CFR Part 61.343 [see section A.II.] of this subpart, the permittee may elect to comply with one of the following:

i. [61.351(a)(1)]
A fixed roof and internal floating roof meeting the requirements in 40 CFR Part 60.112b(a)(1);

ii. [61.351(a)(2)]
An external floating roof meeting the requirements of 40 CFR Part 60.112b(a)(2); or

iii. [61.351(a)(3)]

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An alternative means of emission limitation as described in 40 CFR Part 60.114b.

b. [61.351(b)]
If the permittee elects to comply with the provisions of this section, then the permittee is exempt from the provisions of 40 CFR Part 61.343 [see section A.II.] of this Subpart Applicable to the same facilities.

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7. [CD, section M.65] CURRENT COMPLIANCE STATUS
As of Date of Entry of the Consent Decree, Sunoco shall comply with the compliance option set forth at 40 CFR 61.342(c), utilizing the exemptions set forth in 40 CFR 61.342(c)(2) and (c)(3)(ii) (hereinafter referred to as the "2 Mg Compliance Option").

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8. [CD, section M.66.] REFINERY COMPLIANCE STATUS CHANGES
Commencing on Date of Entry of the Consent Decree and continuing through the Date of Termination, to the extent applicable, Sunoco shall not change the compliance status of any Covered Refinery from the 6 BQ Compliance Option to the 2 Mg Compliance Option. Sunoco shall consult with the EPA, the appropriate EPA Region, and the appropriate state agency ("Relevant Government Agencies") before making any change in compliance strategy not expressly prohibited by this Paragraph. All changes must be undertaken in accordance with Subpart FF.

III. Monitoring and/or Recordkeeping Requirements

1. [63.654(a)] REPORTING AND RECORD KEEPING REQUIREMENTS - 40 CFR Part 63, Subpart CC
Each permittee subject to the wastewater provisions in 40 CFR Part 63.647 [see section A.II.] shall comply with the record keeping and reporting provisions in 40 CFR Part 61.356 and 61.357 of 40 CFR Part 61, Subpart FF [see sections A.III. and A.IV.] unless they are complying with the wastewater provisions specified in 40 CFR Part 63.640(o)(2)(ii). There are no additional reporting and record keeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average.

2. [61.343] STANDARDS: TANKS - 40 CFR Part 61, Subpart FF

   a. [61.343(c)]
   Each fixed-roof, seal, access door, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly.

   b. [61.343(d)]
   Except as provided in 40 CFR Part 61.350 [see section A.III.], when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 45 calendar days after identification.

3. [61.345] STANDARDS: CONTAINERS - 40 CFR Part 61, Subpart FF

   a. [61.345(b)]
   Each cover and all openings shall be visually inspected initially and quarterly thereafter to ensure that they are closed and gasketed properly.

   b. [61.345(c)]

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Except as provided in 40 CFR Part 61.350 [see section A.III.] of this subpart, when a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.

4. [61.346] STANDARDS: INDIVIDUAL DRAIN SYSTEMS - 40 CFR Part 61, Subpart FF

a. [61.346(a)]
Except as provided in 40 CFR Part 61.346(b) [paragraph b.of this section], the permittee shall meet the following standards for each individual drain system in which waste is placed in accordance with 40 CFR Part 61.342(c)(1)(ii) [see section A.II.] of this subpart:

i. [61.346(a)(1)]
The permittee shall install, operate, and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors vented from the drain system to a control device.

(a) [61.346(a)(1)(i) and (a)(1)(i)(A) through (a)(1)(i)(C)]
The cover shall meet the following requirements:

(i) The cover and all openings (e.g., access hatches, sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in 40 CFR Part 61.355(h) [see section A.V.] of this subpart.

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the drain system except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

(iii) If the cover and closed-vent system operate such that the individual drain system is maintained at a pressure less than atmospheric pressure, then 40 CFR Part 61.346(a)(1)(i)(B) [paragraph a.i.(a)(ii) of this section] does not apply to any opening that meets all of the following conditions:

(A) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(B) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 61.355(h) [see section A.V.]; and

(C) The pressure is monitored continuously to ensure that the pressure in the individual drain system remains

below atmospheric pressure.

(b) [61.346(a)(1)(ii)]
The closed-vent system and control device shall be designed and operated in accordance with 40 CFR Part 61.349 [see section A.III.] of this subpart.

ii. [61.346(a)(2)]
Each cover seal, access hatch, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access hatches and other openings are closed and gasketed properly.

iii. [61.346(a)(3)]
Except as provided in 40 CFR Part 61.350 [see section A.III.] of this subpart, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.

b. [61.346(b)]
As an alternative to complying with 40 CFR Part 61.346(a) [paragraph a. of this section], the permittee may elect to comply with the requirements in 40 CFR Part 61.346(b).

5. [61.348] STANDARDS: TREATMENT PROCESSES - 40 CFR Part 61, Subpart FF

NOTE: SUNOCO, Inc. contracts the treatment of the wastewater to TWO LLC/US Filter (0448020080). TWO LLC/US Filter is responsible for the final treatment of the water as defined in 40 CFR Part 61.348.

a. [61.348(a)]
Except as provided in 61.348(a0(5) [paragraph a.v. of this section], the permittee shall treat the waste stream in accordance with the following requirements:

i. [61.348(a)(1) and (a)(1)(i)]
The permittee shall design, install, operate, and maintain a treatment process that removes benzene from the waste stream to a level less than 10 parts per million by weight (ppmw) on a flow-weighted annual average basis.

ii. [61.348(a)(2)]
Each treatment process complying with paragraph a.i. of this section shall be designed and operated in accordance with the appropriate waste management unit standards specified in 40 CFR Part 61.343 through 61.347 [see sections A.II. and A.III.] of this subpart. For example, if a treatment process is a tank, then the permittee shall comply with 40 CFR Part 61.343 of this subpart [see sections A.II. and A.III.].

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iii. [61.348(a)(3)]
For the purpose of complying with the requirements specified in paragraph a.i. of this section, the intentional or unintentional reduction in the benzene concentration of a waste stream by dilution of the waste stream with other wastes or materials is not allowed.

iv. [61.348(a)(4)]
The permittee may aggregate or mix together individual waste streams to create a combined waste stream for the purpose of facilitating treatment of waste to comply with the requirements of paragraph a.i. of this section except as provided in 61.348(a)(5) [paragraph a.v. of this section].

v. [61.348(a)(5)]
If the permittee aggregates or mixes any combination of process wastewater, product tank drawdown, or landfill leachate subject to 40 CFR Part 61.342(c)(1) [see section A.II.] of this subpart together with other waste streams to create a combined waste stream for the purpose of facilitating management or treatment of waste in a wastewater treatment system, then the wastewater treatment system shall be operated in accordance with 40 CFR Part 61.348(b) [paragraph b. of this section]. These provisions apply to above-ground wastewater treatment systems as well as those that are at or below ground level.

b. [61.348(b)]
Except for facilities complying with 40 CFR Part 61.342(e) the permittee that aggregates or mixes individual waste streams as defined in 61.348(a)(5) [paragraph a.v. of this section] for management and treatment in a wastewater treatment system shall comply with the following requirements:

i. [61.348(b)(1)]
The permittee shall design and operate each waste management unit that comprises the wastewater treatment system in accordance with the appropriate standards specified in 40 CFR Part 61.343 through 61.347 [see sections A.II. and A.III.] of this subpart.

ii. [61.348(b)(2)]
The provisions of 40 CFR Part 61.348(b)(1) [paragraph b.i. of this section] do not apply to any waste management unit that the permittee demonstrates to meet the following conditions initially and, thereafter, at least once per year:
(a) [61.348(b)(2)(i)]
The benzene content of each waste stream entering the waste management unit is less than 10 ppmw on a flow-weighted annual average basis as determined by the procedures specified in 40 CFR Part 61.355(c) [see section A.V.] of this subpart; and
(b) [61.348(b)(2)(ii) and (b)(2)(ii)(A) and (b)(2)(ii)(B)]

The total annual benzene quantity contained in all waste streams managed or treated in exempt waste management units comprising the facility wastewater treatment systems is less than 1 Mg/yr (1.1 ton/yr). For this determination, total annual benzene quantity shall be calculated as follows:

(i) The total annual benzene quantity shall be calculated as the sum of the individual benzene quantities determined at each location where a waste stream first enters an exempt waste management unit. The benzene quantity discharged from an exempt waste management unit shall not be included in this calculation.

(ii) The annual benzene quantity in a waste stream managed or treated in an enhanced biodegradation unit shall not be included in the calculation of the total annual benzene quantity, if the enhanced biodegradation unit is the first exempt unit in which the waste is managed or treated. A unit shall be considered enhanced biodegradation if it is a suspended-growth process that generates biomass, uses recycled biomass, and periodically removes biomass from the process. An enhanced biodegradation unit typically operates at a food-to-microorganism ratio in the range of 0.05 to 1.0 kg of biological oxygen demand per kg of biomass per day, a mixed liquor suspended solids ratio in the range of 1 to 8 grams per liter (0.008 to 0.7 pounds per liter), and a residence time in the range of 3 to 36 hours.

c. [61.348(c)]
The permittee shall demonstrate that each treatment process or wastewater treatment system unit, except as provided in 40 CFR Part 61.348(d) of this section, achieves the appropriate conditions specified in paragraphs a. or b. of this section in accordance with the following requirements:

i. [61.348(c)(1)]
Engineering calculations in accordance with requirements specified in 40 CFR Part 61.356(e) [see section A.III.] of this subpart; or

ii. [61.348(c)(2)]
Performance tests conducted using the test methods and procedures that meet the requirements specified in 40 CFR Part 61.355 [see section A.V.] of this subpart.

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d. [61.348(e)]
Except as specified in 40 CFR Part 61.348(e)(3) [paragraph c. of this section], if the treatment process or wastewater treatment system unit has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (e.g., gasketed, latched, etc.) and kept closed at all times when waste is being treated, except during inspection and maintenance.

i. [61.348(e)(1)]
Each seal, access door, and all other openings shall be checked by visual inspections initially and quarterly thereafter to ensure that no cracks or gaps occur and that openings are closed and gasketed properly.

ii. [61.348(e)(2)]
Except as provided in 40 CFR Part 61.350 [see section A.III.] of this subpart, when a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.

iii. [61.348(e)(3)]
If the cover and closed-vent system operate such that the treatment process and wastewater treatment system unit are maintained at a pressure less than atmospheric pressure, the permittee may operate the system with an opening that is not sealed and kept closed at all times if the following conditions are met:

(a) [61.348(e)(3)(i)]
The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(b) [61.348(e)(3)(ii)]
The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR Part 61.355(h) [see section A.V.]; and

(c) [61.348(e)(3)(iii)]
The pressure is monitored continuously to ensure that the pressure in the treatment process and wastewater treatment system unit remain below atmospheric pressure.

e. [61.348(f)]
Except for treatment processes complying with 40 CFR Part 61.348(d), the Administrator may request at any time a permittee demonstrate that a treatment process or wastewater treatment system unit meets the applicable requirements specified in 40 CFR Part 61.348(a) or 61.348(b) [paragraphs a. or b. of this section] by conducting a performance test using the test methods and procedures as required in 40 CFR Part 61.355(h) [see section A.V.] of this subpart.

f. [61.348(g)]
The permittee of a treatment process or wastewater treatment system unit that is used to comply with the provisions of this section shall monitor the unit in accordance with the applicable requirements in 40 CFR Part 61.354 [see section A.IV.] of this subpart.

6. [61.349] STANDARDS: CLOSED VENT SYSTEMS AND CONTROL DEVICES - 40 CFR Part 61, Subpart FF

a. [61.349(a)]
For each closed-vent system and control device used to comply with standards in accordance with 40 CFR Part 61.343 through 61.348 [see sections A.II. and A.III.] of this subpart, the permittee shall properly design, install, operate, and maintain the closed-vent system and control device in accordance with the following requirements:

i. [61.349(a)(1)]
The closed-vent system shall:
(a) [61.349(a)(1)(i)]
Be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR Part 61.355(h) [see section A.V.] of this subpart.
(b) [61.349(a)(1)(ii); (a)(1)(ii)(A) and (a)(1)(ii)(B)]
Vent systems that contain any bypass line that could divert the vent stream away from a control device used to comply with the provisions of this subpart shall install, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow away from the control device at least once every 15 minutes, except as provided in paragraph a.i.(b)(ii) of this section.
(i) The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
(ii) Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required.
(c) [61.349(a)(1)(iii)]
All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

(d) [61.349(a)(1)(iv)]
For each closed-vent system complying with 40 CFR Part 61.349(a) [paragraph a. of this section], one or more devices which vent directly to the atmosphere may be used on the closed-vent system provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system resulting from malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.

ii. [61.349(a)(2)]
The control device shall be designed and operated in accordance with the following conditions:

(a) [61.349(a)(2)(i)]
An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) shall meet one of the following conditions:

(i) Reduce the organic emissions vented to it by 95 weight percent or greater;

(ii) Achieve a total organic compound concentration of 20 ppmv (as the sum of the concentrations for individual compounds using Method 18) on a dry basis corrected to 3 percent oxygen; or

(iii) Provide a minimum residence time of 0.5 seconds at a minimum temperature of 760°C (1,400 °F). If a boiler or process heater issued as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(b) [61.349(a)(2)(ii)]
A vapor recovery system (e.g., a carbon adsorption system or a condenser) shall recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.

(c) [61.349(a)(2)(iii)]
A flare shall comply with the requirements of 40 CFR Part 60.18.

(d) [61.349(a)(2)(iv)]
A control device other than those described in paragraphs ii.(a) through ii.(c) of this section may be used provided that the conditions stated in 40 CFR Part 61.349(a)(2)(iv) are met.

b. [61.349(b)]
Each closed-vent system and control device used to comply with this subpart shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device.

c. [61.349(c)]
The permittee shall demonstrate that each control device, except for a flare, achieves the appropriate conditions specified in 40 CFR Part 61.349(a)(2) [paragraph a.ii. of this section] by using one of the following methods:

i. [61.349(c)(1)]
Engineering calculations in accordance with requirements specified in 40 CFR Part 61.356(f) [see section A.III.] of this subpart; or

ii. [61.349(c)(2)]
Performance tests conducted using the test methods and procedures that meet the requirements specified in 40 CFR Part 61.355 [see section A.V.] of this subpart.

d. [61.349(d)]
The permittee shall demonstrate compliance of each flare in accordance with 61.349(a)(2)(iii) [paragraph a.ii.(c) of this section].

e. [61.349(e)]
The Administrator may request at any time a permittee demonstrate that a control device meets the applicable conditions specified in 40 CFR Part 61.349(a)(2) [paragraph a.ii.of this section] by conducting a performance test using the test methods and procedures as required in 40 CFR Part 61.355 [see section A.V.], and for control devices subject to 40 CFR Part 61.349(a)(2)(iv) [paragraph a.ii.(d) of this section], the Administrator may specify alternative test methods and procedures, as appropriate

f. [61.349(f)]
Each closed-vent system and control device shall be visually inspected initially and quarterly thereafter. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections.

g. [61.349(g)]
Except as provided in 61.350 [see section A.III.] of this subpart, if visible defects are observed during an inspection, or if other problems are identified, or if detectable emissions are measured, a first effort to repair the closed-vent system and control device shall be made as soon as practicable but no later than 5 calendar days after detection. Repair shall be completed no later than 15 calendar days after the emissions are detected or the visible defect is observed.

h. [61.349(h)]
The permittee of a control device that is used to comply with the provisions of this section shall monitor the control device in accordance with 40 CFR Part 61.354(c) of this subpart.

7. [61.350] STANDARDS: DELAY OF REPAIR - 40 CFR Part 61, Subpart FF

a. [61.350(a)]
Delay of repair of facilities or units that are subject to the provisions of this subpart will be allowed if the repair is technically impossible without a complete or partial facility or unit shutdown.

b. [61.350(b)]
Repair of such equipment shall occur before the end of the next facility or unit shutdown.

8. [61.354] MONITORING OF OPERATIONS - 40 CFR Part 61, Subpart FF

NOTE: SUNOCO, Inc. contracts the treatment of the wastewater to TWO LLC/US Filter (0448020080). TWO LLC/US Filter is responsible for the final treatment of the water as defined in 40 CFR Part 61.348.

a. [61.354(b)]
If a permittee complies with the requirements of 40 CFR Part 61.348(b) [see section A.III.], then the permittee shall monitor each wastewater treatment system to ensure the unit is properly operated and maintained by the appropriate monitoring procedure as follows:

i. [61.354(b)(1)]
For the first exempt waste management unit in each waste treatment train, other than an enhanced biodegradation unit, measure the flow rate, using the procedures of 40 CFR Part 61.355(b) [see section A.V.], and the benzene concentration of each waste stream entering the unit at least once per month by collecting and analyzing one or more samples using the procedures specified in 40 CFR Part 61.355(c)(3) [see section A.V.].

ii. [61.354(b)(2)]
For each enhanced biodegradation unit that is the first exempt waste management unit in a treatment train, measure the benzene concentration of each waste stream entering the unit at least once per month by collecting and analyzing one or more samples using the procedures specified in 40 CFR Part 61.355(c)(3) [see section A.V.].

b. [61.354(d)]
For a carbon adsorption system that does not regenerate the carbon bed directly

on site in the control device (e.g., a carbon canister), either the concentration level of the organic compounds or the concentration level of benzene in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, a permittee may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and either the organic concentration or the benzene concentration in the gas stream vented to the carbon adsorption system.

9. [61.356] RECORD KEEPING REQUIREMENTS - 40 CFR Part 61, Subpart FF

a. [61.356(a)]
The permittee shall comply with the record keeping requirements of this section. Each record shall be maintained in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified.

b. [61.356(b)]
The permittee shall maintain records that identify each waste stream at the facility subject to this subpart, and indicate whether or not the waste stream is controlled for benzene emissions in accordance with this subpart. In addition the permittee shall maintain the following records:

i. [61.356(b)(1)]
For each waste stream not controlled for benzene emissions in accordance with this subpart, the records shall include all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity.

ii. [61.356(b)(2)]
For each waste stream exempt from 40 CFR Part 61.342(c)(1) [see section A.II.] in accordance with 40 CFR Part 61.342(c)(3) [see section A.II.], the records shall include:
(a) [61.356(b)(2)(i)]

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All measurements, calculations, and other documentation used to determine that the continuous flow of process wastewater is less than 0.02 liters (0.005 gallons) per minute or the annual waste quantity of process wastewater is less than 10 Mg/yr (11 ton/yr) in accordance with 40 CFR Part 61.342(c)(3)(i) [see section A.II.], or

(b) [61.356(b)(2)(ii)]
All measurements, calculations, and other documentation used to determine that the sum of the total annual benzene quantity in all exempt waste streams does not exceed 2.0 Mg/yr (2.2 ton/yr) in accordance with 40 CFR Part 61.342(c)(3)(ii) [see section A.II.].

iii. [61.356(b)(5)]
For each facility where the annual waste quantity for process unit turnaround waste is determined in accordance with 40 CFR Part 61.355(b)(5) [see section A.V.], the records shall include all test results, measurements, calculations, and other documentation used to determine the following information: identification of each process unit at the facility that undergoes turnarounds, the date of the most recent turnaround for each process unit, identification of each process unit turnaround waste, the water content of each process unit turnaround waste, the annual waste quantity determined in accordance with 40 CFR Part 61.355(b)(5) [see section A.V.], the range of benzene concentrations in the waste, the annual average flow-weighted benzene concentration of the waste, and the annual benzene quantity calculated in accordance with 40 CFR Part 61.355(a)(1)(iii) [see section A.V.] of this section.

iv. [61.356(b)(6)]
For each facility where wastewater streams are controlled for benzene emissions in accordance with 40 CFR Part 61.348(b)(2) [see section A.III.], the records shall include all measurements, calculations, and other documentation used to determine the annual benzene content of the waste streams and the total annual benzene quantity contained in all waste streams managed or treated in exempt waste management units.

c. [61.356(c)]
The permittee transferring waste off-site to another facility for treatment in accordance with 40 CFR Part 61.342(f) shall maintain documentation for each offsite waste shipment that includes the following information: Date waste is shipped offsite, quantity of waste shipped offsite, name and address of the facility receiving the waste, and a copy of the notice sent with the waste shipment.

d. [61.356(d)]
A permittee using control equipment in accordance with 40 CFR Part 61.343 through 61.347 [see sections A.II. and A.III.] shall maintain engineering design documentation for all control equipment that is installed on the waste management unit. The documentation shall be retained for the life of the control equipment. If a

control device is used, then the permittee shall maintain the control device records required by 40 CFR Part 61.355(f) [paragraph f. of this section].

e. [61.356(e)]
A permittee using a treatment process or wastewater treatment system unit in accordance with 40 CFR Part 61.348 [see section A.III.] of this subpart shall maintain the following records. The documentation shall be retained for the life of the unit.

i. [61.356(e)(1)]
A statement signed and dated by the permittee certifying that the unit is designed to operate at the documented performance level when the waste stream entering the unit is at the highest waste stream flow rate and benzene content expected to occur.

ii. [61.356(e)(2)]
If engineering calculations are used to determine treatment process or wastewater treatment system unit performance, then the permittee shall maintain the complete design analysis for the unit. The design analysis shall include for example the following information: Design specifications, drawings, schematics, piping and instrumentation diagrams, and other documentation necessary to demonstrate the unit performance.

iii. [61.356(e)(3)]
If performance tests are used to determine treatment process or wastewater treatment system unit performance, then the permittee shall maintain all test information necessary to demonstrate the unit performance.

(a) [61.356(e)(3)(i)]
A description of the unit including the following information: type of treatment process; manufacturer name and model number; and for each waste stream entering and exiting the unit, the waste stream type (e.g., process wastewater, sludge, slurry, etc.), and the design flow rate and benzene content.

(b) [61.356(e)(3)(ii)]
Documentation describing the test protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the unit performance. The description of the test protocol shall include the following information: sampling locations, sampling method, sampling frequency, and analytical procedures used for sample analysis.

(c) [61.356(e)(3)(iii)]

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Records of unit operating conditions during each test run including all key process parameters.

(d) [61.356(e)(3)(iv)]
All test results.

iv. [61.356(e)(4)]
If a control device is used, then the permittee shall maintain the control device records required by 40 CFR Part 61.356(f) [paragraph f. of this section].

f. [61.356(f)]
The permittee using a closed-vent system and control device in accordance with 40 CFR Part 61.349 [see section A.III.] shall maintain the following records. The documentation shall be retained for the life of the control device.

i. [61.356(f)(1)]
A statement signed and dated by the permittee certifying that the closed-vent system and control device is designed to operate at the documented performance level when the waste management unit vented to the control device is or would be operating at the highest load or capacity expected to occur.

ii. [61.356(f)(2); (2)(i) and (2)(i)(G)]
If engineering calculations are used to determine control device performance in accordance with 40 CFR Part 61.349 [see section A.III.], then a design analysis for the control device that includes for example: specifications, drawings, schematics, and piping and instrumentation diagrams prepared by the permittee, or the control device manufacturer or vendor that describe the control device design based on acceptable engineering texts. The design analysis shall address the following vent stream characteristics and control device operating parameters: for a carbon adsorption system that does not regenerate the carbon bed directly on-site in the control device, such as a carbon canister, the design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and emissions unit operating schedule.

iii. [61.356(f)(3)]
If performance tests are used to determine control device performance in accordance with 40 CFR Part 61.349(c) [see section A.III.] of this subpart:

(a) [61.356(f)(3)(i)]
A description of how it is determined that the test is conducted when

the waste management unit or treatment process is operating at the highest load or capacity level. This description shall include the estimated or design flow rate and organic content of each vent stream and definition of the acceptable operating ranges of key process and control parameters during the test program.

(b) [61.356(f)(3)(ii)]
A description of the control device including the type of control device, control device manufacturer's name and model number, control device dimensions, capacity, and construction materials.

(c) [61.356(f)(3)(iii)]
A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(d) [61.356(f)(3)(iv)]
All test results.

g. [61.356(g)]
The permittee shall maintain a record for each visual inspection required by 40 CFR Part 61.343 through 61.347 [see section A.II. and A.III.] of this subpart that identifies a problem (such as a broken seal, gap or other problem) which could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.

h. [61.356(h)]
A permittee shall maintain a record for each test of no detectable emissions required by 40 CFR Part 61.343 through 61.347 and 61.349 [see sections A.II. and A.III.] of this subpart. The record shall include the following information: date the test is performed, background level measured during test, and maximum concentration indicated by the instrument reading measured for each potential leak interface. If detectable emissions are measured at a leak interface, then the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.

i. [61.356(i)]
For each treatment process and wastewater treatment system unit operated to comply with 40 CFR Part 61.348 [see section A.III.], the permittee shall maintain

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documentation that includes the following information regarding the unit operation:

i. [61.356(i)(1)]
Dates of startup and shutdown of the unit.

ii. [61.356(i)(4)]
If measurements of waste stream benzene concentration are performed in accordance with 40 CFR Part 61.354(b) [see section A.III.], the permittee shall maintain records that include the date each test is performed and all test results.

iii. [61.356(i)(5)]
Periods when the unit is not operated as designed.

j. [61.356(j)]
For each control device, the permittee shall maintain documentation that includes the following information regarding the control device operation:

i. [61.356(j)(1)]
Dates of startup and shutdown of the closed-vent system and control device.

ii. [61.356(j)(2)]
A description of the operating parameter (or parameters) to be monitored to ensure that the control device will be operated in conformance with these standards and the control device's design specifications and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the control device.

iii. [61.356(j)(3)]
Periods when the closed-vent system and control device are not operated as designed including all periods and the duration when:

(a) [61.356(j)(3)(i)]
Any valve car-seal or closure mechanism required under 40 CFR Part 61.349(a)(1)(ii) [see section A.III.] is broken or the by-pass line valve position has changed.

(b) [61.356(j)(3)(ii)]
The flow monitoring devices required under 40 CFR Part 61.349(a)(1)(ii) [see section A.III.] indicate that vapors are not routed to the control device as required.

(c) If a carbon adsorber is used, then the permittee shall maintain records from the monitoring device of the concentration of organics or the concentration of benzene in the control device outlet gas stream. If the concentration of organics or the concentration of benzene in the control device outlet gas stream is monitored, then the permittee shall record all 3-hour periods of operation during which the concentration

of organics or the concentration of benzene in the exhaust stream is more than 20 percent greater than the design value. If the carbon bed regeneration interval is monitored, then the permittee shall record each occurrence when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time.

(d) [61.356(j)(10)]
If a carbon adsorber that is not regenerated directly on site in the control device is used, then the permittee shall maintain records of dates and times when the control device is monitored, when breakthrough is measured, and shall record the date and time then the existing carbon in the control device is replaced with fresh carbon.

iv. [61.356(k)]
The permittee who elects to install and operate the control equipment in 40 CFR Part 61.351 [see section A.II.] of this subpart shall comply with the record keeping requirements in 40 CFR Part 60.115b.

v. [61.356(m)]
If a system is used for emission control that is maintained at a pressure less than atmospheric pressure with openings to provide dilution air, then the permittee shall maintain records of the monitoring device and records of all periods during which the pressure in the unit is operated at a pressure that is equal to or greater than atmospheric pressure.

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10. [CD, section M.67.] REVIEW and VERIFICATION of EACH COVERED REFINERY and COMPLIANCE STATUS

a. Phase One of the Review and Verification Process. By no later than 240days after Date of Entry of the Consent Decree (Nov. 9, 2006), Sunoco shall complete a review and verification of the TAB and the BWON compliance status and shall complete a review of the Covered Refinery within 365 days. For each Covered Refinery, the review and verification process shall include, but shall not be limited to:

i. An identification of each waste stream that is required to be included in the Covered Refinery's TAB (e.g., slop oil, tank water draws, spent caustic, spent caustic hydrocarbon layer, desalter rag layer undercarry, desalter

vessel process sampling points, other sample wastes, maintenance wastes, and turnaround wastes);

ii. A review and identification of the calculations and/or measurements used to determine the flows of each waste stream for the purpose of ensuring the accuracy of the annual waste quantity for each waste stream;

iii. An identification of the benzene concentration in each waste stream, including sampling for benzene concentration at no less than ten (10)waste streams per refinery consistent with the requirements of 40 CFR 61.355(c)(1) and (3); provided, however, that previous analytical data or documented knowledge of waste streams may be used, as per 40 CFR 61.355(c)(2), for streams not sampled; and

iv. An indication whether or not the stream is controlled consistent with the requirements of Subpart FF.

By no later than 30 days following the completion of Phase One of the review and verification process, Sunoco shall submit to EPA a BWON Compliance Review and Verification Report ("Phase One BWON Compliance Review and Verification Report")that sets forth the results of Phase One, including the items identified in subparagraphs 67.a.i-iv. Sunoco shall submit one Phase One BWON ComplianceReview and Verification Report for the Covered Refinery.

b. Phase Two of the Review and Verification Process. Based on EPA's review of the Phase One BWON Compliance Review and Verification Reports, no later than 45 days from the submittal of the Phase One BWON Compliance Review and Verification Report, EPA may select up to twenty (20) additional waste streams at the Covered Refinery for sampling for benzene concentration. As long as waste is being or is scheduled to be generated at the waste steams identified by EPA within 30 days of the request, Sunoco shall conduct the required sampling and submit the results to EPA within 90 days of receipt of EPA's additional sampling request. Sunoco shall use the results of this additional sampling to recalculate the TAB, to re-assess the Covered Refinery's BWON compliance status, and to amend the Phase One BWON Compliance Review and Verification Reports to create a Phase Two BWON Compliance Review and Verification Report, as needed. To the extent that EPA requires Sunoco to re-sample a Phase One waste stream that was sampled as part of this Phase Two review, Sunoco may average the results of the two sampling events. Sunoco shall submit the Phase Two BWON Compliance Review and Verification Report no later than 150 days after receipt of EPA's request for Phase Two sampling, if Phase Two sampling is required by EPA.

c. Amended TAB Reports. Sunoco shall submit, by no later than 60 days after submission of the later of the Phase One or Phase Two BWON Compliance Review and Verification Report(s), an amended TAB report to the Relevant Government Agencies.

11. [CD, section M.69.] CARBON CANISTERS
Sunoco shall comply with the requirements of this Paragraph M.69. of the consent decree at the Covered Refinery where any carbon canister system is used as a control device under Subpart FF.

a. Limitations on Use of Single Carbon Canister Systems

i. New Units or Installations. Except as expressly provided by subparagraphs iii and iv below, commencing on Date of Entry of the Consent Decree (March 14, 2006) and continuing through the Date of Termination, Sunoco shall not use a single carbon canister system for any new unit or installation that requires control pursuant to Subpart FF at the Covered Refinery.

ii. Existing Units or Installations. Except as expressly provided by subparagraphs iii and iv below, commencing 270 days after Date of Entry of the Consent Decree (December 9, 2006) and continuing through the Date of Termination, Sunoco shall not use a single carbon canister system for any existing unit or installation that requires control pursuant to Subpart FF at the Covered Refinery.

iii. Temporary Applications. Sunoco may operate a properly-sized single canister system to control benzene emissions from a short-term operation, such as a temporary storage tank. For any canister operated as part of a single canister system, benzene "breakthrough" shall be defined for the purposes of the Consent Decree as any benzene reading above background as measured at the outlet of the canister. Sunoco shall monitor for breakthrough from a single carbon canister system at least once every 24 hours. Sunoco shall replace any single carbon canister with a fresh carbon canister immediately after a benzene reading above background is detected at the outlet of the canister, unless Sunoco chooses to discontinue flow to the carbon canister or route the stream to an alternative control device. For the purpose of this subparagraph, "immediately" shall mean within 24 hours.

iv. Permanent Applications. Sunoco may continue to operate a properly-sized single canister system on those applications that exist on the Date of Lodging of this Consent Decree where data over the past five (5) years demonstrate that breakthrough has not occurred in less than six (6) months. Sunoco shall monitor for "breakthrough" by monitoring for benzene on a bi-weekly basis at the outlet of the canister. "Breakthrough" shall be defined for the purpose of this Consent Decree as any reading equal to or greater than one (1) ppm benzene. Sunoco shall replace any single carbon canister with a fresh carbon canister immediately after breakthrough is detected. For the purpose of this subparagraph, "immediately" shall mean within 24 hours.

b. Installation and Use of Dual Canisters Operated in Series. Except as provided in

Paragraph 69.a.iii and a.iv of the consent decree, by no later than 270 days after Date of Entry of the Consent Decree (December 9, 2006), Sunoco shall add a secondary carbon canister to each single carbon canister system on an existing unit or installation to convert the single canister system to a dual carbon canister system with the dual canisters operated in series, and shall at each location utilize the dual canister system to control benzene emissions pursuant to Subpart FF. By no later than 30 days following completion of the installation of the dual canisters, for each Refinery, Sunoco shall submit a report certifying the completion of the installation. The report shall include a list of all locations within each Refinery where secondary carbon canisters were installed, the installation date of each secondary canister, and the date that each secondary canister was put into operation.

c. Breakthrough Monitoring With Dual Canisters. By no later seven (7) days after the installation of each secondary carbon canister, Sunoco shall start to monitor for breakthrough between the primary and secondary carbon canisters at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 CFR 61.354(d). At each Covered Refinery, Sunoco shall monitor for "breakthrough" by monitoring for benzene. For a dual carbon canister system, "breakthrough" shall be defined for the purpose of this Consent Decree as any reading equal to or greater than 5 ppm benzene measured between the primary and secondary canister. In lieu of replacing the primary canister immediately, Sunoco may elect to monitor the secondary canister the day breakthrough between the primary and secondary canister is identified and each calendar day thereafter. This daily monitoring shall continue until the primary canister is replaced. If either benzene or VOC is detected at the outlet of the secondary canister during this period of daily monitoring, the primary canister must be replaced within 24 hours. The original secondary carbon canister will become the new primary carbon canister and a fresh carbon canister will become the secondary canister.

d. Canister Replacement With Dual Canister System. Except as otherwise provided in Paragraph 69.c above, immediately when breakthrough is detected, Sunoco shall replace the original primary carbon canister with the secondary canister, and shall use a fresh canister as the new secondary canister. For the purpose of this Paragraph, "immediately" shall mean within 24 hours.

e. Sunoco shall maintain a supply of fresh carbon canisters at each the refinery at all times.

f. Records for the requirements of this Paragraph 69 shall be maintained in accordance with 40 CFR 61.356(j)(10).

12. [CD, section M.70.] ANNUAL REVIEW
By no later than 180 days from Date of Entry of the Consent Decree (September 10, 2006), Sunoco shall modify (or establish) its existing management of change procedures or shall develop and implement new written procedures to provide for performance of an annual review of process information for each Covered Refinery, including construction projects, to ensure that all new benzene waste streams are included in the Covered Refinery's waste stream inventory. Sunoco shall conduct such reviews on an annual basis until the Date of Termination.

13. [CD, section M.71.] LABORATORY AUDITS
Sunoco shall conduct audits of all laboratories that perform analyses of Sunoco's Benzene Waste Operations NESHAP samples to ensure that proper analytical and quality assurance/quality control procedures are followed. Sunoco may elect to submit the results from laboratory audits conducted by other refineries under the global consent decrees, provided the audits meet Sunoco's audit criteria.

    a. Sunoco shall complete audits of at least half of the laboratories used by the Covered Refinery within 180 days after Date of Entry of the Consent Decree (September 10, 2006), and shall complete the remaining audits within 365 days after Date of Entry of the Consent Decree (March 14, 2007). In addition, Sunoco shall audit any new laboratory used for analyses of benzene samples prior to use of the new laboratory.

    b. Until the Date of Termination, Sunoco shall conduct subsequent laboratory audits, such that each laboratory is audited every two (2) years.

14. [CD, section M.72.] BENZENE SPILLS
For each spill at the Refinery after Date of Entry of the Consent Decree (March 14, 2006), Sunoco shall review the spill to determine if benzene waste, as defined by Subpart FF, was generated. For each spill involving the release of more than 10 pounds of benzene in a 24-hour period, Sunoco: (i) shall include benzene waste generated by the spill in the relevant Covered Refinery's TAB, as required by 40 CFR 61.342; and (ii) shall account for such benzene waste in accordance with the applicable compliance option calculations, as appropriate under Subpart FF, unless the benzene waste is properly managed in controlled waste management units at the Refinery.

15. [CD, section M.73.] TRAINING
By no later than 90 days from Date of Entry of the Consent Decree (June 12, 2006), Sunoco shall develop and begin implementation of annual (i.e., once each calendar year) training for all employees assigned to draw benzene waste samples at each Covered Refinery.

    a. For each Covered Refinery, by no later than 180 days from Date of Entry of the Consent Decree (September 10, 2006), Sunoco shall complete the development of standard operating procedures for all control equipment used to comply with the

Benzene Waste Operations NESHAP at the Refinery. By no later than 180 days thereafter, Sunoco shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall also be provided to any persons who subsequently become operators, prior to their assumption of this duty. Until the Date of Termination, "refresher" training in these procedures shall be performed on a three (3) year cycle.

b. As part of Sunoco's training program, Sunoco must require that the employees of any contractors hired to perform the requirements of Section M. of the Consent Decree are properly trained to implement all provisions of this Section at the Refinery.

16. [CD, section M.74.] WASTE/SLOP/OFF-SPEC OIL MANAGEMENT

a. No later than 60 days after Date of Entry (May 13, 2006), Sunoco shall submit to EPA, for the Refinery, schematics that: (i) depict the waste management units (including sewers) that handle, store, and transfer waste/slop/off-spec oil streams; (ii) identify the control status of each waste management unit; and (iii) show how such oil is transferred within the Refinery. If requested by EPA, Sunoco shall submit to EPA, within 90 days of EPA's request, a set of revised schematics reflecting the characterization of oil streams and the appropriate control standards. These schematics will be used in preparing the end-of-line sampling plans.

b. Organic Benzene Waste Streams. For the Covered Refinery from Date of Entry of this Consent Decree (March 14, 2006); if and when that Refinery's TAB reaches 10 Mg/yr and a compliance strategy is approved, all waste management units handling "organic" benzene wastes, as defined in Subpart FF, shall meet the applicable control standards of Subpart FF. If controls not already in place are necessary on any waste management unit handling organic benzene wastes, Sunoco shall submit to EPA, within 90 days, a written plan and schedule, not to exceed 180 days from the date of EPA approval, for installation and operation of necessary controls. Sunoco shall complete the installation and commence operation of the necessary controls in accordance with the EPA-approved plan and schedule.

c. Aqueous Benzene Waste Streams. For purposes of complying with the 2Mg or 6BQ Compliance Option, all waste management units handling aqueous benzene waste streams shall either meet the applicable control standards of Subpart FF or shall have their uncontrolled benzene quantity count toward the 2 or 6 Mg limit.

17. [CD, section M.75.] SAMPLING

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a. BWON Sampling Plans: General

i. Requirement to Submit Plan. Sunoco shall submit to EPA for approval a separate BWON Sampling Plan designed to determine the benzene quantity in uncontrolled waste streams at the Refinery. Each BWON Sampling Plan shall include the information required in Paragraph 75.b. of the Consent Decree. Upon approval by EPA, Sunoco shall implement within the first full Calendar Quarter each EPA-approved BWON Sampling Plan. Delays in the approval of a BWON Sampling Plan for one Refinery shall not constitute grounds for delays in implementing an EPA-approved BWON Sampling Plan for another Refinery.

ii. Timing for Submittal. If, as to the Covered Refinery that is the subject of the proposed BWON Sampling Plan, EPA has not requested Phase Two sampling, then Sunoco shall submit to EPA a proposed BWON Sampling Plan for that Covered Refinery by no later than 60 days after the time for EPA to request Phase Two sampling has expired. If, as to the Covered Refinery that is the subject of the proposed BWON Sampling Plan, EPA has requested Phase Two sampling, then Sunoco shall submit to EPA a proposed BWON Sampling Plan for that Covered Refinery by no later than 120 days after submitting its Phase Two BWON Compliance Review and Verification Report.

iii. Plan Revisions. If, before the Date of Termination, changes in processes, operations, or other factors lead Sunoco or EPA to conclude that the approved sampling locations, approved methods for determining flow calculations, and/or assumed volatilization rates no longer provide an accurate measure of the Refinery's uncontrolled benzene quantity, Sunoco shall submit a revised BWON Sampling Plan to EPA for approval. If, after two (2) years in which Sunoco has implemented monthly and quarterly sampling requirements pursuant to an EPA-approved BWON Sampling Plan, Sunoco determines that a less stringent sampling plan will provide an accurate determination of a Covered Refinery's uncontrolled benzene quantity, Sunoco may request a modification to the EPA-approved BWON Sampling Plan for any Covered Refinery; provided, however, that Sunoco may not implement any modifications if EPA disapproves the plan within 90 days of its submission to EPA.

iv. Plan Implementation. Sunoco shall commence monthly, quarterly, and annual sampling required under an EPA-approved BWON Sampling Plan in the first full calendar month after Sunoco receives EPA's approval of the Plan, and shall continue monthly and quarterly sampling as required by the EPA-approved Plan through the Date of Termination.

b. BWON Sampling Plan Content.

i. Sunoco's BWON Sampling Plan for the Covered Refinery subject to the 2 Mg Compliance Option shall include: (i) a plan for conducting end-of-line ("EOL") sampling pursuant to Paragraph 75.c of the Consent Decree on a monthly basis (three (3) samples in the quarter, one (1) each month); (ii) a plan for conducting non-EOL sampling pursuant to Paragraph 75.d.ii of the Consent Decree on a quarterly basis; (iii) an identification of all proposed sampling locations; and (iv) a description of the proposed flow calculation method to be used in making quarterly benzene determinations under Paragraph 75.e of the Consent Decree. At the Covered Refinery, EOL sampling means sampling at the last practicable point before the waste stream enters a controlled waste management unit, if, based on engineering judgment, EOL sampling would provide a result different than would be provided at the point of waste generation. EOL sampling is not required once the stream has entered a controlled waste management unit, as long as the waste stream remains controlled until either final discharge or discharge to an activated sludge treatment unit.

c. EOL Sampling. Sunoco shall take, and have analyzed, no less than three (3) representative samples from each EOL sampling location identified in an approved BWON Sampling Plan. Sunoco shall use the average of these three samples as the benzene concentration for the stream at the approved sampling location. All sampling results under this Paragraph shall be reported to EPA in the reports due under either Section IX of the Consent Decree or pursuant to 40 CFR 61.357.

d. Non-EOL (Point of Generation) Sampling.

i. [CD, section N.75.d.ii.] Sunoco's BWON Sampling Plan shall include a plan for sampling: (i) each uncontrolled waste stream that contributes greater than 0.05 Mg benzene per year toward the 2 Mg annual exempt waste total; and (ii) each uncontrolled waste stream that contains greater than 0.1 Mg benzene per year and that qualifies for the 10 ppmw benzene exemption.

ii. [CD, section N.75.d.iii.] Sunoco shall conduct all sampling under Paragraph 75.d. of the Consent Decree in compliance with the requirements of 40 CFR 61.355(c)(1) and (3). All sampling results under this Paragraph shall be reported to EPA in the reports due under either Section IX of the Consent Decree or pursuant to 40 CFR 61.357.

e. Calculation of Quarterly and Projected Calendar Year Benzene Quantities. At the end of each Calendar Quarter and based on the EOL sampling results and non-EOL sampling results and the approved flow calculations for the Refinery, Sunoco shall calculate a quarterly benzene quantity and shall estimate a projected calendar year benzene quantity for the Refinery. Sunoco shall submit the benzene quantity calculations in the reports due under Section IX of the Consent Decree, and explain any anomalies or abnormalities. Sunoco may exclude explainable anomalies or abnormalities that are not expected to recur in the calendar year from

estimations of the projected benzene quantity.

f. Corrective Measures. Based on the calculations in Paragraph 75.e., Sunoco shall determine if the projected calendar year benzene quantity equals or exceeds: 10.0 Megagrams at the Tulsa Refinery; or 2.0 Megagrams (uncontrolled) at the Covered Refinery.

If either of the conditions in Paragraph 75.f. of the Consent Decree exist then, Sunoco shall submit for EPA approval a compliance-assurance plan that identifies all corrective actions that Sunoco has taken or plans to take to ensure that noncompliance will not occur. If Sunoco cannot ensure that noncompliance will not occur, Sunoco shall make a statement to that effect in the report required by Paragraph 75.e. of the Consent Decree. Sunoco shall submit the compliance-assurance plan by no later than 60 days after the end of the Calendar Quarter in which one or more of the conditions in this Paragraph 75.f. of the Consent Decree are met. Sunoco shall implement the compliance assurance plan in accordance with the schedule included in the approved plan. If EPA disapproves the compliance-assurance plan, Sunoco shall confer with EPA to develop a mutually acceptable compliance-assurance plan.

g. Third-Party TAB Study and Compliance Review. If, after two (2) consecutive Calendar Quarters it appears likely based on best engineering judgment that, at the end of the calendar year Sunoco will not be in compliance with the 2 Mg Option at the Refinery, then, in the third Calendar Quarter, Sunoco shall retain a third party contractor to undertake a comprehensive TAB study and compliance review ("Third-Party TAB Study and Compliance Review") at that Refinery. By no later than the last day of the third Calendar Quarter, Sunoco shall submit a proposal to EPA that identifies the contractor, the contractor's scope of work, and the contractor's schedule for the Third-Party TAB Study and Compliance Review. Unless, within 30 days after EPA receives this proposal, EPA disapproves it or seeks modifications, Sunoco shall authorize the contractor to commence work, and Sunoco shall ensure that the work is completed in accordance with the approved schedule. By no later than 30 days after Sunoco receives the results of the Third-Party TAB Study and Compliance Review, Sunoco shall submit the results to EPA. After the report is submitted to EPA, Sunoco and EPA shall discuss informally the results of the Third-Party TAB Study and Compliance Review. By no later than 90 days after Sunoco receives the results of the Third-Party TAB Study and Compliance Review, or at such other time as Sunoco and EPA may agree, Sunoco shall submit to EPA for approval a plan and schedule for remedying any deficiencies identified in the Third-Party TAB Study and Compliance Review and any deficiencies that EPA brought to Sunoco's attention as a result of the Third-Party TAB Study and Compliance

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Review. Sunoco shall implement the EPA-approved remedial plan in accordance with the schedule included in the approved plan.

18. [CD, section M.76.] MISCELLANEOUS MEASURES

    a. Sunoco, as and to the extent applicable, shall comply with the Benzene Waste Operations NESHAP provisions applicable to groundwater remediation conveyance systems at the Refinery.

    b. The provisions of Paragraph 76 of the Consent Decree shall apply to the Refinery as of Date of Entry of the Consent Decree (March 14, 2006). The provisions shall continue to apply until the Date of Termination.

        i. Sunoco shall conduct monthly visual inspections of all water traps within the Refinery's individual drain systems.

        ii. On a weekly basis, visually inspect all conservation vent indicators or other leak or flow indicators on junction boxes or on process sewers for detectable leaks; if necessary, reset any vents where leaks are detected; and record the results of the inspections. After two (2) years of weekly inspections, and based upon an evaluation of the recorded results, Sunoco may submit a request to the appropriate EPA Region to modify the frequency of the inspections. Nothing in Paragraph 76 of the Consent Decree shall require Sunoco to monitor conservation vents on fixed roof tanks.

        iii. On a quarterly basis, Sunoco shall conduct monitoring of controlled oil-water separators in accordance with applicable BWON standards.

    c. By no later than 60 days after Date of Entry (May 13, 2006) and continuing until Date of Termination, Sunoco shall identify and mark all area drains that are segregated stormwater drains.

19. [60.692-1] STANDARDS: GENERAL - 40 CFR Part 60, Subpart QQQ

    a. [60.692-1(a)]
    The permittee shall comply with the requirements of 60.692-1 to 60.692-5 and with 60.693-1 [see section A.III.], except during periods of startup, shutdown, or malfunction.

    b. [60.692-1(b)]
    Compliance with 60.692-1 to 60.692-5 and with 60.693-1 [see section A.III.] will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 60.696 [see section

A.V.].

c. [60.692-1(d)]

i. [60.692-1(d)(1)]
Stormwater sewer systems are not subject to the requirements of this subpart.

ii. [60.692-1(d)(2)]
Ancillary equipment, which is physically separate from the wastewater system and does not come in contact with or store oily wastewater, is not subject to the requirements of this subpart.

iii. [60.692-1(d)(3)]
Non-contact cooling water systems are not subject to the requirements of this subpart.

iv. [60.692-1(d)(4)]
The permittee shall demonstrate compliance with the exclusions in paragraphs (d)(1), (2), and (3) of this section as provided in 60.697(h), (i), and (j) [see section A.III.].

20. [60.692-2] STANDARDS: INDIVIDUAL DRAIN SYSTEMS - 40 CFR Part 60, Subpart QQQ

a. [60.692-2(a)]

i. [60.693-2(a)(1)]
Each drain shall be equipped with water seal controls.

ii. [60.692-2(a)(2)]
Each drain in active service shall be checked by visual or physical inspection initially and monthly thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls.

iii. [60.692-2(a)(3)]
Except as provided in paragraph (a)(4) of this section, each drain out of active service shall be checked by visual or physical inspection initially and weekly thereafter for indications of low water levels or other problems that could result in VOC emissions.

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iv. [60.692-2(a)(4)]
As an alternative to the requirements in paragraph (a)(3) of this section, if the permittee elects to install a tightly sealed cap or plug over a drain that is out of service, inspections shall be conducted initially and semiannually to ensure caps or plugs are in place and properly installed.

v. [60.692-2(a)(5)]
Whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection, except as provided in 60.692-6 [see section A.III.].

b. [60.692-2(b)]

i. [60.692-2(b)(1)]
Junction boxes shall be equipped with a cover and may have an open vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.

ii. [60.692-2(b)(2)]
Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.

iii. [60.692-2(b)(3)]
Junction boxes shall be visually inspected initially and semiannually thereafter to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.

iv. [60.692-2(b)(4)]
If a broken seal or gap is identified, first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified, except as provided in 60.692-6 [see section A.III.].

c. [60.692-2(c)]

i. [60.692-2(c)(1)]
Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.

ii. [60.692-2(c)(2)]
The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.

iii. [60.692-2(c)(3)]
Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in 60.692-6 [see section A.III.].

d. [60.692-2(d)]
Except as provided in 60.692-2(e) [paragraph (e) of this section], each modified or reconstructed individual drain system that has a catch basin in the existing

configuration prior to May 4, 1987 shall be exempt from the provisions of this section.

e. [60.692-2(e)]
Refinery wastewater routed through new process drains and a new first common downstream junction box, either as part of a new individual drain system or an existing individual drain system, shall not be routed through a downstream catch basin.

21. [60.692-4] STANDARDS: AGGREGATE FACILITY - 40 CFR Part 60, Subpart QQQ
A new, modified, or reconstructed aggregate facility shall comply with the requirements of 60.692-2 [see section A.III.].

22. [60.692-5] STANDARDS: CLOSED VENT SYSTEMS AND CONTROL DEVICES - 40 CFR Part 60, Subpart QQQ

a. [60.692-5(b)]
Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater.

b. 60.692-5(d)]
Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

c. 60.692-5(e)]

i. [60.692-5(e)(1]
Closed vent systems shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined during the initial and semiannual inspections by the methods specified in 60.696 [see section A.V.].

ii. [60.692-5(e)(2)]
Closed vent systems shall be purged to direct vapor to the control device.

iii. [60.692-5(e)(3)]
A flow indicator shall be installed on a vent stream to a control device to ensure that the vapors are being routed to the device.

iv. [60.692-5(e)(4)]
All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

v. [60.692-5(e)(5)]
When emissions from a closed system are detected, first efforts at repair to eliminate the emissions shall be made as soon as practicable, but not later than 30 calendar days from the date the emissions are detected, except as provided in 60.692-6 [see section A.III.].

23. [60.692-6] STANDARDS: DELAY OF REPAIR - 40 CFR Part 60, Subpart QQQ

a. [60.692-6(a)]
Delay of repair of facilities that are subject to the provisions of this subpart will be allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown.

b. [60.692-6(b)]
Repair of such equipment shall occur before the end of the next refinery or process unit shutdown.

24. [60.692-7] STANDARDS: DELAY OF COMPLIANCE - 40 CFR Part 60, Subpart QQQ

a. [60.692-7(a)]
Delay of compliance of modified individual drain systems with ancillary downstream treatment components will be allowed if compliance with the provisions of this subpart cannot be achieved without a refinery or process unit shutdown.

b. [60.692-7(b)]
Installation of equipment necessary to comply with the provisions of this subpart shall occur no later than the next scheduled refinery or process unit shutdown.

25. [60.693-1] ALTERNATIVE STANDARDS FOR INDIVIDUAL DRAIN SYSTEMS - 40 CFR Part 60, Subpart QQQ

a. [60.693-1(a)]
The permittee may elect to construct and operate a completely closed drain system.

b. [60.693-1(b)]
Each completely closed drain system shall be equipped and operated with a closed vent system and control device complying with the requirements of 60.692-5 [see section A.III.].

c. [60.693-1(c)]
The permittee must notify the Administrator in the report required in 40 CFR 60.7 that the owner or operator has elected to construct and operate a completely closed drain system.

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d. [60.693-1(d)]
If the permittee elects to comply with the provisions of this section, then the permittee does not need to comply with the provisions of 60.692-2 or 60.694 [see section A.III.].

e. [60.693-1(e)]

i. [60.693-1(e)(1)]
Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.

ii. [60.693-1(e)(2)]
The portion of each unburied sewer line shall be visually inspected initially and semiannually

iii. [60.693-1(e)(3)]
Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in 60.692-6 [see section A.III.].

26. [60.695] MONITORING OF OPERATIONS - 40 CFR Part 60, Subpart QQQ

a. [60.695(a)]
The permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator.

i. [60.695(a)(3)]
Where a carbon adsorber is used for VOC emissions reduction, a monitoring device that continuously indicates and records the VOC concentration level or reading of organics in the exhaust gases of the control device outlet gas stream or inlet and outlet gas stream shall be used.

(a) [60.695(a)(3)(i)]
For a carbon adsorption system that regenerates the carbon bed directly onsite, a monotoring device that continuously indicates and records the volatile organic compound concentration level or reading of organics in the exhaust gases of the control device outlet gas stream or inlet and outlet gas stream shall be used

(b) [60.695(a)(3)(ii)]
For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device (e.g., a carbon canister), the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system shall be monitored on a

regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, the permittee may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system.

27. [60.697] RECORDKEEPING REQUIREMENTS - 40 CFR Part 60, Subpart QQQ

a. [60.697(b)]

i. [60.697(b)(1)]
For individual drain systems subject to 60.692-2 [see section A.III.], the location, date, and corrective action shall be recorded for each drain when the water seal is dry or otherwise breached, when a drain cap or plug is missing or improperly installed, or other problem is identified that could result in VOC emissions, as determined during the initial and periodic visual or physical inspection.

ii. [60.697(b)(2)]
For junction boxes subject to 60.692-2 [see section A.III.], the location, date, and corrective action shall be recorded for inspections required by 60.692-2(b) [see section A.III.] when a broken seal, gap, or other problem is identified that could result in VOC emissions.

iii. [60.697(b)(3)]
For sewer lines subject to 60.692-2 [see section A.III.], the location, date, and corrective action shall be recorded for inspections required by 60.692-2(c) and 60.693-1(e) [see section A.III.] when a problem is identified that could result in VOC emissions.

b. [60.697(d)]
For closed vent systems subject to 60.692-5 [see section A.III.] and completely closed drain systems subject to 60.693-1 [see section A.III.], the location, date, and corrective action shall be recorded for inspections required by 60.692-5(e) [see section A.III.] during which detectable emissions are measured or a problem is identified that could result in VOC emissions.

c. [60.697(e)]

i. [60.697(e)(1)]
If an emission point cannot be repaired or corrected without a process unit

shutdown, the expected date of a successful repair shall be recorded.

ii. [60.697(e)(2)]
The reason for the delay as specified in 60.692-6 [see section A.III.] shall be recorded if an emission point or equipment problem is not repaired or corrected in the specified amount of time.

iii. [60.697(e)(3)]
The signature of the owner or operator (or designee) whose decision it was that repair could not be effected without refinery or process shutdown shall be recorded.

iv. [60.697(e)(4)]
The date of successful repair or corrective action shall be recorded.

d. [60.697(f)]

i. [60.697(f)(1)]
A copy of the design specifications for all equipment used to comply with the provisions of this subpart shall be kept for the life of the source in a readily accessible location.

ii. [60.697(f)(2)(i) and (ii)]
The following information pertaining to the design specifications shall be kept: detailed schematics, and piping and instrumentation diagrams; and the dates and descriptions of any changes in the design specifications.

iii. [60.697(f)(3)]
The following information pertaining to the operation and maintenance of closed drain systems and closed vent systems shall be kept in a readily accessible location.

(a) [60.697(f)(3)(i)]
Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions shall be kept for the life of the facility. This documentation is to include a general description of the gas streams that enter the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816°C (1,500°F) is used to meet the 95-percent requirement, documentation that those conditions exist is sufficient to meet the requirements of this paragraph.

(b) [60.697(f)(3)(ii)]
For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device such as a carbon canister, the design analysis shall consider the vent stream composition,

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constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(c) [60.697(f)(3)(iii)]
Periods when the closed vent systems and control devices required in 60.692 [see section A.III.] are not operated as designed, including periods when a flare pilot does not have a flame shall be recorded and kept for 2 years after the information is recorded.

(d) [60.697(f)(3)(iv)]
Dates of startup and shutdown of the closed vent system and control devices required in 60.692 [see section A.III.] shall be recorded and kept for 2 years after the information is recorded

(e) [60.697(f)(3)(v)]
The dates of each measurement of detectable emissions required in 60.692, 60.693, or 60.692-5 [see section A.III.] shall be recorded and kept for 2 years after the information is recorded.

(f) [60.697(f)(3)(vi)]
The background level measured during each detectable emissions measurement shall be recorded and kept for 2 years after the information is recorded.

(g) [60.697(f)(3)(vii)]
The maximum instrument reading measured during each detectable emission measurement shall be recorded and kept for 2 years after the information is recorded.

(h) [60.697(f)(3)(x)]
Each owner or operator of an affected facility that uses a carbon adsorber shall maintain continuous records of the VOC concentration level or reading of organics of the control device outlet gas stream or inlet and outlet gas stream and records of all 3-hour periods of operation during which the average VOC concentration level or reading of organics in the exhaust gases, or inlet and outlet gas stream, is more than 20 percent greater than the design exhaust gas concentration level, and shall keep such records for 2 years after the information is recorded.

(i) [60.697(f)(3)(x)(A)]
The permittee that uses a carbon adsorber which is regenerated directly onsite shall maintain continuous records of the volatile organic compound concentration level or reading of organic of the control device outlet gas stream or inlet and outlet gas stream and records of all 3-hour periods of operation during which the average volatile organic compound concentration level or reading of organics in the exhaust

gases, or inlet ad outlet gas stream, is more than 20 percent greater the design exhaust gas concentration level, and shall keep such records for 2 years after the information is recorded.

(ii) [60.697(f)(3)(x)(B)]
If a carbon adsorber that is not regenerated directly onsite in the control device is used, then the permittee shall maintain records of dates and times when the control device is monitored, when breakthrough is measured, and shall record the date and time that the existing carbon in the control device is replaced with fresh carbon.

e. [60.697(g)]
If the permittee elects to install a tightly sealed cap or plug over a drain that is out of active service, the owner or operator shall keep for the life of a facility in a readily accessible location, plans or specifications which indicate the location of such drains.

f. [60.697(h)]
For stormwater sewer systems subject to the exclusion in 60.692-1(d)(1), the permittee shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that no wastewater from any process units or equipment is directly discharged to the stormwater sewer system.

g. [60.697(i)]
For ancillary equipment subject to the exclusion in 60.692-1(d)(2), the permittee shall keep for the life of a facility in a readily accessible location, plans or specifications which demonstrate that the ancillary equipment does not come in contact with or store oily wastewater.

h. [60.697(j)]
For non-contact cooling water systems subject to the exclusion in 60.692-1(d)(3), the permittee shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that the cooling water does not contact hydrocarbons or oily wastewater and is not recirculated through a cooling tower.

IV. Reporting Requirements

1. REPORTS FOR 40 CFR Part 63, Subpart CC

a. [63.654(a)]
Each permittee subject to the wastewater provisions in 40 CFR Part 63.647 [see

section A.II.] shall comply with the recording keeping and reporting provisions in 40 CFR Part 61.356 and 61.357 of 40 CFR Part 61, Subpart FF [see sections A.III. and A.IV.] unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of 40 CFR Part 63.640 [see section A.I.2.]. There are no additional reporting and record keeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average.

2. [61.357] REPORTING REQUIREMENTS - 40 CFR Part 61, Subpart FF

a. [61.357(a)]
The permittee shall submit to the Administrator by the initial startup for a new emissions unit, a report that summarizes the regulatory status of each waste stream subject to 40 CFR Part 61.342 [see section A.II.] and is determined by the procedures specified in 40 CFR Part 61.355(c) [see section A.V.] to contain benzene. Each permittee subject to this subpart who has no benzene onsite in wastes, products, by-products, or intermediates shall submit an initial report that is a statement to this effect. For all other owners or operators subject to this subpart, the report shall include the following information:

i. [61.357(a)(1)]
Total annual benzene quantity from facility waste determined in accordance with 40 CFR Part 61.355(a) [see section A.V.] of this subpart

ii. [61.357(a)(2)]
A table identifying each waste stream and whether or not the waste stream will be controlled for benzene emissions in accordance with the requirements of this subpart.

iii. [61.357(a)(3)]
For each waste stream identified as not being controlled for benzene emissions in accordance with the requirements of this subpart the following information shall be added to the table:
(a) [61.357(a)(3)(i)]
Whether or not the water content of the waste stream is greater than 10 percent;
(b) [61.357(a)(3)(ii)]
Whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate;
(c) [61.357(a)(3)(iii)]
Annual waste quantity for the waste stream;
(d) [61.357(a)(3)(iv)]
Range of benzene concentrations for the waste stream;
(e) [61.357(a)(3)(v)]
Annual average flow-weighted benzene concentration for the waste stream; and
(f) [61.357(a)(3)(vi)]

Annual benzene quantity for the waste stream.

iv. [61.357(a)(4)]
The information required in paragraphs a.i., a.ii., and a.iii. of this section should represent the waste stream characteristics based on current configuration and operating conditions. The permittee only needs to list in the report those waste streams that contact materials containing benzene. The report does not need to include a description of the controls to be installed to comply with the standard or other information required in 40 CFR Part 61.10(a) of Subpart A.

b. [61.357(d)]
The permittee shall submit to the Administrator and TDOES the following reports:

i. [61.357(d)(1)]
Within 90 days after January 7, 1993, unless a waiver of compliance under 40 CFR Part 61.11 of this part is granted, or by the date of initial startup for a new emissions unit with an initial startup after the effective date, a certification that the equipment necessary to comply with these standards has been installed and that the required initial inspections or tests have been carried out in accordance with this subpart. If a waiver of compliance is granted under 40 CFR Part 61.11, the certification of equipment necessary to comply with these standards shall be submitted by the date the waiver of compliance expires.

ii. [61.357(d)(2)]
Beginning on the date that the equipment necessary to comply with these standards has been certified in accordance with 40 CFR Part 61.357(d)(1) [paragraph b.i. of this section], the permittee shall submit annually to the Administrator and TDOES, a report that updates the information listed in 40 CFR Part 61.357(a)(1) through (a)(3) [paragraphs a.i. through a.iii.of this section]. If the information in the annual report required by 40 CFR Part 61.357(a)(1) through (a)(3) [paragraphs a.i. through a.iii.of this section] is not changed in the following year, the permittee may submit a statement to that effect.

iii. [61.357(d)(3)]
If the permittee elects to comply with the requirements of 40 CFR Part 61.342(c)(3)(ii) [see section A.II.], then the report required by paragraph b.ii. of this section shall include a table identifying each waste stream chosen for exemption and the total annual benzene quantity in these exempted

streams.

iv. [61.357(d)(6)]
Beginning 3 months after the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph b.i. of this section, the permittee shall submit quarterly to the Administrator a certification that all of the required inspections have been carried out in accordance with the requirements of this subpart.

v. [61.357(d)(7)]
Beginning 3 months after the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph b.i.of this section, the permittee shall submit a report quarterly to the Administrator that includes:

[61.357(d)(7)(iii)]
If a treatment process or wastewater treatment system unit is monitored in accordance with 40 CFR Part 61.354(b) [see section A.III.], then each period of operation during which the flow-weighted annual average concentration of benzene in the monitored waste stream entering the unit is equal to or greater than 10 ppmw and/or the total annual benzene quantity is equal to or greater than 1.0 mg/yr.

vi. [61.357(d)(8)]
Beginning one year after the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph b.i.of this section, the permittee shall submit annually to the Administrator a report that summarizes all inspections required by 40 CFR Part 61.342 through 61.354 [see sections A.II. and A.III.] during which detectable emissions are measured or a problem (such as a broken seal, gap or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken.

c. [61.357(e)]
The permittee electing to comply with the provisions of 40 CFR Part 61.351 [see section A.II.] or 40 CFR Part 61.352 of this subpart shall notify the Administrator of the alternative standard selected in the report required under 40 CFR Part 61.07 or 61.10.

d. [61.357(f)]
The permittee who elects to install and operate the control equipment in 61.351 [see section A.II.]of this subpart shall comply with the reporting requirements in 40 CFR Part 60.115b.

ENHANCED BWON PROGRAM AS REQUIRED BY CONSENT DECREE(CD) - Date of Entry, March 14, 2006

3. [CD, section M.68.] IMPLEMENTATION of ACTIONS NECESSARY to CORRECT NONCOMPLIANCE

a. BWON Corrective Action Plans

i. If the results of the later of the Phase One or Phase Two BWON Compliance Review and Verification Report indicate that Sunoco is not in compliance with the 2 Mg Compliance Option, then, for each such Covered Refinery not in compliance, Sunoco shall submit to EPA, by no later than 90 days after completion of the later of the Phase One or Phase Two BWON Compliance Review and Verification Report, a BWON Corrective Action Plan that identifies with specificity the compliance strategy and schedule that Sunoco shall implement to ensure that the Covered Refinery complies with the 2 Mg Compliance Option as soon as practicable, but no later than 180 days after submission of the BWON Corrective Action Plan.

ii. Plan Implementation. Sunoco shall implement any EPA-approved BWON Corrective Action Plan under this Paragraph 68 of the consent decree in

accordance with the schedule included in the approved Plan.

b. Certification of Compliance with the 2 Mg Compliance Option. By no later than 30 days after completion of the implementation of all actions, if any, required pursuant to Paragraphs 68 or 75.f. of the consent decree to come into compliance with the applicable compliance option, Sunoco shall submit a report to the Relevant Government Agencies that the Refinery complies with the Benzene Waste Operations NESHAP.

4. [CD, section M.77.] REPORTING REQUIREMENTS of THE CONSENT DECREE

a. Outside of the Reports required under 40 CFR 61.357 and under the progress report procedures of Section IX of the Consent Decree, to the extent required by the Consent Decree, and at the times specified by Section V.M. of the Consent Decree, Sunoco shall submit the following reports to EPA:

i. Phase One BWON Compliance Review and Verification Report(s) (Paragraph 67.a);

ii. Phase Two BWON Compliance Review and Verification Report(s), as amended, if necessary (Paragraph 67.b);

iii. Amended TAB Report(s), if necessary (Paragraph 67.c);

iv. Any BWON Corrective Action Plans required if the BWON Compliance Review and Verification Reports indicate non-compliance (Paragraph 68.a.i.);

v. A BWON Corrective Action Plan for the Tulsa Refinery if the Refinery's TAB is found to equal or exceed 10 Mg/yr (Paragraph 68.a.ii.);

vi. Certification of compliance, if necessary (Paragraph 68.b);

vii. A report certifying the completion of the installation of dual carbon canisters (Paragraph 69.b);

viii. Schematics of waste/slop/off-spec oil movements, as revised, if necessary (Paragraph 74.a);

ix. A plan and schedule for installing and operating necessary controls on waste management units handling organic benzene waste, if necessary

(Paragraph 74.b);

x. A plan to quantify uncontrolled waste/slop/off-spec oil movements (Paragraph 75.a.i);

xi. BWON Sampling Plans and revised BWON Sampling Plans, if necessary (Paragraph 75);

xii. A Corrective Measures Plan (Paragraph 75.f);

xiii. A proposal for a Third-Party TAB Study and Compliance Review, if necessary (Paragraph 75.g);

xiv. A Third-Party TAB Study and Compliance Review, if necessary (Paragraph 75.g); and

xv. A plan to implement the results of the Third-Party TAB Study and Compliance Review, if necessary (Paragraph 75.g).

b. As part of either the Reports Required under 40 CFR 61.357 or the progress report procedures of Section IX of the Consent Decree, to the extent required by the Decree, and at the times specified by Section V.M. of the Consent Decree, Sunoco shall submit the following reports to EPA:

i. Covered Refinery. In addition to the information submitted in the reports required pursuant to 40 CFR 61.357(d)(6) and (7) ("Section 61.357 Reports"), each Covered Refinery shall include the following information in those reports or in the reports due under Section IX of the Consent Decree:

(a) Laboratory Audits. In the first Section 61.357 Report or first Section IX report due after Sunoco has completed the requirements of Paragraph 71.a. of the Consent Decree, Sunoco shall identify all laboratory audits that Sunoco completed, including, at a minimum, the identification of each laboratory audited, a description of the methods used in the audit, and the results of the audit. In each subsequent 61.357 Report or Section IX report, Sunoco shall identify all laboratory audits that were completed pursuant to the provisions of Paragraph 71.b. of the Consent Decree during the Calendar Quarter, including in each such Report, at a minimum, the identification of each laboratory audited, a description of the methods used in the audit, and the results of the audit;

(b) Training. In the first Section 61.357 Report or Section IX report due after entry of the Consent Decree, Sunoco shall describe the measures that it took to comply with the training provisions of Paragraph 73 starting from Date of Entry of the Consent Decree (March 14, 2006) and continuing through the Calendar Quarter for which the first report is due. In each subsequent Section 61.357

Report or Section IX report, Sunoco shall describe the measures that Sunoco took to comply with the training provisions of Paragraph 73 during the Calendar Quarter;

(c) Sampling Results. Once EOL sampling and non-EOL sampling is required under this Section, Sunoco shall report, in each Section 61.357 Report or each Section IX report, the results of the monthly EOL sampling and quarterly non-EOL sampling undertaken pursuant to Paragraph 75. For each Covered Refinery, the report shall include a list of all waste streams sampled, the results of the benzene analysis for each sample, and the computation of the quarterly benzene quantity and the projected calendar year benzene quantity.

5. [60.698] REPORTING REQUIREMENTS - 40 CFR Part 60, Subpart QQQ

   a. [60.698(b)(1)]
   The permittee shall submit to the Administrator semiannually a certification that all of the required inspections have been carried out in accordance with these standards.

   b. [60.698(c)]
   A report that summarizes all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken, shall be submitted semiannually to the Administrator.

   c. [60.698(d) and (d)(3)]
   As applicable, a report shall be submitted semiannually to the Administrator that indicates each 3-hour period of operation during which the average VOC concentration level or reading of organics in the exhaust gases from a carbon adsorber is more than 20 percent greater than the design exhaust gas concentration level or reading.

      i. [60.698(d)(3)(i)]
      Each 3-hour period of operation during which the average volatile organic compound concentration level or reading of organics in the exhaust gases from a carbon adsorber which is regenerated directly onsite is more than 20 percent greater than the design exhaust gas concentration level or reading.

      ii. [60.698(d)(3)(ii)]
      Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly onsite in the control device is not replaced at the predetermined interval specified in 60.695(a)(3)(ii) [see section A.III.].

   d. [60.698(e)]
   If compliance with the provisions of this subpart is delayed pursuant to 60.692-7 [see section A.III.], the notification required under 40 CFR 60.7(a)(4) shall include the estimated date of the next scheduled refinery or process unit shutdown after the date of notification and the reason why compliance with the standards is technically impossible without a refinery or process unit shutdown.

V. Testing Requirements

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1. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following methods(s):

   a. Emission limitation:
   VOC emissions from the facility-wide benzene wastewater NESHAP program shall not exceed 91.19 tons per year.

   Applicable compliance method:

   Compliance for those components subject to 40 CFR Part 61, subpart FF, shall be demonstrated through the "Test methods, Procedures and Compliance Provisions" of 40 CFR Part 61.355 of subpart FF [see section A.V.].

   Compliance for those components subject to 40 CFR Part 60, subpart QQQ, shall be demonstrated using the fugitive emission factors contained in "VOC Emissions from Petroleum Refinery Wastewater Systems-Background Information for Proposed Standards", EPA-450/3-85-001a, Feb. 1985, Table 4-1 (drains) and section 3.2.1.6 (junction boxes):

   drains, with 50% control (water seal) 0.012 tons VOC/year/drain

   junction boxes with 50% control (water seal)0.31 tons VOC/year/box

   Multiply the stated emission factor times the number of respective components (in tons VOC per year) and add them to the tons VOC per year determined for those components subject to 40 CFR Part 61, subpart FF as calculated according to section 61.355 [see section A.V.].

2. [61.342(g)] COMPLIANCE WITH GENERAL STANDARDS - 40 CFR Part 61, Subpart FF
   Compliance with this subpart will be determined by review of facility records and results from tests and inspections using methods and procedures specified in 40 CFR Part 61.355 [see section A.V.] of this subpart.

3. [61.355] TEST METHODS, PROCEDURES, AND COMPLIANCE PROVISIONS - 40 CFR Part 61, Subpart FF

   a. [61.355(a)]
   The permittee shall determine the total annual benzene quantity from facility waste by the following procedure:

      i. [61.355(a)(1)]
      For each waste stream subject to this subpart having a flow-weighted annual average water content greater than 10 percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10 percent as specified in 40 CFR Part 61.342(a) [see section A.II.], the

permittee shall:

(a) [61.355(a)(1)(i)]
Determine the annual waste quantity for each waste stream using the procedures specified in 40 CFR Part 61.355(b) [paragraph b. of this section].

(b) [61.355(a)(1)(ii)]
Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures specified in 40 CFR Part 61.355(c) [paragraph c. of this section].

(c) [61.355(a)(1)(iii)]
Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration.

ii. [61.355(a)(2)]
Total annual benzene quantity from facility waste is calculated by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to 40 CFR Part 61.355(b)(4) [paragraph b.iii.of this section].

iii. [61.355(a)(3)]
The permittee shall comply with the requirements of 40 CFR Part 61.342(c) [see section A.II.], 40 CFR Part 61.342(d) , or (e).

b. [61.355(b)]
For purposes of the calculation required by 40 CFR Part 61.355(a) [paragraph a. of this section], the permittee shall determine the annual waste quantity at the point of waste generation, unless otherwise provided in 40 CFR Part 61.355(b)(1), (2), (3), and (4) [paragraphs b.i., b.ii. and b.iii. of this section], by one of the methods given in 40 CFR Part 61.355(b)(5) through (7) [paragraphs b.iv. through b.vi.of this section].

i. [61.355(b)(1)]
The determination of annual waste quantity for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper.

ii. [61.355(b)(3)]
The determination of annual waste quantity for wastes that are received at hazardous waste treatment, storage, or disposal facilities from offsite shall

be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility.

iii. [61.355(b)(4)]
The determination of annual waste quantity for each process unit turnaround waste generated only at 2 year or greater intervals, may be made by dividing the total quantity of waste generated during the most recent process unit turnaround by the time period (in the nearest tenth of a year) between the turnaround resulting in generation of the waste and the most recent preceding process turnaround for the unit. The resulting annual waste quantity shall be included in the calculation of the annual benzene quantity as provided in 40 CFR Part 61.355(a)(1)(iii) [paragraph a.i.(c) of this section] for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround. For estimates of total annual benzene quantity as specified in the 90-day report, required under 40 CFR Part 61.357(a)(1) [see section A.IV.], the permittee shall estimate the waste quantity generated during the most recent turnaround, and the time period between turnarounds in accordance with good engineering practices. If the permittee chooses not to annualize process unit turnaround waste, as specified in this paragraph, then the process unit turnaround waste quantity shall be included in the calculation of the annual benzene quantity for the year in which the turnaround occurs.

iv. [61.355(b)(5)]
Select the highest annual quantity of waste managed from historical records representing the most recent 5 years of operation or, if the facility has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the facility;

v. [61.355(b)(6)]
Use the maximum design capacity of the waste management unit; or

vi. [61.355(b)(7)]
Use measurements that are representative of maximum waste generation rates.

c. [61.355(c)]
For the purposes of the calculation required by 40 CFR Part 61.355(a) [paragraph a. of this section] of this subpart, the permittee shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in 40 CFR Part 61.355(c)(1) [paragraph c.i. of this section] using either of the methods given in 61.355(c)(2) and (c)(3) [paragraphs c.ii. and c.iii. of this section].

i. [61.355(c)(1)]
The determination of flow-weighted annual average benzene concentration shall meet all of the following criteria:

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(a) [61.355(c)(1)(i) and (c)(1)(i)(A), (C) and (D)]
The determination shall be made at the point of waste generation except for the specific cases given in 40 CFR Part 61.355(c)(1)(i)(A) through (D) [see the following sentence for (c)(1)(i)(A)]
(i) The determination for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper.
(ii) The determination for wastes that are received from offsite shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility.
(iii) The determination of flow-weighted annual average benzene concentration for process unit turnaround waste shall be made using either of the methods given in 40 CFR Part 61.355(c)(2) or (c)(3) [paragraph c.ii. or c.iii. of this section]. The resulting flow-weighted annual average benzene concentration shall be included in the calculation of annual benzene quantity as provided in 40 CFR Part 61.355(a)(1)(iii) [paragraph a.i.(c) of this section] for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.

(b) [61.355(c)(1)(ii)]
Volatilization of the benzene by exposure to air shall not be used in the determination to reduce the benzene concentration.

(c) [61.355(c)(1)(iii)]
Mixing or diluting the waste stream with other wastes or other materials shall not be used in the determination—to reduce the benzene concentration.

(d) [61.355(c)(1)(iv)]
The determination shall be made prior to any treatment of the waste that removes benzene, except as specified in 40 CFR Part 61.355(c)(1)(i)(A) through (D) [see c.i.(a) for paragraph (c)(1)(i)(A)].

(e) [61.355(c)(1)(v)]
For wastes with multiple phases, the determination shall provide the weighted-average benzene concentration based on the benzene concentration in each phase of the waste and the relative proportion of the phases.

ii. [61.355(c)(2)]
Knowledge of the waste. The permittee shall provide sufficient information to document the flow-weighted annual average benzene concentration of each waste stream. Examples of information that could constitute knowledge include material balances, records of chemicals purchases, or previous test results provided the results are still relevant to the current waste stream conditions. If test data are used, then the permittee shall provide documentation describing the testing protocol and the means by which sampling variability and analytical variability were accounted for in the

determination of the flow-weighted annual average benzene concentration for the waste stream. When a permittee and the Administrator do not agree on determinations of the flow-weighted annual average benzene concentration based on knowledge of the waste, the procedures under 40 CFR Part 61.355(c)(3) [paragraph c.iii. of this section] shall be used to resolve the disagreement.

iii. [61.355(c)(3)]
Measurements of the benzene concentration in the waste stream in accordance with the following procedures:

(a) [61.355(c)(3)(i)]
Collect a minimum of three representative samples from each waste stream. Where feasible, samples shall be taken from an enclosed pipe prior to the waste being exposed to the atmosphere.

(b) [61.355(c)(3)(ii) and (c)(3)(ii)(A) through (F)]
For waste in enclosed pipes, the following procedures shall be used:

(i) Samples shall be collected prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling

(ii) A static mixer shall be installed in the process line or in a by-pass line unless the permittee demonstrates that installation of a static mixer in the line is not necessary to accurately determine the benzene concentration of the waste stream.

(iii) The sampling tap shall be located within two pipe diameters of the static mixer outlet.

(iv) Prior to the initiation of sampling, sample lines and cooling coil shall be purged with at least four volumes of waste.

(v) After purging, the sample flow shall be directed to a sample container and the tip of the sampling tube shall be kept below the surface of the waste during sampling to minimize contact with the atmosphere.

(vi) Samples shall be collected at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10°C (50 °F).

(vii) After filling, the sample container shall be capped immediately (within 5 seconds) to leave a minimum headspace in the container.

(viii) The sample containers shall immediately be cooled and maintained at a temperature below 10°C (50 °F) for transfer to the laboratory.

(c) [61.355(c)(3)(iii)]
When sampling from an enclosed pipe is not feasible, a minimum of three representative samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of benzene prior to sampling.

(d) [61.355(c)(3)(iv) and (c)(3)(iv)(A) through (F)]

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Each waste sample shall be analyzed using one of the following test methods for determining the benzene concentration in a waste stream:

(i) Method 8020, Aromatic Volatile Organics, in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified in 40 CFR Part 61.18);

(ii) Method 8021, Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified in 40 CFR Part 61.18);

(iii) Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified 40 CFR Part 61.18);

(iv) Method 8260, Gas Chromatography/Mass Spectrometry for Volatile Organics: Capillary Column Technique in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified in 40 CFR Part 61.18);

(v) Method 602, Purgeable Aromatics, as described in 40 CFR part 136, Appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA methods; or

(vi) Method 624, Purgeables, as described in 40 CFR part 136, Appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA method.

(e) [61.355(c)(3)(v)]
The flow-weighted annual average benzene concentration shall be calculated by averaging the results of the sample analyses using the equation in 40 CFR Part 61.355(c)(3)(v).

d. [61.355(d)]
NOTE: These tests are performed by TWO LLC/US Filter with the results reported to Sunoco, Inc.

A permittee using performance tests to demonstrate compliance of a treatment process with 40 CFR Part 61.348(a)(1)(i) [see section A.III.] shall measure the flow-weighted annual average benzene concentration of the waste stream exiting the treatment process by collecting and analyzing a minimum of three representative samples of the waste stream using the procedures in 40 CFR Part 61.355(c)(3) [paragraph c.iii. of this section]. The test shall be conducted under conditions that exist when the treatment process is operating at the highest inlet waste stream flow

rate and benzene content expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The permittee shall record all process information as is necessary to document the operating conditions during the test.

e. [61.355(g)]
A permittee using performance tests to demonstrate compliance of a wastewater treatment system unit with 61.348(b) [see section A.III.] shall measure the flow-weighted annual average benzene concentration of the wastewater stream where the waste stream enters an exempt waste management unit by collecting and analyzing a minimum of three representative samples of the waste stream using the procedures in 40 CFR Part 61.355(c)(3) [paragraph c.iii. of this section]. The test shall be conducted under conditions that exist when the wastewater treatment system is operating at the highest inlet wastewater stream flow rate and benzene content expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The permittee shall record all process information as is necessary to document the operating conditions during the test.

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f. [61.355(h)]
The permittee shall test equipment for compliance with no detectable emissions as required in 40 CFR Part 61.343 through 61.347 and 61.349 [see sections A.II and A.III.] of this subpart in accordance with the following requirements:

i. [61.355(h)(1)]
Monitoring shall comply with Method 21 from Appendix A of 40 CFR Part 60.

ii. [61.355(h)(2)]
The detection instrument shall meet the performance criteria of Method 21.

iii. [61.355(h)(3)]
The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21.

iv. [61.355(h)(4); (h)(4)(i) and (4)(ii)]
Calibration gases shall be with zero air (less than 10 ppm of hydrocarbon in air); and a mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

v. [61.355(h)(5)]
The background level shall be determined as set forth in Method 21.

vi [61.355(h)(6)]
The instrument probe shall be traversed around all potential leak interfaces as close as possible to the interface as described in Method 21.

vii. [61.355(h)(7)]
The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared to 500 ppm for determining compliance.

g. [61.355(i)]
A permittee using a performance test to demonstrate compliance of a control device with either the organic reduction efficiency requirement or the benzene reduction efficiency requirement specified under 40 CFR Part 61.349(a)(2) [see section A.III.] shall use the following procedures:

i. [61.355(i)(1)]
The test shall be conducted under conditions that exist when the waste management unit vented to the control device is operating at the highest load or capacity level expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The permittee shall record all process information necessary to document the operating conditions during the test.

ii. [61.355(i)(2)]
Sampling sites shall be selected using Method 1 or 1A from 40 CFR Part 60, Appendix A, as appropriate.

iii. [61.355(i)(3)]
The mass flow rate of either the organics or benzene entering and exiting the control device shall be determined as follows:

(a) [61.355(i)(3)(i)]
The time period for the test shall not be less than 3 hours during which at least 3 stack gas samples are collected. Samples of the vent stream entering and exiting the control device shall be collected during the same time period. Each sample shall be collected over a 1-hour period (e.g., in a tedlar bag) to represent a time-integrated composite sample.

(b) [61.355(i)(3)(ii) and (i)(3)(ii)(A) through (C)]
A run shall consist of a 1-hour period during the test. For each run:

(i) The reading from each measurement shall be recorded;

(ii) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D from 40 CFR Part 60, Appendix A, as appropriate;

(iii) The organic concentration or the benzene concentration, as appropriate, in the vent stream entering and exiting the control shall be determined using Method 18 from 40 CFR Part 60, Appendix A.

(c) [61.355(i)(3)(iii)]
The mass of organics or benzene entering and exiting the control device during each run shall be calculated using the equation in 40 CFR Part 61.355(i)(3)(iii).

(d) [61.355(i)(3)(iv)]
The mass flow rate of organics or benzene entering and exiting the control device shall be calculated using the equation in 40 CFR Part 61.355(i)(3)(iv).

h. [61.355(j)]
A permittee shall determine the benzene quantity for the purposes of the calculation required by 40 CFR Part 61.342(c)(3)(ii)(B) [see section A.II.], according to the provisions of 40 CFR Part 61.355(a) [paragraph a. of this section], except that the procedures in 40 CFR Part 61.355(a) [paragraph a. of this section] shall also apply to wastes with a water content of 10 percent or less.

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4. [60.696] PERFORMANCE TEST METHODS, PROCEDURES AND COMPLIANCE PROVISIONS - 40 CFR Part 60, Subpart QQQ

   a. [60.696(a)]
   Before using any equipment installed in compliance with the requirements of 60.692-2, 60.692-4, 60.692-5, or 60.693 [see section A.III.], the permittee shall inspect such equipment for indications of potential emissions, defects, or other problems that may cause the requirements of this subpart not to be met. Points of inspection shall include, but are not limited to, seals, flanges, joints, gaskets, hatches, caps, and plugs.

   b. [60.696(b)]
   The permittee of each source that is equipped with a closed vent system and control device as required in §60.692-5 (other than a flare) [see section A.III.] is exempt from 60.8 of the General Provisions and shall use Method 21 to measure the emission concentrations, using 500 ppm as the no detectable emission limit. The instrument shall be calibrated each day before using. The calibration gases shall be:

      i. [60.696(b)(1)]
      Zero air (less than 10 ppm of hydrocarbon in air), and

      ii. [60.696(b)(2)]
      A mixture of either methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P017) - All wastewater streams; cooling towers; wastewater tanks and storm water systems within the refinery

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Issued: To be entered upon final issuance
Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P040) Cooling Tower, north of plant 2/3, capacity of 20,500 gallons per minute, non-contact, induced draft, with drift elimination package

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 1.15 pounds per hour and 5.03 tons per year as a rolling 12-month summation of the monthly emissions See section A.I.2.a Volatile organic compounds (VOC) shall not exceed 0.86 pounds per hour and 3.77 tons per year. See section A.I.2.b Visible emissions from this emissions unit shall not exceed10% opacity as a six-minute average. It shall not be deemed a violation of this rule where the presence of uncombined water is the only reason for failure of a stack emission to meet the requirements of this rule.
OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

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OAC rule 3745-31-10 through 20	Particulate matter less than 10 microns (PM_{10}) shall not exceed 1.15 pounds per hour and 5.03 tons per year as a rolling 12-month summation of the monthly emissions. See section A.I.2.a
40 CFR 63, subpart Q	Exempt, see section A.I.2.c

2. Additional Terms and Conditions

2.a The total dissolved solids (TDS) present in cooling water drift is directly responsible for the formation of particulate emissions when the drift is discharged from a cooling tower.

2.b The hourly and annual emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

2.c The permittee does not use chromium based water treatment chemicals.

II. Operational Restrictions

1. The permittee shall operate the drift eliminator at all times when the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, test and record the TDS content, in ppm, of the cooling water at least once per week. The TDS content shall be measured using test procedures that conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" or an equivalent method approved by the Ohio EPA.

   For emission points for which the weekly tests show emissions are representative of normal operation for 6 consecutive operating months, the required frequency of testing may be reduced to monthly (once per month, when the emissions unit is in operation). If a subsequent check of the TDS content by the permittee or an Ohio EPA inspector indicates abnormal emissions (the TDS is greater than 2360 ppm), the frequency of testing shall revert to weekly for that emission point until such time as there are 6 consecutive operating months of tests equal to or less than 2360 ppm.

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2. Each week (or month if the sampling frequency is monthly), the permittee shall calculate and record the particulate matter (PM_{10}) emissions in pounds per hour as follows, using the emission factor for PE/PM_{10} from AP-42, Table 13.4-1 (January, 1995):

   PM_{10}, in lbs/hr = [(20,500 gallons/minute) x (0.019 lb PM_{10}/1000 gal) x (TDS ppm/12,000 ppm) x (0.25) x (60 min/hr)

   where:

   20,500 gallons/minute = the maximum water flow rate;
   0.019 lb PM10/1000 gallons = AP-42 emission factor, Table 13.4-1 for induced cooling towers;
   TDS ppm = the tested TDS level in ppm;
   12,000 ppm = the baseline TDS level, see AP-42, Table 13.4-1;
   0.25 = (0.00005/0.0002) the maximum drift loss fraction compared to the baseline; and
   60 min/hr = conversion factor for minutes to hours.

   A calculated exceedance of the allowable hourly emission limitation using the procedures of this section does not indicate a violation of the allowable hourly emission limitation. Rather, it serves as a trigger level at which corrective action needs to be taken in order to lower the TDS concentration of the cooling water to a level acceptable to comply with the hourly emission limitation.

3. Each month, the permittee shall use the information in A.III.2. to calculate the rolling, 12-month PM_{10} emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation reports that identify all exceedances of the hourly and annual allowable particulate emission and particulate matter less than 10 microns limitation. The quarterly deviation reports shall be submitted in accordance with the general terms and conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:
   1.15 lbs/hr of PE/PM_{10}

   Applicable Compliance Method:
   This emission limitation was developed by the calculation in section A.III.2. using a maximum flow rate of 20,500 gallons per minute, a total dissolved solids (TDS) value of 2360 ppm and assuming a drift loss of 0.005%. Therefore, provided

compliance has shown that the TDS is equal to or less than 2360 ppm, compliance with the pound per hour limitation will be assumed.

If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", c), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

b. Emission Limitation:
5.03 tons per year of PE/PM_{10} as a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:
The annual emission limitation was established as follows:

PE/PM_{10} in tons per year = (20,500 gallons/minute) x (0.019 lb PM_{10}/1000 gal) x (TDS ppm/12,000 ppm) x (0.25) x (60 min/hr) x (8760 hr/yr) x (ton/2000 lbs)

where:

20,500 gallons/minute = the maximum water flow rate;
0.019 lb PM10/1000 gallons = AP-42 emission factor, Table 13.4-1 (1/95) for induced cooling towers;
TDS ppm = the tested TDS level in ppm;
12,000 ppm = the baseline TDS level, see AP-42, Table 13.4-1;
0.25 = (0.00005/0.0002) the maximum drift loss fraction compared to the baseline;
60 min/hr = conversion factor for minutes to hours;
8760 hr/yr = conversion factor for the number of hours in a year; and
ton/2000 lb = conversion factor for a ton to pounds.

Therefore, provided compliance has shown that the TDS is equal to or less than 2360 ppm, compliance with the annual limitation will be assumed.

c. Emission Limitation:
0.86 lb/hr of VOC

Applicable Compliance Method:
The permittee shall demonstrate compliance with the hourly limitation by multiplying the VOC emission factor of 0.7 pounds per million gallons of flow, from AP-42 Table 5.1-2 (dated 1/95), by the maximum flow of 1,230,000 gallons per hour.

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d. Emission Limitation:
3.77 tons per year of VOC as a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:
The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

e. Emission Limitation:
Visible particulate emissions shall not exceed 10% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR 60, Appendix A, Method 9 and the requirements of OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

1. [CD, section XVIII, 245] TERMINATION of the CONSENT DECREE
The Consent Decree shall be subject to termination upon motion by the United States or Sunoco under the conditions identified in Paragraphs 245 through 247 of the Consent Decree. Sunoco may seek termination of the Consent Decree upon either (A) completion and satisfaction at the relevant Refinery of all of the following requirements stated in Paragraphs 245.a-e.; or (B) anytime after the permanent shutdown of, and relinquishment of all operating permits for, such Refinery.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P040) - Cooling Tower, north of plant 2/3, capacity of 20,500 gallons per minute, non-contact, induced draft, with drift elimination package

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P041) - Claus sulfur recovery unit No. 2 and sulfur pit with tail gas unit and incinerator. Emissions from the Claus sulfur recovery unit can be vented to the number 1 tail gas treater with 7 mmBtu/hr incinerator and/or the number 2 tail gas treater with 7 mmBtu/hr incinerator.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

Emissions Unit ID: P041

OAC rule 3745-31-05(A)(3)	Hydrogen sulfide (H_2S) emissions shall not exceed 10 parts per million by volume dry (ppmvd) and 1.23 tons per year, based upon a rolling, 365-day summation of the daily emissions; Nitrogen oxides (NO_x) emissions shall not exceed 0.28 pound per hour and 1.23 tons per year, based upon a rolling, 365-day summation of the daily emissions; Filterable plus condensable particulate matter (PM) emissions shall not exceed 0.05 pound per hour and 0.23 ton per year, based upon a rolling, 365-day summation of the daily emissions; Sulfur dioxide (SO_2) emissions shall not exceed 16 pounds per hour and 56.72 tons per year, based upon a rolling, 365-day summation of the daily emissions; Volatile organic compounds (VOC) emissions shall not exceed 0.04 pound per hour and 0.17 ton per year, based upon a rolling, 365-day summation of the daily emissions; Visible emissions shall not exceed 10% opacity as a 6-minute average; and See sections A.I.2.a and A.I.2.k.
OAC rule 3745-31-05(C)	See section A.I.2.f.
OAC rule 3745-17-07(A)(1)	See section A.I.2.g.
OAC rule 3745-17-11(A)(2)	See section A.I.2.g.
OAC rule 3745-18-06(E)	See section A.I.2.g.
OAC rule 3745-21-07(B)	See section A.I.2.h.
OAC rule 3745-21-08(B)	See section A.I.2.i.
OAC rule 3745-21-09(T)	See section A.I.2.l.
OAC rule 3745-23-06(B)	See section A.I.2.j.
40 CFR Part 60, Subpart A	See section A.I.2.c.
40 CFR Part 60, Subpart J	See section A.I.2.b.
40 CFR Part 63, Subpart A	See section A.I.2.d.
40 CFR Part 63, Subpart UUU	See sections A.I.2.e.

OAC rule 3745-31-10 through 20	CO emissions shall not exceed 0.58 pound per hour, 0.082 pound per million Btu of heat input (incinerator), and 2.52 tons per year, based upon a rolling, 365-day summation of the daily emissions; Particulate matter emissions less than 10 microns in diameter (PM_{10}) shall not exceed 0.05 pound per hour, 0.0074 pound per million Btu of heat input, and 0.23 ton per year, based upon a rolling, 365-day summation of the daily emissions; and See section A.I.2.k.

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart J and 40 CFR Part 63, Subpart UUU.

2.b The permittee shall not discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of 250 ppm by volume (dry basis) of SO_2 at zero percent excess air, as a rolling, 12-hour average.

2.c 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

2.d 40 CFR Part 63, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 63.

Table 44 of 40 CFR Part 63, Subpart UUU [see section A.VI.] shows which parts of the General Provision in 40 CFR Part 63.1 through 63.15 apply to this emissions unit.

2.e The permittee shall comply with the applicable emission limitations and work practice standards for existing emissions units in 40 CFR Part 63, Subpart UUU.

2.f Within 180 days of startup of this emissions unit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

2.g The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.h The requirements established pursuant to this rule are equivalent to the VOC requirements of OAC rule 3745-31-05(A)(3).

2.i The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

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2.j The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, this rule is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.k The hourly and annual emission limitations for CO, H_2S, NOx, PM, PM_{10} and VOC were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

2.l The permittee shall comply with the applicable equipment leak monitoring requirements found in sections A.I, A.II, A.III, A,IV, and A.V, referencing OAC rule 3745-21-09(T) in Part III for emissions unit P801.

II. Operational Restrictions

1. The permittee shall burn only natural gas or refinery fuel gas as fuel in this emissions unit. [There are 2 sources of particulate emissions from this process: sulfur-containing process emissions and particulate emissions from the combustion of fuel at the incinerator. This term and condition is to assure compliance with opacity emission limitation for the particulate emissions resulting from combustion of fuel gas and to make daily VE readings unnecessary. Compliance with the visible emission limitation for opacity caused by the sulfur portion of particulate emissions will be assured by the continuous SO_2 emissions monitoring system.]

2. The permittee shall route all sulfur pit emissions so that they are eliminated, controlled, or included and monitored as part of the sulfur recovery plant's emissions subject to the 40 CFR Part 60, Subpart J limitation for SO_2, 40 CFR 60.104(a)(2).

3. By no later than 180 days from March 20, 2006, the permittee shall submit or shall have submitted to the U.S. EPA, Ohio EPA, and the Toledo Division of Environmental Services a summary of the plans, implemented or to be implemented, at the Toledo Refinery for enhanced maintenance and operation of the sulfur recovery plant (SRP), and tail gas units (TGUs), including any supplemental control devices, and the appropriate upstream process units. This plan shall be termed a Preventive Maintenance and Malfunction Abatement Plan (PMMAP). The PMMAP shall be a compilation of the permittee's

approaches for exercising good air pollution control practices and for minimizing SO_2 emissions at the Toledo Refinery. The PMMAP shall have as its goal the elimination of Acid Gas Flaring and the continuous operation of the SRP, between scheduled maintenance turnarounds, with a minimization of emissions. The PMMAP shall include, but not be limited to, sulfur shedding procedures, startup and shutdown procedures, emergency procedures and schedules to coordinate maintenance turnarounds of the SRP Claus trains and associated TGUs to coincide, if necessary to minimize emissions, with scheduled turnarounds of major Upstream Process Units. The permittee shall operate consistent with the PMMAP at all times, including periods of startup, shutdown and malfunction of its SRP. Changes to a PMMAP related to minimizing acid gas flaring and/or SO_2 emissions shall be summarized and reported by the permittee to U.S. EPA, Ohio EPA and the Toledo Division of Environmental Services on an annual basis.

4. U.S. EPA, Ohio EPA and the Toledo Division of Environmental Services do not, by their review of a PMMAP and/or by their failure to comment on a PMMAP, warrant or aver in any manner that any of the actions that the permittee may take pursuant to such PMMAP will result in compliance with the provisions of the Clean Air Act or any other applicable federal, state, or local law or regulation. Notwithstanding the review by EPA or any state agency of a PMMAP, the permittee shall remain solely responsible for compliance with the Clean Air Act and such other laws and regulations.

5. [63.1568(a)] REQUIREMENTS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

   a. [63.1568(a)(2)]
   The permittee must meet each operating limit in Table 30 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit.

   b. [63.1568(a)(3)]
   The permittee must prepare an operation, maintenance, and monitoring plan according to the requirements in 40 CFR Part 63.1574(f) [see section A.IV.] and operate at all times according to the procedures in the plan.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas or refinery fuel gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. Prior to the installation of the continuous SO_2 monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with

the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous SO_2 monitoring system meets the requirements of Performance Specification 2. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

3. The permittee shall install, operate, and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

   The permittee shall maintain records of data obtained by the continuous SO_2 monitoring system including, but not limited to:

   a. emissions of SO_2 in parts per million on an instantaneous (one-minute) basis;

   b. emissions of SO_2 in all units of the applicable standard(s) in the appropriate averaging period;

   c. results of quarterly cylinder gas audits;

   d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

   e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

   f. hours of operation of the emissions unit, continuous SO_2 monitoring system, and control equipment;

   g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO_2 monitoring system;

   h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

   i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

4. [63.1570] GENERAL COMPLIANCE REQUIREMENTS - 40 CFR Part 63, Subpart UUU

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a. [63.1570(a)]
The permittee must be in compliance with all of the non-opacity standards in this subpart during the times specified in 40 CFR Part 63.6(f)(1).

b. [63.1570(b)]
The permittee must be in compliance with the opacity and visible emission limits in this subpart during the times specified in 40 CFR Part 63.6(h)(1).

c. [63.1570(c)]
The permittee must always operate and maintain the affected emissions unit, including air pollution control and monitoring equipment, according to the provisions in 40 CFR Part 63.6(e)(1)(i).

d. [63.1570(d)]
The permittee must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR Part 63.6(e)(3).

e. [63.1570(f)]
The permittee must report each instance in which each emission limitation that was not met and each applicable operating limit in 40 CFR Part 63, Subpart UUU that was not met. This includes periods of startup, shutdown, and malfunction. The permittee also must report each instance in which the applicable work practice standards in 40 CFR Part 63, Subpart UUU that were not met. These instances are deviations from the emission limitations and work practice standards in this subpart. These deviations must be reported according to the requirements in 40 CFR Part 63.1575 [see section A.IV.].

f. [63.1570(g)]
Consistent with 40 CFR Part 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if the permittee demonstrates to the Administrator's satisfaction that the permittee was operating in accordance with 40 CFR 63.6(e)(1). The SSMP must include elements designed to minimize the frequency of such periods (i.e., root cause analysis). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in 40 CFR Part 63.6(e).

5. [63.1572] MONITORING, INSTALLATION, OPERATION, AND MAINTENANCE REQUIREMENTS [Tables 40 and 41] - 40 CFR Part 63, Subpart UUU

a. [63.1572(a)]
The permittee must install, operate, and maintain each continuous emission monitoring system according to the requirements in 40 CFR Part 63.1572(a)(1) through (4) [paragraphs a.i. through a.iv. of this section].

i. [63.1572(a)(1)]
The permittee must install, operate, and maintain each continuous emission monitoring system according to the requirements in Table of 40 CFR Part 63, Subpart UUU [see section A.VI.].

ii. [63.1572(a)(2)]
If the permittee uses a continuous emission monitoring system to meet the NSPS CO or SO_2 limit, the permittee must conduct a performance evaluation of each continuous emission monitoring system according to the requirements in 40 CFR Part 63.8. This requirement does not apply to an affected emissions unit subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification.

iii. [63.1572(a)(3)]
As specified in 40 CFR Part 63.8(c)(4)(ii), each continuous emission monitoring system must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

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iv. [63.1572(a)(4)]
Data must be reduced as specified in 40 CFR Part 63.8(g)(2).

b. [63.1572(d)]
The permittee must monitor and collect data according to the requirements in 40 CFR Part 63.1572(d)(1) and (d)(2) [see paragraph d.i. and d.ii. of this section].

i. [63.1572(d)(1)]
Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected unit is operating.

ii. [63.1572(d)(2)]
The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

6. [63.1576] RECORD KEEPING REQUIREMENTS - 40 CFR Part 63, Subpart UUU

a. [63.1576(a)]
The permittee must keep the records specified in 63.1576(a)(1) through (3) [paragraphs a.i through a.iii. of this section].

i. [63.1576(a)(1)]
A copy of each notification and report that the permittee submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status that the permittee submitted, according to the requirements in 40 CFR Part 63.10(b)(2)(xiv).

ii. [63.1576(a)(2)]
The records in 40 CFR Part 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

iii. [63.1576(a)(3)]
Records of performance tests, performance evaluations, and visible

emission observations as required in 40 CFR Part 63.10(b)(2)(viii).

b. [63.1576(b)]
For each continuous emission monitoring system and continuous opacity monitoring system, the permittee must keep the records required in 63.1576(b)(1) through (5) [paragraphs b.i. through b.v. of this section].

i. [63.1576(b)(1)]
Records described in 40 CFR Part 63.10(b)(2)(vi) through (xi) of Subpart A.

ii. [63.1576(b)(2)]
Monitoring data for continuous opacity monitoring systems during a performance evaluation as required in 40 CFR Part 63.6(h)(7)(i) and (ii) of Subpart A.

iii. [63.1576(b)(3)]
Previous (i.e., superceded) versions of the performance evaluation plan as required in 40 CFR Part 63.8(d)(3) of Subpart A.

iv. [63.1576(b)(4)]
Requests for alternatives to the relative accuracy test for continuous emission monitoring systems as required in 40 CFR Part 63.8(f)(6)(i) of Subpart A.

v. [63.1576(b)(5)]
Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

c. [63.1576(d)]
The permittee must keep records required by 40 CFR Part 63, Subpart UUU Tables 34 and 35 [see section A.VI.] (for sulfur recovery units) and Table 39 [see section A.VI.] (for bypass lines) to show continuous compliance with each emission limitation that applies to this emissions unit.

d. [63.1576(e)]
The permittee must keep a current copy of the operation, maintenance, and monitoring plan onsite and available for inspection. The permittee also must keep records to show continuous compliance with the procedures in the operation, maintenance, and monitoring plan.

e. [63.1576(f)]
The permittee also must keep the records of any changes that affect emission control system performance including, but not limited to, the location at which the vent stream is introduced into the flame zone for a boiler or process heater.

f. [63.1576(g)]
The records must be in a form suitable and readily available for expeditious review according to 40 CFR Part 63.10(b)(1).

g. [63.1576(h)]
As specified in 40 CFR Part 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

h. [63.1576(i)]
The permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR Part 63.10(b)(1). The permittee can keep the records offsite for the remaining 3 years.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or refinery fuel gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

2. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

   a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

   b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

      i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. the location of the continuous SO_2 monitor;

iv. the exceedance report as detailed in (a) above;

v. the total SO_2 emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction* of the continuous SO_2 monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime* of the continuous SO_2 monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter. For any periods for which sulfur dioxide or oxides emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

3. This emissions unit is subject to the applicable provisions of Subpart J of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

   Pursuant to the 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

   a. Construction date (no later than 30 days after such date);

   b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

   c. Actual start-up date (within 15 days after such date); and

   d. Date of performance testing (if required, at least 30 days prior to testing).

   Reports are to be sent to:

   Ohio Environmental Protection Agency
   DAPC - Permit Management Unit
   P. O. Box 163669
   Columbus, Ohio 43216-3669

   and

   Toledo Division of Environmental Services
   348 South Erie Street
   Toledo, Ohio 43604

4. 40 CFR Part 63, Subpart UUU Notifications

   a. [63.1574(a)]
   Except as allowed in paragraphs (a)(1) through (3) of 40 CFR 63.1574, the permittee must submit all of the notifications in 40 CFR 63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h)that apply by the dates specified.

      i. [63.1574(a)(1)]

The permittee must submit the notification of your intention to construct or reconstruct according to 40 CFR 63.9(b)(5). This deadline also applies to the application for approval of construction or reconstruction and approval of construction or reconstruction based on State preconstruction review required in 40 CFR 63.5(d)(1)(i) and 63.5(f)(2).

ii. [63.1574(a)(2)]
The permittee must submit the notification of intent to conduct a performance test required in 40 CFR 63.7(b) at least 30 calendar days before the performance test is scheduled to begin (instead of 60 days).

iii. [63.1574(a)(3)]
If the permittee is required to conduct a performance test, performance evaluation, design evaluation, opacity observation, visible emission observation, or other initial compliance demonstration, the permittee must submit a notification of compliance status according to 40 CFR 63.9(h)(2)(ii). This information can be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submission, or in any combination. If the required information has been submitted previously, the permittee does not have to provide a separate notification of compliance status. Just refer to the earlier submissions instead of duplicating and resubmitting the previously submitted information.

(a) [63.1574(a)(3)(i)]
For each initial compliance demonstration that does not include a performance test, the permittee must submit the Notification of Compliance Status no later than 30 calendar days following completion of the initial compliance demonstration.

(b) [63.1574(a)(3)(ii)]
For each initial compliance demonstration that includes a performance test, the permittee must submit the notification of compliance status, including the performance test results, no later than 150 calendar days after the compliance date specified for your affected source in §63.1563.

b. [63.1574(c)]
If the startup of a new or reconstructed affected source occurs on or after April 11, 2002, the permittee must submit the initial notification no later than 120 days after you become subject to this subpart.

c. [63.1574(d)]
The permittee also must include the information in Table 42 of 40 CFR Part 63, Subpart UUU in the notification of compliance status.

d. [63.1574(f)]
As required by 40 CFR Part 63, Subpart UUU, the permittee must prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. The purpose of this plan is to detail the operation, maintenance, and monitoring procedures that will be followed.

i. [63.1574(f)(1)]
The permittee must submit the plan to the permitting authority for review and approval along with the notification of compliance status. While the permittee does not have to include the entire plan in the 40 CFR part 70 or 71 permit, the permittee must include the duty to prepare and implement the plan as an applicable requirement in the 40 CFR part 70 or 71 operating permit. The permittee must submit any changes to the permitting authority for review and approval and comply with the plan until the change is approved.

ii. [63.1574(f)(2)]
Each plan must include, at a minimum, the information specified in paragraphs (f)(2)(i) through (xii) of this section.

(a) [63.1574(f)(2)(i)]
Process and control device parameters to be monitored for each affected source, along with established operating limits.

(b) [63.1574(f)(2)(ii)]
Procedures for monitoring emissions and process and control device operating parameters for each affected source.

(c) [63.1574(f)(2)(viii)]
Monitoring schedule, including when the permittee will monitor and will not monitor an affected source (e.g., during the coke burn-off, regeneration process).

(d) [63.1574(f)(2)(ix)]
Quality control plan for each continuous opacity monitoring system and continuous emission monitoring system the permittee uses to meet an emission limit in 40 CFR Part 63, Subpart UUU. This plan must include procedures the permittee will use for calibrations, accuracy audits, and adjustments to the system needed to meet applicable requirements for the system.

(e) [63.1574(f)(2)(x)]
Maintenance schedule for each monitoring system and control device for each affected source that is generally consistent with the manufacturer's instructions for routine and long-term maintenance.

5. [63.1575] REPORTS FOR 40 CFR Part 63, Subpart UUU

a. [63.1575(a)]
The permittee must submit each report in Table 43 of 40 CFR Part 63, Subpart UUU [see section A.VI.] that applies to this emissions unit.

b. [63.1575(b)]
Unless the Administrator has approved a different schedule, the permittee must submit each report by the date in Table 43 of 40 CFR Part 63, Subpart UUU [see section A.VI.] and according to the requirements in 40 CFR Part 63.1575(b)(1) through (b)(5) [see paragraphs b.i. through b.v. of this section].

i. [63.1575(b)(1)]
The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR 63.1563 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your affected source in 40 CFR 63.1563.

ii. [63.1575(b)(2)]
The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in 40 CFR 63.1563.

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iii. [63.1575(b)(3)]
Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

iv. [63.1575(b)(4)]
Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

v. [63.1575(b)(5)]
For each affected emissions unit that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in 63.1575(b)(1) through (b)(4) [see paragraphs b.i. through b.iv. of this section].

c. 63.1575(c)]
The compliance report must contain the following information:

i. [63.1575(c)(1)]
Company name and address.

ii. [63.1575(c)(2)]
Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

iii. [63.1575(c)(3)]
Date of report and beginning and ending dates of the reporting period.

iv. [63.1575(c)(4)]
If there are no deviations from any emission limitation that applies to this emissions unit and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system or continuous opacity monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

d. [63.1575(e)]
For each deviation from an emission limitation occurring at an affected emissions unit where a continuous opacity monitoring system or a continuous emission monitoring system is used to comply with the emission limitation, the permittee

must include the information in 40 CFR Part 63.1575(d)(1) through(3) [paragraphs d.i. through d.iii. of this section] and the information in 40 CFR 63.1575(e)(1) through (13) [paragraphs e.i through e.xiii. of this section].

i. [63.1575(e)(1)]
The date and time that each malfunction started and stopped.

ii. [63.1575(e)(2)]
The date and time that each continuous opacity monitoring system or continuous emission monitoring system was inoperative, except for zero (low-level) and high-level checks.

iii. [63.1575(e)(3)]
The date and time that each continuous opacity monitoring system or continuous emission monitoring system was out-of-control, including the information in 40 CFR Part 63.8(c)(8) of Subpart A.

iv. [63.1575(e)(4)]
The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

v. [63.1575(e)(5)]
A summary of the total duration of the deviation during the reporting period (recorded in minutes for opacity and hours for gases and in the averaging period specified in the regulation for other types of emission limitations), and the total duration as a percent of the total emissions unit operating time during that reporting period.

vi. [63.1575(e)(6)]
A breakdown of the total duration of the deviations during the reporting period and into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

vii. [63.1575(e)(7)]
A summary of the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system during the reporting period (recorded in minutes for opacity and hours for gases and in the averaging time specified in the regulation for other types of standards), and the total duration of downtime for the continuous opacity monitoring

system or continuous emission monitoring system as a percent of the total emissions unit operating time during that reporting period.

viii. [63.1575(e)(8)]
A breakdown of the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

ix. [63.1575(e)(9)]
An identification of each HAP that was monitored at the affected emissions unit.

x. [63.1575(e)(10)]
A brief description of the process units.

xi. [63.1575(e)(11)]
The monitoring equipment manufacturer(s) and model number(s).

xii. [63.1575(e)(12)]
The date of the latest certification or audit for the continuous opacity monitoring system or continuous emission monitoring system.

xiii. [63.1575(e)(13)]
A description of any change in the continuous emission monitoring system or continuous opacity monitoring system, processes, or controls since the last reporting period.

e. [63.1575(f)]
The permittee also must include the information required in 40 CFR 63.1575(f)(1) through (f)(2) [paragraphs f.i. and f.ii. of this section] in each compliance report, if applicable.

i. [63.1575(f)(1)]
A copy of any performance test done during the reporting period on any affected unit. The report may be included in the next semiannual report. The copy must include a complete report for each test method used for a particular kind of emission point tested. For additional tests performed for a similar emission point using the same method, the permittee must submit the results and any other information required, but a complete test report is not required. A complete test report contains a brief process description; a simplified flow diagram showing affected processes, control equipment, and sampling point locations; sampling site data; description of sampling and analysis procedures and any modifications to standard procedures; quality

assurance procedures; record of operating conditions during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; documentation of calculations; and any other information required by the test method.

ii. [63.1575(f)(2)]
Any requested change in the applicability of an emission standard (e.g., changing from the PM standard to the Ni standard for catalytic cracking units or from the HCl concentration standard to percent reduction for catalytic reforming units) in the periodic report. The permittee must include all information and data necessary to demonstrate compliance with the new emission standard selected and any other associated requirements.

f. [63.1575(g)]
The permittee may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.

g. [63.1575(h)]
The reporting requirements in paragraphs 40 CFR 63.1575(h)(1) and (2) [paragraphs h.i. and h.ii. of this section] apply to startups, shutdowns, and malfunctions:

i. [63.1575(h)(1)]
When actions taken to respond are consistent with the plan, the permittee is not required to report these events in the semiannual compliance report and the reporting requirements in 40 CFR Part 63.6(e)(3)(iii) and 63.10(d)(5) do not apply.

ii. [63.1575(h)(2)]
When actions taken to respond are not consistent with the plan, the permittee must report these events and the response taken in the semiannual compliance report. In this case, the reporting requirements in 40 CFR Part 63.6(e)(3)(iv) and 40 CFR 63.10(d)(5) do not apply.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation;

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Visible emissions shall not exceed 10% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

CO emissions shall not exceed 0.58 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot and multiply the result by the maximum heat input capacity of 7 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 10 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

c. Emission Limitation:

CO emissions shall not exceed 2.52 tons per year tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btus per standard cubic foot, multiply by the maximum heat input capacity of 7 mmBtu per hour, multiply by the maximum annual hours of operation (8,760 hrs/yr) and divide by 2,000 pounds per ton.

d. Emission Limitation:

H_2S emissions shall not exceed 10 ppmvd.

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Emission Limitation:

This emission limitation is based on emission testing conducted by the permittee on a similar emissions unit. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f)(2).

e. Emission Limitation:

H_2S emissions shall not exceed 1.23 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the maximum stack gas flow rate (5,214 dscm) by the maximum annual minutes of operation (60 minutes/hr x 24 hrs/day x 365 days/yr), multiply by 10 parts divided by 1,000,000 parts, multiply by the molecular weight of H_2S (34.1 lb/lb-mole), divide by 379.43 cubic feet per pound mole, and divide by 2000 lbs/ton.

f. Emission Limitation:

NOx emissions shall not exceed 0.28 pounds per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on the low-NOx burner emission factor supplied by the permittee as follows: multiply the emission factor of 0.04 pound of NOx emissions per million Btu by the maximum heat input capacity of 7 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 7 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

g. Emission Limitation:

NOx emissions shall not exceed 1.23 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.28 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

h. Emission Limitation:

Filterable plus condensable PM emissions shall not exceed 0.05 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 7.6 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 7 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9) to determine the filterable PM emissions. Method 202 of 40 CFR Part 51,

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Appendix M shall be used to determine the condensable PM emissions. Add the results of the Method 5 emission testing to the results of the Method 202 emission testing to determine the filterable plus condensable PM emissions. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

i. Emission Limitation:

Filterable plus condensable PM emissions shall not exceed 0.23 ton per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.05 pound of PE per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

j. Emission Limitation:

PM_{10} emissions shall not exceed 0.05 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 7.6 pounds of PE per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 7 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

k. Emission Limitation:

PM_{10} emissions shall not exceed 0.23 ton per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.05 pound of PE per hour by

8,760 hours per year and divide by 2,000 pounds per ton.

I. Emission Limitation:

SO_2 emissions shall not exceed 250 ppmvd at 0% O_2 as a rolling, 12-hr average.

Applicable Compliance Method:

The monitoring and recordkeeping requirements of Section III shall be used to demonstrate compliance. If required, the permittee shall demonstrate compliance using the methods and procedures of 40 CFR 60.106(f)(1).

m. Emission Limitation:

SO_2 emissions shall not exceed 16 pounds per hour.

Applicable Compliance Method:

This emission limitation was established by the following emission calculation using the permittee-supplied one-hour average emission factor of 300 ppmvd SO_2 at 0% oxygen: multiply the maximum stack gas flow rate (5,110 dscfm at 0% O_2) by 60 minutes per hour, multiply by 300 parts, divide by 1,000,000 parts, multiply by the molecular weight of SO_2 (64.1 lb/lb-mole), and divide by 379.43 cubic feet per pound mole.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

n. Emission Limitation:

SO_2 emissions shall not exceed 56.72 tons per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit by the following emission calculation using the allowable emission limitation of 250 ppmvd at 0% O_2: multiply the maximum stack gas flow rate (5,110 dscfm at 0% O_2) by 60 minutes per hr, multiply by 24 hours per day, multiply by 365 days per year, multiply by 250 parts, divide by 1,000,000 parts, multiply by the molecular weight of SO_2 (64.1 lb/lb-mole), divide by 379.43 cubic feet per pound mole, and divide by 2,000 pounds per ton.

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o. Emission Limitation:

VOC emissions shall not exceed 0.04 pound per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot and multiply by the maximum heat input capacity of 7 mmBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 25 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

p. Emission Limitation:

VOC emissions shall not exceed 0.17 ton per year, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1020 Btus per standard cubic foot, multiply by the maximum heat input capacity of 7 mmBtu per hour, multiply by the maximum annual hours of operation (8,760 hours/yr), and divide by 2,000 pounds per ton.

q. Emission Limitation:

PM_{10} emissions shall not exceed 0.0074 pound per million Btu of heat input

Applicable Compliance Method:

This emission limitation was established based on the emission factor contained in AP-42 Table 1.4-2 dated 7/98. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in

accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

r. Emission Limitation:

CO emissions shall not exceed 0.082 pound per million Btu of heat input

Applicable Compliance Method:

This emission limitation was established based on the emission factor contained in AP-42 Table 1.4-1 dated 7/98. If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 10 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

2. Ongoing compliance with the SO_2 emission limitations contained in this permit, 40 CFR Parts 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with a quality assurance/quality control plan which meets the requirements of 40 CFR Part 60.

VI. Miscellaneous Requirements

1. The following tables from 40 CFR 63 subpart UUU are attached:

Tables 29; 30; 31; 32; 33; 34; 35; 36; 37; 38; 39; 40; 41; 42; 43 and 44.

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TABLE 29 TO SUBPART UUU OF PART 63.—HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(a)(1), you shall meet each emission limitation in the following table that applies to you]

For	You shall meet this emission limit for each process vent .....
1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) of sulfur dioxide (SO_2) at zero percent excess air if you use an oxidation or reduction control system followed by incineration. b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.
2. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2): Option 1 (Elect NSPS).	a. 250 ppmv (dry basis) of SO_2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration. b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.
3. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in paragraph (a)(2) of 40 CFR 60.104: Option 2 (TRS limit).	300 ppmv of total reduced sulfur (TRS) compounds, expressed as an equivalent SO_2 concentration (dry basis) at zero percent oxygen.

TABLE 30 TO SUBPART UUU OF PART 63.—OPERATING LIMITS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

[As stated in § 63.1568(a)(2), you shall meet each operating limit in the following table that applies to you]

For	If use this type of control device	You shall meet this operating limit .....

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1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	Not applicable	Not applicable.
2. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2): Option 1 (Elect NSPS).	Not applicable	Not applicable.
3. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2): Option 2 (TRS limit).	Thermal incinerator	Maintain the daily average combustion zone temperature above the limit established during the performance test; and maintain the daily average oxygen concentration in the vent stream (percent, dry basis) above the limit established during the performance test.

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TABLE 31 TO SUBPART UUU OF PART 63.—CONTINUOUS MONITORING SYSTEMS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

[As stated in § 63.1568(b)(1), you shall meet each requirement in the following table that applies to you]

For	For this limit	You shall install and operate this continuous monitoring system .....

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1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2)..	a. 250 ppmv (dry basis) of SO_2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of SO_2 (dry basis) at zero percent excess air for each exhaust stack. This system must include an oxygen monitor for correcting the data for excess air.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of reduced sulfur and oxygen (O_2) emissions. Calculate the reduced sulfur emissions as SO_2 (dry basis) at zero percent excess air. *Exception:* You can use an instrument having an air or SO_2 dilution and oxidation system to convert the reduced sulfur to SO_2 for continuously monitoring and recording the concentration (dry basis) at zero percent excess air of the resultant SO_2 instead of the reduced sulfur monitor. The monitor must include an oxygen monitor for correcting the data for excess oxygen.
2. Option 1: Elect NSPS. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in paragraph (a) (2) of 40 CFR 60.104.	a. 250 ppmv (dry basis) of SO_2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of SO_2 (dry basis), at zero percent excess air for each exhaust stack. This system must include an oxygen monitor for correcting the data for excess air.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO_2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	Continuous emission monitoring system to measure and record the hourly average concentration of reduced sulfur and O_2 emissions for each exhaust stack. Calculate the reduced sulfur emissions as SO_2 (dry basis), at zero percent excess air. *Exception:* You can use an instrument having an air or O_2 dilution and oxidation system to convert the reduced sulfur to SO_2 for continuously monitoring and recording the concentration (dry basis) at zero percent excess air of the resultant SO_2 instead of the reduced sulfur monitor. The monitor must include an oxygen monitor for correcting the data for excess oxygen.
3. Option 2: TRS limit. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	300 ppmv of total reduced sulfur (TRS) compounds, expressed as an equivalent SO2 concentration (dry basis) at zero percent oxygen.	i. Continuous emission monitoring system to measure and record the hourly average concentration of TRS for each exhaust stack; this monitor must include an oxygen monitor for correcting the data for excess oxygen; or ii. Continuous parameter monitoring systems to measure and record the combustion zone temperature of each thermal incinerator and

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TABLE 32 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARDS FOR SULFUR OXIDES

[As stated in § 63.1568(b)(2) and (3), you shall meet each requirement in the following table that applies to you]

For	You shall	Using	According to these requirements....

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1. Each new and existing sulfur recovery unit: Option 1 (Elect NSPS).	Measure SO_2 concentration (for an oxidation or reduction system followed by incineration) or the concentration of reduced sulfur (or SO_2 if you use an instrument to convert the reduced sulfur to SO_2) for a reduction control system without incineration.	Data from continuous emission monitoring system.	Collect SO_2 monitoring data every 15 minutes for 24 consecutive operating hours. Reduce the data to 1-hour averages computed from four or more data points equally spaced over each 1-hour period.
2. Each new and existing sulfur recovery unit: Option 2 (TRS limit).	a. Select sampling port's location and the number of traverse ports.	Method 1 or 1A appendix A to part 60 of this chapter.	Sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere.
	b. Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter, as applicable.	
	c. Conduct gas molecular weight analysis; obtain the oxygen concentration needed to correct the emission rate for excess air.	Method 3, 3A, or 3B in appendix A to part 60 of this chapter, as applicable.	Take the samples simultaneously with reduced sulfur or moisture samples.
	d. Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	Make your sampling time for each Method 4 sample equal to that for 4 Method 15 samples.
	e. Measure the concentration of TRS.	Method 15 or 15A in appendix A to part 60 of this chapter, as applicable.	If the cross-sectional area of the duct is less than 5 square meters (m_2) or 54 square feet, you must use the centroid of the cross section as the sampling point. If the cross-sectional area is 5 m_2 or more and the centroid is more than 1 meter (m) from the wall, your sampling point may be at a point no closer to the walls than 1 m or 39 inches. Your sampling rate must be at least 3 liters per minute or 0.10 cubic feet per minute to ensure minimum residence time for the sample inside the sample lines.
	f. Calculate the SO_2 equivalent for each run after correcting for moisture and oxygen.	The arithmetic average of the SO2 equivalent for each sample during the run.	
	g. Correct the reduced sulfur samples to zero percent excess air.	Equation 1 of § 63.1568.	
	h. Establish each operating limit in Table 30 of this subpart that applies to you.	Data from the continuous parameter monitoring system.	

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(Cont.) TABLE 32 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS NOT SUBJECT TO THE NEW SOURCE PERFORMANCE STANDARDS FOR SULFUR OXIDES

[As stated in § 63.1568(b)(2) and (3), you shall meet each requirement in the following table that applies to you]

For	You must	Using	According to these requirements .....
	i. Measure thermal incinerator: combustion zone temperature.	Data from the continuous parameter monitoring system.	Collect temperature monitoring data every 15 minutes during the entire period of the performance test; and determine and record the minimum hourly average temperature from all the readings.
	j. Measure thermal incinerator: oxygen concentration (percent, dry basis) in the vent stream.	Data from the continuous parameter monitoring system.	Collect oxygen concentration (percent, dry basis) data every 15 minutes during the entire period of the performance test; and determine and record the minimum hourly average percent excess oxygen concentration.
	k. If you use a continuous emission monitoring system, measure TRS concentration.	Data from continuous emission monitoring system.	Collect TRS data every 15 minutes for 24 consecutive operating hours. Reduce the data to 1-hour averages computed from four or more data points equally spaced over each 1-hour period.

TABLE 33 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(b)(5), you shall meet each requirement in the following table that applies to you]

For	For the following emission limit	You have demonstrated initial compliance if ...

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1. Each new or existing Clause sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) SO2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	You have already conducted a performance test to demonstrate initial compliance with the NSPS and each 12-hour rolling average concentration of SO2 emissions measured by the continuous emission monitoring system is less than or equal to 250 ppmv (dry basis) at zero percent excess air. As part of the Notification of Compliance Status, you must certify that your vent meets the SO2 limit. You are not required to do another performance test to demonstrate initial compliance. You have already conducted a performance evaluation to demonstrate initial compliance with the applicable performance specification. As part of your Notification of Compliance Status, you must certify that your continuous emission monitoring system meets the applicable requirements in § 63.1572. You are not required to do another performance evaluation to demonstrate initial compliance.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	You have already conducted a performance test to demonstrate initial compliance with the NSPS and each 12-hour rolling average concentration of reduced sulfur compounds measured by your continuous emission monitoring system is less than or equal to 300 ppmv, calculated as ppmv SO2 (dry basis) at zero percent excess air. As part of the Notification of Compliance Status, you must certify that your vent meets the SO2 limit. You are not required to do another performance test to demonstrate initial compliance. You have already conducted a performance evaluation to demonstrate initial compliance with the applicable performance specification. As part of your Notification of Compliance Status, you must certify that your continuous emission monitoring system meets the applicable requirements in § 63.1572. You are not required to do another performance evaluation to demonstrate initial compliance.
2. Option 1: Elect NSPS. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) of SO2 at zero percent excess air if you use an oxidation control system followed by incineration.	Each 12-hour rolling average concentration of SO2 emissions measured by the continuous emission monitoring system during the initial performance test is less than or equal to 250 ppmv (dry basis) at zero percent excess air; and your performance evaluation shows the monitoring system meets the applicable requirements in § 63.1572. Each 12-hour rolling average concentration of

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(Cont.) TABLE 33 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(b)(5), you shall meet each requirement in the following table that applies to you]

For	For the following emission limit	You have demonstrated initial compliance if .....
3. Option 2: TRS limit. Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	300 ppmv of TRS compounds expressed as an equivalent SO_2 concentration (dry basis) at zero percent oxygen.	If you use continuous parameter monitoring systems, the average concentration of TRS emissions measured using Method 15 during the initial performance test is less than or equal to 300 ppmv expressed as equivalent SO2 concentration (dry basis) at zero percent oxygen. If you use a continuous emission monitoring system, each 12-hour rolling average concentration of TRS emissions measured by the continuous emission monitoring system during the initial performance test is less than or equal to 300 ppmv expressed as an equivalent SO2 (dry basis) at zero percent oxygen; and your performance evaluation shows the continuous emission monitoring system meets the applicable requirements in § 63.1572.

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TABLE 34 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH HAP EMISSION LIMITS FOR SULFUR RECOVERY UNITS

[As stated in § 63.1568(c)(1), you shall meet each requirement in the following table that applies to you.]

For	For this emission limit	You shall demonstrate continuous compliance by .....

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1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per or more and subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) SO2 at zero percent excess air if you use an oxidation or reduction control system followed by incineration.	Collecting the hourly average SO2 monitoring data (dry basis, percent excess air) according to § 63.1572; determining and recording each 12-hour rolling average concentration of SO2; maintaining each 12-hour rolling average concentration of SO2 at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of SO2 greater than the applicable emission limitation in the compliance report required by § 63.1575.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv (dry basis) SO2 at zero percent excess air if you use a reduction control system without incineration.	Collecting the hourly average reduced sulfur (and air or O2 dilution and oxidation) monitoring data according to § 63.1572; determining and recording each 12-hour rolling average concentration of reduced sulfur; maintaining each 12-hour rolling average concentration of reduced sulfur at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of reduced sulfur greater than the applicable emission limitation in the compliance report required by § 63.1575.
2. Option 1: Elect NSPS Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	a. 250 ppmv (dry basis) of SO2 at zero percent excess air (for oxidation or reduction system followed by incineration).	Collecting the hourly average SO2 data (dry basis, percent excess air) according to § 63.1572; maintaining the hourly average SO2 concentration at or below the applicable limit; determining and recording each 12-hour average SO2 concentration; and reporting any 12-hour average SO2 concentration greater than the applicable emission limitation in the compliance report required in § 63.1575.
	b. 300 ppmv of reduced sulfur compounds calculated as ppmv SO2 (dry basis) at zero percent excess air if you use a reduction control system without incineration.	Collecting the hourly average reduced sulfur (and air or O2 dilution and oxidation) monitoring data according to § 63.1572; determining and recording each 12-hour rolling average concentration of reduced sulfur; maintaining each 12-hour rolling average concentration of reduced sulfur at or below the applicable emission limitation; and reporting any 12-hour rolling average concentration of reduced sulfur greater than the applicable emission limitation in the compliance report required by § 63.1575.
3. Option 2: TRS limit Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	300 ppmv of TRS compounds, expressed as an SO2 concentration (dry basis) at zero percent oxygen or reduced sulfur compounds calculated as ppmv SO2 (dry basis) at zero percent excess air.	i. If you use continuous parameter monitoring systems, collecting the hourly average TRS monitoring data according to § 63.1572 and maintaining each 12-hour average concentration of TRS at or below the applicable emission limitation; or ii. If you use a continuous emission monitoring system, collecting the hourly average TRS monitoring data according to § 63.1572, determining and recording each 12-hour rolling average concentration of TRS; maintaining each

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TABLE 35 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS FOR HAP EMISSIONS FROM SULFUR RECOVERY UNITS

[As stated in § 63.1568(c)(1), you shall meet each requirement in the following table that applies to you]

For	For this operating limit	You must demonstrate continuous compliance by .....
1. Each new or existing Claus sulfur recovery unit part of a sulfur recovery plant of 20 long tons per day or more and subject to the NSPS for sulfur oxides in paragraph 40 CFR 60.104(a)(2).	Not applicable	Meeting the requirements of Table 34 of this subpart.
2. Option 1: Elect NSPS Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2).	Not applicable	Meeting the requirements of Table 34 of this subpart.
3. Option 2: TRS limit Each new or existing sulfur recovery unit (Claus or other type, regardless of size) not subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2)	a. Maintain the daily average combustion zone temperature above the level established during the performance test.	Collecting the hourly and daily average temperature monitoring data according to § 63.1572; and maintaining the daily average combustion zone temperature at or above the limit established during the performance test.
	b. The daily average oxygen concentration in the vent stream (percent, dry basis) must not fall below the level established during the performance test.	Collecting the hourly and daily average O_2 monitoring data according to § 63.1572; and maintaining the average O_2 concentration above the level established during the performance test.

TABLE 36 TO SUBPART UUU OF PART 63.—WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(a)(1), you shall meet each work practice standard in the following table that applies to you]

Option	You shall meet one of these equipment standards .....

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1. Option 1	Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to continuously detect, at least every hour, whether flow is present in the bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
2. Option 2	Install a car-seal or lock-and-key device placed on the mechanism by which the bypass device flow position is controlled (e.g., valve handle, damper level) when the bypass device is in the closed position such that the bypass
3. Option 3	line valve cannot be opened without breaking the seal or removing the device.
4. Option 4	Seal the bypass line by installing a solid blind between piping flanges.
	Vent the bypass line to a control device that meets the appropriate requirements in this subpart.

TABLE 37 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS FOR BYPASS LINES

[As stated in § 63.1569(b)(1), you shall meet each requirement in the following table that applies to you]

For this standard . . .	You must . . .
1. Option 1: Install and operate a flow indicator, level recorder, or electronic valve position monitor.	Record during the performance test for each type of control device whether the flow indicator, level recorder, or electronic valve position monitor was operating and whether flow was detected at any time during each hour of level the three runs comprising the performance test.

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TABLE 38 TO SUBPART UUU OF PART 63.—INITIAL COMPLIANCE WITH WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(b)(2), you shall meet each requirement in the following table that applies to you]

For	For this work practice standard	You have demonstrated initial compliance if .....
1. Each new or existing bypass line associated with a catalytic cracking unit, catalytic reforming unit, or sulfur recovery unit.	a. Option 1: Install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor) to continuously detect, at least every hour, whether flow is present in the bypass line. Install the device at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.	The installed equipment operates properly during each run of the performance test and no flow is present in the line during the test.
	b. Option 2: Install a car-seal or lock-and-key device placed on the mechanism by which the bypass device flow position is controlled (e.g., valve handle, damper level) when the bypass device is in the closed position such that the bypass line valve cannot be opened without breaking the seal or removing the device.	As part of the notification of compliance status, you certify that you installed the equipment, the equipment was operational by your compliance date, and you identify what equipment was installed.
	c. Option 3: Seal the bypass line by installing a solid blind between piping flanges.	See item 1.b. of this table.
	d. Option 4: Vent the bypass line to a control device that meets the appropriate requirements in this subpart.	See item 1.b. of this table.

TABLE 39 TO SUBPART UUU OF PART 63.—CONTINUOUS COMPLIANCE WITH WORK PRACTICE STANDARDS FOR HAP EMISSIONS FROM BYPASS LINES

[As stated in § 63.1569(c)(1), you shall meet each requirement in the following table that applies to you]

If you elect this standard	You shall demonstrate continuous compliance by .....

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1. Option 1: Flow indicator, level recorder, or electronic valve position monitor.	Continuously monitoring and recording whether flow is present in the bypass line; visually inspecting the device at least once every hour if the device is not equipped with a recording system that provides a continuous record; and recording whether the device is operating properly and whether flow is present in the bypass line.
2. Option 2: Car-seal or lock-and-key device	Visually inspecting the seal or closure mechanism at least once every month; and recording whether the bypass line valve is maintained in the closed position and whether flow is present in the line.
3. Option 3: Solid blind flange	Visually inspecting the blind at least once a month; and recording whether the blind is maintained in the correct position such that the vent stream cannot be diverted through the bypass line.
4. Option 4: Vent to control device	Monitoring the control device according to appropriate subpart requirements. Recording and reporting the time and duration of any bypass.
5. Option 1, 2, 3, or 4	

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TABLE 40 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE OF CONTINUOUS OPACITY MONITORING SYSTEMS AND CONTINUOUS EMISSION MONITORING SYSTEMS

[As stated in § 63.1572(a)(1) and (b)(1), you shall meet each requirement in the following table that applies to you]

This type of continuous opacity or emission monitoring system	Must meet these requirements .....
1. Continuous opacity monitoring system	Performance specification 1 (40 CFR part 60, appendix B).
2. CO continuous emission monitoring system	Performance specification 4 (40 CFR part 60, appendix B); span value of 1,000 ppm; and procedure 1 (40 CFR part 60, appendix F) except relative accuracy test audits are required annually instead of quarterly.
3. CO continuous emission monitoring system used to demonstrate emissions average under 50 ppm (dry basis).	Performance specification 4 (40 CFR part 60, appendix B); and span value of 100 ppm.
4. SO_2 continuous emission monitoring for sulfur recovery unit with oxidation control system or reduction control system; this monitor must include an O_2 monitor for correcting the data for excess air.	Performance specification 2 (40 CFR part 60, appendix B); span value of 500 ppm SO2; use Methods 6 or 6C and 3A or 3B (40 CFR part 60, appendix A) for certifying O2 monitor; and procedure 1 (40 CFR part 60, appendix F) except relative accuracy test audits are required annually instead of quarterly.
5. Reduced sulfur and O_2 continuous emission monitoring system for sulfur recovery unit with reduction control system not followed by incineration; this monitor must include an O_2 monitor for correcting the data for excess air unless exempted.	Performance specification 5 (40 CFR part 60, appendix B), except calibration drift specification is 2.5 percent of the span value instead of 5 percent; 450 ppm reduced sulfur; use Methods 15 or 15A and 3A or 3B (40 CFR part 60, appendix A) for certifying O2monitor; if Method 3A or 3B yields O2 concentrations below 0.25 percent during the performance evaluation, the O2 concentration can be assumed to be zero and the O2 monitor is not required; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.
6. Instrument with an air or O2 dilution and oxidation system to convert reduced sulfur to SO_2 for continuously monitoring the concentration of SO_2 instead of reduced sulfur monitor and O_2 monitor.	Performance specification 5 (40 CFR part 60, appendix B); span value of 375 ppm SO2; use Methods 15 or 15A and 3A or 3B for certifying O2 monitor; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.
7. TRS continuous emission monitoring system for sulfur recovery unit; this monitor must include an O_2 monitor for correcting the data for excess air.	Performance specification 5 (40 CFR part 60, appendix B).
8. O_2 monitor for oxygen concentration	If necessary due to interferences, locate the oxygen sensor prior to the introduction of any outside gas stream; performance specification 3 (40 CFR part 60, appendix B; and procedure 1 (40 CFR part 60, appendix F), except relative accuracy test audits, are required annually instead of quarterly.

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TABLE 41 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR INSTALLATION, OPERATION, AND MAINTENANCE OF CONTINUOUS PARAMETER MONITORING SYSTEMS—Continued

[As stated in § 63.1572(c)(1), you shall meet each requirement in the following table that applies to you]

If you use.....	You shall.....
1. pH strips.....	Use pH strips with an accuracy of ± 10 percent.
2. Colormetric tube sampling system.	Use a colormetric tube sampling system with a printed numerical scale in ppmv, a standard measurement range of 1 to 10 ppmv (or 1 to 30 ppmv if applicable), and a standard deviation for measured values of no more than ± 15 percent. System must include a gas detection pump and hot air probe if needed for the measurement range.

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TABLE 42 TO SUBPART UUU OF PART 63.—ADDITIONAL INFORMATION FOR INITIAL NOTIFICATION OF COMPLIANCE STATUS

[As stated in § 63.1574(d), you shall meet each requirement in the following table that applies to you]

For	You shall provide this additional information .....
1. Identification of affected sources and emission points.	Nature, size, design, method of operation, operating design capacity of each affected source; identify each emission point for each HAP; identify any affected source or vent associated with an affected source not subject to the requirements of subpart UUU.
2. Initial compliance	Identification of each emission limitation you will meet for each affected source, including any option you select (i.e., NSPS, PM or Ni, flare, percent reduction, concentration, options for bypass lines); if applicable, certification that you have already conducted a performance test to demonstrate initial compliance with the NSPS for an affected source; certification that the vents meet the applicable emission limit and the continuous opacity or that the emission monitoring system meets the applicable performance specification; if applicable, certification that you have installed and verified the operational status of equipment by your compliance date for each bypass line that meets the requirements of Option 2, 3, or 4 in § 63.1569 and what equipment you installed; identification of the operating limit for each affected source, including supporting documentation; if your affected source is subject to the NSPS, certification of compliance with NSPS emission limitations and performance specifications; a brief description of performance test conditions (capacity, feed quality, catalyst, etc.); an engineering assessment (if applicable); and if applicable, the flare design (e.g., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the Method 22 test.
3. Continuous compliance	Each monitoring option you elect; and identification of any unit or vent for which monitoring is not required; and the definition of ‘‘operating day.’’ (This definition, subject to approval by the applicable permitting authority, must specify the times at which a 24-hr operating day begins and ends.)

TABLE 43 TO SUBPART UUU OF PART 63.—REQUIREMENTS FOR REPORTS

[As stated in § 63.1575(a), you shall meet each requirement in the following table that applies to you]

You must submit a(n)	The report must contain	You shall submit the report .....
1. Compliance report	If there are not deviations from any emission limitation or work practice standard that applies to you, a statement that there were no deviations from the standards during the reporting period and that no continuous opacity monitoring system or continuous emission monitoring system was inoperative, inactive, out-of-control, repaired, or adjusted; and if you have a deviation from any emission limitation or work practice standard during the reporting period, the report must contain the information in § 63.1575(d) or (e)	Semiannually according to the requirements in § 63.1575(b).

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Table 44 to Subpart UUU of Part 63 - Applicability of NESHAP General Provisions to Subpart UUU
As stated in §63.1577, you shall meet each requirement in the following table that applies to you.

Citation	Subject	Applies to Subpart UUU	Explanation
§63.1	Applicability	Yes	Except that subpart UUU specifies calendar or operating day.
§63.2	Definitions	Yes	
§63.3	Units and Abbreviations	Yes	
§63.4	Prohibited Activities	Yes	
§63.5(a)-(c)	Construction and Reconstruction	Yes	In §63.5(b)(4), replace the reference to §63.9 with §63.9(b)(4) and (5).
§63.5(d)(1)(i)	Application for Approval of Construction or Reconstruction - General Application Requirements	Yes	Except, subpart UUU specifies the application is submitted as soon as practicable before startup but no later than 90 days (rather than 60) after the promulgation date where construction or reconstruction had commenced and initial startup had not occurred before promulgation.
§63.5(d)(1)(ii)		Yes	Except that emission estimates specified in §63.5(d)(1) (ii)(H) are not required.
§63.5(d)(1)(iii)		No	Subpart UUU specifies submission of notification of compliance status.
§63.5(d)(2)		No	
§63.5(d)(3)		Yes	Except that §63.5(d)(3)(ii) does not apply.
§63.5(d)(4)		Yes	
§63.5(e)	Approval of Construction or Reconstruction	Yes	
§63.5(f)(1)	Approval of Construction or Reconstruction Based on State Review	Yes	
§63.5(f)(2)		Yes	Except that 60 days is changed to 90 days and cross-reference to 53.9(B)(2) does not apply.
§63.6(a)	Compliance with Standards and Maintenance - Applicability	Yes	
§63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Yes	
§63.6(b)(5)		Yes	Except that subpart UUU specifies different compliance dates for sources.
§63.6(b)(6)	[Reserved]	Not applicable	
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Yes	

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§63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Yes	Except that subpart UUU specifies different compliance dates for sources subject to Tier II gasoline sulfur control requirements.
§63.6(c)(3)-(4)	[Reserved]	Not applicable	
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Yes	
§63.6(d)	[Reserved]	Not applicable	
§63.6(e)(1)-(2)	Operation and Maintenance Requirements	Yes	
§63.6(e)(3)(i)-(iii)	Startup, Shutdown, and Malfunction Plan	Yes	
§63.6(e)(3)(iv)		Yes	Except that reports of actions not consistent with plan are not required within 2 and 7 days of action but rather must be included in next periodic report.
§63.6(e)(3)(v)-(viii)		Yes	The owner or operator is only required to keep the latest version of the plan.
§63.6(e)(3)(iv)		Yes	
§63.6(f)(1)-(2)(iii)(C)	Compliance with Emission Standards	Yes	
§63.6(f)(2)(iii)(D)		No	
§63.6(f)(2)(iv)-(v)		Yes	
§63.6(f)(3)		Yes	
§63.6(g)	Alternative Standard	Yes	
§63.6(h)	Opacity/VE Standards	Yes	
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	No	Subpart UUU specifies methods.
§63.6(h)(2)(ii)	[Reserved]	Not applicable	
§63.6(h)(2)(iii)		Yes	
§63.6(h)(3)	[Reserved]	Not applicable	
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Yes	Applies to Method 22 tests.
§63.6(h)(5)	Conducting Opacity/VE Observations	No	
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Yes	Applies to Method 22 observations.
§63.6(h)(7)(i)	Report COM Monitoring Data from Performance Test	Yes	
§63.6(h)(7)(ii)	Using COM Instead of Method 9	No	
§63.6(h)(7)(iii)	Averaging Time for COM during Performance Test	Yes	
§63.6(h)(7)(iv)	COM Requirements	Yes	
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Yes	
§63.6(h)(9)	Adjusted Opacity Standard	Yes	
§63.6(i)(1)-(14)	Extension of Compliance	Yes	Except that 60 days is changed to 90 days and cross-reference to 53.9(B)(2) does not apply.
§63.6(i)(15)	[Reserved]	Not applicable	
§63.6(i)(16)		Yes	

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§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7(a)(1)	Performance Test Requirements-Applicability	Yes	Except that subpart UUU specifies the applicable test and demonstration procedures.
§63.7(a)(2)	Performance Test Dates	No	Test results must be submitted in the Notification of Compliance Status report due 150 days after the compliance date.
§63.7(a)(3)	Section 114 Authority	Yes	
§63.7(b)	Notifications	Yes	Except that subpart UUU specifies notification at least 30 days prior to the scheduled test date rather than 60 days.
§63.7(c)	Quality Assurance Program/Site-Specific Test Plan	Yes	
§63.7(d)	Performance Test Facilities	Yes	
§63.7(e)	Conduct of Tests	Yes	
§63.7(f)	Alternative Test Method	Yes	
§63.7(g)	Data Analysis, Recordkeeping, Reporting	Yes	Except performance test reports must be submitted with notification of compliance status due 150 days after the compliance date.
§63.7(h)	Waiver of Tests	Yes	
§63.8(a)(1)	Monitoring Requirements - Applicability	Yes	
§63.8(a)(2)	Performance Specifications	Yes	
§63.8(a)(3)	[Reserved]	Not applicable	
§63.8(a)(4)	Monitoring with Flares	Yes	
§63.8(b)(1)	Conduct of Monitoring	Yes	
§63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Yes	Subpart UUU specifies the required monitoring locations.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Yes	
§63.8(c)(1)(i)-(ii)	Startup, Shutdown, and Malfunctions	Yes	Except that subpart UUU specifies that reports are not required if actions are consistent with the SSM plan, unless requested by the permitting authority. If actions are not consistent, actions must be described in next compliance report.
§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Yes	

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§63.8(c)(2)-(3)	Monitoring System Installation	Yes	Except that subpart UUU specifies that for continuous parameter monitoring systems, operational status verification includes completion of manufacturer written specifications or installation operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment will monitor accurately.
§63.8(c)(4)	Continuous Monitoring System Requirements	No	Subpart UUU specifies operational requirements.
§63.8(c)(4)(i)-(ii)	Continuous Monitoring System Requirements	Yes	Except that these requirements apply only to a continuous opacity monitoring system or a continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(c)(5)	COM Minimum Procedures	Yes	
§63.8(c)(6)	CMS Requirements	No	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(c)(7)-(8)	CMS Requirements	Yes	
§63.8(d)	Quality Control Program	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.8(e)	CMS Performance Evaluation	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits. Results are to be submitted as part of the Notification of Compliance Status due 150 days after the compliance date.
§63.8(f)(1)-(5)	Alternative Monitoring Method	Yes	Except that subpart UUU specifies procedures for requesting alternative monitoring systems and alternative parameters.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Yes	Applicable to continuous emission monitoring systems if performance specification requires a relative accuracy test audit.
§63.8(g)(1)-(4)	Reduction of Monitoring Data	Yes	Applies to a continuous opacity monitoring system or continuous emission monitoring system.
§63.8(g)(5)	Data Reduction	No	Subpart UUU specifies requirements.

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§63.9(a)	Notification Requirements - Applicability	Yes	Duplicate Notification of Compliance Status report to the Regional Administrator may be required.
§63.9(b)(1)-(5)	Initial Notifications	Yes	Except that notification of construction or reconstruction is to be submitted as soon as practicable before startup but no later than 30 days (rather than 60 days) after the effective date if construction or reconstruction had commenced but startup had not occurred before the effective date.
§63.9(c)	Request for Extension of Compliance	Yes	
§63.9(d)	New Source Notification for Special Compliance Requirements	Yes	
§63.9(e)	Notification of Performance Test	Yes	Except that notification is required at least 30 days before test.
§63.9(f)	Notification of VE/Opacity Test	Yes	
§63.9(g)	Additional Notification Requirements for Sources with Continuous Monitoring Systems	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits.
§63.9(h)	Notification of Compliance Status	Yes	Except that subpart UUU specifies the notification is due no later than 150 days after compliance date.
§63.9(i)	Adjustment of Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	
§63.10(a)	Recordkeeping and Reporting-Applicability	Yes	
§63.10(b)	Records	Yes	Except that §63.10(b)(2)(xiii) applies if you use a continuous emission monitoring system to meet the NSPS or you elect to meet the NSPS, CO, or SO_2 reduced sulfur limit and the performance evaluation requires a relative accuracy test audit.
§63.10(c)(1)-(6), (9)-(15)	Additional Records for Continuous Monitoring Systems	Yes	Except that these requirements apply if you use a continuous opacity monitoring system or a continuous emission monitoring system to meet the NSPS or elect to meet the NSPS opacity, CO, or SO_2 limits.
§63.10(c)(7)-(8)	Records of Excess Emissions and Exceedances	No	Subpart UUU specifies requirements.
§63.10(d)(1)	General Reporting Requirements	Yes	

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§63.10(d)(2)	Performance Test Results	No	Subpart UUU requires performance test results to be reported as part of the Notification of Compliance Status due 150 days after the compliance date.
§63.10(d)(3)	Opacity or VE Observations	Yes	
§63.10(d)(4)	Progress Reports	Yes	
§63.10(d)(5)(i)	Startup, Shutdown, and Malfunction Reports	Yes	Except that reports are not required if actions are consistent with the SSM plan, unless requested by permitting authority.
§63.10(d)(5)(ii)		Yes	Except that actions taken during a startup, shut- down, or malfunction that are not consistent with the plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report.
§63.10(e)(1)-(2)	Additional CMS Reports	Yes	Except that these requirements apply only to a continuous opacity monitoring system or continuous emission monitoring system if you are subject to the NSPS or elect to comply with the NSPS opacity, CO, or SO_2 limits. Reports of performance evaluations must be submitted in Notification of Compliance Status.
§63.10(e)(3)	Excess Emissions/CMS Performance Reports	No	Subpart UUU specifies the applicable requirements.
§63.10(e)(4)	COMS Data Reports	Yes	
§63.10(f)	Recordkeeping/ Reporting Waiver	Yes	
§63.11	Control Device Requirements	Yes	Applicable to flares.
§63.13	Addresses	Yes	
§63.14	Incorporation by Reference	Yes	
§63.15	Availability of Information	Yes	

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P041) - Claus sulfur recovery unit No. 2 and sulfur pit with tail gas unit and incinerator. Emissions from the Claus sulfur recovery unit can be vented to the number 1 tail gas treater with 7 mmBtu/hr incinerator and/or the number 2 tail gas treater with 7 mmBtu/hr incinerator.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
None	

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

Sunoco, Inc. **Facility ID: 0448010246**

PTI Application: 04-01447

Emissions Unit ID: P041

None

Issued: To be entered upon final issuance
Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P801) -Facility-wide Leak Detection and Repair (LDAR) program subject to refinery MACT and OAC rule 3745-21-09(T)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	385.43 tons per year volatile organic compounds (VOC) per rolling 12-month summation of the monthly emissions see sections A.I.2.a and 2.b
40 CFR Part 63, Subpart CC	see sections A.I. 2.c through 2.e
40 CFR Part 60, Subpart VV	see section A.I.2.c and 2.d
40 CFR Part 60, Subpart GGG	see section A.I.2.c and 2.d
OAC rule 3745-21-09(T)	see sections A.I.2.g
Enhanced LDAR Program OAC rule 3745-31-05(C)	see sections A.I.2.h and 2.i

2. Additional Terms and Conditions

2.a Modifications of the equipment at this facility shall not require a PTI modification that results solely in increases in fugitive equipment leaks unless and until the calculated facility-wide potential to emit (PTE) for fugitive emissions equals or exceeds the allowable fugitive emission limit stated in section A.I.1.

2.b The permittee shall consider only those fugitive emissions from the equipment being installed or modified (i.e., not the facility-wide fugitive equipment limit) when

determining applicability under OAC rule 3745-31-11 through OAC rule 3745-31-20.

2.c [63.648(a)] - Equipment Leaks
In accordance with 40 CFR Part 63, Subpart CC, the permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart VV and paragraph (b) of 40 CFR Part 63.648 except as provided in 63.648(a)(1) [paragraphs 2.c.i., 2.c.ii. of this section], and (c) through (i) of 40 CFR Part 63.648.

i. [63.648(a)(1)]
For purposes of compliance with 40 CFR Part 63.648, the provisions of 40 CFR Part 60, Subpart VV apply only to equipment in organic HAP service, as defined in 40 CFR Part 63.641, Subpart CC:
"*In organic hazardous air pollutant service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of 40 CFR 63.180(d) of subpart H of this part and table 1 of this subpart. The provisions of 63.180(d) of subpart H also specify how to determine that a piece of equipment is not in organic HAP service."

ii. [63.648(a)(2)]
Calculation of percentage leaking equipment components for Subpart VV of 40 CFR Part 60 may be done on a source wide basis. All subsequent calculations shall be on the same basis unless a permit change is made.

2.d [63.640(p)] - Equipment Leaks
If there is an overlap of 40 CFR Part 63, Subpart CC with other regulations for equipment leaks, after the compliance dates, that are also subject to the provisions of 40 CFR Part 60 and 61, the permittee is required to comply only with the provisions specified in 40 CFR Part 63, Subpart CC.

2.e [63.640(q)] - Equipment Leaks
For overlap of 40 CFR Part 63, Subpart CC with local or State regulations, the permitting authority for the affected source may allow consolidation of the monitoring, record keeping, and reporting requirements under Subpart CC with the monitoring, record keeping, and reporting requirements under other applicable requirements in 40 CFR Part 60, 61, or 63, and in any 40 CFR part 52 approved State implementation plan provided the implementation plan allows for approval of alternative monitoring, reporting, or record keeping requirements and provided that the permit contains an equivalent degree of compliance and control.

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2.f [63.640(l)]
If an additional petroleum refining process unit is added to a plant site that meets the criteria in 40 CFR Part 63.640(c)(3) of Subpart CC is added to an existing petroleum refinery and if the addition or process change is not subject to the new source requirements as determined according to 40 CFR Part 63.640(i) or (j) of Subpart CC, the requirements in 63.640(l)(1) through (3) [paragraphs i. through iii. of this section] shall apply. Examples of process changes include, but are not limited to, changes in production capacity, or feed or raw material where the change requires construction or physical alteration of the existing equipment or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph and 63.640(m) [see section A.I.2.], process changes do not include: process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status report required by 40 CFR Part 63.654(f).

i. [63.640(l)(1)]
The added emission point(s) and any emission point(s) within the added or changed petroleum refining process unit are subject to the requirements for an existing source.

ii. [63.640(l)(2)]
The added emission point(s) and any emission point(s) within the added or changed petroleum refining process unit shall be in compliance with 40 CFR Part 63, Subpart CC, by the dates specified in paragraphs ii.(a) or ii.(b) of this section, as applicable.
(a) If a petroleum refining process unit is added to a plant site or an emission point(s) is added to any existing petroleum refining process unit, the added emission point(s) shall be in compliance upon initial startup of any added petroleum refining process unit or emission point(s).
(b) If a deliberate operational process change to an existing petroleum refining process unit causes a Group 2 emission point to become a Group 1 emission point (as defined in 40 CFR Part 63.641), the permittee shall be in compliance upon initial startup, unless the permittee demonstrates to the Director and Administrator that achieving compliance will take longer than making the change. If this demonstration is made to the Director’s and Administrator's satisfaction, the permittee shall follow the procedures in 63.640(m)(1) through (m)(3) to establish a compliance date.

iii. [63.640(l)(3)]
The permittee of a petroleum refining process unit meeting the criteria in 40 CFR Part 63.640(c)(3) of Subpart CC, that is added to a plant site and is subject to the requirements for existing emissions units shall comply with the reporting and record keeping requirements that are applicable to existing

emissions units including, but not limited to, the reports listed in paragraphs (a) through (f) of this section. A process change to an existing petroleum refining process unit shall be subject to the reporting requirements for existing emissions units including, but not limited to, the reports listed below. The applicable reports include, but are not limited to:

(a) the Notification of Compliance Status report as required by 40 CFR Part 63.654(f) for the emission points that were added or changed;
(b) Periodic Reports and other reports as required by 40 CFR Part 63.654(g) and (h);
(c) reports and notifications required by sections of Subpart A of 40 CFR Part 63 that are applicable to this subpart, as identified in table 6 of Subpart CC; and
(d) reports and notifications required by 40 CFR Part 60.487.

iv. [63.640(l)(4)]
If pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, or instrumentation systems are added to an existing source, they are subject to the equipment leak standards for existing emissions units in 40 CFR Part 63.648 [see section A.III.]. A notification of compliance status report shall not be required for such added equipment.

2.g [OAC 3745-21-09(T)]

i. This regulation applies to petroleum refinery equipment leaks of volatile organic compounds from pump seals, pipeline valves, process drains, compressor seals and pressure relief devices.

ii. Except as otherwise provided in paragraphs 2.g.iii. of this section and OAC 3745-21-09(T)(1)(c) [see section A.III.], the permittee shall establish a leak detection and repair program for the emissions units identified in paragraph 2.g.i. of this section, in compliance with the monitoring, record keeping and reporting requirements of sections A.II., A.III. and A.IV. of this permit.

iii. [OAC 3745-21-09(T)(1)(b)] Pressure relief devices which are connected to an operating flare header, vapor recovery devices, valves which are located in pipelines containing kerosene or heavier liquids, storage tank valves and valves which are not externally regulated are exempt from the monitoring requirements contained in section A.III.

iv. ALTERNATIVE MONITORING, RECORDKEEPING AND REPORTING FOR OAC rule 3745-21-09(T)(4)

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The director may accept an alternative monitoring, recordkeeping and reporting program for that required by paragraph (T)(1) of this rule if the permittee of a petroleum refinery can demonstrate to the satisfaction of the director that the alternative program is at least as effective in identifying, documenting and reporting leaks from petroleum refinery equipment as the program outlined in paragraph (T)(1) of this rule. For purposes of this paragraph, any proposed alternative program which the director finds comparable to the requirements of paragraph (DD)(12) or (DD)(13) of this rule shall be acceptable to the director.

2.h An enhanced LDAR program is required by the consent decree as filed on March 14, 2006. Most of the requirements established by the consent decree are more stringent than the requirements of 40 CFR 63, subpart CC and OAC rule 3745-21-09(T).

2.i [CD, section N. - LEAK DETECTION AND REPAIR PROGRAM ENHANCEMENTS] In order to minimize or eliminate fugitive emissions of volatile organic compounds ("VOCs"), benzene, volatile hazardous air pollutants ("VHAPs"), and organic hazardous air pollutants ("HAPs") from equipment in light liquid and/or in gas/vapor service, The permittee shall implement the measures required by the Consent Decree filed March 14, 2006 [Date of Entry], to enhance the Refinery's LDAR program under Title 40 of the Code of Federal Regulations, Part 60, Subpart GGG; Part 63, Subparts F, H, and CC; and applicable state LDAR requirements. The terms "equipment", "in light liquid service" and "in gas/vapor service" shall have the definitions set forth in the applicable provisions of Title 40 of the Code of Federal Regulations, Part 60, Subpart GGG; Part 63, Subparts F, H and CC; and applicable state LDAR regulation.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

[63.648] EQUIPMENT LEAK STANDARDS - 40 CFR Part 63, Subpart CC

1. [63.648(b)]
   The use of monitoring data generated before August 18, 1995 to qualify for less frequent monitoring of valves and pumps as provided under 40 CFR Part 60, Subpart VV and 40 CFR Part 63.648(c) [see section A.III.] (i.e., quarterly or semiannually) is governed by the requirements of 40 CFR Part 63.648(b)(1) and (b)(2) [see section A.III.].

   a. [63.648(b)(1)]
      Monitoring data must meet the test methods and procedures specified in 40 CFR Part 60.485 except for minor departures.

   b. [63.648(b)(2)]

Departures from the criteria specified in 40 CFR Part 60.485(b) or from the monitoring frequency specified in 40 CFR Part 60, Subpart VV or in 40 CFR Part 63.648(c) [see section A.III.] (such as every 6 weeks instead of monthly or quarterly) are minor and do not significantly affect the quality of the data. An example of a minor departure is monitoring at a slightly different frequency (such as every 6 weeks instead of monthly or quarterly). Failure to use a calibrated instrument is not considered a minor departure.

c. [63.648(c)]
In lieu of complying with the existing source provisions of 63.648(a) [see section A.I.2.], the permittee may elect to comply with the requirements of 40 CFR Part 63.161 through 63.169, 63.171, 63.172, 63.175, 63.176, 63.177, 63.179 and 63.180 of Subpart H except as provided in 40 CFR Part 63.648(c)(1) through (c)(10) and 40 CFR Part 63.648(e) through (i) of Subpart CC.

d. [63.648(f)]
Reciprocating pumps in light liquid service are exempt from 60.482 [see section A.III.] if recasting the distance piece or reciprocating pump replacement is required.

e. [63.648(g)]
Compressors in hydrogen service are exempt from the requirements of 63.648(a) and (c) [see sections A.I.2. and A.III.] if a permittee demonstrates that a compressor is in hydrogen service.

i. [63.648(g)(1)]
Each compressor is presumed not to be in hydrogen service unless the permittee demonstrates that the piece of equipment is in hydrogen service.

ii. [63.648(g)(2)]
For a piece of equipment to be considered in hydrogen service, it must be determined that the percentage hydrogen content can be reasonably expected always to exceed 50 percent by volume. To determine the percentage hydrogen content, refer to 40 CFR Part 63.648(g)(2)(i).

f. [63.648(i)]
Reciprocating compressors are exempt from seal requirements if recasting the distance piece or compressor replacement is required.

2. [60.482-1] STANDARDS: GENERAL - 40 CFR Part 60, Subpart VV

a. [60.482-1(a)]
The permittee shall demonstrate compliance with the requirements of 60.482-1 to 60.482-10 [see section A.III.] or 40.480(e) for all equipment within 180 days of initial startup.

b. [60.482-1(b)]
Compliance with 60.482-1 to 60.482-10 [see section A.III.] will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 60.485 [see section A.V.].

c. [60.482-1(c)]
i. [60.482-1(c)(1)]
The permittee may request a determination of equivalence of a means of emission limitation to the requirements of 60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8 and 60.482-10 [see section A.III.] as provided in 40 CFR Part 60.484.

ii. [60.482-1(c)(2)]
If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8 and 60.482-10 [see section A.III.], the permittee shall comply with the requirements of that determination.

d. [60.482-1(d)]
Equipment that is in vacuum service is excluded from the requirements of 60.482-2 to 60.482-10 [see section A.III.] if it is identified as required in 60.486(e)(5) [see section A.III.].

3. [60.482-2] STANDARDS: PUMPS IN LIGHT LIQUID SERVICE - 40 CFR Part 60, Subpart VV

a. [60.482-2(a)(1) and (a)(2)]
Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 60.485(b) [see section A.V.], except as provided in 60.482-1(c) [see section A.III.] and paragraphs d., e., and f. of this section. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

b. [60.482-2(b)]
If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, a leak is detected.

c. [60.482-2(c)]
When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9 [see section A.III.]. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

d. [60.482-2(d)]
Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph a. of this section, provided the following requirements are met:

i. [60.482-2(d)(1)]
Each dual mechanical seal system is:
(a) operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or
(b) equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to a control device that complies with the requirements of 60.482-10 [see section A.III.]; or
(c) equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

ii. [60.482-2(d)(2)]
The barrier fluid system is in heavy liquid service or is not in VOC service.

iii. [60.482-2(d)(3)]
Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

iv. [60.482-2(d)(4)]
Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

v. [60.482-2(d)(5)]
Each sensor as described in 60.482-2(d)(3) [paragraph d.iii. of this section] is checked daily or is equipped with an audible alarm, and the permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

vi. [60.482-2(d)(6)]
If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph d.v. of this section, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9 [see section A.III.]. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

e. [60.482-2(e)]
Any pump that is designated, as described in 60.486(e)(1) and (2) [see section A.III.], for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 60.482-2(a), (c) and (d) [paragraphs a., c., and d. of this section] if the pump:

i. [60.482-2(e)(1)]
has no externally actuated shaft penetrating the pump housing;

ii. [60.482-2(e)(2)]
is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in 40.485(c) [see section A.V.]; and

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iii. [60.482-2(e)(3)]
is tested for compliance with 60.482-2(e)(2) [paragraph e.ii. of this section] initially upon designation, annually, and at other times requested by the Administrator.

f. [60.482-2(f)]
If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of 60.482-10 [see section A.III.], it is exempt from 60.482-2(a) through (e) [paragraphs a. through e. of this section].

g. [60.482-2(g)]
Any pump that is designated, as described in 60.486(f)(1) [see section A.III.], as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of 60.482-2(a) and (d)(4) through (6) [see paragraphs a. and d. of this section] if:

i. [60.482-2(g)(1)]
The permittee of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 60.482-2(a) [see paragraph a. of this section]; and

ii. [60.482-2(g)(2)]
The permittee of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 60.482-2(c) [paragraph c. of this section] if a leak is detected.

h. [60.482-2(h)]
Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 60.482(a)(2) and (d)(4) [see paragraphs a. and d. of this section], and the daily requirements of 60.482-2(d)(5) [see paragraph d. of this section], provided that each pump is visually inspected as often as practicable and at least monthly.

4. [60.482-3] STANDARDS: COMPRESSORS - 40 CFR Part 60, Subpart VV

a. [60.482-3(a)]
Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 60.482-1(c) [see section A.III.] and paragraphs h. and i. of this section.

b. [60.482-3(b)]
Each compressor seal system as required in paragraph a. of this section shall be:

i. [60.482-3(b)(1)]
operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

ii. [60.482-3(b)(2)]

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equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 60.482-10 [see section A.III.]; or

iii. [60.482-3(b)(3)]
equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

c. [60.482-3(c)]
The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

d. [60.482-3(d)]
Each barrier fluid system as described in paragraph a. of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

e. [60.482-3(e)]
Each sensor as required in 60.482-3(d) [paragraph d. of this section] shall be checked daily or shall be equipped with an audible alarm. The permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

f. [60.482-3(f)]
If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph e., a leak is detected.

g. [60.482-3(g)]
When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9 [see section A.III.]. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

h. [60.482-3(h)]
A compressor is exempt from the requirements of 60.482-3(a) and (b) [paragraphs a. and b. of this section], if it is equipped with a closed vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of 60.482-10 [see section A.III.], except as provided in 60.482-3(i) [paragraph i. of this section].

i. [60.482-3(i)]
Any compressor that is designated, as described in 60.486(e)(1) and (2) [see section A.III.], for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of

60.482-3(a) through (h) [paragraphs a. through h. of this section] if the compressor:

i. [60.482-3(i)(1)]
is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in 60.485(c) [see section A.V.]; and

ii. [60.482-3(i)(2)]
is tested for compliance with 60.482-3(i)(1) [paragraph i.i. of this section], initially upon designation, annually, and at other times requested by the Administrator.

j. [60.482-3(j)]
Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of 60 CFR 60.14 or 60.15 is exempt from 60.482-3(a), (b), (c), (d), (e), and (h) [see section A.III.], provided the permittee demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs a. through e. and h. of this section.

5. [60.482-4] STANDARDS: PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE - 40 CFR Part 60, Subpart VV

a. [60.482-4(a)]
Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 60.485(c) [see section A.V.].

b. [60.482-4(b)]
After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 60.482-9 [see section A.III.]. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 60.485(c) [see section A.V.].

c. [60.482-4(c)]
Any pressure relief device that is routed to a process or fuel gas system or

equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 60.482-10 [see section A.III.] is exempted from the requirements of paragraphs a. and b. of this section.

d. [60.482-4(d)]

i. [60.482-4(d)(1)]
Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of 60.482-4(a) and (b) [see paragraphs a. and b. of this section], provided the permittee complies with the requirements in 60.482-4(d)(2) [paragraph d.ii. of this section].

ii. [60.482-4(d)(2)]
After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 60.482-9[see section A.III.].

6. [60.482-5] STANDARDS: SAMPLING CONNECTION SYSTEMS - 40 CFR Part 60, Subpart VV

a. [60.482-5(a)]
Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in 60.482-1(c) [see section A.III.]. Gases displaced during the filling of the sample container are not required to be collected or captured.

b. [60.482-5(b)]
Each closed-purge, closed-loop, or closed-vent system as required in paragraph a. of this section shall comply with the requirements specified in 60.482-5(b)(1) through (b)(3) [paragraphs b.i. through b.iii. of this section]:

i. [60.482-5(b)(1)]
return the purged process fluid directly to the process line; or

ii. [60.482-5(b)(2)]
collect and recycle the purged process fluid to a process; or

iii. [60.482-5(b)(3)]
be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 60.482-10 [see section A.III.]; or

iv. [60.482-5(b)(4)]

collect, store, and transport the purged process fluid to any of the following systems or facilities:

(a) a waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(b) A treatment, storage, or disposal facility subject to regulation under 40 CFR parts 262, 263, 264, 265, or 266; or

(c) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

c. [60.482-5(c)]
In situ sampling systems and sampling systems without purges are exempt from the requirements of 60.482-5(a) and (b) [paragraphs a. and b. of this section].

7. [60.482-6] STANDARDS: OPEN-ENDED VALVES OR LINES - 40 CFR Part 60, Subpart VV

a. [60.482-6(a)(1) and (2)]
Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 60.482-1(c) [see section A.III.]. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

b. [60.482-6(b)]
Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

c. [60.482-6(c)]
When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall comply with 60.482-6(a) [paragraph a. of this section] at all other times.

d. [60.482-6(d)]
Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of 60.482-6(a) through (c) [see paragraphs a. through c. of this section].

e. [60.482-6(e)]
Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious over pressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in 60.482-6(a) through (c) [see paragraphs a. through c. of this section] are exempt from the requirements of 60.482-6(a) through (c) [see paragraphs a. through c. of this section].

8. [60.482-7] STANDARDS: VALVES IN GAS/VAPOR SERVICE AND IN LIGHT LIQUID SERVICE - 40 CFR Part 60, Subpart VV

a. [60.482-7(a)]
Each valve shall be monitored monthly to detect leaks by the methods specified in 60.485(b) [see section A.V.] and shall comply with 60.482-7(b) through (e) [paragraphs b. through e. of this section], except as provided in 60.482-7(f), (g) and (h) [paragraphs f., g., and h. of this section], 60.483-1, 60.483-2, and 60.482-1(c) [see section A.III.].

b. [60.482-7(b)]
If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

c. [60.482-7(c)(1) and (2)]
Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

d. [60.482-7(d)(1) and (2)]
When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 60.482-9 [see section A.III.]. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

e. [60.482-7(e)]
First attempts at repair include, but are not limited to, the following best practices where practicable:

i. [60.482-7(e)(1)]
tightening of bonnet bolts;

ii. [60.482-7(e)(2)]
replacement of bonnet bolts;

iii. [60.482-7(e)(3)]
tightening of packing gland nuts; and

iv. [60.482-7(e)(4)]
injection of lubricant into lubricated packing.

f. [60.482-7(f)]
Any valve that is designated, for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph a. of this section if the valve:

i. [60.482-7(f)(1)]
has no external actuating mechanism in contact with the process fluid;

ii. [60.482-7(f)(2)]
is operated with emissions less than 500 ppm above background as determined by the method specified in 60.485(c) [see section A.V.]; and

iii. [60.482-7(f)(3)]
is tested for compliance with paragraph f.ii. of this section initially upon designation, annually, and at other times requested by the Administrator.

g. [60.482-7(g)]
Any valve that is designated, as described in 60.486(f)(1) [see section A.III.], as an unsafe-to-monitor valve is exempt from the requirements of paragraph a. of this section if:

i. [60.482-7(g)(1)]
the permittee of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph a. of this section; and

ii. [60.482-7(g)(2)]
the permittee of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

h. [60.482-7(h)]
Any valve that is designated, as described in 60.486(f)(2) [see section A.III.], as a difficult-to-monitor valve is exempt from the requirements of paragraph a. of this section if:

i. [60.482-7(h)(1)]
the permittee of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;

ii. [60.482-7(h)(2)]
the process unit within which the valve is located either becomes an affected facility through 40 CFR Part 60.14 or 60.15 or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor; and

iii. [60.482-7(h)(3)]
the permittee of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

9. [60.482-8] STANDARDS: PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICES IN LIGHT LIQUID OR HEAVY LIQUID SERVICE, AND CONNECTORS - 40 CFR Part 60, Subpart VV

a. [60.482-8(a)]
If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief

devices in light liquid or heavy liquid service, and connectors, the permittee shall follow either one of the following procedures:

i. [60.482-8(a)(1)]
The permittee shall monitor the equipment within 5 days by the method specified in 60.485(b) [see section A.V.] and shall comply with the requirements of 60.482-8(b) through (d) [paragraphs b. through d. of this section].

ii. [60.482-8(a)(2)]
The permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

b. [60.482-8(b)]
If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

c. [60.482-8(c)]
When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 60.482-9 [see section A.III.]. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

d. [60.482-8(d)]
First attempts at repair include, but are not limited to, the best practices described under 60.482-7(e) [see section A.III.].

10. [60.482-9] STANDARDS: DELAY OF REPAIR - 40 CFR Part 60, Subpart VV

a. [60.482-9(a)]
Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

b. [60.482-9(b)]
Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

c. [60.482-9(c)]
Delay of repair for valves will be allowed if:

i. [60.482-9(c)(1)]
the permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair; and

ii. [60.482-9(c)(2)]
when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 60.482-10 [see section A.III.].

d. [60.482-9(d)]
Delay of repair for pumps will be allowed if:

i. [60.482-9(d)(1)]
repair requires the use of a dual mechanical seal system that includes a barrier fluid system; and

ii. [60.482-9(d)(2)]
repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

e. [60.482-9(e)]
Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

11. [60.482-10] STANDARDS: CLOSED VENT SYSTEMS AND CONTROL DEVICES - 40 CFR Part 60, Subpart VV

a. [60.482-10(a)]
Permittees of closed vent systems and control devices used to comply with provisions of 40 CFR Part 60, Subpart VV shall comply with the provisions of this paragraph and the record keeping for closed vent systems found in section A.III.

b. [60.482-10(b)]
Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

c. [60.482-10(c)]
Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit

concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

d. [60.482-10(d)]
Flares used to comply with this subpart shall comply with the requirements of 40 CFR Part 60.18.

e. [60.482-10(e)]
Permittees of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

f. [60.482-10(f)]
Except as provided in 60.482-10(i) through (k) [paragraphs i. through k. of this section], each closed vent system shall be inspected according to the procedures and schedule specified in 60.482-10(f)(1) and (f)(2) [paragraphs f.i. and f.ii. of this section].

i. [60.482-10(f)(1)]
If the vapor collection system or closed vent system is constructed of hard-piping, the permittee shall comply with the following requirements: conduct an initial inspection according to the procedures in 60.485(b) [see section A.V.]; and conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

ii. [60.482-10(f)(2)]
If the vapor collection system or closed vent system is constructed of ductwork, the permittee shall conduct an initial inspection according to the procedures in 60.485(b) [see section A.V.] and conduct annual inspections according to the procedures in 60.485(b) [see section A.V.].

g. [60.482-10(g)]
Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph h. of this section. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. Repair shall be completed no later than 15 calendar days after the leak is detected.

h. [60.482-10(h)]
Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

i. [60.482-10(i)]
If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of 60.482-10(f)(1) and (f)(2) [paragraphs f.i. and f.ii. of this section].

j. [60.482-10(j)]
Any parts of the closed vent system that are designated, as described in

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60.482-10(l)(1) [see section A.III.], as unsafe to inspect are exempt from the inspection requirements of 60.482-10(f)(1) and (f)(2) [paragraphs f.i. and f.ii. of this section] if they comply with the requirements specified in 60.482-10(j)(1) and (j)(2) [paragraphs j.i. and j.ii. of this section]:

i. [60.482-10(j)(1)]
the permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with 60.482-10(f)(1) or (f)(2) [paragraphs f.i. and f.ii. of this section]; and

ii. [60.482-10(j)(2)]
the permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

k. [60.482-10(k)(1)-(3)]
Any parts of the closed vent system that are designated, as described in 60.482-10(l)(2) [see section A.III.] of this section, as difficult to inspect are exempt from the inspection requirements of 60.482-10(f)(1) and (f)(2) [paragraphs f.i. and f.ii. of this section] if they comply with the requirements specified in 60.482-10(k)(1) through (k)(3) [paragraphs k.i. through k.iii. of this section]:

i. [60.482-10(k)(1)]
the permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

ii. [60.482-10(k)(2)]
the process unit within which the closed vent system is located becomes an affected facility through 40 CFR Part 60.14 or 60.15, or the permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

iii. [60.482-10(k)(3)]
the permittee has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

l. [60.482-10(l)]
The permittee shall record the information specified in 60.482-10(l)(1) through (1)(5) [paragraphs l.i. through l.v. of this section].

i. [60.482-10(l)(1)]
Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

ii. [60.482-10(l)(2)]
Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

iii. [60.482-10(l)(3)]
For each inspection during which a leak is detected, a record of the information specified in 60.486(c) [see section A.III.].

iv. [60.482-10(l)(4)]
For each inspection conducted in accordance with 60.485(b) [see section A.V.] during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

v. [60.482-10(l)(5)]
For each visual inspection conducted in accordance with section 60.482-10(f)(i) [see section A.III.] during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

m. [60.482-10(m)]
Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

12. [60.483-1] ALTERNATIVE STANDARDS FOR VALVES - ALLOWABLE PERCENTAGE OF VALVES LEAKING - 40 CFR Part 60, Subpart VV

a. [40.483-1(a)]
The permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

b. [40.483-1(b)]
The following requirements shall be met if the permittee wishes to comply with an allowable percentage of valves leaking:

i. [40.483-1(b)(1)]
The permittee must notify the Administrator that the permittee has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in 60.487(d). [see section A.IV.].

ii. [40.483-1(b)(2)]
A performance test as specified in paragraph c. of this section shall be conducted initially upon designation, annually, and at other times requested by the Director and Administrator.

iii. [40.483-1(b)(3)]
If a valve leak is detected, it shall be repaired in accordance with 60.482-7(d) and (e) [see section A.III.].

c. [40.483-1(c)]
Performance tests shall be conducted in the following manner:

i. [40.483-1(c)(1)]
All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in 60.485(b) [see section A.V.].

ii. [40.483-1(c)(2)]
If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

iii. [40.483-1(c)(3)]
The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

d. [40.483-1(d)]
Permittees who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent.

13. [60.483-2] ALTERNATIVE STANDARDS FOR VALVES - SKIP PERIOD LEAK DETECTION AND REPAIR - 40 CFR Part 60, Subpart VV

a. [60.483-2(a)]
The permittee may elect to comply with one of the alternative work practices specified in 60.483-2(b)(2) and (b)(3) [paragraphs b.ii. and b.iii. of this section]. The permittee must notify the Director and Administrator before implementing one of the alternative work practices, as specified in 40 CFR Part 60.487(b).

b. [60.483-2(b)(1)]

i. [60.483-2(b)(1)]
The permittee shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in 60.482-7 [see section A.III.].

ii. [60.483-2(b)(2)]
After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the permittee may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light

liquid service.

iii. [60.483-2(b)(3)]
After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the permittee may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

iv. [60.483-2(b)(4)]
If the percent of valves leaking is greater than 2.0, the permittee shall comply with the requirements as described in 60.482-7 [see section A.III.], but can again elect to use this section.

v. [60.483-2(b)(5)]
The percent of valves leaking shall be determined by dividing the sum of valves found leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements of this section.

vi. [60.483-2(b)(6)]
The permittee must keep a record of the percent of valves found leaking during each leak detection period.

14. [60.484] EQUIVALENCE OF MEANS OF EMISSION LIMITATION - 40 CFR Part 60, Subpart VV

a. [60.484(a)]
Each permittee subject to the provisions of this subpart may apply to the Director and Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

b. [60.484(b)(1)-(3)]
Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

i. [60.484(b)(1)]
Each permittee applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

ii. [60.484(b)(2)]
The Director and Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

iii. [60.484(b)(3)]
The Director and Administrator may condition the approval of equivalence

on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

c. [60.484(c)]
Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

i. [60.484(c)(1)]
Each permittee applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

ii. [60.484(c)(2)]
For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

iii. [60.484(c)(3)]
For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

iv. [60.484(c)(4)]
Each permittee applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

v. [60.484(c)(5)]
The Director and Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in 60.484(c)(4) [paragraph c.iv. of this section].

vi. [60.484(c)(6)]
The Director and Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

d. [60.484(d)]
The permittee may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

e. [60.484(e)(1)-(3)]
After a request for determination of equivalence is received, the Administrator will

publish a notice in the FEDERAL REGISTER and provide the opportunity for public hearing if the Administrator judges that the request may be approved. After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the FEDERAL REGISTER. Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the Clean Air Act.

f. [60.484(f)(1)-(2)]
Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart. The Administrator will make an equivalence determination according to the provisions of 60.484(b), (c), (d) and (e) [paragraphs b., c., d., and e. of this section].

15. [60.486] RECORD KEEPING REQUIREMENTS, EQUIPMENT LEAKS - 40 CFR Part 60, Subpart VV

a. [60.486(a)]
Each permittee subject to the provisions of 40 CFR Part 60, Subpart VV shall comply with the record keeping requirements of this section. A permittee of more than one affected facility subject to the provisions of this subpart may comply with the record keeping requirements for these facilities in one record keeping system if the system identifies each record by each facility.

b. [60.486(b)]
When each leak is detected as specified in 60.482-2, 60.482-3, 60.482-7, 60.482-8 and 40 CFR Part 60.483-2 [see section A.II], the following requirements apply:

i. [60.486(b)(1)]
A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

ii. [60.486(b)(2)]
The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 60.482-7(c) [see section A.III.] and no leak has been detected during those 2 months.

iii. [60.486(b)(3)]
The identification on equipment except on a valve, may be removed after it

has been repaired.

c. [60.486(c)]
When each leak is detected as specified in 60.482-2, 60.482-3, 60.482-7, 60.482-8 and 40 CFR Part 60.483-2 [see section A.III.], the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

i. [60.486(c)(1)]
The instrument and operator identification numbers and the equipment identification number.

ii. [60.486(c)(2)]
The date the leak was detected and the dates of each attempt to repair the leak.

iii. [60.486(c)(3)]
Repair methods applied in each attempt to repair the leak.

iv. [60.486(c)(4)]
"Above 10,000" if the maximum instrument reading measured by the methods specified in 60.485(a) [see section A.V.] after each repair attempt is equal to or greater than 10,000 ppm.

v. [60.486(c)(5)]
"Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

vi. [60.486(c)(6)]
The signature of the person (or designate) whose decision it was that repair could not be effected without a process shutdown.

vii. [60.486(c)(7)]
The expected date of successful repair of the leak if a leak is not repaired within 15 days.

viii. [60.486(c)(8)]
Dates of process unit shutdown that occur while the equipment is unrepaired.

ix. [60.486(c)(9)]
The date of successful repair of the leak.

d. [60.486(d)]
The following information pertaining to the design requirements for closed vent systems and control devices described in 60.482-10 [see section A.III.] shall be recorded and kept in a readily accessible location:

i. [60.486(d)(1)]
Detailed schematics, design specifications, and piping and instrumentation diagrams.

ii. [60.486(d)(2)]
The dates and descriptions of any changes in the design specifications.

iii. [60.486(d)(3)]
A description of the parameter or parameters monitored, as required in 60.482-10(e) [see section A.III.], to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

iv. [60.486(d)(4)]
Periods when the closed vent systems and control devices required in 60.482-2, 60.482-3, 60.482-4, and 60.482-5 [see section A.III.] are not operated as designed, including periods when a flare pilot light does not have a flame.

v. [60.486(d)(5)]
Dates of startups and shutdowns of the closed vent systems and control devices required in 60.482-2, 60.482-3, 60.482-4, and 60.482-5 [see section A.III.]

e. [60.486(e)]
The following information pertaining to all equipment subject to the requirements in 60.482-1 to 60.482-10 [see section A.III.] shall be recorded in a log that is kept in a readily accessible location:

i. [60.486(e)(1)]
A list of identification numbers for equipment subject to the requirements of 40 CFR Part 60, Subpart VV.

ii. [60.486(e)(2)]
A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 60.482-2(e), 60.482-3(i) and 60.482-7(f) [see section A.III.]. The designation of equipment subject to the requirements of 60.482-2(e), 60.482-3(i), or 60.482-7(f) [see section A.III.] shall be signed by the permittee.

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iii. [60.486(e)(3)]
A list of equipment identification numbers for pressure relief devices required to comply with 60.482-4 [see section A.III.].

iv. [60.486(e)(4)]
(a) The dates of each compliance test as required in 60.482-2(e), 60.482-3(i), 60.482-4, and 60.482-7(f) [see section A.III.].
(b) The background level measured during each compliance test.
(c) The maximum instrument reading measured at the equipment during each compliance test.

v. [60.486(e)(5)]
A list of identification numbers for equipment in vacuum service.

f. [60.486(f)]
The following information pertaining to all valves subject to the requirements of 60.482-7(g) and (h) [see section A.III.] and to all pumps subject to the requirements of 60.482-2(g) shall be recorded in a log that is kept in a readily accessible location:

i. [60.486(f)(1)]
A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

ii. [60.486(f)(2)]
A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each value.

g. [60.486(g)]
The following information shall be recorded for valves complying with 40 CFR Part 60.483-2:

i. A schedule of monitoring.

ii. The percent of valves found leaking during each monitoring period.

h. [60.486(h)(1)-(2)]
The following information shall be recorded in a log that is kept in a readily accessible location. The design criterion required in 60.482-2(d)(5) and 60.482-3(e)(2) [see section A.III.], and an explanation of the design criterion; along with any changes to this criterion and the reasons for the changes.

i. [60.486(i)]
The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR Part 60.480(d):

i. [60.486(i)(1)]
an analysis demonstrating the design capacity of the affected facility;

ii. [60.486(i)(2)]
a statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol; and

iii. [60.486(i)(3)]
an analysis demonstrating that equipment is not in VOC service.

j. [60.486(j)]
Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

k. [60.486(k)]

The provisions of 40 CFR Part 60.7(b) and (d) do not apply to affected facilities subject to 40 CFR Part 60, Subpart VV.

16. [OAC rule 3745-21-09(T)] STANDARDS FOR PETROLEUM REFINERY EQUIPMENT LEAKS OF VOCs FROM PUMP SEALS, PIPELINE VALVES, PROCESS DRAINS, COMPRESSOR SEALS AND PRESSURE RELIEF DEVICES

    a. [OAC rule 3745-21-09(T)(1)(d)]
    All pipeline valves in gas service and pressure relief valves in gas service shall be clearly marked and identified in such a manner that they will be obvious to both refinery personnel performing monitoring and to the Director.

    b. If a leak is identified as a result of the monitoring program required by paragraph a. of this section and the concentration of volatile organic compounds exceeds ten thousand parts per million by volume, a tag shall immediately be placed on the leaking component. The tag shall be readily visible and weatherproof; it shall bear an identification number; and it shall clearly indicate the date the leak was detected. The tag shall remain in place until the leaking component is repaired.

    c. [OAC rule 3745-21-09(T)(2)]
    Any permittee of a petroleum refinery shall repair and retest any leaking component, which is tagged and identified in accordance with paragraph b. of this section, as soon as possible but no later than fifteen days after the leak is found unless the leaking component cannot be repaired until a process unit turnaround occurs.

    d. [OAC rule 3745-21-09(T)(3)]
    The Toledo Division of Environmental Services may require a process unit turnaround to occur earlier than the normally scheduled date if the number and severity of leaking components awaiting a turnaround warrant such action. Any such process unit turnaround shall be required by means of an order issued by the Director to the permittee of the petroleum refinery pursuant to division (R) of section 3704.03 of the Ohio Revised Code.

    e. [OAC rule 3745-21-09(T)(4)] ALTERNATIVE MONITORING, RECORDKEEPING AND REPORTING
    The Toledo Division of Environmental Services may accept an alternative monitoring, recordkeeping and reporting program for that required by section A.I.2. if the permittee of a petroleum refinery can demonstrate to the satisfaction of the Director that the alternative program is at least as effective in identifying, documenting and reporting leaks from petroleum refinery equipment as the

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program outlined in this permit. For purposes of this paragraph, any proposed alternative program which the Director finds comparable to the requirements of paragraph (DD)(12) or (DD)(13) of OAC rule 3745-21-09 shall be acceptable to the Director.

The proposed alternative monitoring plan is as follows:

i. Affected Sources:
Pipeline valves in gas service and pressure relief valves in gas service that are not designated as difficult, inaccessible, or unsafe to monitor under OAC rule 3745-21-09(T)(1)(c) [see section A.III.].

ii. Alternative Program:
The permittee shall monitor the affected sources quarterly and repair leaks that are recorded to be in excess of 10,000 ppm as measured by the method specified in OAC rule 3745-21-10 within 5 days. Once two quarters are recorded in which leak percentage is below 2%, the permittee may skip one quarterly monitoring period. Once five consecutive quarters are recorded in which the percentage leaking is below 2%, the permittee may skip up to three quarterly monitoring periods. If the percentage leaking goes above 2%, the permittee will return to the monitoring specified in OAC rule 3745-21-09(T)(1)(a)(ii), but may again return to the alternative program when the leak percentage falls below 2%.

iii. Notification
The permittee may begin implementation of the alternative program upon written notification to the Toledo Division of Environmental Services.

iv. Calculation of Percent Leaking
The percentage leaking shall be conducted on a refinery-wide basis by comparing the total number of affected sources monitored with the sum of the affected sources leaking and the affected sources that have been placed on shutdown.

v. Recordkeeping and Reporting
The permittee shall submit reports as specified in OAC rule 3745-21-09(T)(1)(i). The permittee shall maintain records on site which show the percentage of valves leaking. These records will be made available to the Director upon request.

vi. Equivalency with OAC rule 3745-21-09(T)(1)(a)(ii)
This program is equivalent to OAC rule 3745-21-09(DD)(12), which has been determine to be acceptable to the Director as stated in OAC rule 3745-21-09(T)(4).

17. [OAC 3745-21-09(T)] MONITORING AND RECORDKEEPING REQUIREMENTS FOR PETROLEUM REFINERY EQUIPMENT LEAKS OF VOCs FROM PUMP SEALS, PIPELINE VALVES, PROCESS DRAINS, COMPRESSOR SEALS AND PRESSURE RELIEF DEVICES

a. [OAC 3745-21-09(T)(1)(a)]
Except as otherwise indicated in section A.I.2., a monitoring program shall be

developed and implemented which incorporates the following provisions:

i. Yearly monitoring of all pump seals, pipeline valves in liquid service and process drains in accordance with the method specified in section A.V.;

ii. Quarterly monitoring of all compressor seals, pipeline valves in gas service and pressure relief valves in gas service in accordance with the method specified in section A.V.;

iii. Monthly monitoring of all pump seals by visual methods;

iv. Monitoring of any pump seal in accordance with the method specified in section A.V. within five working days after any liquids are observed dripping from the seal;

v. Monitoring of any relief valve in accordance with the method specified in section A.V. within five working days after the valve has vented to the atmosphere; and

vi. Monitoring of any component in accordance with the method specified in section A.V. within five working days after the repair of a leak.

b. [OAC 3745-21-09(T)(1)(c)]
For any pipeline or pressure relief valves in gas or liquid service, an alternative monitoring schedule may be employed in lieu of the monitoring schedule specified in paragraph a. of this section as follows:

i. The valve is designated as difficult to monitor and is monitored each calendar year, provided the following conditions are met:
   (a) Construction of the process unit commenced prior to March 27, 1981;
   (b) The permittee of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than six feet above a support surface; and
   (c) The permittee of the valve has a written plan that requires monitoring of the valve at least once per year.

ii. The valve is designated as unsafe to monitor and is monitored as frequently as practical during safe to monitor times, provided the following conditions are met:
   (a) The permittee of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an

immediate danger as a consequence of monitoring on a quarterly or yearly basis as specified in paragraph a. of this section; and

(b) The permittee of the valve adheres to a written plan that requires monitoring of the valve as frequently as practical during process unit turnarounds and other safe to monitor times.

c. A monitoring log shall be maintained for all leaking components which are tagged in accordance with section A.II..[under OAC 3745-21-09(T)]. The monitoring log shall contain, at a minimum, the following data:

i. The name of the process unit where the leaking component is located;

ii. The type of leaking component (such as valve, seal, or other component);

iii. The tag number of the leaking component;

iv. The date on which the leaking component was detected;

v. The date on which the leaking component was repaired;

vi. The date and results of the monitoring performed within five working days after the leaking component was repaired;

vii. A record of the calibration of the monitoring instrument;

viii. A list of those leaking components which cannot be repaired until the next process unit turnaround; and

ix. The total number of components monitored and the total number of components found leaking during the calendar year.

d. [OAC 3745-21-09(T)(1)(g)]
A copy of any monitoring log shall be retained by the permittee for a minimum of two years after the date on which the record was made or the report was prepared.

e. [OAC 3745-21-09(T)(1)(h)]
A copy of any monitoring log shall immediately be made available to the Director or an authorized representative of the Director, upon verbal or written request, at any reasonable time.

ENHANCED LDAR PROGRAM AS REQUIRED BY CONSENT DECREE(CD) - Date of Entry, March 14, 2006

18. [CD, section N.78.] WRITTEN REFINERY-WIDE LDAR PROGRAM and COMPLIANCE CERTIFICATION.
Enhanced LDAR Program Description. By no later than 180 days (9/10/06) after Date of Entry of the Consent Decree, The permittee shall develop a written description of a

refinery-wide program designed to achieve and maintain compliance with all applicable federal and state LDAR regulations, as well as all requirements imposed by Section N. The permittee shall update each Refinery's program description as necessary to ensure continuing compliance. By no later than 180 days (9/10/06) after Date of Entry of the Consent Decree, The permittee shall submit copies of its enhanced LDAR program descriptions to U.S. EPA, Ohio EPA, and the Toledo Division of Environmental Services, and shall maintain an updated version of that Refinery's program description. Until the Date of Termination, the permittee shall use the enhanced LDAR program descriptions prepared pursuant to this Paragraph to implement an enhanced LDAR program at each Refinery, as required by this Section V.N. The Refinery's program description shall include at a minimum:

a. A set of refinery-specific leak rate goals that will be a target for achievement on process-unit-by-process-unit basis;

b. An identification of all equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs, HAPs, VHAPs, and benzene within process units that are owned and maintained at each Refinery;

c. Procedures for identifying leaking equipment within process units that are owned and maintained at each Refinery;

d. Procedures for repairing and keeping track of leaking equipment;

e. Procedures for identifying and including in the LDAR program new equipment;

f. A process for evaluating new and replacement equipment to promote consideration and installation of equipment that will minimize leaks and/or eliminate chronic leakers;

g. A designation of the "LDAR Personnel" and the "LDAR Coordinator" who are responsible for implementing the enhanced LDAR program at the Refinery; and

h. Procedures designed to ensure that components subject to LDAR requirements that are added to the Refinery during scheduled maintenance and construction activities are integrated into the enhanced LDAR program.

19. [CD, section N.79.] TRAINING
By no later than one (1) year from Date of Entry of the Consent Decree (March 14, 2007), the Permittee shall implement a training program that includes the following features:

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a. Any person assigned LDAR program responsibilities at a Refinery shall be given initial training as described by this Paragraph 79 before performing any LDAR work;

b. For any of the permittee's employees assigned LDAR responsibilities as a primary job function (such as monitoring technicians, database users, QA/QC personnel, and the LDAR Coordinator), the Permittee shall provide and require completion of annual LDAR training (on an initial and recurrent basis);

c. For all other of the permittee's operations and maintenance personnel, the permittee shall provide and require completion of annual training (on an initial and recurrent basis) on aspects of LDAR that are relevant to the person's duties; and

d. For contract employees who perform LDAR work, the permittee shall either provide those personnel annual training (on an initial and recurrent basis) as described by this Paragraph 79, or shall require that the contractor provides annual training (on an initial and recurrent basis) as described by this Paragraph.

20. [CD, section N.80.] LDAR AUDITS

a. Initial Compliance Audit. By no later than 270 days (12/9/06) after Date of Entry of the Consent Decree, a third-party contractor retained by the permittee shall complete a refinery-wide initial audit of its compliance with all applicable LDAR requirements, which shall include, at a minimum:

i. performing comparative monitoring;

ii. reviewing records to ensure that monitoring and repairs have been completed in the required time frames;

iii. reviewing component identification procedures and data management procedures;

iv. observing LDAR technicians' calibration and monitoring techniques; and

v. an applicability review for regulations potentially applicable to the permittee's process units.

Within 90 days after completing the Initial Compliance Audit, the permittee shall submit to EPA an Initial Compliance Audit Report which shall describe the results of the audit, disclose all areas of identified noncompliance, identify all steps taken to remedy the identified non-compliance, and certify the permittee's full compliance with all applicable LDAR requirements as of the date of the Report.

b. Commencing on Date of Entry of the Consent Decree (March 14, 2006), the permittee shall implement, the refinery-wide audits set forth in Paragraphs 80.c and 80.d (of the consent decree) to ensure the Refinery's compliance with all applicable

LDAR requirements. The permittee's LDAR audits shall include, at a minimum:

i. performing comparative monitoring;

ii. reviewing records to ensure that monitoring and repairs have been completed in the required time frames;

iii. reviewing component identification procedures and data management procedures; and

iv. observing LDAR technicians' calibration and monitoring techniques.

To ensure that an audit at the Refinery occurs every two years, third-party audits required by Paragraph 80.c and the internal audits required by Paragraph 80.d (of the consent decree) shall be separated by two (2) years. As an alternative to the internal audits required by Paragraph 80.d. of the consent decree, the permittee may elect to retain third-parties to undertake these audits, provided that an audit of the Refinery occurs every two (2) years. For each audit conducted under Paragraph 80.c. or d. of the consent decree, the permittee shall require the auditors to prepare a written audit report describing the audit's scope and findings.

c. Third-Party Audits.
The permittee shall retain a contractor(s) to perform a third-party audit of the Refinery's LDAR program at least once every four (4) years.

d. Internal Audits.
The permittee shall conduct internal audits of the Refinery's LDAR program by sending personnel familiar with the LDAR program and its requirements from one or more of the permittee's refineries or locations to audit another Sunoco Refinery. The permittee shall complete the first round of these internal LDAR audits by no later than two (2) years from the date of the completion of the initial third-party audit required in Paragraph 80.a. of the consent decree. Internal audits at the Refinery shall be held every four (4) years thereafter until the Date of Termination unless the permittee elects to retain third parties to conduct these audits pursuant to Paragraph 80.c. of the consent decree.

21. [CD, section N.81.] ACTIONS NECESSARY TO CORRECT NONCOMPLIANCE.
If the results of any of the audits conducted pursuant to Paragraph 80 of the consent decree at the Refinery identifies any areas of noncompliance, The permittee shall implement, as soon as practicable, all steps necessary to correct the area(s) of noncompliance, and to prevent, to the extent practicable, a recurrence of the cause of the noncompliance. Until the Date of Termination, the permittee shall retain the audit reports for all audits conducted pursuant to Paragraphs 80.c. and d. of the consent decree and shall maintain a written record of the corrective actions that the permittee takes at each Refinery in response to any deficiencies identified in any audits. In the semiannual report submitted pursuant to the provisions of Section IX of this Consent Decree ("Reporting and Recordkeeping") for the first semiannual period of each calendar year, the permittee shall submit the audit reports and corrective action records for audits performed and actions taken during the previous calendar year.

22. [CD, section N.82.] INTERNAL LEAK DEFINITION FOR VALVES and PUMPS
By no later than two (2) years after Date of Entry of the Consent Decree (March 14, 2008), the permittee shall utilize the following internal leak definitions for valves and pumps in light liquid and/or gas/vapor service, unless other permit(s), regulations, or laws require the use of lower leak definitions.

a. Leak Definition for Valves.
The permittee shall utilize an internal leak definition of 500 ppm VOCs for all the Refineries' valves, excluding pressure relief devices.

b. Leak Definition for Pumps.
The permittee shall utilize an internal leak definition of 2000 ppm for its Refineries' pumps.

23. [CD, section N.83.] REPORTING, RECORDING, TRACKING, REPAIRING and REMONITORING LEAKS of VALVES and PUMPS BASE on the INTERNAL LEAK DEFINITIONS

a. Reporting.
For regulatory reporting purposes, the permittee may continue to report leak rates

in valves and pumps against the applicable regulatory leak definition, or may use the lower, internal leak definitions specified in Paragraph 82. of the consent decree.

b. Recording, Tracking, Repairing and Remonitoring Leaks.
The permittee shall record, track, repair, and remonitor all leaks above the internal leak definitions specified by Paragraph 82. of the consent decree (at such time as those definitions become applicable). For any component leaking above the applicable regulatory leak rate, The permittee shall repair and remonitor the component or place the component on a "delay of repair" list as required by the applicable regulations and Paragraph 90. For any component leaking above the internal leak definitions specified by Paragraph 82 of the consent decree but below the applicable regulatory leak rate, the permittee shall make an initial attempt at repair and remonitor the component within five (5) calendar days, and shall complete repairs and remonitor the component or place the component on a "delay of repair" list according to Paragraph 90 of the consent decree within 30 calendar days.

24. [CD, section N.84.] LDAR MONITORING FREQUENCY

a. Pumps.
By no later than the date the internal leak definitions under Paragraph 82 of the consent decree become effective, the permittee shall monitor pumps at the lower leak definition established by Paragraph 82.b. on a monthly basis, unless more frequent monitoring is required by a federal, state, or local regulation.

b. Valves. By no later than the date the internal leak definitions under Paragraph 82 of the consent decree become effective, the permittee shall implement a program to monitor valves at the lower leak definition established by Paragraph 82.a. of the consent decree on a quarterly basis, unless more frequent monitoring is required by a federal, state, or local regulation.

25. [CD, section N.85.] FIRST ATTEMPT AT REPAIRS ON VALVES
Commencing no later than 90 days (6/12/06) after Date of Entry of the Consent Decree, The permittee shall make a "first attempt at repair" within one (1) calendar day on any valve that has a reading greater than 200 ppm of VOCs and that LDAR personnel are authorized to repair. The permittee or its designated contractor shall remonitor all valves no later than the next calendar day at that Refinery where LDAR personnel made a "first attempt at repair." If the re-monitored leak reading is greater than the applicable leak definition, The permittee may delay further repairs up to five (5) days after initial identification in order to assess the persistence of the leak by re-monitoring again. If the

re-monitored leak reading is below the applicable leak definition, no further action will be necessary. If the re-monitored leak reading is greater than the applicable leak definition, The permittee shall repair the valve according to the requirements of Paragraph 83.b. of the consent decree, except that no first repair attempt requirement shall apply.

26. [CD, section N.86.] ELECTRONIC MONITORING, STORING, and REPORTING of LDAR DATA

    a. Electronic Storing and Reporting of LDAR Data.
    At the Refinery, The permittee will develop or continue to maintain an electronic database for storing and reporting LDAR data.

    b. Electronic Data Collection During LDAR Monitoring and Transfer Thereafter.
    By no later than 180 days (9/10/06) after Date of Entry of the Consent Decree, The permittee shall make maximum possible use of data loggers and/or other electronic data collection devices for all data collection during all LDAR monitoring. The permittee shall ensure that the responsible The permittee employees or contractor personnel shall transfer, on a daily basis, electronic data from electronic data logging devices to the electronic database required by Paragraph 86.a. of the consent decree. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include an accurate time and date stamp for each monitoring event, the monitoring reading, and identifying information on the operator and the instrument used in the monitored event. The permittee may use paper logs where necessary or more feasible (e.g., small rounds, remonitoring, or when data loggers are not available or broken), and shall record, at a minimum, the identification of the technician undertaking the monitoring, the date, daily start and end times for the monitoring conducted, each monitoring reading, and the identification of the monitoring equipment. The permittee shall transfer any manually recorded monitoring data to the electronic database required by Paragraph 86.a. of the consent decree within seven (7) days of monitoring.

27. [CD, section N.87.] QA/QC of LDAR DATA

    a. By no later than 120 days (7/18/06) after Date of Entry of the Consent Decree, The permittee, or a third-party contractor retained by The permittee, shall develop and implement a procedure at the Refinery to ensure a quality assurance/quality control ("QA/QC") review of all data generated by LDAR monitoring technicians.

        i. The permittee shall ensure that monitoring data provided to The permittee by its contractors is reviewed for QA/QC before the contractor submits the data to The permittee.

        ii. At least once per calendar quarter, The permittee shall perform QA/QC of any contractor’s monitoring data which shall include, but not be limited to: number of components monitored per technician, time between monitoring

events, and abnormal data patterns.

iii. The permittee shall implement a system for daily reporting of monitored activity and for periodically reviewing the daily results by appropriate operating supervisors.

28. [CD, section N.88.] LDAR PERSONNEL
By no later than 180 days (9/10/06) after Date of Entry of the Consent Decree, The permittee shall establish a program that will hold LDAR personnel accountable for LDAR performance. The permittee shall establish and maintain an LDAR Coordinator position within each Refinery, responsible for LDAR management, with the authority to implement improvements.

29. [CD, section N.89.] CALIBRATION/CALIBRATION DRIFT ASSESSMENT

    a. Calibration.
    Commencing on Date of Entry of the Consent Decree, The permittee shall conduct all calibrations of LDAR monitoring equipment at each Refinery in accordance with 40 C.F.R. Part 60, EPA Reference Test Method 21.

    b. Calibration Drift Assessment.
    Commencing on Date of Entry of the Consent Decree, at each Refinery, The permittee shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. The permittee shall conduct the calibration drift assessment using, at a minimum, a calibration gas corresponding to the applicable leak threshold. If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, The permittee shall remonitor all valves that were monitored since the last calibration that had a reading greater than 100 ppm and shall remonitor all pumps that were monitored since the last calibration that had a reading greater than 500 ppm

    c. The permittee shall maintain records of all instrument calibrations for a period of one year after performing the calibrations.

30. [CD, section N.90.] DELAY of REPAIR and REQUIRED REPAIRS

    a. Within 30 days of submittal of the enhanced LDAR program description described in Paragraph 78 of the consent decree, The permittee shall comply with the provisions of Paragraph 90 of the consent decree at the Refinery.

    b. Delay of Repair.
    For any equipment that The permittee is allowed under the applicable regulations to place on the "delay of repair" list for repair, The permittee shall:

        i. Require sign-off by the appropriate operating supervisor (which position will be identified in the Refinery’s written enhanced LDAR program description) that the valve or pump is eligible for inclusion on the "delay of repair" list; and

        ii. Include any valve or pump that is placed on the "delay of repair" list in The permittee’s regular LDAR monitoring.

    c. Required Repairs on Leaking Valves

        i. Within 30 days of the implementation of the enhanced LDAR program, for valves, other than control valves, leaking at a rate of 10,000 ppm or greater and which cannot be repaired using traditional techniques, The permittee

shall use the "drill and tap" or similarly effective method to repair the leaking valve, rather than placing the valve on the "delay of repair" list, unless The permittee can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. If not repaired within fifteen (15) days by other means, The permittee shall make the first "drill and tap" or similarly effective repair attempt within fifteen (15) days after the leak was identified, and shall have 45 days after the leak was identified to complete the repair attempts.

ii. Within 30 days of the implementation of the enhanced LDAR program, for valves other than control valves or pressure relief valves leaking at a rate of 50,000 ppm or greater, The permittee shall use the "drill and tap" or similarly effective method to repair the leaking valve, rather than placing the valve on the "delay of repair" list, unless The permittee can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. If not repaired within fifteen (15) days by other means, The permittee shall make the first "drill and tap" or similarly effective repair attempt within fifteen (15) days after the leak was identified, and shall have 21 days after the leak was identified to complete the repair attempts.

iii. After two unsuccessful attempts to repair a leaking valve through the "drill and tap" or similarly effective repair method, The permittee may place the leaking valve on its "delay of repair" list. The permittee shall inform EPA of any similarly effective repair methods (alternate repair methods to "drill and tap") used to comply with Paragraphs 90.c.i or 90.c.ii of this consent decree.

31. [CD, section N.91.] CHRONIC LEAKER PROGRAM
The permittee shall replace, repack, or perform similarly effective repairs on all "chronic leaker" non-control valves during the next process unit turnaround. A component shall be classified as a "chronic leaker" under Paragraph 91 if it leaks above 5000 ppm twice in any consecutive four (4) calendar quarters, unless the component has not leaked in the six (6) consecutive calendar quarters prior to the relevant process unit turnaround.

32. [CD, section N.92.] RECORDKEEPING and REPORTING REQUIREMENTS OF THIS SECTION

a. Outside of the reports required under 40 C.F.R. 63.654 and the progress report procedures of Section IX of the consent decree, no later than 30 days after completion of the development of the written refinery-wide enhanced LDAR program descriptions that The permittee develops pursuant to Paragraph 78 of the consent decree, The permittee shall submit a copy of each Covered Refinery’s

program description to the Relevant Government Agencies.

b. Consistent with the requirements of Section IX of the consent decree, at the later of: (i) the first progress report due under the consent decree; or (ii) the first progress report in which the requirement becomes due, The permittee shall include the following:

i. A certification of the implementation of the "first attempt at repair" program under Paragraph 85 of the consent decree;

ii. A certification of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 87 of the consent decree;

iii. An identification of the LDAR Coordinator at each Refinery responsible for LDAR performance as required by Paragraph 88 of the consent decree;

iv. A certification of the implementation of the calibration drift assessment procedures of Paragraph 89 of the consent decree;

v. A certification of the implementation of the "delay of repair" procedures of Paragraph 90 of the consent decree; and

vi. A certification of the implementation of the internal leak definition and monitoring frequency procedures under Paragraphs 82 and 84 of the consent decree.

IV. Reporting Requirements

1. [63.654(d)] REPORTS - 40 CFR Part 63, Subpart CC
The permittee subject to the equipment leaks standards in 63.648 [see section A.III.] shall comply with the recordkeeping and reporting provisions in 63.648(d)(1) through (d)(6) [paragraphs a. through e. of this section].

a. [63.654(d)(1)]
Sections 60.486 and 60.487 of subpart VV of part 60 except as specified in 63.654(d)(1)(i) [paragraph a.i. of this section].

i. [63.654(d)(1)(i)]
The signature of the owner or operator (or designate) whose decision it was that a repair could not be effected without a process shutdown is not required to be recorded. Instead, the name of the person whose decision it was that a repair could not be effected without a process shutdown shall be recorded and retained for 2 years.

b. [63.654(d)(3)]

The permittee who determines that a compressor qualifies for the hydrogen service exemption in 63.648 [see section A.III.] shall also keep a record of the demonstration required by 63.648 [see section A.III.].

c. [63.654(d)(4)]
The permittee must keep a list of identification numbers for valves that are designated as leakless per 63.648(c)(10).

d. [63.654(d)(5)]
The permittee must identify, either by list or location (area or refining process unit), equipment in organic HAP service less than 300 hours per year within refining process units subject to this subpart.

e. [63.654(d)(6)]
The permittee must keep a list of reciprocating pumps and compressors determined to be exempt from seal requirements as per 63.648(f) and (i) [see section A.III.].

2. [63.654(h)] REPORTS - 40 CFR Part 63, Subpart CC
The following reports shall be submitted as specified in 40 CFR Part 63, Subpart A and as follows:

a. [63.654(h)(1)]
Reports of startup, shutdown, and malfunctions required by 40 CFR Part 63.10(d)(5) of 40 CFR Part 63, Subpart A. For purposes of this paragraph, startup and shutdown shall have the meaning defined in 40 CFR Part 63.641, and malfunction shall have the meaning defined in 40 CFR Part 63.2 of Subpart A.

b. [63.654(h)(6)(iii)]
The permittee shall submit the information specified in 63.654 (h)(6)(i) through (h)(6)(iii) [paragraphs b.i. through b.iii. of this section], as applicable. For existing emissions units, this information shall be submitted in the initial Notification of Compliance Status report. For a new source, the information shall be submitted with the application for approval of construction or reconstruction required by 40 CFR Part 63.5(d) of Subpart A. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

i. The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units.

ii. The determination of applicability of this subpart to any storage vessel for

which use varies from year to year.

iii. The determination of applicability of this subpart to any distillation unit for which use varies from year to year.

3. [60.487] REPORTING REQUIREMENTS, EQUIPMENT LEAKS - 40 CFR Part 60, Subpart VV

a. [60.487(a)]
Each permittee subject to the provisions of this subpart shall submit semiannual reports to the Director and Administrator beginning six months after the initial start-up date.

b. [60.487(c)]
All semiannual reports to the Director and Administrator shall include the following information, summarized from the information in 60.486 [see section A.III.]:

i. [60.487(c)(1)]
Process unit identification.

ii. [60.487(c)(2)]
For each month during the semiannual reporting period:
(a) number of valves for which leaks were detected as described in 60.482(7)(b) [see section A.III.];
(b) number of valves for which leaks were not repaired as required in paragraph 60.482-7(d)(1) [see section A.III.];
(c) number of pumps for which leaks were detected as described in 60.482-2(b) and (d)(6)(i) [see section A.III.];
(d) number of pumps for which leaks were not repaired as required in 60.482-2(c)(1) and (d)(6)(ii) [see section A.III.];
(e) number of compressors for which leaks were detected as described in 60.482-3(f) [see section A.III.];
(f) number of compressors for which leaks were not repaired as required in 60.482-3(g)(1) [see section A.III.]; and
(g) the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

iii. [60.487(c)(3)]
Dates of process unit shutdowns which occurred within the semiannual reporting period.

iv. [60.487(c)(4)]
Revisions to items reported according to 40 CFR Part 60.487(b) if changes have occurred since the initial report or subsequent revisions to the initial report.

Issued: To be entered upon final issuance

c. [60.487(d)]
The permittee electing to comply with the provisions of 40 CFR Part 60.483-1 or 60.483-2 shall notify the Director and Administrator of the alternative standard selected 90 days before implementing either of the provisions.

d. [60.487(e)]
The permittee shall report the results of all performance tests in accordance with 40 CFR Part 60.8 of the General Provisions. The provisions of 40 CFR Part 60.8(d) do not apply to affected facilities subject to the provisions of 40 CFR Part 60 Subpart VV except that the permittee must notify the Director and Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

4. [OAC 3745-21-09(T)] REPORTING REQUIREMENTS FOR PETROLEUM REFINERY EQUIPMENT LEAKS OF VOCs FROM PUMP SEALS, PIPELINE VALVES, PROCESS DRAINS, COMPRESSOR SEALS AND PRESSURE RELIEF DEVICES

[OAC 3745-21-09(T)(1)(i)] A report shall be submitted to the Director by the fifteenth day of January, April, July and October that gives the total number of components monitored during the previous three calendar months, gives the total number of components found leaking during the previous three calendar months, identifies all components which were found leaking during the previous three calendar months but which were not repaired within fifteen days and identifies all leaking components which cannot be repaired until the next process unit turnaround.

5. [CD, section N.92.c.] REPORTING REQUIREMENTS OF THIS SECTION of the CONSENT DECREE

a. Semiannual reports due under 40 CFR 63.654. In the first semiannual report of each calendar year required under 40 CFR 63.654, The permittee shall identify each audit that was conducted pursuant to the requirements of Paragraph 80 of the consent decree in the previous calendar year including, an identification of the auditors, a summary of the audit results, and a summary of the actions that The permittee took or intend to take to correct all deficiencies identified in the audits. In each semiannual report due under 40 CFR 63.654, The permittee shall include:

i. Training.
Information identifying the measures that The permittee took to comply with the provisions of Paragraph 79 of the consent decree; and

ii. Monitoring.
The following information on LDAR monitoring:

(a) a list of the process units monitored during the quarter;
(b) the number of valves and pumps monitored in each process unit;
(c) the number of valves and pumps found leaking;
(d) the number of components not fixed within 30 days or placed on the delay of repair list;

(e) the number of first repair attempts not completed within five (5) days;
(f) the number of first attempts not performed within one (1) day according to Paragraph 85 of the consent decree;
(g) the number of "difficult to monitor" pieces of equipment monitored;
(h) number of all chronic leakers not repaired during the prior turnaround; and
(i) a list of all equipment currently on the "delay of repair" list and the date each component was placed on the list; and the number of repair attempts not completed according to the time frames in Paragraph 90 of the consent decree.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:
   VOC emissions from facility-wide fugitive equipment leaks shall not exceed 385.43 tons per year per rolling 12-month summation of the monthly emissions.

Applicable Compliance Method:

The facility-wide potential to emit (PTE) fugitive emissions are based upon the sum of PTE fugitive emissions from components in each emissions unit at the facility. These components include all valves, pumps, pressure relief valves, connectors, open-ended lines and sampling connections in regulated service at the facility. The fugitive emissions are calculated using the facility component count, component service type, and the petroleum industry screening value correlations.

Fugitive emission rates are calculated utilizing Tables 2-10 "Petroleum Industry Leak Rate/Screening Value Correlations"; 2-12 "Default-Zero Values: Petroleum Industry" and 2-14 "10,000 ppmv and 100,000 ppmv Screening Value Pegged Emission Rates for the Petroleum Industry" as listed in "Protocol for Equipment Leak Emission Estimates" (EPA-453/R-95-017). Use of "Default Zero Values" can only be used for non-detectable screening values as measured by a portable monitoring device having a minimum detection limit of greater than 1 ppmv.

The equipment service/type (gas/vapor, light liquid and heavy liquid service) for each component is determined according to the definitions contained in 40 CFR Part 63, Subpart CC for equipment in organic HAP service. For equipment not in organic HAP service, the equipment service/type (gas/vapor, light liquid and heavy liquid service) is determined according to the following definitions.

In gas/vapor service means that the piece of equipment contains or contacts process fluid that is in the gaseous state at the operating conditions.

In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

In light liquid service means that the piece of equipment contains or contacts process fluid that meets the conditions specified in paragraph (O)(3) of OAC rule 3745-21-10.

The fugitive emissions shall be calculated by multiplying all components in a given service type by the respective leak emission rates as listed in the tables of "Protocol for Equipment Leak Emission Estimates" (EPA-453/R-95-017) and then converted to tons per year. The total facility-wide VOC emissions from fugitive equipment leaks is the sum of emissions from all components at the facility.

2. [60.485] TEST METHODS AND PROCEDURES, LEAK DETECTION - 40 CFR Part 60,

Emissions Unit ID: P801

Subpart VV

a. [60.485(a)]
In conducting the performance tests required in 40 CFR Part 60.8, the permittee shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in 40 CFR Part 60.8(b).

b. [60.485(b)]
The permittee shall determine compliance with the standards in 60.482, 60.483, and 60.484 [see section A.III.] as follows. Method 21 shall be used to determine the presence of leaking emissions units. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

i. [60.485(b)(1)(i)]
zero air (less than 10 ppm of hydrocarbon in air); and

ii. [60.485(b)(1)(ii)]
a mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.

c. [60.485(c)]
The permittee shall determine compliance with the no detectable emission standards in 60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f) and 60.482-10(e) [see section A.III.] as follows:

i. [60.485(c)(1)]
The requirements of paragraph (b) shall apply.

ii. [60.485(c)(2)]
Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicates by the instrument and the background level is compared with 500 ppm for determining compliance.

d. [60.485(d)]
The permittee shall test each piece of equipment unless he demonstrates that a process unit is not in VOC series, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

i. [60.485(d)(1)]
Procedures that conform to the general methods in ASTM E-260-73,91 or 96, E-168-67,77 or 92, E-169-63,77 or 93 (incorporated by reference-see 40

CFR Part 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

ii. [60.485(d)(2)]
Organic compounds that are considered by the Director and Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

iii. [60.485(d)(3)]
Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Director and Administrator disagree with the judgment, paragraphs d.i. and d.ii. of this section shall be used to resolve the disagreement.

e. [60.485(e)]
The permittee shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:

i. [60.485(e)(1)]
The vapor pressure of one or more of the components is greater than 0.3 kPa at 20°C (1.2 in H_2O at 68° F). Standard reference texts or ASTM D-2879 (incorporated by reference-see 40 CFR Part 60.17) shall be used to determine the vapor pressures.

ii. [60.485(e)(2)]
The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20°C (1.2 in H_2O at 68° F) is equal to or greater than 20 percent by weight.

iii. [60.485(e)(3)]
The fluid is a liquid at operating conditions.

f. [60.485(f)]
Samples used in conjunction with paragraphs d., e., and g. of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

g. [60.485(g)]
The permittee shall determine compliance with the standards of flares as follows:

i. [60.685(g)(1)]
Method 22 shall be used to determine visible emissions.

ii. [60.685(g)(2)]
A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

iii. [60.685(g)(4)]
The net heating value (H_T) of the gas being combusted in a flare shall be computed using the equation found in 40 CFR Part 60.685(g)(4).

iv. [60.685(g)(5)]
Method 18 and ASTM D 2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference-see 40 CFR Part 60.17) shall be used to determine the concentration of sample component "i.".

v. [60.685(g)(6)]
ASTM D 2382-76 or 88 or D4809-95 (incorporated by reference-see 40 CFR Part 60.17) shall be used to determine the net heat of combustion of component "i" if published values are not available or cannot be calculated.

vi. [60.685(g)(7)]
Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

3. [OAC 3745-21-09(T)] METHOD FOR THE DETECTION OF LEAKS OF VOC COMPOUNDS FROM PETROLEUM REFINERY EQUIPMENT

a. [OAC 3745-21-10(F)(1)]
This method is applicable to the detection of leaks of volatile organic compounds into the ambient air from petroleum refinery equipment and any chemical manufacturing equipment subject to paragraph (T) or (DD) of OAC rule 3745-21-09 of the Ohio Administrative Code.

b. [OAC 3745-21-10(F)(2)]
The detection of leaks shall be determined in accordance with the test procedure set forth in "Method 21, 40 CFR, Part 60, Appendix A."

c. [OAC 3745-21-10(F)(3)]
The calibration gases shall be:

i. Zero air, which consists of less than ten ppmv of hydrocarbon in air; and

ii. A mixture of air and methane or n-hexane at a concentration of approximately, but less than, ten thousand ppmv of methane or n-hexane.

d. [OAC 3745-21-10(F)(4)]
The leak detection instrument shall be calibrated before use on each day of its use.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this Permit to Install for emissions unit P801 supercedes all requirements for the following emissions units:

Emissions Unit	PTI Number
P019	04-0255
P020	04-0255
P023	04-0303
P024	04-0365
P025	04-0382
P027	04-0405
P028	04-0419
P034	04-01199

2. [CD, section XVIII, 245] TERMINATION of the CONSENT DECREE
The Consent Decree shall be subject to termination upon motion by the United States or Sunoco under the conditions identified in Paragraphs 245 through 247 of the Consent Decree. Sunoco may seek termination of the Consent Decree upon either (A) completion and satisfaction at the relevant Refinery of all of the following requirements stated in Paragraphs 245.a-e.; or (B) anytime after the permanent shutdown of, and relinquishment of all operating permits for, such Refinery.

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - *(P801) -Facility-wide Leak Detection and Repair (LDAR) program subject to refinery MACT* and OAC rule 3745-21-09(T)

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Issued: To be entered upon final issuance