State of Ohio Environmental Protection Agency

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8/4/2008

Certified Mail

No	TOXIC REVIEW
Yes	PSD
No	SYNTHETIC MINOR
Yes	CEMS
Yes	MACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED

Stephan Dopuch
Ohio River Clean Fuels LLC
9013 NE Highway 99, Suite S
Vancover, WA 98665

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0215130393
Permit Number: 02-22896
Permit Type: Initial installation
County: Columbiana

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of 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 permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Morning Journal. A copy of the public notice and the draft permit are enclosed. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page http://www.epa.state.oh.us/dapc in Microsoft Word and Adobe Acrobat format. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
122 South Front Street
Columbus, Ohio 43215

and

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
Ohio EPA-NEDO; Pennsylvania; West Virginia

Columbiana County

PUBLIC NOTICE
Issuance Of Draft Air Pollution Permit-To-Install
Ohio River Clean Fuels LLC

Issue Date: 8/4/2008
Permit Number: 02-22896
Permit Type: Initial installation
Permit Description: Installation of a coal/biomass-to-liquid fuels facility, including gasification and related equipment.
Facility ID: 0215130393
Facility Location: Ohio River Clean Fuels LLC
Sixteen Scool Road,
Wellsville, OH 43958
Facility Description: All Other Basic Organic Chemical Manufacturing

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft action of an air pollution control permit-to-install (PTI) for the facility at the location identified above on the date indicated. This draft permit proposes to allow the installation of gasification and related equipment at a new coal/biomass-to-liquids (CBTL) facility for production of transportation fuels, to be located along the southeastern border of Columbiana County, Ohio. The draft permit proposed allowable emissions rates of PSD pollutants from the new facility are listed below, in tons per year. Pollutant Tons/yr Particulate 443.1 PM10/PM2.5 363.4 NOX 842.7 SO2 1213.4 CO 4844.0 VOC 275.0 H2S 24.3 This facility is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by U.S. EPA (40 CFR 52.21) and the Ohio EPA permit to install requirements (OAC 3745-31). The U.S. EPA allows sources to consume no more than the maximum available ambient PSD increment(s) for each PSD pollutant. The Ohio EPA allows PSD sources to consume less than one half the available increment. This facility has demonstrated that the impact from the new sources is less than one half the available increment. Based on this analysis, the project complies with the increment requirements for PM10, NOx and S02. There are no PSD increments for CO. For such pollutants, Ohio EPA only allows a source to have impacts up to one quarter of the National Ambient Air Quality Standards. Based on this analysis, the project complies with this requirement for CO. A public hearing on the draft air permit is scheduled for September 10, 2008, at Wellsville High School, 1 Bengal Way, Wellsville, Ohio. The public information session and hearing will commence at 6:30 p.m. to accept comments on the draft permit. 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 on the draft permit must be received by the close of the business day on September 15, 2008. Comments received after this date will not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to: Bob Princic of the Northeast District Office, 2110 Aurora Road, Twinsburg, Ohio, 44087. Copies of the draft permit application and technical support information may be reviewed and/or copies made by first calling to make an appointment at the Northeast District Office, located at the above address, telephone number (330) 425-9171. The permit can be downloaded from the Web page: www.epa.state.oh.us/dapc

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS FOR OHIO RIVER CLEAN FUELS (ORCF), BAARD ENERGY WELLSVILLE, OHIO (COLUMBIANA CO.) PTI NUMBER 02-22896

July 31, 2008

Ohio Environmental Protection Agency
Division of Air Pollution Control
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43215

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 least 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

The facility will be sited near Wellsville, Ohio, in Columbiana County. The property is south of the Village of Wellsville along Route 7, and borders Jefferson County to the south. This area is classified as attainment for all of the criteria pollutants.

Facility Description

ORCF/Baard Energy is planning to construct a new coal-to-liquid synthetic fuels production facility near the Ohio River, in the southeast corner of Columbiana County. The plant will convert primarily coal as well as biomass, which will consist of wood and sawdust, as feedstock materials, through a gasification process. The company is proposing to install materials receiving equipment, storage systems, feedstock preparation processes, gasifiers, synthetic fuel clean up processes, Fischer-Tropsch/ Product Upgrade synfining equipment, finished product storage/loading and a power supply plant.

New Source Review (NSR)/PSD Applicability

This process will generate criteria pollutant emissions of particulates ($PM/PM_{10}/PM_{2.5}$), NO_x, SO_2, CO, VOC and Hydrogen Sulfide, as well as HAPs emissions. A PSD analysis is required for any increase in emissions of a pollutant exceeding the PSD threshold emissions levels. Per USEPA guidance, PM_{10} is being used as a surrogate for $PM_{2.5}$. Nonattainment NSR is not applicable, due to the attainment status of the area. Of the pollutants emitted, PM, $PM_{10}/PM_{2.5}$, NO_x, SO_2, CO, VOC and H_2S will result in a net increase in annual emissions above PSD levels.

Potential HAP emissions exceed the standard levels of 10 tons/year for any single HAP and 25 tons/year for a combination of HAPs, therefore Maximum Achievable Control Technology (MACT) standards and NSPS requirements apply to emissions units at this facility.

ORCF has requested restricted operational limits for some emissions units in the project. Table 1 below summarizes the allowable/potential emissions in the draft PTI.

TABLE 1
PRELIMINARY POLLUTANT EMISSION RATES
Ohio River Clean Fuels

Air Pollutant	**PTI Increase (tpy)**	**PSD/NSR Threshold (tpy)**
Particulate (PM)	443.1	25
$PM_{10}/PM_{2.5}$	363.4	15
Nitrogen Oxides (NO_x)	842.7	40
Sulfur Dioxide (SO_2)	1213.4	40
Carbon Monoxide (CO)	4844.0	100
Volatile Organic Compounds (VOC/OC)	275.0	40
Hydrogen Sulfide (H_2S)	24.3	10

PSD regulated pollutants will be generated by various types of equipment used in the process.

The following equipment/processes generate PE/PM_{10} emissions:
- Feedstock Preparation (Handling/Storage, Crushing/Milling & Drying)
- Syngas Production and Synfining: Venting, SRU/TTU, F-T/Fractionator/Heaters
- Slag Handling/Storage
- Fly Ash Handling/Storage
- Power Block (Phase 1 Boiler, Turbines)
- Emergency Generator/Fire Pump
- Roadways and Parking Areas

The following equipment/processes generate NO_x, CO and SO_2 emissions:
- Feedstock Preparation (Milling & Drying)
- Syngas Production and Synfining: Venting, SRU/TTU, F-T/Fractionator/Heaters
- Power Block (Phase 1 Boiler, Turbines)
- Emergency Generator/Fire Pump

The following equipment/processes generate VOC emissions:
- Feedstock Preparation (Milling & Drying)
- Syngas Production and Synfining: Venting, SRU/TTU, F-T/Fractionator/Heaters
- Power Block (Phase 1 Boiler, Turbines)
- Emergency Generator/Fire Pump
- Equipment Leaks
- Storage Tanks
- Product Loading

The following equipment/processes generate H_2S emissions:
- Syngas Production and Synfining: AGR, SRU/TTU

Control Technology Review

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. The ORCF facility 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 evaluate the latest demonstrated control techniques and select the appropriate controls.

BACT Evaluation Steps:

Identify all available potential control options;
Eliminate technically infeasible options;
Rank remaining technologies by control effectiveness;
Evaluate the feasible controls by performance and cost analysis; and
Select the most effective control based on energy, environmental and economic impacts (generally, the feasible technology that is also considered to be cost effective).

Feedstock Preparation (Handling, Crushing and Milling & Drying)

Feedstock material arrives at the site via truck or conveyor for placement in controlled storage, before transfer to feedstock preparation. Handling emissions points are controlled by baghouses. The material undergoes crushing prior to milling and drying, which readies it for gasification. The milled feedstock is carried by the hot gas stream (which is also drying it) to a product capture baghouse, from which most of the air is recirculated (26% will be emitted to the atmosphere to allow for fresh makeup air).

Milling and Drying	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
PE	Additional Wet Suppression	N	This technology is not feasible.
	Clean fuels, good design/ combustion; Baghouse	Y	Use of gaseous fuels. Enclosed and controlled bunkers, transfer points and conveyor inlets and exits achieving 0.005 gr/dscf.
	Filters	Y	Use of bin vent filters on silos and vessels.
CO	Cat Ox	N	This technology is not feasible.
	SCONOx	N	This technology is not feasible.
	Clean fuels, good design/ combustion	Y	Use of gaseous fuels, 0.07 lb/mmBtu.
NOx	SCR, NSCR	N	These technologies are not feasible.
	SCONOx	N	This technology is not feasible.

	Clean fuels, good design/ combustion; Low-NOx burner	Y	Use of gaseous fuels, flue gas recirculation, low-NOx burners, 0.043 lb/mmBtu.
VOC	Cat Ox	N	This technology is not feasible.
	SCONOx	N	This technology is not feasible.
	Clean fuels, good design/ combustion	Y	Use of gaseous fuels, 0.005 lb/mmBtu.
SO2	FGD	N	This technology is not feasible.
	Clean fuels, good design/ combustion	Y	Use of gaseous fuels, 0.0077 lb/mmBtu.

Syngas Production and Synfining: Gasification, Syngas Cleanup (AGR), Sulfur Recovery (SRU/TTU), F-T/Fractionator/Heaters
Synthetic gas is produced in the gasifiers. There are no direct air emissions from these units, rather the gas exits the gasifiers and moves downstream and thru a number of gas cleanup processes with emissions control devices at various stages.

During startup and shutdown periods, as well as under emergency upset conditions, it will be necessary to vent syngas. The gasifiers will be equipped with a high pressure flare to combust syngas during these periods, where syngas passes through filtration cleanup prior to combustion, during startups and shutdowns.

Gasification Venting	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
PE	Flare 3,140 mmBtu/hr	Y	Use of gaseous fuels, smokeless design, good design/combustion/maintenance. 0.003 lb/mmBtu.
CO	Flare 3,140 mmBtu/hr	Y	Use of gaseous fuels, good design/combustion/maintenance. 0.8 lb/mmBtu
NOx	Flare 3,140 mmBtu/hr	Y	Use of gaseous fuels, good design/combustion/maintenance. 0.12 lb/mmBtu
VOC	Flare 3,140 mmBtu/hr	Y	Use of gaseous fuels, good design/combustion/maintenance, 98% efficient. 0.05 lb/mmBtu

SO2	Flare 3,140 mmBtu/hr	Y	Use of gaseous fuels, good design/combustion/maintenance. 9 lbs/mmBtu

Three Acid Gas Removal (AGR) units, which are expected to use Rectisol technology, will emit CO. The acid gas removed by the AGR units is then sent to the SRUs.

AGR (Rectisol)	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
CO	Oxidation	N	Catalytic oxidation is not feasible. Thermal and Regenerative Oxidation were determined to be cost prohibitive, at over $40,000/ton fuel cost alone.
	Cryogenic Separation	N	This technology is not feasible.
	Pressure-Swing Adsorption	N	Determined to be cost prohibitive, at a cost exceeding $27,000/ton.
	Waste CO_2 vent	Y	Not to exceed 400 ppm from the AGR unit's waste CO_2 exhaust stream (the only emissions point).
H_2S	Waste CO_2 vent	Y	Not to exceed 0.93 lb/hour H_2S from the AGR unit's waste CO_2 exhaust stream (the only emissions point).

The Sulfur Recovery Units (SRUs) will consist of two SCOT trains which will convert acid gas (H_2S) from the AGRs into sulfur and other gas streams (tailgas and sulfur pit & spent degassing air). Tailgas from the SRU is sent to the Tailgas Treating Units (TTUs) before recirculation or combustion as a fuel source. Sulfur pit and spent degassing air from the SRUs is sent to two Thermal Oxidizers.

SRU/TTU	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
SO2 & H_2S	Tailgas Thermal Oxidizer (TTO) with low-NOx burners	Y	Control emissions from the acid gas sulfur recovery train during startups and shutdowns, and continuously from the sulfur pit sweep air and spent degassing air. Oxidation of H_2S to SO_2, with a limit of 250 ppm SO_2 dry basis @ 0% excess air (12-hour rolling average).

The cleaned "sweet" gas exits the AGR units with the sulfur removed, and moves to the Fischer-Tropsh (F-T) and Product Upgrade process, where the syngas is ultimately converted to a liquid (oil and wax-type substances), by undergoing a catalytic reaction.

There will be three F-T trains. Under normal operation, this process will not have emissions. However, during periodic F-T catalyst regeneration (approximately each week), process vent emissions will be controlled by a low-pressure flare. The flare will also control vent emissions from low pressure components during any vessel depressurization.

F-T Process Venting	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
PE	Low Pressure Flare	Y	Use of gaseous fuels.
CO	Low Pressure Flare	Y	Use of gaseous fuels.
NOx	Low Pressure Flare	Y	Use of gaseous fuels.
VOC	Good combustion Practices Low Pressure Flare	Y	Fueled by natural gas/tailgas with 98%, by weight, VOC control efficiency, 0.0002 lb/mmBtu.

While F-T reactor vapors are recirculated, purged tailgas is sent through the sponge oil column, which has no air emissions, before becoming a fuel source for process heaters and combustion turbines on site.

Six heaters will be used in the F-T process, the largest of which is the 154.0 mmBtu/hr F-T Fractionator Feed Heater, controlled by a Selective Catalytic Reduction (SCR) device to reduce NOx emissions (the other five are involved in the F-T catalyst activation/reactivation process and are each 4.0 mmBtu/hr in size, with NOx emissions of 0.28 lb/mmBtu: Nitrogen Heater, Hot Oil Heater, Hydrogen Heater, Oxidation Gas Heater and Reduction Gas Heater).

The product stream from the F-T reactor trains moves on to the Product Upgrade phase, where it is refined into petroleum products (diesel, naptha and LPG). High molecular weight species go to the hydrocracker to make parafins or to the hydrocracker reactor to be eliminated, and low molecular weight hydrocarbons will be hydrotreated to saturate olefins and alcohols. The liquid products from these two reactors go to a single product fractionator column, which is not a source of emissions, to be split into three streams (C5-C9, side stripper "distillate" and bottom unconverted "wax"). Noncondensible overhead vapors are compressed and chilled into LPG.

Three heaters will be used in Product Upgrade section, the 21.0 mmBtu/hr Hydrocracker Feed Oil Heater, the 20.0 mmBtu/hr Hydrocracker Feed Hydrogen Heater and the 24.0 mmBtu/hr Product Fractionation Feed Heater, and all are controlled by the SCR device, which also serves the F-T Fractionator Feed Heater.

Fractionator Heater and Product Upgrade Heaters (3)	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
PE	Dust Collector	N	Costs exceeding $60,000/ton.
	Wet Scrubber	N	Cost exceeding $200,000/ton.
	Clean fuels, good design/ combustion	Y	0.005 gr/dscf PE
CO	Cat Ox	N	Costs exceeding $12,000/ton.
	SCONOx	N	This technology is not feasible.
	Clean fuels, good design/ combustion	Y	0.24 lb/mmBtu CO
NOx	SNCR, NSCR, SCONOx	N	These technologies are not feasible.
	Low-NOx burners and FGR (10% estimated control eff.)	N	Cost effective, but lower efficiency than SCR.
	Ultra low-NOx burners and SCR (95% estimated control eff.)	Y	0.08 lb/mmBtu NOx
VOC	Cat Ox	N	Costs exceeding the cost for CO.
	SCONOx	N	This technology is not feasible.
	Clean fuels, good design/ combustion	Y	0.02 lb/mmBtu VOC
SO2	Clean fuels, good design/ combustion	Y	0.002 lb/mmBtu SO2

There will be a number of components in the system (valves, flanges, pumps, compressors, etc.) that may be subject to leaks, and will be required to meet applicable state and federal requirements.

Product Storage and Loading

Output from Product Upgrade will be F-T Diesel and F-T Naptha materials, as well as some amount of off-spec liquid. The diesel tanks will have fixed roofs, and the naptha/off-spec tanks will be equipped with internal floating roofs. Emissions from the tanks will be small. The loading rack will be equipped with vapor recovery and emit less than 2 tons/year VOC.

Loading Rack	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
VOC	Thermal Ox	N	This technology is less effective, and generates additional pollutants.
	Vapor recovery	Y	0.32 lb/1,000 gallons

Power Block (Phase 1 Boiler, Turbines)

It is planned that the facility will initially receive power/steam from a large boiler, which will only be used as backup once the turbines are operational. One 1,200 mmBtu/hour heat input capacity, gaseous fueled boiler is being proposed.

Phase 1 Boiler	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
PE	Post Combustion Controls	N	These technologies are not feasible.
	Good combustion, gaseous fuels	Y	Natural and/or tailgas fuel, 0.0156 lb/mmBtu.
CO	EMx	N	This technology is not feasible.
	Cat Ox, Good combustion	Y	0.034 lb/mmBtu (as a rolling 24-hour average).
NOx	FGR	N	This technology is not feasible.
	NSCR, EMx	N	These technologies are not feasible.
	Low-NOx burners and SCR	Y	0.1 lb/mmBtu.
VOC	Good combustion	Y	3.9 lbs/1.0 mmscf.
SO2	FGD	N	This technology is not feasible.

	Low Sulfur Fuels and good combustion	Y	0.6 lb/1.0 mmscf.

Two 2193 mmBtu/hr (230 MW) turbines with 210.0 mmBtu/hr Duct Burner HRSG, that feeds a shared steam turbine generator will be constructed to supply power.

Combustion Turbine Generators (CTGs)	**Control Type, Feasibility/Cost Effectiveness (Y/N)**		**Description**
PE	Post Combustion Controls	N	These technologies are not feasible.
	Good combustion practices, gaseous fuels	Y	Natural and/or tailgas fuel, 0.008 lb/mmBtu.
CO	XONON, EMx	N	These technologies are not feasible.
	Catalytic Oxidation, good combustion practices	Y	0.008 lb/mmBtu (as a rolling 24-hour average).
NOx	Combustion Process Mod (Injection, DLN, FGR)	N	These technologies are not feasible.
	SNCR, EMx	N	These technologies are not feasible.
	SCR	Y	5.0 ppmvd (at 15% O2), with water or steam injection (when firing natural gas); 0.022 lb/mmBtu.
VOC	XONON, EMx	N	These technologies are not feasible.
	Catalytic Oxidation, good combustion practices	Y	0.012 lb/mmBtu (as a rolling 24-hour average).
SO2	FGD	N	This technology is not feasible.
	Clean fuels	Y	Natural and/or tailgas

The following table identifies the Emissions Units (EUs) in the project and summarizes permit requirements.

Description of Proposed Units	**Control Technology Summary**	**Module**
Coal Storage Piles, with stacker/reclaimers (16.6 acres)	3-sided windscreen with 75% efficiency to minimize wind erosion; enclosed conveyors; reduced drop heights; and dust suppressants/watering, as needed. 12.3 tons per rolling 12-month period PM10; 25.7 tons per rolling 12-month period PE.	1
Biomass Storage Piles, consisting of clean untreated wood or sawdust under roof (4.4 acres)	3-sided windscreen with 75% efficiency to minimize wind erosion; enclosed conveyors; reduced drop heights; and chemical stabilization/dust suppressants, as needed. 0.9 ton per rolling 12-month period PM10. 2.71 tons per rolling 12-month period PE.	1
Truck Unloading, Coal & Biomass Hopper Building, 300 tons/hr, to storage or processing	Totally enclosed unloading hopper building, material transfer points and exit conveyors, equipped with 99% efficient baghouse; 0.12 lb per hour and 0.6 ton per rolling 12-month period PE/PM10 from the baghouse stack. [PE as 100% PM10]	2
Coal & Biomass Parallel Conveyors to Transfer Tower, 3,500 tons/hr, to storage or processing	Totally enclosed inlet/exit conveyors, transfer tower and transfer points; 0.005 gr/dscf PE baghouse; 0.9 lb per hour and 3.9 tons per rolling 12-month period PE/PM10 from the baghouse stack. [PE as 100% PM10]	2
Coal Crusher House and Biomass Crusher House, 2000 tons/hour	Totally enclosed crusher house, including all transfer points; 0.005 gr/dscf of PE baghouse; Totally enclosed inlet and exit coal conveyors; 1.2 lbs per hour and 5.3 tons per rolling 12-month period PE/PM10 from the baghouse stack. [PE as 100% PM10]	2
Coal Silos and Biomass Silos, 2000 tons/hr transfer rate	Totally enclosed fill and exit conveyors, silos, and transfer points; 0.005 gr/dscf of PE from the silo common baghouse; 0.7 (or 0.9) lb per hour and 3.0 (or 3.8) tons per rolling 12-month period PE/PM10 from the baghouse stack. [PE as 100% PM10]	2
	Totally enclosed bunker and transfer points;	

Coal & Biomass Milling & Drying lines, 200 tons/hr maximum, enclosed and controlled by baghouses	Totally enclosed inlet and exit conveyors; 0.005 gr/dscf PE from the bunker baghouse and the filing vessel baghouse. NSPS Subpart Ja. Bunker: 0.43 lb per hour and 1.9 tons per rolling 12-month period PE/PM10. Hot Gas Generator: use of a low NOx burner (rated heat input of 31.0 mmBtu/hr) limiting emissions to 50 lbs NOx per 1.0 MMscf of gas burnt; 0.6 lb/hr and 2.62 tons PE/PM10, 0.24 lb/hour and 1.06 tons SO2, 1.32 lbs/hour and 5.8 tons NOx, 2.23 lbs/hour and 9.75 tons CO, 0.15 lbs/hour and 0.64 tons OC, per rolling 12-month period. Filling Vessel: 0.07 lb per hour and 0.32 ton per rolling 12-month period PE/PM10. [PE as 100% PM10]	2
Gasifiers (6) for syngas generation, including slag accumulation/sluice vessels, with startup/shutdown emissions vented to a common 3,410 mmBtu per hour high-pressure flare	High pressure flare to combust syngas during all startups and shutdowns, meeting 98% VOC reduction. Flare emissions (P025-P030 combined) shall not exceed: PE/PM10: 9.4 lbs/hour and 0.3 ton/rolling 12-month period. SO2: 28,166 lbs/hour and 732.3 tons/rolling 12-month period. NOx: 377.0 lbs/hour and 10.1 tons per rolling 12-month period. CO: 2,522.0 lbs/hour and 65.8 tons per rolling 12-month period. VOC.: 157.0 lbs/hour and 4.1 tons per rolling 12-month period. Total HAPs: 13.2 lbs/hour and 0.3 tons per rolling 12-month period (COS is the greatest single HAP emitted.) H2S: 13.2 lbs/hour and 0.3 tons per rolling 12-month period.	3
Fly Ash Handling System, including intermediate vessels, storage silo and pneumatic transfer to trucks, all with filter controlled vents.	Totally enclosed fly ash intermediate storage bins, fly ash storage silo, all equipped with passive dust collectors achieving 0.005 gr/dscf; High moisture content in the ash (from previous processing); Pneumatic conveying; Totally enclosed truck loading (including no open drop height); and Covering, at all times, of open-bodied vehicles when transporting ash.	4

	0.015 pound/hour and 0.065 ton per rolling 12-month period of fugitive PE/PM10 from the intermediate fly ash vessels. 0.03 pound/hour and 0.13 ton per rolling 12-month period of fugitive PE/PM10 from the fly ash storage silo. [PE as 100% PM10]	
Slag Dewatering Silos, followed by transfer and conveying to storage.	Totally enclosed pneumatic belt conveyors; Minimizing drop heights at transfer points; Moisture content in the slag is 10-20%; 1.9 tons per rolling 12-month period PE/PM10 from the silo vent; 1.9 tons per rolling 12-month period fugitive PE/PM10 from conveying and transferring to storage.	4
Slag Storage Pile, 1.2 acres, wind erosion and front end load out of the pile to trucks.	Use of a dust control program (water trucks and/or fire hoses as needed to reduce fugitive dust) to maintain a high moisture content in the slag; Good housekeeping for control measures; Water applied as needed for load out from the slag storage pile; Minimize free fall distances; Haul trucks shall be covered before exiting the slag storage area; Front-end loader buckets shall not be dragged along the ground; 0.8 ton PM10 and 1.6 tons PE per rolling 12-month period from wind erosion; 0.4 ton PE and 0.2 ton PM10 per rolling 12-month period from load out to trucks.	4
Syngas Cleanup Trains [2 fly ash filters, 2 wet scrubbers, a sour CO shift unit, 2 mercury guard beds, an AGR unit (Rectisol) and a sulfur guard bed]	The only emissions point shall be the acid gas removal units's waste CO_2 exhaust stack; stream concentration shall not exceed 400 ppm CO. CO: 308.7 lbs per hour and 1,351.7 tons per rolling 12-month period. H_2S: 1 ppm, 0.93 lb/hr and 4.0 tons per rolling 12-month period.	5
Sulfur Recovery Trains, includes a Claus Plant for the recovery of elemental sulfur from AGR, Tailgas Treatment Unit (SCOT)/Tailgas Compression Unit/TTO,	Natural gas, tailgas thermal oxidizer (TTO), equipped with low-NOx burners, to control H_2S emissions during startup/shutdown, and continuously from the sulfur pit sweep air and spent degassing air; NSPS Subpart Ja. From the Thermal Oxidizer burner's natural gas combustion: PE/PM10: 0.2 lb per hour (as a 3-hr average) and	5

rated 24.0 mmBtu/hr, fueled by natural gas	0.85 tons per rolling 12-month period; NOx: 1.27 lbs per hour (as a 3-hr average) and 5.55 tons per rolling 12-month period; CO: 2.13 lbs per hour (as a 3-hr average) and 9.32 tons per rolling 12-month period; VOC: 0.2 lbs per hour (as a 3-hr average) and 0.85 tons per rolling 12-month period; SO2: 0.015 lb per hour (as a 3-hr average) and 0.07 tons per rolling 12-month period. From the incineration of the Sulfur Pit Sweep Air and the Spent Degassing Air by the TTO: SO2: 28.15 lbs per hr (as a 3-hr average) and 123.35 tons per rolling 12-month period; From the incineration of Tailgas during startups and shutdowns: NOx: 1224.0 lbs per hour and 7.35 tons per rolling 12-month period; SO2: 4867.5 lbs per hour and 29.2 tons per rolling 12-month period; CO: 52.5 lbs per hour and 0.32 tons per rolling 12-month period.	
Fischer-Tropsch (F-T) Catalyst regeneration and process vent emissions (during F-T or Product Upgrade depressurization), controlled by a shared 150 mm Btu/hr low-pressure flare	Low pressure flare fueled by natural gas/tailgas with 98%, by weight, VOC control efficiency. 2.3 pounds per hour and 10.0 tons per rolling, 12-month period of PE. 30.0 pounds per hour and 131.4 tons per rolling, 12-month period of NOx. 25.2 pounds per hour and 110.3 tons per rolling, 12-month period CO. 0.03 pound per hour and 0.1 ton per year of VOC. 0.2 pounds per hour and 0.8 ton per year of SOx.	6
Fischer-Tropsch (F-T) Reactors (3), tailgas is sent to the sponge oil column, with 154.0 mm Btu/hr Fractionator Heater fueled by natural gas/tailgas, controlled by a common Selective Catalytic Reduction (SCR) device	Natural/tailgas as fuel; Ultra low-NOx burners and a Selective Catalytic Reduction (SCR) unit emissions control device to reduce NOx emissions; and Employ good combustion practices. 4.7 pounds per hour and 20.7 tons per rolling, 12-month period PE, 16.8 pounds per hour and 73.6 tons per rolling, 12-month period NOx, 51.9 pounds per hour and 227.3 tons per rolling, 12-month period CO, 3.4 pounds per hour and 14.9 tons per rolling, 12-month period VOC, 0.4 pounds per hour and 1.6 tons per rolling, 12-month period SOx.	6
F-T Catalyst Rotary	Natural/tailgas as fuel good combustion practices to	6

Dryer, with Nitrogen Heater and Hot Oil Heater (4.0 mm Btu/hr each)	limit emissions. Total allowable heater emissions: 0.8 ton per rolling 12-month period PE; 2.26 pounds per hour and 9.8 tons per rolling 12-month period NOx; 1.8 pounds per hour and 8.4 tons per rolling 12-month period CO; 0.12 pound per hour and 0.6 ton per rolling 12-month period VOC; and 0.02 pounds per hour and 0.08 ton per rolling 12-month period SOx.	
F-T Catalyst Vessels: Hydrogen Heater; Oxidation Gas Heater; and Reduction Gas Heater (4.0 mmBtu/hr each)	Natural/tailgas as fuel; and good combustion practices to limit emissions. 0.09 pound per hour and 0.4 ton per year PE; 1.13 pounds per hour and 4.9 tons per year NOx; 0.9 pound per hour and 4.2 tons per year CO; 0.06 pound per hour and 0.3 ton per year VOC; 0.01 pounds per hour and 0.04 ton per year SOx.	6
Product Upgrade System (Hydrocracker/Product Fractionator), with 21.0 mm Btu/hr Hydrocracker Feed Oil Heater, 20.0 mm Btu/hr Hydrocracker Feed Hydrogen Heater and 24.0 mm Btu/hr Production Fractionation Feed Heater, controlled by a common Selective Catalytic Reduction (SCR) device	Natural/tailgas as fuel, good combustion practices, ultra low-NOx burners and a Selective Catalytic Reduction (SCR) unit emissions control device to reduce NOx. Total allowable Fractionator Feed, Hydrocracker Feed Oil, Hydrocracker Feed Hydrogen and Production Fractionation Feed heater emissions (all of which vent to the SCR device): 4.7 pounds per hour and 20.7 tons per rolling, 12-month period PE; 16.8 pounds per hour and 73.6 tons per rolling, 12-month period NOx; 51.9 pounds per hour and 227.3 tons per rolling, 12-month period CO; 3.4 pounds per hour and 14.9 tons per rolling, 12-month period VOC; 0.4 pounds per hour and 1.6 tons per rolling 12-month period SOx.	6
Equipment leaks from pumps, compressors, devices, sampling, valves, connectors, closed vent systems and control devices	Low-emission pumps, valves, compressors and LDAR program. 1.7 tons per rolling 12-month period VOC.	6
3.0 MM Gallon Fixed Roof, Diesel Storage	Maximum true vapor pressure of 3.5 kilopascals (0.508 psia);	7

Tanks	0.8 ton VOC per rolling 12-month period.	
3.0 MM Gallon, Fixed, Internal Floating Roof Tanks for Naphtha and off-spec	Fixed roof in combination with an internal floating roof. 0.88 ton VOC per rolling 12-month period.	7
Loading Rack, two bays with 315,000 gal/day capacity for loading into tanker trucks, with vapor recovery system	Loading into transport vehicles via submerged fill pipes; 0.01 lb VOC emissions per 1,000 gallons of F-T Diesel loaded; 0.06 lb VOC emissions per 1,000 gallons of F-T Naphtha loaded; Vapor recovery unit with a collection efficiency of at least 91%, by weight, for VOCs, and a vapor recovery system which has a control efficiency of at least 95%, by weight, for VOCs from the F-T naphtha loading bay. 1.65 tons per rolling 12-month period VOC.	8
Phase 1 Boiler, rated maximum heat input capacity of 1,200 mmBtu/hour	Natural and tailgas, low Sulfur fuels, 0.6 lb/mmSCF SO2, 0.0156 lb/mmBtu PE/PM10; Low-NOx burner and SCR, 0.1 lb/mmBtu NOx; Catalytic Oxidation, 0.034 lb/mmBtu CO, 3.9 lb/mmSCF OC; PE/PM10: 18.7 lbs per hour (as a 3-hr average) and 81.9 tons per rolling 12-month period; NOx: 120.0 lbs per hour (as a 3-hr average) and 525.6 tons per rolling 12-month period; CO: 36.0 lbs per hour (as a 3-hr average) and 157.2 tons per rolling 12-month period; OC/VOC: 13.0 lbs per hour (as a 3-hr average) and 56.9 tons per rolling 12-month period; SO_2: 2.0 lbs per hour (as a 3-hr average) and 8.9 ton per rolling 12-month period.	9
Combined Cycle Plant, includes Combustion Gas Turbines w/ rated heat input capacity of 2193 mmBtu/hr (230 MW electric generating capacity) a Duct Burner HRSG w/rated heat input capacity of 210.0 mmBtu/hr which feeds a shared steam turbine generator (36 MW	Natural and tailgas; Employ water or steam injection in the combustion turbine in combination with the SCR emissions control device to reduce NOx emissions to 5.0 ppmvd (at 15% O2); Employ a Catalytic Oxidation emissions control device along with good combustion practices to reduce CO emissions to 0.008 lb/mmBtu (as a rolling 24-hour average) and VOC emissions to 0.012 lb/mmBtu (as a rolling 24-hour average); Employ good combustion practices in firing only gaseous fuels to reduce PM/PM10 emissions to 0.008 lb/mmBtu; and Tailgas fired in this emissions unit shall contain no more than 0.006 grains H2S per 100 dscf or firing	9

generating capacity	pipeline quality natural gas. PE/PM10: 18.21 lbs per hour (as a 3-hr average) and 78.67 tons per rolling 12-month period; NOx: 57.06 lbs per hour (as a 3-hr average) and 246.5 tons per rolling 12-month period; CO: 23.1 lbs per hour (as a 3-hr average) and 99.78 tons per rolling 12-month period; VOC: 26.62 lbs per hour (as a 3-hr average) and 114.99 tons per rolling 12-month period; SO_2: 21.06 lbs per hour (as a 3-hr average) and 90.97 tons per rolling 12-month period.	
Cooling Towers, 962 thousand gallons/minute, with drift eliminators	Drift eliminators with a maximum drift rate of 0.0005%, by weight; 2.4 lbs per hour and 10.5 tons per rolling 12-month period PM10. [PE as 100% PM10.]	10
Emergency Generators, 2000kW compression-ignition diesel engine	NSPS Subpart IIII. PE: 0.87 lb per hr and 0.22 tons per rolling 12-month period; NOx: 26.47 lbs per hour and 6.61 tons per rolling 12-month period; CO: 15.18 lbs per hour and 3.80 tons per rolling 12-month period; NMHC: 1.39 lb per hour and 0.35 ton per rolling 12-month period.	11
Fire Pumps, 300 hp compression-ignition diesel engine	NSPS Subpart IIII. PE: 0.27 lb per hr and 0.07 tons per rolling 12-month period; NOx: 4.89 lbs per hour and 1.23 tons per rolling 12-month period; CO: 1.72 lbs per hour and 0.43 tons per rolling 12-month period; NMHC: 0.26 lb per hour and 0.07 ton per rolling 12-month period.	11
Paved Roadways & Parking Areas	Best available control measures that are sufficient to minimize or eliminate visible particulate emissions of fugitive dust; 15.39 tons fugitive PM10 per rolling 12-month period; 79.0 tons fugitive particulate matter per rolling 12-month period.	12

Ambient Air Quality Monitoring Requirements

The Ohio River Clean Fuels facility is located in AQCR 181 in Columbiana County in Wellsville Heights, Ohio. 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 modeling 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 which is representative of the area.

Ohio River Clean Fuels has conducted ambient air quality modeling to determine the potential impact due to the proposed installation. NO2 impacts from the proposed installation are below their respective PSD monitoring de minimus level. SO2, PM10 and CO impacts are above their respective PSD monitoring de minimus level. Ohio EPA has identified representative SO2, PM10 and CO data for use by Ohio River Clean Fuels in this project. Therefore, Ohio River Clean Fuels would not be required to perform preconstruction or postconstruction monitoring. The following are the projected impacts:

Pollutant	Averaging Period	Modeled Impact	Monitoring De Minimus
NO2	Annual	4.42 ug/m3	14 ug/m3
PM10	24-hour	11.6 ug/m3	10 ug/m3
CO	8-hour	1,686 ug/m3	575 ug/m3
SO2	24-hour	20.9 ug/m3	13 ug/m3

Modeling

Air quality dispersion was conducted to assess the effect of this modification on the national ambient air quality standards (NAAQS) and for the PSD increments. AERMOD (version 07026) was used in the regulatory default, rural mode. Five years of representative meteorological data (Pittsburgh surface data and upper air data, 2001-2005) were used. Building downwash was incorporated into the AERMOD estimates.

Peak impacts of SO2, NO2 and PM10 were above their respective PSD significant impact levels. Therefore, additional modeling to address PSD increments and NAAQS were necessary.

PSD Increment

Pollutant	Averaging Period	Modeled Impact	PSD Increment
NO2	Annual	4.42 ug/m3	25 ug/m3
PM10	24-hour	11.6 ug/m3	30 ug/m3
	Annual	2.71 ug/m3	17 ug/m3
SO2	Annual	2.48 ug/m3	20 ug/m3
	24-hour	20.9 ug/m3	91 ug/m3
	3-hour	34.6 ug/m3	512 ug/m3

Ohio EPA's policy is that no single project should consume more than 50% of the available PSD increment, except in situations where the impact is localized, temporary or as part of a brownfields project. In such cases, the peak constraining concentration can consume up to 83.3% of the PSD increment.

NAAQS

Existing sources at the facility, existing sources above the PSD significant rates within the Ohio River Clean Fuels significant impact area (SIA) and sources greater than 100 tons/yr 50km outside of the SIA are modeled to determine the combined impact of existing and proposed sources. A background value was added to account for minor sources not explicitly included in the modeling.

Pollutant	Averaging Period	Modeled Concentration	NAAQS Concentration	Conc. With Background
NO2	Annual	6.4 ug/m3	100 ug/m3	16.6 ug/m3
PM10	24-hour	11.7 ug/m3	150 ug/m3	63.7 ug/m3
SO2	Annual	7.94 ug/m3	80 ug/m3	27.3 ug/m3
	24-hour	63.5 ug/m3	365 ug/m3	194 ug/m3
	3-hour	178 ug/m3	1300 ug/m3	414 ug/m3
CO	8-hour	1,686 ug/m3	10,000 ug/m3	6,102 ug/m3
	1-hour	4,188 ug/m3	40,000 ug/m3	17,435 ug/m3

Toxics Analysis

The Ohio Air Toxics Policy requires evaluation of increases in air toxics above the one ton/year threshold. The applicant has indicated that several air toxics will exceed one ton/year, therefore, modeling was conducted on the respective air toxics. All of the air toxics are well below the Threshold Limit Values (TLVs).

Air Toxic	ACGIH TLV (ug/m3)	Maximum 1 hour Concentration (ug/m3)
Ammonia	17,400	9.9
Mercury	50	0.00046
n-hexane	176,000	3.7
Hydrogen Sulfide	14,000	13.6
Carbonyl Sulfide	N/A	2.4
Formaldehyde	20	0.13
Phenol	19,000	0.18

Secondary Impact Analysis

Ohio River Clean Fuels has demonstrated that the predicted pollutant concentrations throughout the study area are below the secondary NAAQS thresholds. The secondary NAAQS are designed to limit the amount of pollutants in the ambient air to levels below those which could have an adverse impact on human welfare, soils and vegetation. The modeling analyses demonstrate that no significant impacts on human welfare, soils or vegetation will occur from the proposed modification.

Soil and Vegetation: EPA Air Quality Criteria documents were reviewed for information on pollutants and adverse effects on the type of vegetation and soils in the area. No adverse impact upon soils or vegetation is expected. The modeled concentrations are below the primary and secondary NAAQS limits.

Conclusions

Based upon the review of the permit to install application and supporting documentation provided by the applicant, the Ohio EPA staff has determined the installation will comply with all applicable State and Federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to Ohio River Clean Fuels for the installation of the new coal/biomass solid-to-liquid synthetic fuels production facility.

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

DRAFT

Air Pollution Permit-to-Install
for
Ohio River Clean Fuels LLC

Facility ID: 0215130393
Permit Number: 02-22896
Permit Type: Initial installation
Issued: 8/4/2008
Effective: To be entered upon final issuance

Air Pollution Permit-to-Install
for
Ohio River Clean Fuels LLC

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Authorization

Facility ID: 0215130393
Facility Description: Coal to liquid fuel facility
Application Number(s): A0002157
Permit Number: 02-22896
Permit Description: Installation of a coal/biomass-to-liquid fuels facility, including gasification and related equipment.
Permit Type: Initial installation
Permit Fee: $81,500.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 8/4/2008
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Ohio River Clean Fuels LLC
Sixteen Scool Road
Wellsville, OH 43958

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087
(330)425-9171

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section 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 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

Chris Korleski
Director

Authorization (continued)

Permit Number: 02-22896
Permit Description: Installation of a coal/biomass-to-liquid fuels facility, including gasification and related equipment.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**B001**
Company Equipment ID:	Phase 1 Boiler
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B002**
Company Equipment ID:	Reduction Gas Heater (4.0 mmBtu/hr)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B003**
Company Equipment ID:	Oxidation Gas Heater (4.0 mmBtu/hr)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B004**
Company Equipment ID:	Hydrogen Stripping Heater (4.0 mmBtu/hr)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B005**
Company Equipment ID:	Product Upgrade System
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B006**
Company Equipment ID:	F-T Process Unit
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F001**
Company Equipment ID:	Coal Storage Piles
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F002**
Company Equipment ID:	Biomass Storage Piles
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F003**
Company Equipment ID:	Coal & Biomass Receiving Building
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F004**
Company Equipment ID:	Coal and Biomass Parallel Conveyors to transfer tower 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	**F005**
Company Equipment ID:	Coal and Biomass Parallel Conveyors to transfer tower 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F006**
Company Equipment ID:	Coal and Biomass Parallel Conveyors to transfer tower 3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F007**
Company Equipment ID:	Coal and Biomass Parallel Conveyors to transfer tower 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F008**
Company Equipment ID:	Coal and Biomass Parallel Conveyors to transfer tower 5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F009**
Company Equipment ID:	Coal Crusher House
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F010**
Company Equipment ID:	Biomass Crusher House
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F011**
Company Equipment ID:	Coal Silos 1 & 2 w/common dust collector
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F012**
Company Equipment ID:	Coal Silos 3 & 4 w/common dust collector
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F013**
Company Equipment ID:	Coal Silos 5 & 6 w/common dust collector
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F014**
Company Equipment ID:	Biomass Silos 1 & 2 w/common dust collector
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F015**
Company Equipment ID:	Flyash handling system 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F016**
Company Equipment ID:	Flyash handling system 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F017**
Company Equipment ID:	Flyash handling system 3
Superseded Permit Number:	

General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F018**
Company Equipment ID:	Flyash handling system 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F019**
Company Equipment ID:	Flyash handling system 5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F020**
Company Equipment ID:	Flyash handling system 6
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F021**
Company Equipment ID:	Slag Dewatering Silo 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F022**
Company Equipment ID:	Slag Dewatering Silo 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F023**
Company Equipment ID:	Slag Dewatering Silo 3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F024**
Company Equipment ID:	Slag Dewatering Silo 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F025**
Company Equipment ID:	Slag Dewatering Silo 5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F026**
Company Equipment ID:	Slag Dewatering Silo 6
Superseded Permit Number:	
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Company Equipment ID:	Slag Storage Pile
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Company Equipment ID:	Plant Roadways & Parking Areas
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General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**J001**
Company Equipment ID:	Loading Rack for F-T fuels
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P001**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 1

Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P002**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P003**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P004**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P005**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P006**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 6
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P007**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 7
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P008**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 8
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P009**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 9
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P010**
Company Equipment ID:	Coal or Biomass Drying & Milling Line 10
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P011**
Company Equipment ID:	Sulfur Recovery Process Unit 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P012**
Company Equipment ID:	Sulfur Recovery Process Unit 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P013**
Company Equipment ID:	Cooling Tower 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P014**

Company Equipment ID:	Cooling Tower 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P015**
Company Equipment ID:	Emergency Generator
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P016**
Company Equipment ID:	Fire Pump Engine 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P017**
Company Equipment ID:	Fire Pump Engine 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P018**
Company Equipment ID:	Combined Cycle Plant 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P019**
Company Equipment ID:	Combined Cycle Plant 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P020**
Company Equipment ID:	Gasifier No. 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P021**
Company Equipment ID:	Gasifier No. 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P022**
Company Equipment ID:	Gasifier No. 3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P023**
Company Equipment ID:	Gasifier No. 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P024**
Company Equipment ID:	Gasifier No. 5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P025**
Company Equipment ID:	Gasifier No. 6
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P026**
Company Equipment ID:	Syngas Cleanup Train 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	**P027**
Company Equipment ID:	Syngas Cleanup Train 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P028**
Company Equipment ID:	Syngas Cleanup Train 3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P029**
Company Equipment ID:	Three F-T Reactor Trains
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P030**
Company Equipment ID:	F-T Catalyst Rotary Dryer
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P031**
Company Equipment ID:	Equipment Leaks
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T001**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T002**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T003**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T004**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T005**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T006**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T007**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T008**
Company Equipment ID:	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank
Superseded Permit Number:	

General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T009**
Company Equipment ID:	3.0 MM Gallon F-T Naphtha Tank 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T010**
Company Equipment ID:	3.0 MM Gallon F-T Naphtha Tank 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T011**
Company Equipment ID:	3.0 MM Gallon F-T Naphtha Tank 3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T012**
Company Equipment ID:	3.0 MM Gallon F-T Naphtha Tank 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 2.a), Severability Clause

(2) Standard Term and Condition A. 3.c) through A. 3.e) General Requirements

(3) Standard Term and Condition A. 6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A. 9., Reporting Requirements

(5) Standard Term and Condition A. 10., Applicability

(6) Standard Term and Condition A. 11.b) through A. 11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A. 14., Public Disclosure

(8) Standard Term and Condition A. 15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A. 16., Fees

(10) Standard Term and Condition A. 17., Permit Transfers

2. Severability Clause

a) 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.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they 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. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. 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.

4. Monitoring and Related Record Keeping 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:

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

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) 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:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.

(2) 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 Ohio EPA DAPC, Northeast District Office. 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 A.15. below if no deviations occurred during the quarter.

(3) 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 Ohio EPA DAPC, Northeast District Office 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.

(4) This permit is for an emissions unit located at a Title V facility. 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.

5. 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 Ohio EPA DAPC, Northeast District Office 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).

6. Compliance Requirements

a) 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.

b) 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.

c) 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:

(1) 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.

(2) 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.

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

(4) 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.

d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office 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:

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

(2) 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. 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 Ohio EPA DAPC, Northeast District Office.

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 Ohio EPA DAPC, Northeast District

Office. 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.)

10. 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).

11. Construction of New Sources(s) and Authorization to Install

a) 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.

b) If applicable, authorization to install any new 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 has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed through completion of the annual PER covering the last period of operation of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted

for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the PER covering the last period the emissions unit operated.

1) No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a PER, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

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).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. 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.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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.

16. 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.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Northeast District Office must be notified in writing of any transfer of this permit.

18. 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.

19. 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.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

C. Emissions Unit Terms and Conditions

1. B001, Phase 1 Boiler

Operations, Property and/or Equipment Description:

Phase 1 Boiler, with a rated maximum heat input capacity of 1,200 mmBtu/hour, firing natural gas or tailgas.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-31-10 through 3745-31-20. Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity, as a six-minute average.
b.	OAC rule 3745-31-05(A)(3)(b)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the SO2 emissions from this air contaminant source since the potential to emit of said pollutant is less than ten tons per year.
c.	OAC rule 3745-31-10 through 3745-31-20	PE/PM10: 18.7 lbs per hour (as a 3-hr average) and 81.9 tons per rolling 12-month period. NOx: 120.0 lbs per hour (as a 3-hr average) and 525.6 tons per rolling 12-month period. CO: 36.0 lbs per hour (as a 3-hr average) and 157.2 tons per rolling

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		12-month period. O.C.: 13.0 lbs per hour (as a 3-hr average) and 56.9 tons per rolling 12-month period. SO2: 2.0 lbs per hour (as a 3-hr average) and 8.9 tons per rolling 12-month period. Total HAPs: 4.5 lbs per hour (as a 3-hr average) and 19.6 tons per rolling 12-month period. Hexane: 4.3 lbs per hour (as a 3-hr average) and 18.6 tons per rolling 12-month period. (Hexane is the greatest single HAP emitted.) See b)(2)a.
d.	40 CFR Part 60, Subpart Db	The particulates and NOx emissions limitations specified by this rule are equivalent to or less stringent than those established pursuant to the BACT requirements.
e.	OAC rule 3745-17-07	The visible emission limitations specified in this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A).
f.	OAC rule 3745-17-10(B)	The emission limitations specified in this rule are equivalent to the emission limitations established pursuant to OAC rule 3745-31-10 through 3745-31-20.
g.	OAC Chapter 3745-14 (NOx Budget Trading Program)	The permittee shall comply with all applicable requirements under the NOx Budget Trading Program in a timely manner.
h.	OAC chapter 3745-109	On July 11, 2008, the Washington DC Circuit Court vacated U.S. EPA's CAIR. U.S. EPA is reviewing the court's decisions and evaluating it's impacts.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Because Ohio's CAIR was based on the above federal rule, it's future implementation has yet to be determined.
i.	OAC Chapter 3745-108 (Clean Air Mercury Rule)	On Feb 8, 2008, the Washington DC Circuit Court vacated U.S. EPA's rule removing power plants from the CAA list of sources of HAPs. At the same time, they vacated CAMR. U.S. EPA is reviewing the court's decisions. Because Ohio's CAMR was based on the above federal rule, it's future implementation has yet to be determined.
j.	OAC rule 3745-31-28 (Case-by case MACT)	The carbon monoxide emissions from the natural gas-fired or gaseous fuel-fired boiler(s) rated at 100 mmBtu/hour or greater shall not exceed the following limit from 40 CFR Part 63, Subpart DDDDD: 400 ppm by volume on a dry basis, corrected to 3 percent oxygen, as a 30-day rolling average. [40 CFR 63.7500] and [40 CFR 63 Subpart DDDDD, Table 1] See b)(2)c.

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. use of only either natural gas or tailgas as fuel;

ii. employ Low-NOx burners in the boiler and a Selective Catalytic Reduction (SCR) unit emissions control device to reduce NOx emissions to 0.1 lb/mmBtu of actual heat input;

iii. burn only gaseous fuels, employ good combustion practices and employ a catalytic oxidation emission control device to limit CO emissions to 0.034 lb/mmBtu, and VOC emissions to 3.9 lbs per 1.0 million scf of gas fired; and

iv. burn only gaseous fuels, employ good combustion practices to limit SO2 emissions to 0.6 lb per 1.0 million scf of gas fired, and PE/PM10 emissions to 0.0156 lb/mmBtu.

b. The permittee shall prepare and submit to the Ohio EPA Northeast District Office a unit-specific monitoring plan for each monitoring system (SO2, NOx, and CO2 or O2) at least 45 days before commencing certification testing of the monitoring systems. The plan must address the requirements in 40 CFR 75 and 40 CFR Part 60, Subpart Db.

c. This emissions unit is a new major MACT source as defined in section 112 of the Clean Air Act (CAA) and OAC rule 3745-31-01(HHH) and is subject to a Case-by-Case MACT determination pursuant to OAC rule 3745-31-28 due to the June 8, 2007 D.C. Circuit Court of Appeals decision to vacate the Boiler MACT (40 CFR Part 63, Subpart DDDDD). In order to comply with the requirements of OAC rule 3745-31-28, the permittee has committed to comply with the requirements of the vacated Boiler MACT for "new, large, gaseous fuel process heaters" as specified in the following terms and conditions*:

b)(2)f. through b)(2)h.

c)(2) through c)(3).

d)(9) through d)(15).

e)(9) through e)(15).

f)(6).

*Note: these terms and conditions include specific rule citations to the vacated Boiler MACT (40 CFR Part 63, Subpart DDDDD). The rule citations have been included for reference purposes only in order to establish a complete and accurate Case-by-Case MACT determination.

d. The permittee shall meet the requirements of 40 CFR 63, Subpart DDDDD through the following methods in order to demonstrate compliance with the work practice standard for carbon monoxide (CO), from Table 1 to the Subpart for the facility's new, large, natural gas-fired (or gaseous fuel-fired) boiler(s). The permittee shall:

i. maintain continuous compliance with the work practice standard for CO by maintaining CO emissions below the limit from Table 1 to the Subpart, as required in 40 CFR 63.7500 and this permit, by installing a continuous emission monitor system (CEMS) for CO and oxygen (O_2) at each emissions point from the subject boiler(s);

ii. install, operate, and maintain each CEMS for CO and O_2 according to procedures prescribed under Performance Specifications 4A and 3 of 40 CFR Part 60, Appendix B, and continuously monitor CO and O_2 as required by 40 CFR 7535 and 40 CFR 7540(a)(10) and according to 40 CFR 63.7525(a), 40 CFR 63.8, and the site-specific monitoring plan;

iii. develop and submit a site-specific performance evaluation test and monitoring plan meeting the requirements of 40 CFR 63.8(e)(3), as required by 40 CFR 63.7505(d) for each CO and O_2 CEMS;

iv. conduct performance evaluations for each required CO and O_2 CEMS, according to the site-specific monitoring plan and within 180 days of startup, certifying that each CEMS meets the requirements of Performance Specifications 4A or 3, as required per 40 CFR 63.7525(a)(2) and this permit;

v. monitor and record the CO and O_2 levels as required in this permit and per 40 CFR 63.7535, 63.7540(a)(10), and 63.7555(b), and maintain records of the calculated, daily, 30-day rolling average CO emission rate as required per 40 CFR 63.7525(a)(5);

vi. develop and implement a written startup, shutdown, and malfunction plan as required by 40 CFR 63.6(e)(3) and 40 CFR 63.7505(e);

vii. meet the reporting requirements of 40 CFR 7540(b), 63.7545, and 40 CFR 63.7550 and as specified in Tables 9 and 10 to the Subpart; and

viii. maintain compliance with all the requirements of this permit and the applicable requirements of Subpart DDDDD.

Per 40 CFR 63.7525(a) and Table 1 to the Subpart, natural gas/gaseous fuel-fired boilers equal to or greater than 100 mmBtu/hour shall demonstrate compliance with the CO work practice standard from Table 1 of the Subpart by installing CEMS for CO and O_2 at each emissions point from the subject boilers.

[40 CFR 63.6(e)(3)], [40 CFR 63.8], [40 CFR 63.7500(a)(1)], [40 CFR 63.7505(d)], [40 CFR 63.7506(a)], [40 CFR 63.7510(c) and (g)], [40 CFR 63.7525(a)], [40 CFR 63.7530(b)], [40 CFR 63.7535], [40 CFR 63.7540(a)(10)and (b)], [40. CFR 63.7545], [40 CFR 63.7550], [40 CFR 63.7555], and [40 CFR 63 Subpart DDDDD, Tables 1, 9, and 10]

e. Only natural gas or gaseous fuels shall be burned in the subject boiler(s) identified above; no liquid or solid fuels shall be burned without first obtaining a revision to the permit.

[40 CFR 63 Subpart DDDDD, Table 1]

f. Compliance with the CO emission limit and work practice standard contained in this permit shall be maintained at all times except during periods of startup, shutdown, and malfunction, and as specified in Subpart DDDDD. The Director of the Ohio EPA or his/her representative shall determine compliance with the CO emission limit and work practice standard through review and evaluation of required records of operational and maintenance procedures, CEMS monitoring data, CEMS performance evaluations, supporting calculations and emissions data, and any other applicable records required in this permit.

[40 CFR 63.6(f)(1) and (2)] and [40 CFR 63.7505(a)]

g. The permittee shall develop and implement a written startup, shutdown, and malfunction plan (SSMP) by the compliance date of Subpart DDDDD and according to the provisions found in 40 CFR 63.6(e)(3), as follows:

i. The written startup, shutdown, and malfunction plan (SSMP) shall describe, in detail, procedures for operating and maintaining the boiler(s) during periods of startup, shutdown, and malfunction.

ii. The plan shall document detailed procedures of corrective action for the malfunction of the boiler(s), the air pollution control equipment, and the monitoring equipment (including CEMS), used to comply with the requirements of this permit and Subpart DDDDD.

iii. The SSMP does not need to address any scenario that would not cause the emissions unit(s) to exceed an applicable emission limitation in Subpart DDDDD.

iv. The SSMP shall be written for the following purpose:

(a) to ensure that, at all times, each boiler, including any associated air pollution control equipment and monitoring equipment, is maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions;

(b) to ensure that operators are prepared to correct malfunctions as soon as practicable after their occurrence, in order to minimize excess emissions of hazardous air pollutants;

(c) to reduce the reporting burden associated with periods of startup, shutdown, and malfunction; and

(d) to document corrective actions and operating procedures to be taken to restore malfunctioning processes and air pollution control equipment to its normal or usual manner of operation.

v. The plan shall provide a means to maintain a record of actions (including those conducted to correct a malfunction) taken by the operator during any startup, shutdown, or malfunction event where the emissions unit(s) exceeded an applicable emission limitation, and where actions are consistent with the procedures specified in the SSMP. These records may take the form of a “checklist” or other effective form of record keeping that confirms conformance with the SSMP and describes the actions taken during each startup, shutdown, and/or malfunction event. The plan (and checklist, if used) can then be modified to correct or change any sequence of actions and/or equipment settings to help prevent future exceedances of the same limitation for the same reason.

vi. If an/the action(s) taken by the operator during a startup, shutdown, or malfunction event is/are not consistent with the procedures specified in

the emissions unit's SSMP, and the unit's(s') emissions exceed an applicable emission limitation from Subpart DDDDD, the plan shall require the operator to record the actions taken during each such an event, and shall require the permittee to report (via phone call or FAX) the exceedance and its cause (actions taken) to the regulating agency within 2 working days following the actions conducted that were inconsistent with the plan. The plan shall also require that this notification be followed by a letter, within 7 working days after the end of the event, in accordance with the reporting requirements of this permit (from 40 CFR 63.10(d)(5)(ii)), unless the permittee makes alternative reporting arrangements, in advance, with the appropriate District Office or local air agency of the Ohio EPA, Division of Air Pollution Control.

vii. The permittee may use the standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) plan or other similar document to satisfy the requirements for a SSMP, provided the alternative plans meet all the requirements of the permit and Subpart DDDDD, and the document is available for inspection or is submitted when requested by the Ohio EPA.

viii. The appropriate District Office or local air agency of the Ohio EPA Division of Air Pollution Control shall require revisions to the SSMP, if the plan contains one of the following inadequacies:

(a) does not address a startup, shutdown, or malfunction event that has occurred;

(b) fails to provide for the operation of the emissions unit (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions;

(c) does not provide adequate procedures for correcting malfunctioning processes and/or air pollution control and monitoring equipment as quickly as practicable; or

(d) includes an event that does not meet the definition of startup, shutdown, or malfunction in 40 CFR 63.2.

63.2 definitions:

Malfunction: means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Shutdown: means the cessation of operation of an affected source or portion of an affected source for any purpose.

Startup*:* means the setting in operation of an affected source or portion of an affected source for any purpose.

ix. The permittee shall periodically review the SSMP, as necessary, to reflect changes in equipment or procedures that would affect the emissions unit's operations. Unless determined otherwise by the appropriate District Office or local air agency of the Ohio EPA Division of Air Pollution Control, the permittee may make revisions to the SSMP without prior approval; however, each such revision to the SSMP shall be reported in the semiannual report, as required in this permit (and 40 CFR 63.10(d)(5)).

x. If the SSMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall revise the SSMP within 45 days after the event, to include detailed procedures for operating and maintaining the emissions unit(s) using a program of corrective actions for the boiler(s), pollution control equipment, and/or monitoring equipment, and which are to be implemented during any similar malfunction event.

xi. The permittee shall maintain a current SSMP at the facility and shall make the plan available, upon request, for inspection and copying by any representative from the Ohio EPA, Division of Air Pollution Control. If the SSMP is revised, the permittee shall maintain each previous (i.e., superseded) version of the SSMP for a period of 5 years after revision of the plan.

xii. The record keeping requirements contained in this permit include the required documentation of actions taken during startup, shutdown, and malfunction events.

xiii. The permittee shall document in each semiannual report, that actions taken during each startup, shutdown, and malfunction event during the relevant reporting period, were either consistent or not consistent with the emissions unit's(s') SSMP.

[40 CFR 63.6(e)(3)], [40 CFR 63.10(d)(5)], and [40 CFR 63.7505(e)]

h. In order to maintain ongoing data quality assurance for the CEMS for CO and O_2, the permittee shall develop and implement a CEMS quality control program. The permittee shall develop a site-specific performance evaluation test plan (site-specific monitoring plan), as required by 40 CFR 63.8(e) and 40 CFR 63.7505(d), for each required CEMS. At least 60 days before the initial performance evaluation of the CEMS (unless approved for an alternative date), the permittee shall submit the performance evaluation test plan to the appropriate District Office or local air agency of the Ohio EPA, Division of Air Pollution Control for evaluation and/or approval. If any required CEMS has never been certified, a copy of the plan must also be sent to the Central Office of the Ohio EPA, Division of Air Pollution Control (CEMS are considered certified once Ohio EPA's Central Office has reviewed the certification testing data and generated a certification letter).

A performance evaluation of each CEMS shall be conducted in accordance with the approved site-specific performance evaluation test plan(s). The performance evaluations shall demonstrate the precision and accuracy of the equipment and completeness of the data collected. The performance evaluations of the CEMS shall be conducted in such a way as to assure that the requirements of Performance Specifications 4A for CO, Performance Specification 3 for O_2 (both from 40 CFR Part 60 Appendix B), 40 CFR 63.8, and 40 CFR 63.7525(a) are being met. The plan shall require all CEMS (required by rule) be maintained in continuous operation during boiler operations and shall include the requirement to analyze performance audit samples during the performance evaluation (per 40 CFR 63.7(c)(2)(iii)). The CEMS shall be designed to ensure continuous, valid, and representative readings of CO emissions in parts per million (ppm) and oxygen in percent. The performance evaluation test plan shall include:

i. the evaluation program objectives;

ii. an evaluation program summary;

iii. the performance evaluation schedule;

iv. data quality objectives;

v. provisions for regular calibrations of the CEMS;

vi. provisions for the daily determination of and the adjustments for the calibration drift of all the required CEMS, and for the records of the amount of excess drift (or also the record for no drift) measured at each 24-hour interval check;

vii. preventive maintenance of the CEMS, including spare parts inventory;

viii. provisions for data recording, calculations, and reporting;

ix. program of corrective action for any malfunctioning CEMS;

x. provisions to obtain cylinder audit gases from Region V, at least 30 days prior to the scheduled performance test date;

xi. provisions to identify, record, and report periods of time in which the CEMS is out- of-control and/or fails to pass daily calibration drift assessments;

xii. an internal quality assurance (QA) program to include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CEMS performance; and

xiii. an external QA program to include, at a minimum, provisions for systems audits and validation of instrument calibration, data collection, sample logging, and documentation of quality control data and field maintenance activities, and shall also address the following requirements:

(a) the CEMS for O_2 and CO shall be installed at a single location that meets Performance Specifications 3 and 4A siting requirements and that accurately measures the exhaust emissions representative of each emissions unit (e.g., on or downstream of the last control device);

(b) performance and equipment specifications for the sample interface, the accuracy of emissions data, and the data collection and reduction systems; and

(c) performance evaluation procedures and acceptance criteria, including calibration frequency, results, and records.

The Division of Air Pollution Control may request additional relevant information following the review of the site-specific performance evaluation test plan(s). The permittee shall maintain the site-specific performance evaluation test plan(s) at the facility for the life of the boiler(s). The CEMS quality control performance evaluation test plan shall be made available for inspection by the Director of the Ohio EPA or his/her representative upon request. If the performance evaluation plan(s) is/are revised, the superseded plan shall be retained as a facility record for a period of 5 years following its revision.

[40 CFR 63.7(c)(4)], [40 CFR 63.8], [40 CFR 63.7505(d)], and [40 CFR 63.7525(a)]

c) Operational Restrictions

(1) The permittee shall only burn natural gas and/or other gaseous fuels in the identified boiler(s); no liquid or solid fuels shall be burned in the boilers identified above.

[40 CFR 63 Subpart DDDDD, Table 1]

(2) The permittee shall install, operate, and maintain CEMS for CO and O_2 at each emissions point from the subject boiler(s) and shall continuously monitor CO and O_2 as required by 40 CFR 7535 and 40 CFR 7540(a)(10) and according to 40 CFR 63.7525(a), 40 CFR 63.8, and the site-specific monitoring plan. The CO and O_2 CEMS shall be installed upon startup and according to the following procedures:

a. Each CEMS for CO shall be installed, operated, and maintained according to Performance Specification 4A of 40 CFR Part 60, Appendix B; 40 CFR 63.8; and according to the site-specific monitoring plan developed according to 40 CFR 63.7505(d) and 40 CFR 63.8(e)(3);

b. Each CEMS for O_2 shall be installed, operated, and maintained according to Performance Specification 3 of 40 CFR Part 60, Appendix B; 40 CFR 63.8; and according to the site-specific monitoring plan developed according to 40 CFR 63.7505(d) and 40 CFR 63.8(e)(3);

c. Performance evaluations of each CEMS shall be completed no later than 180 days following the startup of the boiler(s) and shall be conducted according to Performance Specifications 3 and 4A of 40 CFR Part 60, Appendix B;

d. The permittee shall maintain and operate each CEMS in a manner consistent with safety and good air pollution control practices for minimizing emissions, as specified in 40 CFR 63.6(e)(1) and as reflected in the operations and maintenance requirements of this permit.

e. The permittee shall keep the necessary parts for routine repairs and maintenance of the CEMS equipment readily available.

f. The permittee shall develop a written startup, shutdown, and malfunction plan (SSMP) for each required CEMS as specified in 40 CFR 63.6(e)(3), and as required by 40 CFR 63.7505(e), 40 CFR 63.8(c)(1)(iii), and this permit.

g. The CEMS for both CO and O_2 shall be installed at the same location and where they accurately measure the exhaust emissions representative of the emissions unit(s) (e.g., downstream of the last control device) and according to the siting requirements documented in Performance Specifications 4A and 3.

h. Each CEMS shall be checked for the zero (low-level) and high-level calibration drifts at least once daily and they shall be adjusted whenever the 24-hour low-level drift exceeds two times the limits of the appropriate Performance Specification.

i. When the emissions from two or more affected sources are combined before being released to the atmosphere, the permittee shall install the CEMS for each emissions stream; where the emissions from one emissions unit are released to the atmosphere through more than one point or stack, the permittee shall install a CEMS at each emissions point; and only one CEMS is required to be installed at the vent/exhaust of any control device.

j. Verification of the operational status of each CEMS shall include the completion of the manufacturer's written specifications or the recommendations for installation, operation, calibration of the system, compliance with 40 CFR 63.8, and the completion of performance evaluations using Performance Specifications 3 and 4A;

k. The read out (the visual display or measured record of the CEMS) or other indication of operation for each CO and O_2 CEMS, required for compliance with Subpart DDDDD, shall be readily accessible and visible for monitoring and recording by the operator of the equipment.

l. Except for system breakdowns, required quality assurance or control activities, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all required CEMS shall be maintained in continuous operation.

m. All the required CEMS for CO and O_2 shall be installed to complete a minimum of one cycle of operation (sampling, analyzing, and the data recorded) for each successive 15-minute period of time.

n. CEMS data shall be reduced to 1-hour averages, computed from four or more data points equally spaced over each 1-hour period. A valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. The raw data may be recorded in reduced or nonreduced form, with the record of the emission averages in the appropriate units to demonstrate compliance (ppm CO and percent O_2).

[40 CFR 63.6(e)(1) and (3)], [40 CFR 63.8(c)], [63.7505(d)(2)(i) and (e)], [40 CFR 63.7520(a)], and [40 CFR 63.7525(a)] [40 CFR 63.7535], and [40 CFR 7540(a)(10)]

(3) The permittee shall operate and maintain, at all times, any emissions unit contained in this permit (including any associated air pollution control equipment and monitoring equipment) in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the operator/permittee reduce emissions to the greatest extent which is consistent with safety and good air pollution control practices. Malfunctions shall be corrected as soon as practicable after their occurrence.

The requirement to minimize emissions during any period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times, if it is not consistent with safety and good air pollution control practices; nor does it require the operator/permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. The operational and maintenance requirements contained in Subpart DDDDD are enforceable, independent of the emissions limitations or other requirements of the rule.

Determination of whether such operation and maintenance procedures are being applied shall be based on information requested by and made available to the director (appropriate Ohio EPA Division of Air Pollution Control District Office or local air agency), which may include, but shall not be limited to: monitoring results, operation and maintenance procedures (including the startup, shutdown, and malfunction plan or other standard operating procedures), operation and maintenance records, and inspection of the facility.

[40 CFR 63.6(e)(1)] & [40 CFR 63.7505(b)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the total quantity and type of gaseous fuel(s) burned in each subject boiler during each reporting period.

[40 CFR 63.7540(a)(2)] and [40 CFR 63.7555(d)(1)]

(2) See 40 CFR Part 60, Subpart Db.

(3) Each continuous NOx monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous NOx monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NOx emissions from the continuous monitor(s), 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 NO_x 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.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

(4) 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. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specifications 2 and 6. Once received, the letter(s)/document(s) 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.

[40 CFR 60.13] and [40 CFR Part 60, Appendix B]

(5) The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x 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 NO_x monitoring system including, but not limited to:

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

b. emissions of NO_x in pounds per hour and 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 NO_x 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 NO_x 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 NO_x monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in d)(5)g. and d)(5)h.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

(6) Prior to the installation of the continuous CO_2 or O2 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 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO_2 or O2 monitoring system meets the requirements of Performance Specification 3; and the U.S. EPA shall certify that the continuous CO_2 or O2 monitoring system meets the requirements under 40 CFR Part 75, which may be approved through the recommendation for certification by Ohio EPA to U.S. EPA. Once received, the letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be maintain on-site and 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.

[40 CFR 60.13]; [40 CFR Part 60, Appendix B]; and [40 CFR Part 75]

(7) The permittee shall operate and maintain equipment to continuously monitor and record CO2 or O2 emitted from this emissions unit in percent. The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and Part 75.

The permittee shall maintain records of data obtained by the continuous CO_2 or O2 monitoring system including, but not limited to:

a. percent on an instantaneous (one-minute) basis;

b. results of quarterly cylinder gas audits or linearity checks;

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

d. results of required relative accuracy test audit(s);

e. hours of operation of the emissions unit, continuous CO_2 or O2 monitoring system;

f. the date, time, and hours of operation of the emissions unit without the continuous CO_2 or O2 monitoring system;

g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous CO_2 or O2 monitoring system; as well as,

h. the reason (if known) and the corrective actions taken (if any) for each such event in d)(7)f. and d)(7)g.

[40 CFR 60.13]; [40 CFR Part 60, Appendices B & F]; and [40 CFR Part 75]

(8) The permittee shall maintain records of the following information for the facility's subject natural gas/gaseous fuel-fired boiler(s), in order to meet the record keeping requirements of 40 CFR 63.7555 and the Subpart:

a. a copy of each notification and report that is submitted to comply with this Subpart, including all documentation supporting the Initial Notification and all subsequent Notifications of Compliance Status or semiannual compliance reports;

b. the following records required by 40 CFR 63.6(e)(3)(iii) through (v) and 40 CFR 63.10(b)(2)(i) through (vi), related to exceedances and startup, shutdown, and malfunction events:

i. the occurrence (date and time) and duration of each startup or shutdown when the startup or shutdown causes any subject boiler to exceed the CO emission limit in Subpart DDDDD;

ii. the occurrence (date and time) and duration of each malfunction of operations of the boiler(s) and/or the monitoring equipment (CEMS);

iii. all required maintenance performed on the CEMS, i.e., date, equipment, maintenance activity performed;

iv. actions taken during periods of startup and shutdown, when the emissions unit exceeds the CO emission limit from Subpart DDDDD, and when these actions are different from the procedures specified in the boiler's(s') startup, shutdown, and malfunction plan (SSMP);

v. actions taken during periods of malfunction of the boiler(s) and/or the CEMS that are different from the procedures specified in the SSMP;

vi. actions taken to demonstrate compliance with the SSMP during periods of startup and/or shutdown and malfunction, where the CO limit/work

practice standard from Subpart DDDDD was exceeded, or may have been exceeded, and the actions taken were consistent with the procedures specified in the SSMP*;

vii. each period of operation (date, time, and number of minutes) during which a/the CEMS is inoperative or is not functioning properly;

c. all required measurements needed to demonstrate compliance with the CO limit, as required by 40 CFR 63.7540(a)(10)(iii) and 40 CFR 63.7555(b) and (c), including: the 15-minute averages of CEMS data, raw performance testing measurements, raw performance evaluation measurements, and any supporting data needed to demonstrate compliance with this permit;

d. results for each performance evaluation of the CEMS, as required in 40 CFR 63.8(e), 40 CFR 63.10(b)(2)(viii), and 40 CFR 7525(a);

e. all records and measurements needed to determine the conditions of each performance evaluation;

f. the following records for each CEMS installed to demonstrate compliance with the Subpart:

i. all CEMS calibration checks;

ii. all adjustments and maintenance performed on CEMS; and

iii. the monitoring data produced during each performance evaluation of the CEMS as required in 40 CFR 63.6(h)(7)(i);

g. previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3);

h. records of the date, time, and duration of each deviation from the Table 1 work practice standard and limit, the time each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period, to include a deviation from the requirement to continuously operate the CEMS for CO or O_2 and any exceedance of the CO emission limit;

i. records of the date and results of each inspection, calibration, and validation check of each CEMS;

j. records of all deviations from the monitoring requirements, i.e, periods of time during which any one of the CEMS is out-of-control and data are not available for required calculations; and

k. records to document compliance with the emission CO limit contained in this permit:

i. monthly records of the fuel(s) burned in each boiler, including the type of fuel (documented by the vendor) and the amount of each fuel burned; and

ii. the monthly heat input (mmBtu/month) for each boiler.

*The information needed to demonstrate compliance with the SSMP plan may be recorded using a "checklist" or some other effective form of record keeping, in order to minimize the recording burden for conforming procedures.

[63.6(e)(3)(iii)], [40 CFR 63.8], [40 CFR 63.10(b)], [40 CFR 63.7525(a)(3) through (5)], [40 CFR 63.7540(a)(2)], and [40 CFR 63.7555(a) through (d)]

(9) The permittee shall maintain the following records for the CEMS in accordance with the general requirements 40 CFR 63.10(c) and per 40 CFR 40 CFR 63.7505(d)(2)(iii). The following records shall be maintained in order to demonstrate compliance with the CO limit and/or shall be identified and maintained as a record to be submitted in the next semi-annual NESHAP and/or quarterly excess emissions reports required by this permit:

a. all required CEMS measurements (including monitoring data recorded during unavoidable CEMS breakdowns and out-of-control periods), to include:

i. the CEMS record of each successive 15-minute period of operations (one cycle of sampling, analyzing, and data recording), reduced to 1-hour averages* computed from four or more data points equally spaced over each 1-hour period; and

ii. the daily record of the 30-day rolling average emission rate of CO, i.e., a record of the new 30-day rolling average emission rate is calculated as the average of all of the hourly CO emission data for the preceding 30 days of operation, as required by 40 CFR 63.7525(a)(5).

b. the amount of excess zero (low-level) and high-level drift of the CEMS, measured at each 24-hour interval of boiler operations;

c. the date and time identifying each period during which the CEMS was inoperative except for zero (low-level) and high-level checks;

d. the date and time identifying each period during which the CEMS was out-of-control;

e. the specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions, as defined in Subpart DDDDD, that occurs during startups, shutdowns, and malfunctions of the emissions unit;

f. the specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions, as defined in Subpart DDDDD, that occurs during periods other than startups, shutdowns, and malfunctions of the emissions unit;

g. the nature and cause of any malfunction (if known);

h. the corrective action taken or preventive measures adopted;

i. the nature of the repairs or adjustments to each CEMS whenever it is inoperative or out of control;

j. the total boiler operating time during the reporting period; and

k. all records of the procedures that are required as part of a quality control program, developed and implemented for the CEMS under 40 CFR 63.8(d), as reflected in this permit.

* A valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. The data may be recorded in reduced or nonreduced form and in the appropriate units to demonstrate compliance (e.g., ppm CO and percent O_2).

[40 CFR 63.8], [40 CFR 63.10(c)], [40 CFR 63.7505(d)(2)(iii)], and [40 CFR 63.7525(a)]

(10) Data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities (including calibration checks and required zero and span adjustments), and/or any periods when the boiler(s) is/are operating at less than 50 percent of its/their rated capacity, shall not be used for purpose of calculating the 30-day rolling CO emissions average. Data collected during all other periods of operation shall be used in assessing compliance. Any period for which the monitoring system is out-of-control and data are invalid or not available for required calculations constitutes a deviation from the monitoring requirements, and should be reported as monitor downtime. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring equipment to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 63.8(c)(6)], [40 CFR 63.8(g)(5)], [40 CFR 63.7525(a)(6)], and [40 CFR 63.7535(b)and (c)]

(11) The permittee shall calibrate and maintain each CEMS as follows:

a. For each CEMS that is installed in accordance with the provisions of Subpart DDDDD and the CMS Performance Specifications 3 and 4A, the permittee shall check the zero (low-level value, between 0 and 20 percent of span value) and high-level (50 to 100 percent of span value) calibration drifts at least once daily (per 40 CFR 63.8(c)(6)), in accordance with written procedures which shall be specified in the performance evaluation plan. The zero (low-level) and high-level calibration drifts must be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable Performance Specifications 3 or 4A found in Appendix B of 40 CFR Part 60. The amount of excess zero (low-level) and high-level drift, measured at the 24-hour interval checks, shall be recorded daily and shall be quantified for the regulating office of the Ohio EPA if/when required.

b. When the CEMS is out of control, the permittee shall take the necessary corrective action(s) and shall repeat the necessary tests to demonstrate the system is back in control. The beginning of the out-of-control period is the hour the permittee or operator conducts a performance check (e.g., calibration drift)

that indicates an exceedance of the performance requirements. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During any period the CEMS is out of control, the data recorded shall not be used in averages and/or calculations, and shall not be used to demonstrate compliance with any applicable limitation or meet any data availability requirement established under Subpart DDDDD.

c. If any CEMS that is out of control, the permittee shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in 40 CFR 63.10(e)(3) and this permit. A CMS/CEMS is out of control if:

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

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

[40 CFR 63.8(c)(6), (7), and (8)]

(12) The permittee shall maintain a record of each instance in which any subject natural gas/gaseous fuel-fired boiler did not meet the emission limit/work practice standard for CO in Table 1 to this Subpart and if it occurred during a startup, shutdown, or malfunction event. These deviations from the emission limit/work practice standard in Subpart DDDDD shall be reported according to the requirements in 40 CFR 63.7550.

[40 CFR 63.7540(b)]

(13) Consistent with 40 CFR 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if it can be demonstrated to the satisfaction of the regulating agency (Ohio EPA Division of Air Pollution Control, District Office or local air agency) that the boiler(s) were operating in accordance with the SSMP. The regulating agency shall determine whether deviations that occurred during a period of startup, shutdown, or malfunction are violations, according to the provisions in 40 CFR 63.6(e).

[40 CFR 63.7540(d)]

(14) The records required by 40 CFR Part 63, Subpart DDDDD shall be maintained for a period of 5 years following the date of each occurrence, measurement, maintenance activity, corrective action, report, or record. The records must be in a form suitable and readily available for an expeditious review, however, only the most current 2 years of these records must be retained on site.

[40 CFR 63.10(b)(1)] & [40 CFR 63.7560]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or tailgas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(2) See 40 CFR Part 60, Subpart Db.

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x 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 Ohio EPA, Northeast District Office, documenting all instances of NO_x emissions in excess of any applicable limitation specified in this permit, 40 CFR Part 60, 40 CFR Parts 75 and 76, 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 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 or linearity checks;

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 e)(3)b.xi. and e)(3)b.xii..

Each report shall address the operations conducted and data obtained during the previous calendar quarter. Data substitution procedures from 40 CFR Part 75 are not to be used for showing compliance with the short term OAC 3745-31-05(A)(3) rule-based or NSPS-based limitation(s) in this permit.

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

[40 CFR 60.7] and [40 CFR Part 75]

(4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO_2 or O_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 Ohio EPA, Northeast District Office, documenting all instances of continuous CO_2 or O_2 monitoring system downtime and malfunction while the emissions unit was on line.

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 CO_2 or O_2 and other associated monitors;

iii. the location of the continuous CO_2 or O_2 monitor;

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

v. the total operating time of the continuous CO_2 or O_2 monitoring system while the emissions unit was in operation;

vi. results and dates of quarterly cylinder gas audits or linearity checks;

vii. results and dates of the relative accuracy test audit(s) (during appropriate quarter(s));

viii. the results of any relative accuracy test audit showing the continuous CO_2 or O_2 monitor out-of-control and the compliant results following any corrective actions;

ix. the date, time, and duration of any/each malfunction* of the continuous CO_2 or O_2 monitoring system while the emissions unit was in operation;

x. the date, time, and duration of any downtime* of the continuous CO_2 or O_2 monitoring system while the emissions unit was in operation; and

xi. the reason (if known) and the corrective actions taken (if any) for each event in e)(4)b.x. and e)(4)b.xi..

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 limitation.

[40 CFR 60.7] and [40 CFR Part 75]

(5) The permittee shall collect, record, and maintain measurements, data, records, and reports required per 40 CFR Part 75; and shall submit certification, recertification, notifications, applications, monitoring plans, petitions for alternative monitoring systems, electronic quarterly reports, and any other pertinent record and/or report to the Administrator (U.S. EPA), as required by 40 CFR Part 75.

[40 CFR Part 75]

(6) Pursuant to the NSPS, the source owner/operator 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. actual start-up date (within 15 days after such date); and

c. 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
50 West Town Street, Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049

and

Northeast District Office of the Ohio EPA
Division of Air Pollution Control
2110 E. Aurora Road
Twinsburg, Ohio 44087.

(7) The permittee shall submit a signed statement with each required quarterly report indicating whether:

a. The required continuous monitoring system calibration, span, and drift checks or other periodic audits have or have not been performed as specified.

b. The data used to show compliance was or was not obtained in accordance with approved methods and procedures of 40 CFR Part 60(and/or 40 CFR Part 75) and is representative of plant performance.

c. The minimum data requirements have or have not been met; or, the minimum data requirements have not been met due to errors that were unavoidable.

d. compliance with the standards has or has not been achieved during the reporting period.

(8) The permittee shall conduct performance evaluations of the required CEMS (O_2 and CO) for each natural gas/gaseous fuel-fired boiler within 180 days of startup and shall notify the Ohio EPA, Division of Air Pollution Control Central Office and the Northeast District Office, in writing, of the scheduled performance test date at least 30 days before it is scheduled (where the performance evaluation test plan has been submitted), to allow the Agency time to arrange for an observer to be present during the compliance demonstration.

A written report on the results of the emissions test(s) shall be submitted to the appropriate Ohio EPA Division of Air Pollution Control, Northeast District Office within 30 days following completion of the test(s) and shall be signed by the person or persons responsible for the tests. The Notification of Compliance Status containing the results of the initial compliance demonstration (including performance evaluation testing results of the CO and O_2 CEMS) shall be submitted before the close of business on the 60th day following completion of the performance test and according to the requirements in 40 CFR 63.7545(e).

[40 CFR 63.6(h)(4)], [40 CFR 63.7(a)(2) and (b)(1)], [40 CFR 63.9(h)], [40 CFR 63.7510(c) and (g)], [40 CFR 63.7530(e)], [40 CFR 63.7545(d) and (e)], and [OAC 3745-15-04(A)]

(9) Following the initial performance evaluation of the CEMS and with each sequential required determination and/or demonstration of compliance, the permittee shall submit, to the appropriate Ohio EPA, Division of Air Pollution Control, District Office or local air agency, notification of compliance with 40 CFR Part 63, Subpart DDDDD, signed by the owner or operator or other responsible official who is certifying the accuracy and completeness of the report. The notification of the testing results shall be postmarked no later than 60 days following the completion of the compliance demonstration for the initial performance test, and again no later than 60 days following the completion of each subsequent required performance evaluation. The performance evaluation report shall include the following information:

a. the subcategory under which each boiler is covered in Subpart DDDDD, and the emissions limit, work practice standard, and/or other limitation(s) applicable to each emissions unit, from the tables to the Subpart;

b. the method(s) that were used to determine compliance with CO limit and work practice standard and the date each compliance demonstration was conducted;

c. the results of the CEMS performance evaluations, and/or other monitoring procedures or methods that were conducted to demonstrate compliance;

d. the methods that will be used for determining continuing compliance, including a description of the records that will be maintained for each CEMS and the performance specification requirements that will be maintained for the CEMS or any monitoring of the burner or gas flow rate;

e. the range of CO emissions, as monitored by the CEMS, in ppm by volume on a dry basis corrected to 3% oxygen;

f. the analysis demonstrating whether the facility is a major source or an area source and the supporting potential and controlled emissions data to document the determination;

g. a description of any additional air pollution control equipment;

h. a statement, signed by a responsible official, as to whether the subject natural gas/gaseous fuel-fired boiler(s) has/have met the CO work practice standard requirements of Subpart DDDDD; and if not, the proposed method and time-line for achieving compliance; and

i. a statement certifying that only natural gas or gaseous fuels was/were burned in the subject boiler(s) and that no liquid or solid fuels were burned since the startup of the emissions unit.

Each time a notification of a compliance test is required under Subpart DDDDD, the permittee shall submit, to the appropriate Ohio EPA, Division of Air Pollution Control, District Office or local air agency, a notification of the performance evaluation testing results and compliance status, signed by a responsible official who shall certify its accuracy, attesting to whether each emissions unit has complied with the CO limit, work practice standard, and all the requirements of Subpart DDDDD. The CO and O_2 CEMS performance evaluation test results shall be included in the next semi-annual report.

[40 CFR 63.9(h)], [40 CFR 63.10(d)(2)], [40 CFR 63.7515(g)], and [40 CFR 63.7545(e)]

(10) The Initial Notification of Compliance Status shall be submitted before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstration(s) according to 40 CFR 63.10(d)(2). The Initial Notification of Compliance Status Report shall include the following information:

a. the analysis demonstrating whether the facility is a major source or an area source and the supporting potential and controlled emissions data to document the determination;

b. the emissions unit identification of each boiler subject to 40 CFR Part 63, Subpart DDDDD and the subcategory under which each shall be demonstrating compliance;

c. the heat capacity of each boiler, i.e., mmBtu/hr;

d. a summary of the CO and O_2 CEMS emissions monitoring data during the initial compliance period, to include the maximum CO emission levels recorded during the performance evaluation tests of the CEMS and the maximum 30-day rolling average CO emission levels recorded during the initial compliance period, reported in parts per million by volume on a dry basis corrected to 3 percent oxygen;

e. a description of each deviation from the CO emission limit and work practice standard contained in Table 1 of Subpart DDDDD, the boiler(s) involved in the deviation, the duration of each deviation, and the corrective action(s) taken;

f. a statement of certification, signed by an authorized responsible official, verifying that the CO emission limit and work practice standard has been met for each subject, natural gas/gaseous fuel-fired boiler, and/or a detailed description of each deviation, the nature of the deviation, the date(s) and duration of the deviation, and the emissions unit(s) involved; and

g. a statement certifying that only natural gas or gaseous fuels were burned in the subject boiler(s) and that no liquid or solid fuels were burned during the initial compliance period.

[40 CFR 63.9(h)(2)(ii)], [40 CFR 63.10(d)(2)], [40 CFR 63.7506(a)], and [40 CFR 63.7545(e)]

(11) The permittee shall submit Semi-annual Compliance Reports containing the following records, in accordance with the general reporting requirements of 40 CFR 63.6(f), 63.10(d), and 40 CFR 63.7550(c), (d), and (e). Each semi-annual compliance report shall contain the following information for the facility boilers(s) burning natural gas or gaseous fuels:

a. the company name and address and facility ID number;

b. a statement by a responsible official, to include the official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;

c. the date of the report and the beginning and ending dates of the reporting period;

d. the total natural gas and gaseous fuel usage, in cubic feet, for each boiler (identified by the assigned emission unit number), for each calendar month within the semiannual reporting period;

e. a summary of the CO and O_2 CEMS emissions monitoring data during the 6-month compliance period, to include the maximum 30-day rolling average CO emission levels recorded (reported in parts per million by volume on a dry basis,

corrected to 3 percent oxygen) and the maximum CO emission levels recorded during any performance evaluation test of the CEMS;

f. a signed statement, by a responsible official as defined in 40 CFR 70.2, certifying that only natural gas or gaseous fuels were burned in the subject boiler(s), and that no liquid or solid fuels and/or new type of fuels were burned during the semiannual compliance period;

g. if a startup, shutdown, or malfunction occurred during the reporting period, and the event did not cause an exceedance of the CO work practice standard/limit from Subpart DDDDD, the permittee shall confirm in the semiannual report that there were no exceedances during the startup, shutdown, or malfunction event and shall document (whether an exceedance or not) if the actions taken during the event were consistent with the SSMP, or if not, the reason for the deviation from the plan;

h. if a startup, shutdown, or malfunction occurred during the reporting period, and the event caused an exceedance of the CO work practice standard or limit from Subpart DDDDD, the permittee shall include (with/in the semiannual report) a startup, shutdown, and malfunction report documenting the exceedance, the date, and its duration;

i. if a startup, shutdown, or malfunction occurred during the reporting period, and the event caused an exceedance of the CO limit or work practice standard from Subpart DDDDD, and the actions taken during the event were not consistent with the SSMP, the permittee shall include (with/in the semiannual report) a startup, shutdown, and malfunction report documenting the exceedance, the fact that the SSMP was not followed, and the date(s) of the event(s); and the permittee shall also submit an immediate startup, shutdown, and malfunction report, as required by 40 CFR 63.10(d)(5)(ii) and this permit;

j. if there were no deviations from the CO limit or work practice standard in Subpart DDDDD, a statement that there were no deviations from the emission limits or the CO work practice standard during the reporting period;

k. if there were no periods during which the CEMS were out of control as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CEMS were out of control during the reporting period;

l. for each deviation from any emission limit or the CO work practice standard, and/or from the site-specific monitoring plan (required per 40 CFR 63.7505(d)) contained in 40 CFR Part 63, Subpart DDDDD (including periods of startup, shutdown, and malfunction) that occurs where CEMS are used to comply with any emission limit or work practice standard, the compliance report shall contain the following information for each boiler:

   i. the date and time that each malfunction started and stopped and description of the nature of the deviation (i.e., the limits, work practice standards, plan);

ii. the date and time that each CEMS was inoperative, except for zero (low-level) and high-level checks;

iii. the date, time, and duration that each CEMS was out of control, including the information in 40 CFR 63.8(c)(8);

iv. 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. a summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period;

vi. a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and unknown causes;

vii. a summary of the total duration of CEMS downtime during the reporting period and the total duration of CEMS downtime as a percent of the total source operating time during that reporting period;

viii. an identification of any exceedance of the CO limit as recorded by the CEMS, including any malfunction of the CEMS;

ix. an identification of the boiler for which there was a deviation;

x. an identification of each CEMS for which there was a deviation;

xi. the date of the latest CEMS certification or audit for the system for which there was a deviation; and

xii. a description of any changes to the CEMS, the boiler(s), or controls since the last reporting period for the boiler(s) for which there was a deviation.

m. if it cannot be demonstrated that boiler(s) is/are in compliance with the CO limit, the compliance report shall include a statement indicating the intent to correct the malfunction and/or replace the CEMS and conduct a new performance evaluation within 60 days.

(12) The permittee shall conduct a performance evaluation of the CEMS for CO and O_2 for each new boiler within 180 days of startup. The permittee shall notify the director (appropriate Ohio EPA Division of Air Pollution Control District Office or local air agency) in writing of the scheduled performance test date at least 60 calendar days before it is scheduled, to allow the agency time to review and approve the site-specific test plan and to arrange for an observer to be present during the compliance demonstration.

A written report on the results of the performance evaluation shall be submitted to the Central Office and the appropriate District Office or local air agency of the Ohio EPA Division of Air Pollution Control within 30 days (per OAC 3745-15-04(A)) following

completion of the test(s) and shall be signed by the person or persons responsible for the tests.

[40 CFR 63.7(a)(2) and (b)(1)]; [40 CFR 63.7510(g)]; [40 CFR 63.7525(a)(2)], [40 CFR 63.7530(e)], [40 CFR 63.7545(e)], and [OAC 3745-15-04(A)]

The first compliance report shall cover the period beginning on the compliance date, at the startup of the unit, and ending on either June 30 or December 31 whichever comes first. Each subsequent compliance report shall cover the semiannual reporting period from January 1 through June 30 or from July 1 through December 31 and each report shall 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.

[40 CFR 63.7(g)(1)], [40 CFR 63.9(h)], [40 CFR 63.10(d)], [40 CFR 63.7506(a)], [40 CFR 63.7545(e)], [40 CFR 63.7550(b),(c), (d), and (e)], and [40 CFR Part 63, Subpart DDDDD, Tables 9 and 10]

(13) The permittee shall submit quarterly written reports of excess emissions or exceedances of Subpart DDDDD limits or permit established limits, in units of the applicable standard (for CO, ppm by volume on a dry basis corrected to 3% O_2) which shall include:

a. the date and time identifying each period during which the CEMS were inoperative except during zero (low-level) and high-level checks;

b. the start and end date(s) and the number of hours of each period of time during which any CEMS were out-of-control, and a description of the corrective actions taken to bring it back to normal operation;

c. the specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions from the limitations established in this permit for compliance with 40 CFR Part 63, Subpart DDDDD, that occurs during startups, shutdowns, and malfunctions of the emissions unit;

d. the specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions from the limitations established in this permit for compliance with 40 CFR Part 63, Subpart DDDDD, that occurs during periods other than startup, shutdown, and/or malfunction of the emissions unit;

e. the nature and cause (if known) of any malfunction;

f. the corrective action taken or preventive measures adopted;

g. the nature of the repairs or adjustments to any CEMS that was inoperative or out of control;

h. the total operating time for each boiler during the reporting period; and

i. the name, title, and signature of the responsible official who is certifying the accuracy of the report.

All required excess emissions and monitoring system performance reports and/or summary reports shall be delivered to the appropriate Ohio EPA, Division of Air Pollution Control, District Office or local air agency and shall be postmarked by the 30th day following the end of each calendar quarter, unless a different schedule has been required and/or approved by the same office. Quarterly shall mean January through March, April through June, July through September, and October through December.

[40 CFR 63.8(c)(8)], [40 CFR 63.10(e)(3)], and [OAC 3745-15-03(B)]

f) Testing Requirements

(1) Within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up at the facility, the permittee shall conduct certification tests of the continuous NO_x monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 2; ORC section 3704.03(I); and 40 CFR Part 75. The permittee may test the continuous NO_x monitoring system in accordance with requirements for monitoring systems subject to 40 CFR Part 75, Appendix B, if the test results are reported in units of the applicable standard(s) and approved by Ohio EPA.

Personnel from the Ohio EPA, Central Office and the Ohio EPA, Northeast District Office shall be notified 45 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 Ohio EPA, Central Office and one copy to the Ohio EPA, Northeast District Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO_x 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 2; ORC section 3704.03(I); and 40 CFR Part 75.

Ongoing compliance with the NO_x emission limitations contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

[40 CFR 60.13]; [40 CFR Part 60, Appendices B & F]; and [40 CFR Part 75]

(2) Within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up at the facility, the permittee shall conduct certification tests of the continuous CO_2 or O_2 monitoring system to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 3; ORC section 3704.03(I); and 40 CFR Part 75. The permittee may test the continuous CO_2 or O_2 monitoring system in accordance with requirements for monitoring systems subject to 40 CFR Part 75, Appendix B, if the test results are approved by Ohio EPA.

Personnel from the Ohio EPA, Central Office and the Ohio EPA, Northeast District Office shall be notified 45 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 Ohio EPA, Central Office and one copy to the Ohio EPA, Southeast District Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous CO_2 or O_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 Specification 3; ORC section 3704.03(I); and 40 CFR Part 75.

Ongoing compliance with the CO_2 or O_2 monitoring requirements contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

[40 CFR 60.13]; [40 CFR Part 60, Appendices B & F]; and [40 CFR Part 75]

(3) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitations:

Particulate matter less than ten microns (PM-10), filterable and condensible emissions, shall not exceed 0.015 pound per million Btu heat input(as a 3-hour average),18.7 pounds per hour(as a 3-hour average) and 81.9 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per million Btu and pound per hour PM-10 emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(4).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by compliance with the hourly emissions limit.

b. Emission Limitation:

Sulfur dioxide(SO2) emissions shall not exceed 0.6 lb per 1.0 million scf of gas fired, 2.0 lbs per hour(as a 3-hour average), and 8.9 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by compliance with the hourly emissions limit.

c. Emission Limitations:

Nitrogen oxides(NOx) emissions shall not exceed 0.10 pound per million Btu heat input(as a 3-hour average), 120.0 lbs per hour(as a 3-hour average), and 525.6 tons per rolling 12-month period.

Applicable Compliance Methods:

Compliance with the pound per million Btu and pound per hour NOx emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(5), the monitoring and record keeping requirements in b)(3) and the reporting requirements in e).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the record keeping required pursuant to d), b)(3) and the associated emission factors derived from emissions testing as specified in d), and f)(5)

d. Emission Limitations:

Carbon monoxide(CO) emissions shall not exceed 0.03 lb per million Btu heat input(as a 3-hour average), 36.0 lbs per hour(as a 3-hour average), and 157.2 tons per rolling, 12-month period. Applicable Compliance Methods:

Compliance with the pound per million Btu and pound per hour CO emissions limitations shall be demonstrated based upon the applicable emissions tests specified f)(7)

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the record keeping required pursuant to d) and the associated emission factors derived from emissions testing as specified in f)(5)

e. Emission Limitations:

Volatile organic compound(VOC) emissions shall not exceed 3.9 lbs per 1.0 million scf of gas fired, 13.0 lbs per hour(as a 3-hour average) and 56.9 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per million Btu and pound per hour VOC emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(7)

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(5)

f. Emission Limitations:

Total HAPs emissions shall not exceed, 4.5 lbs per hour(as a 3-hour average) and 19.6 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the lbs per hour total HAPs emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(5).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(5)

g. Emission Limitations:

Hexane emissions shall not exceed, 4.3 lbs per hour(as a 3-hour average) and 18.6 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the lbs per hour total HAPs emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(5).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(5).

(4) The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirements:

a. The emissions testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of the emissions unit.

b. The emissions testing shall be conducted to demonstrate compliance with the applicable emissions limitations for PM-10, NO_X, SO_2, VOC, CO, and opacity, in the appropriate averaging period(s).

c. The following test methods shall be employed to demonstrate compliance with the applicable emissions limitations:

PM-10	Method 201(40 CFR Part 51, Appendix M)
	Method 202(40 CFR Part 51, Appendix M)
SO2	Methods 1 through 4 and 6C of 40 CFR Part 60, Appendix A
NOx	Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A
CO	Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A

VOC	Methods 1 through 4 and 25, or Methods 1 through 4 and 25A (as appropriate), of 40 CFR Part 60, Appendix A
Total HAPs	Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A.
Hexane	Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A.
Opacity	Method 9 of 40 CFR Part 60, Appendix A

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

d. The test(s) shall be conducted while the emissions unit is operating at greater than 90% of the boiler heat input rating, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. 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 Ohio EPA, Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA, Northeast District Office 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 Ohio EPA, Northeast District Office 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 Ohio EPA, Northeast District Office.

(5) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

Emission Limitations:

400 ppm CO by volume on a dry basis corrected to 3% oxygen and on a 30-day rolling average

Applicable Compliance Method:

The permittee shall meet the CO work practice standard in Table 1 to the Subpart as follows:

a. The permittee shall demonstrate compliance with the emission limit above by installing CEMS for CO and O_2 and maintaining records for the 30-day rolling average emissions, and by conducting the performance evaluations and performance audits as required in this permit.

b. The permittee shall check the zero (low-level) and high-level calibration drifts at least once daily and in accordance with the written procedures specified in the performance evaluation plan. The low-level and high-level calibration drifts shall be adjusted, at a minimum, whenever the 24-hour low-level drift exceeds two times the limits of the applicable performance specification. The daily CEMS calibration checks shall be recorded and the amount of excess drift (high or low) shall be quantified upon request.

c. The permittee shall conduct, or have conducted, performance evaluations of the CEMS for CO and O_2 within 180 of the startup of each boiler. The permittee shall submit written notification of the date of the CEMS performance evaluation to both the Central Office and the appropriate District Office or local air agency of the Ohio EPA, Division of Air Pollution Control, at least 30 days (where the performance evaluation test plan has already been submitted) prior to the date the performance evaluation is scheduled to begin. The performance evaluations shall be conducted in accordance with Performance Specifications 4A for CO, Performance Specification 3 for O_2, and as required in 40 CFR 63.7525(a), 40 CFR 63.8, and the performance evaluation test plan.

    i. The performance evaluation test shall include the requirement to analyze performance audit samples during the performance evaluation (per 40 CFR 63.7(c)(2)(iii)). The permittee must request cylinder audit gases from U.S. EPA Region V at least 30 days prior to the performance evaluation test date.

    ii. The performance evaluation tests shall be conducted while the boiler is operating at its maximum normal operating rate and flow rate of the gas. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of the performance evaluation test. The permittee shall make available to the Ohio EPA, Division of Air Pollution Control, Central Office or the appropriate District Office or local air agency, upon request, any records that may be necessary to determine the conditions of the performance evaluation of the CEMS for CO and O_2.

    iii. The permittee shall notify the Ohio EPA, Division of Air Pollution Control, Central Office and the appropriate District Office or local air agency, in writing, of the intent to conduct a performance evaluation and/or performance audit at least 60 calendar days before the performance test is initially scheduled to begin. The notification shall describe in detail the Performance Specifications to be conducted at each emissions point, the

time(s) and date(s) of the test(s), and the person(s) who will be conducting the performance evaluation tests. Failure to submit such notification for review and approval prior to the CEMS performance evaluations may result in the Division of Air Pollution Control's refusal to accept the testing results.

iv. Personnel from the appropriate Ohio EPA, Division of Air Pollution Control, District Office, local air agency, or Central Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of each CEMS, the emissions units, and the testing procedures provide a valid characterization of the emissions from each boiler monitored.

v. A comprehensive written report on the results of the performance evaluation shall be signed by the person or persons responsible for the tests and shall be submitted to the appropriate Ohio EPA, Division of Air Pollution Control, Central Office, as well as the District Office or local air agency within 30 days following completion of the test(s).

vi. In the event the permittee is unable to conduct the performance evaluation on the date specified in the notification requirement due to unforeseeable circumstances beyond control, the permittee shall notify the appropriate Ohio EPA, Division of Air Pollution Control, Central Office and appropriate District Office or local air agency as soon as practicable and without delay prior to the scheduled performance evaluation date and specify the date when the performance evaluation is rescheduled. This notification of delay in conducting the performance evaluation shall not relieve the permittee of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable federal, State, or local requirement.

vii. The permittee shall maintain performance evaluation results and any other data needed to determine emissions from each emissions unit for a minimum of 5 years after the testing is conducted or after the data is collected. These records shall be made available for inspection by the Director of the Ohio EPA or his/her representative, upon request.

As defined in 40 CFR 63.2, Subpart A of the NESHAP:

Performance audit means a procedure to analyze blind samples, the content of which is known by the Administrator, simultaneously with the analysis of performance test samples in order to provide a measure of test data quality.

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

[40 CFR 63.7(c)], [40 CFR 63.8], [40 CFR 63.7505(d)(3)], [40 CFR 63.7506(a)], [40 CFR 63.7510(c) and (g)], [40 CFR 63.7525(a)], [40 CFR 63, Subpart DDDDD, Table 1], and [OAC 3745-15-04(A)]

Within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up at the facility, the permittee shall conduct certification tests of the continuous NO_x monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 2; ORC section 3704.03(I); and 40 CFR Part 75. The permittee may test the continuous NO_x monitoring system in accordance with requirements for monitoring systems subject to 40 CFR Part 75, Appendix B, if the test results are reported in units of the applicable standard(s) and approved by Ohio EPA.

Personnel from the Ohio EPA, Central Office and the Ohio EPA, Northeast District Office shall be notified 45 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 Ohio EPA, Central Office and one copy to the Ohio EPA, Northeast District Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO_x 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 2; ORC section 3704.03(I); and 40 CFR Part 75.

Ongoing compliance with the NO_x emission limitations contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

[40 CFR 60.13]; [40 CFR Part 60, Appendices B & F]; and [40 CFR Part 75]

g) Miscellaneous Requirements

(1) None

2. B005, Product Upgrade System.

Operations, Property and/or Equipment Description:

Product Upgrade System w/21.0 mmBtu/hr Hydrocracker Feed Oil Heater, 20.0 mmBtu/hr Hydrocracker Feed Hydrogen Heater & 24.0 mmBtu/hr Product Fractionator Heater.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-31-10 through 3745-31-20.
b.	OAC rule 3745-31-10 through 3745-31-20	Particulate emissions (PE) shall not exceed 4.7 pounds per hour and 20.7 tons per rolling, 12-month period from the SCR device controlling this emissions unit. Nitrogen oxides (NOx) emissions shall not exceed 16.8 pounds per hour and 73.6 tons per rolling, 12-month period from the SCR device controlling this emissions unit, Carbon monoxide (CO) emissions shall not exceed 51.9 pounds per hour and 227.3 tons per rolling, 12-month period from the SCR device controlling this emissions unit, Volatile organic compounds (VOC) emissions shall not exceed 3.4 pounds per hour and 14.9 tons per rolling, 12-month period from the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		SCR device controlling this emissions unit, Sulfur dioxide (SOx) emissions shall not exceed 0.4 pound per hour and 1.6 tons per rolling 12-month period from the SCR device controlling this emissions unit. See b)(2)b. These limitations are the total allowable emissions for emissions unit B006, the 154.0 mm Btu/hr F-T Fractionator Fired Heater, the 21.0 mm Btu/hr Hydrocracker Feed Oil Heater, the 20.0 mm Btu/hr Hydrocracker Feed Hydrogen Heater, and the 24.0 mm Btu Production Fractionation Feed Heater, all of which vent to the SCR device, Note: For purposes of totaling the facility-wide emissions, the emissions from emissions units B005 and B006 represent the same set of emissions and shall not be twice counted.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-10	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-21-08(E)	See b)(2)a.
f.	40 CFR Part 60, Subpart Ja	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-31-05(D)	This permit to install takes into account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 upon S02 emissions as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The waste gas stream shall be burned at 1,300 degrees Fahrenheit for 0.3 seconds or greater in a direct-flame afterburner or boiler equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

b. The BACT determination for this emissions unit includes:

i. use of only either natural gas or tailgas as fuel;

ii. employ ultra low-NOx burners (ULNB) in the boiler and a Selective Catalytic Reduction (SCR) unit emissions control device to reduce NOx emissions;

iii. burn only gaseous fuels and employ good combustion practices to limit CO emissions, VOC emissions, SO2 emissions, H2S emissions, and PE/PM10 emissions.

c) Operational Restrictions

(1) Each heater shall be designed and manufactured to meet the requirements of b)(2)a.

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 60, Subpart Ja.

Subpart Ja, Section 60.107a allows the permittee to choose to continuously monitor and record either the sulfur dioxide emissions into the atmosphere from this emissions unit or to continuously monitor and record the H2S content of the fuel gas before being burned.

(2) The permittee shall maintain monthly records of the total quantity and type of gaseous fuel(s) burned in this emissions unit during each reporting period.

(3) The permittee shall collect and record the following information for each day for the emissions unit and control equipment:

a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

e) Reporting Requirements

(1) See 40 CFR Part 60, Subpart Ja.

(2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or tailgas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(3) The permittee shall submit quarterly summaries of the following records:

a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed 16.8 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, the maximum amount of the low Btu fuel gas entering the heaters, and the control efficiency of the SCR (88%).

E(NOx)FT Heater = 434,359 scf/hr x 280 lbs NOx/10xE6 scf (AP-42 emission factor) x (1-0.88) = 14.6 lbs/hr

E(NOx)HFOH, HFH, PFF Heaters = 183,334 scf/hr x 100 lbs NOx/10xE6 scf (AP-42 EF) x (1-0.88) = 2.2 lbs/hr

E(NOx) Total = 14.6 + 2.2 = 16.8 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

b. Emission Limitation:

NOx emissions shall not exceed 73.6 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable NOx emission limitation (16.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

c. Emission Limitation:

PE emissions shall not exceed 4.7 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(PE) = 617,693 scf/hr x 7.6 lbs PE/10xE6 scf (AP-42 emission factor) = 4.7 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5.

d. Emission Limitation:

PE emissions shall not exceed 20.7 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable PE emission limitation (4.7 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 51.9 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(CO) = 617,693 scf/hr x 84 lbs CO/10xE6 scf (AP-42 emission factor) = 51.9 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 10.

f. Emission Limitation:

CO emissions shall not exceed 227.3 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable CO emission limitation (51.9 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

g. Emission Limitation:

VOC emissions shall not exceed 3.4 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(VOC) = 617,693 scf/hr x 5.5 lbs VOC/10xE6 scf (AP-42 emission factor) = 3.4 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly VOC emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 25 or 25A.

h. Emission Limitation:

VOC emissions shall not exceed 14.9 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable VOC emission limitation (3.4 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission

limitation, compliance shall also be shown with the rolling 12 month emission limitation.

i. Emission Limitation:

SOx emissions shall not exceed 0.4 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(SOx) = 617,693 scf/hr x 0.6 lbs SOx/10xE6 scf (AP-42 emission factor) = 0.4 lb/hr

If required, the permittee shall demonstrate compliance with the hourly SOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 6.

j. Emission Limitation:

SOx emissions shall not exceed 1.6 tons per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable SOx emission limitation (0.4 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g) Miscellaneous Requirements

(1) None.

3. B006, F-T Process Unit.

Operations, Property and/or Equipment Description:

F-T Process w/154.0 mmBtu/hr Fractionator Fired heater fueled by natural gas/tailgas, controlled by a common SCR device.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-31-10 through 3745-31-20.
b.	OAC rule 3745-31-10 through 3745-31-20	Particulate emissions (PE) shall not exceed 4.7 pounds per hour and 20.7 tons per rolling, 12-month period from the SCR device controlling this emissions unit. Nitrogen oxides (NOx) emissions shall not exceed 16.8 pounds per hour and 73.6 tons per rolling, 12-month period from the SCR device controlling this emissions unit. Carbon monoxide (CO) emissions shall not exceed 51.9 pounds per hour and 227.3 tons per rolling, 12-month period from the SCR device controlling this emissions unit. Volatile organic compounds (VOC) emissions shall not exceed 3.4 pounds per hour and 14.9 tons per rolling, 12-month period from the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		SCR device controlling this emissions unit. Sulfur dioxide (SOx) emissions shall not exceed 0.4 pound per hour and 1.6 tons per rolling 12-month period from the SCR device controlling this emissions unit. See b)(2)b. These limitations are the total allowable emissions for emissions unit B006, the 154.0 mm Btu/hr F-T Fractionator Fired Heater, the 21.0 mm Btu/hr Hydrocracker Feed Oil Heater, the 20.0 mm Btu/hr Hydrocracker Feed Hydrogen Heater, and the 24.0 mm Btu Production Fractionation Feed Heater, all of which vent to the SCR device. Note: For purposes of totaling the facility-wide emissions, the emissions from emissions units B005 and B006 represent the same set of emissions and shall not be twice counted.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-10	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-21-08(E)	See b)(2)a.
f.	40 CFR Part 60, Subpart Ja	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-31-05(D)	This permit to install takes into

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 upon S02 emissions as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The waste gas stream shall be burned at 1,300 degrees Fahrenheit for 0.3 seconds or greater in a direct-flame afterburner or boiler equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

b. The BACT determination for this emissions unit includes:

i. use of only either natural gas or tailgas as fuel;

ii. employ ultra low-NOx burners (ULNB) in the boiler and a Selective Catalytic Reduction (SCR) unit emissions control device to reduce NOx emissions;

iii. burn only gaseous fuels and employ good combustion practices to limit CO emissions, VOC emissions, SO2 emissions, and PE/PM10 emissions.

c) Operational Restrictions

(1) Each heater shall be designed and manufactured to meet the requirements of b)(2)a.

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 60, Subpart Ja.

Subpart Ja, Section 60.107a allows the permittee to choose to continuously monitor and record either the sulfur dioxide emissions into the atmosphere from this emissions unit or to continuously monitor and record the H2S content of the fuel gas before being burned.

(2) The permittee shall maintain monthly records of the total quantity and type of gaseous fuel(s) burned in this emissions unit during each reporting period.

(3) The permittee shall collect and record the following information for each day for the emissions unit and control equipment:

a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

b.

e) Reporting Requirements

(1) See 40 CFR Part 60, Subpart Ja.

(2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or tailgas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(3) The permittee shall submit quarterly summaries of the following records:

a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed 16.8 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, the maximum amount of the low Btu fuel gas entering the heaters, and the combined control efficiency of the ULNB and SCR (88%).

E(NOx)FT Heater = 434,359 scf/hr x 280 lbs NOx/10xE6 scf (AP-42 emission factor) x (1-0.88) = 14.6 lbs/hr

E(NOx)HFOH, HFH, PFF Heaters = 183,334 scf/hr x 100 lbs NOx/10xE6 scf (AP-42 EF) x (1-0.88) = 2.2 lbs/hr

E(NOx) Total = 14.6 + 2.2 = 16.8 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

b. Emission Limitation:

NOx emissions shall not exceed 73.6 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable NOx emission limitation (16.8 lbs/hr) by the

maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

c. Emission Limitation:

PE emissions shall not exceed 4.7 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(PE) = 617,693 scf/hr x 7.6 lbs PE/10xE6 scf (AP-42 emission factor) = 4.7 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5.

d. Emission Limitation:

PE emissions shall not exceed 20.7 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable PE emission limitation (4.7 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 51.9 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(CO) = 617,693 scf/hr x 84 lbs CO/10xE6 scf (AP-42 emission factor) = 51.9 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 10.

f. Emission Limitation:

CO emissions shall not exceed 227.3 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable CO emission limitation (51.9 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

g. Emission Limitation:

VOC emissions shall not exceed 3.4 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(VOC) = 617,693 scf/hr x 5.5 lbs VOC/10xE6 scf (AP-42 emission factor) = 3.4 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly VOC emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 25 or 25A.

h. Emission Limitation:

VOC emissions shall not exceed 14.9 tons per rolling, 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable VOC emission limitation (3.4 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

i. Emission Limitation:

SOx emissions shall not exceed 0.4 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters .

E(SOx) = 617,693 scf/hr x 0.6 lbs SOx/10xE6 scf (AP-42 emission factor) = 0.4 lb/hr

If required, the permittee shall demonstrate compliance with the hourly SOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 6.

j. Emission Limitation:

SOx emissions shall not exceed 1.6 tons per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable SOx emission limitation (0.4 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g) Miscellaneous Requirements

(1) None.

4. F001, Coal Storage Piles.

Operations, Property and/or Equipment Description:

Coal Storage Piles, 16.6 acres with stocker/reclaimers.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-31-10 through 3745-31-20. There shall be no visible particulate emissions except for a period of time not to exceed one minute in any 60-minute observation period. The permittee shall implement best available control measures that are sufficient to minimize or eliminate visible particulate emissions of fugitive dust. See b)(2)c.
b.	OAC rule 3745-17-07(B)(6)	The visible particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 through 3745-31-20.
c.	OAC rules 3745-31-10 through 3745-31-20	Emissions of fugitive particulate matter of 10 microns or less (PM10) shall not exceed 12.3 tons per rolling,12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Fugitive particulate matter emissions shall not exceed 25.7 tons per rolling, 12-month period. See b)(2)a. through b)(2)b.

(2) Additional Terms and Conditions

a. The Best Available Control Technology (BACT) determination for this emissions unit includes:

i. installation and use of a 3-sided windscreen barrier, at all times, around the storage piles to minimize particulate matter and PM10 emissions caused by windblown erosion of the storage piles. Said wind barrier shall have a design, emission reduction efficiency of at least 75%:

ii. enclosed conveyors;

iii. reduced drop heights; and

iv. use of chemical stabilization/dust suppressants and/or watering, as required.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation and for wind erosion at each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

c. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile in accordance with the following frequencies:

storage pile identification	minimum load-in inspection frequency
all	daily

(2) Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

storage pile identification	minimum load-out inspection frequency
all	daily

(3) Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

storage pile identification	minimum wind erosion inspection frequency
all	daily

(4) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(5) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.

(6) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement chemical stabilization/dust suppressants;

c. the dates that chemical stabilization/dust suppressants were applied; and

d. on a calendar quarter basis, the total number of days that chemical stabilization/dust suppressants were applied and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in d)(6)d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit semi-annual deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when chemical stabilization/dust suppressants, that were to be implemented as a result of an inspection, were not implemented.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emissions Limitations:

Emissions of fugitive particulate matter of 10 microns or less (PM10) shall not exceed 12.3 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with fugitive particulate matter and PM10 emissions limitations shall be determined by using the emission factor equations in U.S. EPA's 'Control of Open Fugitive Dust Sources' (EPA-450/3-88-008),Section 4.1.3 and Sections 13.2.4 and 13.2.5, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 1/95), for load-in operations, load-out operations, and wind erosion. These emission limits were based on a maximum coal pile storage area of 16.6 acres of continuously active piles, an average silt content of 4.8%, a 28% time factor representing wind speeds of 12 miles per hour or greater on an annual basis and a 75% overall control efficiency for particulate emissions and PM10.

b. Emission Limitation:

Particulate emissions shall not exceed 25.7 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with fugitive particulate matter and PM10 emissions limitations shall be determined by using the emission factor equations in U.S. EPA's 'Control of Open Fugitive Dust Sources' (EPA-450/3-88-008),Section 4.1.3 and Sections 13.2.4 and 13.2.5, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 1/95), for load-in operations, load-out operations, and wind erosion. These emission limits were based on a maximum coal pile storage area of 16.6 acres of continuously active piles, an average silt content of 4.8%, a 28% time factor representing wind speeds of 12 miles per hour or greater on an annual basis and a 75% overall control efficiency for particulate emissions and PM10.

c. Emission Limitation:

There shall be no visible particulate emissions except for a period of time not to exceed one minute in any 60-minute observation period.

Applicable Compliance Method:

Compliance with the visible particulate emissions limitations for the storage piles identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

g) Miscellaneous Requirements

(1) None.

5. F002, Biomass Storage Piles.

Operations, Property and/or Equipment Description:

Biomass Storage Piles, 4.40 acres consisting of clean, untreated wood chips or sawdust, under roof.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) from this air contaminant source since the calculated annual emission rate for PE is less than ten tons per year taking into account the federally enforceable BACT emission limit of 2.71 tons per rolling, 12-month period.
b.	OAC rule 3745-17-07(B)(6)	There shall be no visible particulate emissions except for a period of time not to exceed thirteen minutes in any 60-minute observation period.
c.	OAC rules 3745-31-10 through 3745-31-20	Emissions of fugitive particulate matter of 10 microns or less (PM10) shall not exceed 1.0 tons per rolling, 12-month period. Fugitive particulate matter emissions shall not exceed 2.71 tons per rolling, 12-month period. See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. The Best Available Control Technology (BACT) determination for this emissions unit includes:

i. installation and use of a 3-sided windscreen barrier, at all times, around the storage piles to minimize particulate matter and PM10 emissions caused by windblown erosion of the storage piles. Said wind barrier shall be designed for an, emission reduction efficiency, of at least 75%:

ii. enclosed conveyors;

iii. reduced drop heights; and

iv. use of chemical stabilization/dust suppressants and/or watering, as required.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation and for wind erosion at each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile in accordance with the following frequencies:

storage pile identification	minimum load-in inspection frequency
all	daily

(2) Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

storage pile identification	minimum load-out inspection frequency
all	daily

(3) Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

storage pile identification	minimum wind erosion inspection frequency
all	daily

(4) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(5) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.

(6) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement chemical stabilization/dust suppressants;

c. the dates that chemical stabilization/dust suppressants were applied; and

d. on a calendar quarter basis, the total number of days that chemical stabilization/dust suppressants were applied and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in d)(6) shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit semi-annual deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when chemical stabilization/dust suppressants, that were to be implemented as a result of an inspection, were not implemented.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emissions Limitation:

Emissions of fugitive particulate matter of 10 microns or less (PM10) shall not exceed 1.0 ton per rolling,12-month period.

Applicable Compliance Method:

Compliance with fugitive particulate matter and PM10 emissions limitations shall be determined by using the emission factor equations in U.S. EPA's 'Control of Open Fugitive Dust Sources' (EPA-450/3-88-008),Section 4.1.3, and Sections 13.2.4 and 13.2.5, in 'Compilation of Air Pollutant Emission Factors', AP-42, Fifth Edition, Volume 1 (revised 1/95), for load-in operations, load-out operations, and wind erosion. These emission limits were based on a maximum biomass storage pile area of 4.4 acres of continuously active piles, an average silt content of 8.0%, a 28% time factor representing wind speeds of 12 miles per hour or greater on an annual basis and a 75% overall control efficiency for particulate emissions and PM10.

b. Emission Limitation:

Particulate emissions shall not exceed 2.71 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with fugitive particulate matter and PM10 emissions limitations shall be determined by using the emission factor equations in U.S. EPA's 'Control of Open Fugitive Dust Sources' (EPA-450/3-88-008),Section 4.1.3, and Sections 13.2.4 and 13.2.5, in 'Compilation of Air Pollutant Emission Factors', AP-42, Fifth Edition, Volume 1 (revised 1/95), for load-in operations, load-out operations, and wind erosion. These emission limits were based on a maximum biomass storage pile area of 4.4 acres of continuously active piles, an average silt content of 8.0%, a 28% time factor representing wind speeds of 12 miles per hour or greater on an annual basis and a 75% overall control efficiency for particulate emissions and PM10.

c. Emission Limitation:

There shall be no visible particulate emissions except for a period of time not to exceed thirteen minutes in any 60-minute observation period.

Applicable Compliance Method:

Compliance with the visible particulate emissions limitations for the storage piles identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

g) Miscellaneous Requirements

(1) None.

6. F003, Coal & Biomass Receiving Building.

Operations, Property and/or Equipment Description:

Coal & Biomass Hopper, Truckload Receiving Building.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	PE/PM10 emissions shall not exceed 0.12 lb per hour and 0.6 ton per year from the baghouse exhaust stack. (It is assumed that the PE is 100% PM10.) See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) from this air contaminant source since the calculated annual emission rate for PE is less than ten tons per year taking into account the federally enforceable BACT emission limit of 0.12 lb PE per hour.
c.	OAC rule 3745-17-07(A)	Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-08(B)	See b)(2)a.
e.	40 CFR Part 63 subpart Y	See b)(2)c.

(2) Additional Terms and Conditions

a. The emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 through 3745-31-20.

b. The BACT determination for this emissions unit includes:

i. Totally enclosing coal and biomass unloading hopper building, including all material transfer points;

ii. Equipping the unloading hopper building with a baghouse dust collector capable of reducing particulate emissions by 99%, by weight; and

iii. Totally enclosing coal and biomass exit conveyors from the building.

c. In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing equipment, coal storage system or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from the baghouse stack. The presence or absence of any visible emissions from the baghouse stack shall be noted in an operations log. If any visible emissions are observed from the stack, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

e) Reporting Requirements

(1) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from the baghouse stack and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

f) Testing Requirements

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

a. The emission testing shall be conducted within 3 months after start-up.

b. The emission testing shall be conducted to demonstrate compliance with:

i. the allowable mass emission rate for PE of 0.12 lb/hour; and

ii. the visible PE limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. for particulates, Method 5 of 40 CFR Part 60, Appendix A; and

ii. for visible PE, Method 9 of 40 CFR Part 60, Appendix A.

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 Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

(2) Emissions Limitation:

Particulate emissions shall not exceed 0.6 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated.

(3) Emissions Limitation:

Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9. The initial performance test shall be conducted in accordance with the requirements listed in f)(1).

(4) Emissions Limitation:

In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in Section 60.11 of 40 CFR Part 60.

In accordance with Section 60.8, of 40 CFR Part 60, the permittee shall conduct initial performance tests within 60 days of achieving the maximum production rate at which the affected facility will be operated, but no longer than 180 days after initial startup.

The permittee shall comply with the requirements in f)(1)e. through f)(1)g., in regard to testing notice, Ohio EPA witness of testing, and submitting written reports on results.

g) Miscellaneous Requirements

(1) None.

7. F009, Coal Crusher House.

Operations, Property and/or Equipment Description:

Coal Crusher House, 2,000 tons per hr. maximum w/dust collector.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	PE/PM10 emissions shall not exceed 1.2 lbs per hour and 5.3 tons per rolling 12-month period the baghouse exhaust stack. (It is assumed that the PE is 100% PM10.) See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) from this air contaminant source since the calculated annual emission rate for PE is less than ten tons per year taking into account the federally enforceable BACT emission limit of 1.2 lbs PE per hour.
c.	OAC rule 3745-17-07(A)	Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-08(B)	See b)(2)a.
e.	40 CFR Part 63 subpart Y	See b)(2)c.

(2) Additional Terms and Conditions

a. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 through 3745-31-20.

b. The BACT determination for this emissions unit includes:

i. a totally enclosed coal crusher house, including all coal transfer points;

ii. equipping the coal crusher house with a baghouse dust collector capable of achieving a stack outlet PE loading of 0.005 gr/dscf of exhaust gases; and

iii. totally enclosed inlet and exit coal conveyors to the coal crusher house.

c. In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from the baghouse stack. The presence or absence of any visible emissions from the baghouse stack shall be noted in an operations log. If any visible emissions are observed from the stack, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

e) Reporting Requirements

(1) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from the baghouse stack and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

f) Testing Requirements

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

a. The emission testing shall be conducted within 3 months after start-up.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE of 1.2 lbs/hour.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for particulates, Method 5 of 40 CFR Part 60, Appendix A.

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 Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

(2) Emissions Limitation:

Particulate emissions shall not exceed 5.3 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated.

(3) Emissions Limitation:

Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

(4) Emissions Limitation:

In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment,

coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

Applicable Compliance Method:

If, required, compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in Section 60.11 of 40 CFR Part 60.

In accordance with Section 60.8, of 40 CFR Part 60, the permittee shall conduct initial performance tests within 60 days of achieving the maximum production rate at which the affected facility will be operated, but no longer than 180 days after initial startup.

The permittee shall comply with the requirements in f)(1)e. through f)(1)g., in regard to testing notice, Ohio EPA witness of testing, and submitting written reports on results.

g) Miscellaneous Requirements

(1) None.

8. F010, Biomass Crusher House.

Operations, Property and/or Equipment Description:

Biomass Crusher House, 2,000 tons per hour maximum w/dust collector.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	PE/PM10 emissions shall not exceed 1.2 lbs per hour and 5.3 tons per rolling 12-month period the baghouse exhaust stack. (It is assumed that the PE is 100% PM10.) See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) from this air contaminant source since the calculated annual emission rate for PE is less than ten tons per year taking into account the federally enforceable BACT emission limit of 1.2 lbs PE per hour.
c.	OAC rule 3745-17-07(A)	Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-08(B)	See b)(2)a.

(2) Additional Terms and Conditions

a. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 through 3745-31-20.

b. The BACT determination for this emissions unit includes:

i. a totally enclosed biomass crusher house, including all transfer points;

ii. equipping the biomass crusher house with a baghouse dust collector capable of achieving a stack outlet PE loading of 0.005 gr/dscf of exhaust gases; and

iii. totally enclosed inlet and exit biomass conveyors to the biomass crusher house.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from the baghouse stack. The presence or absence of any visible emissions from the baghouse stack shall be noted in an operations log. If any visible emissions are observed from the stack, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

e) Reporting Requirements

(1) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from the baghouse stack and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

f) Testing Requirements

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

a. The emission testing shall be conducted within 3 months after start-up.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE of 1.2 lbs/hour.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for particulates, Method 5 of 40 CFR Part 60, Appendix A.

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 Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

(2) Emissions Limitation:

Particulate emissions shall not exceed 5.3 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated.

(3) Emissions Limitation:

Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.

9. F027, Slag Storage Pile.

Operations, Property and/or Equipment Description:

Slag Storage Pile.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	Emissions of fugitive particulate matter of 10 microns or less (PM10) shall not exceed 0.8 ton per rolling 12-month period from wind erosion on the storage pile. Emissions of fugitive particulate matter (PE) shall not exceed 1.6 tons per rolling 12-month period from wind erosion on the storage pile. Emissions of fugitive PE from load out to trucks shall not exceed 0.4 ton per rolling 12-month period. Emissions of fugitive PM10 from load out to trucks shall not exceed 0.2 ton per rolling 12-month period. See b)(2)a.
b.	OAC rule 3745-17-07(B)(6)	There shall be no visible particulate emissions from the slag storage pile or from load out of the storage pile except for a period of time not to exceed thirteen minutes during any 60-minute observation period.

c.	OAC rule 3745-31-05(A)(3)(b)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions from this air contaminant source since the uncontrolled potential to emit for particulate is less than 10 tons/year.
d.	OAC rule 3745-17-08(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. the use of a dust control program (use of water trucks and/or fire hoses as needed to reduce fugitive dust) to maintain a high moisture content in the slag;

ii. water will be applied as needed for load out from the slag storage pile;

iii. minimize free fall distances; and

iv. the haul trucks shall be covered before exiting the slag storage area;

b. The above BACT determination notwithstanding, should any visible emissions be observed, except for a period of time not to exceed thirteen minutes during any 60-minute observation period, the permittee shall implement additional measures as needed to comply with the requirements in this permit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform observations for visible emissions in accordance with the following frequencies:

storage pile identification	minimum load-in inspection frequency
all slag storage piles	daily
storage pile front end loading to trucks	daily

Notwithstanding the frequency of inspection requirements specified above, the permittee may reduce the frequency of inspections for the slag storage piles from daily to weekly if the following conditions are met:

a. for 1 full quarter the inspections of the slag storage piles indicate no need for implementing the above-mentioned control measures; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d).

c. The permittee shall revert to daily inspections of the slag storage piles if the inspections of the slag storage piles indicate the need for implementing the above-mentioned control measures. The permittee may again reduce the frequency of inspections from daily to weekly after obtaining 1 full quarter of inspections of the slag storage piles that indicate no need for implementing the above-mentioned control measures.

(2) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

(3) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for wind erosion from the surface of a storage pile and from load out of the pile into trucks. The inspections shall be performed during representative, normal storage pile operating conditions.

(4) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in d)(4)d. shall be kept separately for (i) wind erosion from the storage pile and (ii) load out of the pile into trucks and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit semi-annual deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emissions Limitations:

Emissions of fugitive PM10 shall not exceed 0.8 ton per rolling 12-month period from wind erosion on the storage pile.

Emissions of fugitive PE shall not exceed 1.6 tons per rolling 12-month period from wind erosion on the storage pile.

Applicable Compliance Method:

Compliance with fugitive particulate matter and PM10 emissions limitations shall be determined by using the emission factor equations in U.S. EPA's 'Control of Open Fugitive Dust Sources' (EPA-450/3-88-008), Section 4.1.3 and Sections 13.2.4 and 13.2.5, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 1/95), for wind erosion. These emission limits were based on a maximum slag storage pile area of 1.2 acres of continuously active piles, an average silt content of 7.3%, a 28% time factor representing wind speeds of 12 miles per hour or greater on an annual basis, 150 days/year with $\geq$ 0.01 inch of precipitation per year and 50% overall control efficiency for particulate emissions and PM10.

b. Emissions Limitations:

Emissions of fugitive PE from load out to trucks shall not exceed 0.4 ton per rolling 12-month period.

Emissions of fugitive PM10 from load out to trucks shall not exceed 0.2 ton per rolling 12-month period.

Applicable Compliance Method:

Compliance with fugitive particulate matter and PM10 emissions limitations shall be determined by using the emission factor 0.02 lb PE/ton slag in Sections 13.2.4.3 in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 1/95), for loading slag out of the pile onto trucks. These

emission limits were based on a slag generation rate of 255.42 tons per hour slag generation, a 15% moisture content, wind speed of 10 mph and particle size multipliers of 0.74 for PE and 0.35 for PM10.

c. Emission Limitation:

There shall be no visible particulate emissions except for a period of time not to exceed thirteen minute in any 60-minute observation period.

Applicable Compliance Method:

Compliance with the visible particulate emissions limitations for the storage piles identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

g) Miscellaneous Requirements

(1) None.

10. F028, Plant Roadways & Parking Areas.

Operations, Property and/or Equipment Description:

Plant Roadways & Parking Areas.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	There shall be no visible particulate emissions except for a period of time not to exceed one minute in any 60-minute observation period. The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-31-10 through 3745-31-20. See b)(2)e.
b.	OAC rule 3745-17-07(B)(7)	The visible particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rules 3745-31-10 through 3745-31-20	Emissions of fugitive particulate matter of 10 microns or less (PM10) shall not exceed 15.39 tons per rolling 12-month period. Fugitive particulate matter emissions shall not exceed 79.0 tons per rolling 12-month period. The permittee shall implement best available control measures that are sufficient to minimize or eliminate visible particulate emissions of fugitive dust. See. b)(2).a through. b)(2)d.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has

been determined that the use of reduced speed limits, sweeping, watering and good housekeeping for control measures constitutes BACT for this emissions unit. The emissions limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 above. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring

c. Implementation of the control measures shall not be necessary for paved roadways and parking areas that are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

d. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

e. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

f. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each of the roadway segments and parking areas in accordance with the following frequencies:

paved roadways and parking areas	minimum inspection frequency
all paved roads and parking areas	daily

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events

shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(3) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

(4) The information required in d)(3)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit semi-annual deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

(2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) permit shall be determined in accordance with the following methods:

a. Emissions Limitations:

Emissions of fugitive particulate matter of 10 microns or less (PM10) shall not exceed 15.39 tons per rolling 12-month period.

Fugitive particulate matter emissions shall not exceed 79.0 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with fugitive particulate emissions and PM10 limitations shall be determined by using the emission factor equations in Section 13.2.1, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 12/03) for paved roadways. These emission limits were based on 736,205 vehicle miles traveled per year, and a 90 % control efficiency for particulate emissions and PM10.

b. Emission Limitation:

There shall be no visible particulate emissions except for a period of time not to exceed one minute in any 60-minute observation period.

Applicable Compliance Method:

If required, compliance with the visible particulate emissions limitation listed above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

g) Miscellaneous Requirements

(1) None.

11. J001, Loading Rack for F-T fuels.

Operations, Property and/or Equipment Description:

Loading Rack for F-T fuels.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(b)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC from this air contaminant source since the calculated annual emission rate for VOC is less than ten tons per year taking into account the federally enforceable BACT emission limit of 1.7 tons per rolling 12-month period.
b.	OAC rules 3745-31-10 through 3745-31-20	See Section b)(2)a. and b)(2)b below. VOC emissions shall not exceed 1.7 tons per rolling 12-month period.
c.	40 CFR Part 63, Subpart EEEE	See Section b)(2)c. through b)(2)j.
d.	40 CFR Part 63, Subpart SS	See Section b)(2)k.
e.	40 CFR Part 63, Subpart H	See Section b)(2)i.
f.	40 CFR Part 63, Subpart TT	See Section b)(2)l.
g.	40 CFR Part 63, Subpart UU	See Section b)(2)l.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	40 CFR Part 63, Subpart A	See Section b)(2)m.

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes the following emissions limitations and control requirements:

i. F-T diesel fuel shall be loaded to transport vehicles via submerged fill pipes. VOC emissions shall not exceed 0.01 lb per 1,000 gallons of fuel loaded.

ii. F-T naphtha shall be loaded to transport vehicles via submerged fill pipes. VOC emissions shall not exceed 0.06 lb per 1,000 gallons of naphtha loaded.

iii. The dedicated F-T naphtha loading bay shall be equipped with a VOC vapor recovery unit which has a collection efficiency of at least 91%, by weight, and a VOC vapor recovery system which has a control efficiency of at least 95%, by weight.

b. The proposed maximum annual throughput of the loading rack is 114,975,000 gallons. The mix of products loaded will vary from 100% F-T diesel fuel to a 50% split between F-T diesel fuel and F-T naphtha.

c. The annual VOC emission limitation of 1.7 tons per rolling 12-month period is based upon a 50% split between F-T diesel fuel and F-T naphtha loading. Said 50% split of products loaded results in the maximum potential to emit for this emissions unit.

d. This emissions unit is a transfer rack consisting of 2 bays, one for F-T naphtha loading and another for F-T diesel fuel loading.

e. F-T diesel fuel does not contain 5%, by weight, or greater of a HAP listed in Table 1 of Subpart EEEE. Therefore, the transfer rack bay dedicated to loading F-T diesel fuel is not subject for the requirements of Subpart EEEE.

f. F-T naphtha does contain 5%, by weight, or greater of a HAP listed in Table 1 of Subpart EEEE. F-T naphtha contains an estimated 21%, by wt., of n-hexane.

g. The dedicated F-T naphtha loading bay is a transfer rack as defined in Section 63.2406 of Subpart EEEE, at an organic liquids distribution (OLD) operation, and therefore subject to the requirements of Subpart EEEE.

h. The dedicated F-T naphtha equipment leak components in organic liquid service that are associated with pipelines, storage tanks and loading racks storing,

loading or unloading organic liquids are subject to the requirements of Subpart EEEE, in accordance with Section 63.2338.

i. All transport vehicles while they are loading or unloading organic liquids (F-T naphtha) at transfer racks are subject to the requirements of Subpart EEEE, in accordance with Section 63.2338.

j. The permittee shall comply with the emission limitation, control requirements and work practice standards in Section 63.2346 of Subpart EEEE for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha.

k. The permittee shall comply with the emission limitation, control requirements and work practice standards for new sources upon startup, in accordance with Section 63.2342 of Subpart EEEE, for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha.

l. In accordance with Section 63.2346(b) of Subpart EEEE, the permittee shall comply with the applicable requirements for transfer racks in 40 CFR Part 63, Subpart SS.

m. In accordance with Section 63.2346(c) of Subpart EEEE, the permittee shall comply with the applicable requirements for equipment leak components under 40 CFR Part 63, Subpart TT (control level 1), Subpart UU (control level 2) or Subpart H.

n. In accordance with Section 63.2398 of Subpart EEEE, the permittee shall comply with the applicable requirements in 40 CFR Part 63, Subpart A - General Provisions, as listed in Table 12 of Subpart EEEE.

c) Operational Restrictions

(1) The F-T naphtha loading rack bay shall be equipped with a vapor collection system whereby during the transfer of F-T naphtha to any delivery vessel:

a. all vapors displaced from the delivery vessel during loading are vented only to the vapor collection system; and

b. the pressure in the vapor collection system is maintained at the manufacturers recommended design range.

(2) The F-T naphtha loading rack bay shall be equipped with a vapor control system whereby:

a. all vapors collected by the vapor collection system are vented to the vapor control system;

b. the mass emissions of VOC from the vapor control system do not exceed 0.06 pound of VOC per 1,000 gallons of F-T naphtha loaded into the delivery vessel; and

c. any liquid F-T naphtha returned to a stationary storage tank from the vapor control system is free of entrained air to the extent possible with good engineering design.

(3) The loading rack shall be provided with a means to prevent drainage of F-T naphtha from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.

(4) All F-T naphtha loading lines and vapor lines shall be equipped with fittings which are vapor tight.

(5) The permittee shall not permit F-T naphtha to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.

(6) The permittee shall repair any leak from the vapor collection system or vapor control system within 15 days of detection, when such leak is equal to or greater than 100 percent of the lower explosive limit as propane, as determined under paragraph (K) of OAC rule 3745-21-10.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the monitoring installation, operation and maintenance requirements in Section 63.2366 of Subpart EEEE for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha.

(2) The permittee shall comply with the monitoring and data collection requirements in Section 63.2374 of Subpart EEEE for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha.

(3) The permittee shall demonstrate continuous compliance with the emission limitations, operating limits and work practice standards in accordance with Section 63.2378 of Subpart EEEE.

(4) The permittee shall comply with the record keeping requirements in Section 63.2374 and Section 63.2394 for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha.

(5) While F-T naphtha is being loaded, the permittee shall monitor the vapor collection system for leaks in accordance with 40 CFR Part 63, Subparts TT, UU or H, as applicable. If vapor leaks are detected, the permittee shall maintain a record of the following information:

a. the date the leak was detected;

b. the findings of the inspection for the leak, which shall indicate the location, nature, and severity of the leak;

c. the leak detection method;

d. the corrective action(s) taken to repair each leak and the date of final repair;

e. the reasons for any repair interval exceeding 15 calendar days (from the time of detection to the date of final repair) for each leak equal to or greater than one hundred per cent of the lower explosive limit as propane, as determined under paragraph (K) of OAC rule 3745-21-10; and

f. the inspector's name and signature.

These records shall be retained and accessible for a period of 5 years.

e) Reporting Requirements

(1) The permittee shall comply with the notification requirements in Section 63.2382 of Subpart EEEE for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha.

(2) The permittee shall comply with the reporting requirements in Section 63.2386 of Subpart EEEE for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha.

(3) Any leaks in the vapor collection system or vapor control system equal to or greater than 100 percent of the lower explosive limit as propane, as determined under paragraph (K) of OAC rule 3745-21-10 of the Administrative Code, that are not repaired within 15 days after identification, shall be reported to the director (Ohio EPA Northeast District Office) within 30 days after the repair is completed. This report shall include the date the leak was detected and the date the leak was repaired.

f) Testing Requirements

(1) The permittee shall comply with the performance testing, design evaluation and performance evaluation requirements in Section 63.2354 of Subpart EEEE for the transfer rack, equipment leak components and transport vehicles loading F-T naphtha. Said performance tests and initial compliance demonstrations shall be conducted in accordance with the date or schedule listed in Section 63.2358 of Subpart EEEE.

(2) The permittee conduct subsequent performance tests in accordance with the requirements in Section 63.2362 of Subpart EEEE.

(3) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emissions Limitations:

VOC emissions shall not exceed 0.01 lb per 1,000 gallons of F-T diesel fuel loaded.

Applicable Compliance Method:

Compliance shall be demonstrated using formulae and emission factors specified in USEPA reference document AP-42, Fifth Edition, 'Compilation of Air Pollution Emission Factors', Section 5-2 (1/95).

b. Emissions Limitations**:**

VOC emissions shall not exceed 0.06 lb per 1,000 gallons of F-T naphtha loaded.

Applicable Compliance Method:

Compliance shall be demonstrated using formulae and emission factors specified in USEPA reference document AP-42, Fifth Edition, 'Compilation of Air Pollution Emission Factors', Section 5-2 (1/95).

c. Emissions Limitations**:**

VOC emissions shall not exceed 1.7 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated using formulae and emission factors specified in USEPA reference document AP-42, Fifth Edition, 'Compilation of Air Pollution Emission Factors', Section 5-2 (1/95), and then multiplying by the maximum throughput of F-T diesel fuel and F-T naphtha, as listed in A.2.b, above.

g) Miscellaneous Requirements

(1) None.

12. P015, Emergency Generator.

Operations, Property and/or Equipment Description:

Emergency Generator-Engine Set, 2,000 KW compression ignition diesel engine with a displacement of 4 liters per cylinder (40 CFR Part 60 IIII and 40 CFR Part 89 Table 1).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	The BACT determination for this emissions unit is equivalent to the requirements specified in 40 CFR Part 60, Subpart IIII. Also see b)(2)a., b)(2)b. and c)(4).
b.	OAC rule 3745-31-05(D)	See b)(2)d.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% as a 6-minute average, except as provided by rule. This limitation applies any time the limitations specified in 40 CFR 89.113 are not applicable for the acceleration and lugging modes. (This limit does not apply during peaks in either acceleration or lugging modes.)
d.	OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less restrictive than the emissions limitation specified under 40 CFR 89.112.
e.	OAC rule 3745-18-06(F)	The emissions limitation specified by this rule is less restrictive than the emissions limitation specified under 40 CFR 80.510(b).
f.	40 CFR Part 63 Subpart ZZZZ, Section 63.	See e)(3).
g.	40 CFR Part 89, Section 112	Emissions of non-methane hydrocarbons (NMHC) and nitrogen

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		oxides (NOx) combined shall not exceed 6.4 grams/kW-hr. Emissions of carbon monoxide (CO) shall not exceed 3.5 grams/kW-hr. Particulate emissions (PE) shall not exceed 0.20 gram/kW-hr.
h.	40 CFR Part 89, Section 113	The exhaust opacity from the engine must not exceed 20 percent during the acceleration mode and 15 percent during the lugging mode. During the peaks in either the acceleration and lugging modes, this rule is less restrictive (50% opacity is permitted) than the requirements specified in OAC rule 3745-17-07(A), (20% opacity as a six-minute average).

(2) Additional Terms and Conditions

a. The emissions limitations established as BACT are:

PE: 0.87 lb/hour and 0.22 ton per rolling 12-month period;

CO: 15.18 lbs/hour and 3.80 tons per rolling 12-month period;

NOx: 26.47 lbs/hour and 6.61 tons per rolling 12-month period; and

NMHC: 1.39 lbs/hour and 0.35 ton per rolling 12-month period.

b. The BACT determination for this emissions unit also includes:

i. good combustion practices;

ii. good engine design;

iii. ignition timing retard;

iv. turbocharger; and

v. low-temperature aftercooler.

c. The permittee shall install a non-resettable hour meter prior to startup of the engine, per 40 CFR 60.4209(a).

d. Permit-to-install (PTI) 02-22896 takes into account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC 3756-31-05(A)(3).

c) Operational Restrictions

(1) Per 40 CFR 60.4211 (c) the permittee shall purchase an engine certified to the emissions standards specified in 40 CFR 89.112 and 40 CFR 89.113. The engine must be installed and configured according to the manufacturer's specifications.

(2) Per 40 CFR 60.4211 (a) the permittee shall operate and maintain the engine and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer.

(3) Per 40 CFR 60.4211(e) the engine may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of the engine in emergency situations. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State or local standards require maintenance and testing of the engine beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing as permitted in this section is prohibited.

(4) The maximum annual operating hours for this emissions unit shall not exceed 500, based upon a rolling, 12-month summation of the operating hours.

(5) The permittee shall combust only diesel fuel which meets the following specifications, as detailed in 40 CFR 80.510(b) and required by 40 CFR 60.4207(b):

a. sulfur content of 15 ppm, maximum; and

b. cetane index of 40, minimum or

c. aromatic content of 35 volume percent, maximum.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is undergoing maintenance or readiness testing and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. These checks are not required when operating under emergency conditions. 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.

f. The permittee shall retain records of:

i. hours of operation recorded in the non-resettable hour meter;

ii. the hours of operation over each rolling 12-month period;

iii. time of operation of the engine; and

iv. the reason the engine operated.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on the hours of operation. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

(2) The permittee shall submit semi-annual 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 Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month periods.

(3) The permittee shall comply with the applicable initial reporting requirements in Section 40 CFR 63.6645(d) as specified in 40 CFR 63.6590(b)(i) of subpart ZZZZ.

f) Testing Requirements

Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

(1) Emission Limitation:

Visible particulate emissions (PE) shall not exceed 20% as a 6-minute average, except as provided by rule, except for the acceleration and lugging modes.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

(2) Emission Limitation:

The exhaust opacity from the engine must not exceed 20 percent during the acceleration mode and 15 percent during the lugging mode.

Applicable Compliance Method:

The permittee shall comply with this requirement by following the procedures specified in 40 CFR Part 86, Subpart I.

(3) Emission Limitation:

0.87 lb PE/hour and 0.22 ton per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 2,650 hp by the emission factor of 0.20 gram/hp-hr taken from Table 1 of 40 CFR Part 89, Section 112 and the conversion factor of 1 gram equals 0.0022 lb.

Compliance with the annual emission limits shall be assumed if compliance with the hourly emission limits is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

(4) Emission Limitation:

15.18 lbs CO/hour and 3.80 tons per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 2,650 hp by the emission factor of 3.5 grams/hp-hr taken from Table 1 of 40 CFR Part 89, Section 112 and the conversion factor of 1 gram equals 0.0022 lb.

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

(5) Emission Limitation:

26.43 lbs NOx/hour and 6.61 tons per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 2,650 hp by the factor in Table 1 of 40 CFR Part 89, Section 112 of 6.4 grams/kW-hr and the conversion factor of 1 gram equals 0.0022 lb. 95% of the NMHC + NOx is assumed to be NOx.

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

(6) Emission Limitation:

1.39 lbs NMHC/hour and 0.35 ton per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 2,650 hp by the factor of 6.4 grams/kW-hr from Table 1 of 40 CFR Part 89, Section 112 and the conversion factor of 1 gram equals 0.0022 lb. 5% of the NMHC + NOx is assumed to be NMHC.

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

(7) Emission Limitation:

Diesel fuel specifications: sulfur content of 15 ppm, maximum; and cetane index of 40, minimum or aromatic content of 35 volume percent, maximum.

Applicable Compliance Method:

Compliance with the fuel specifications shall be determined by any method allowed under 40 CFR Part 80 Subpart I.

g) Miscellaneous Requirements

(1) None.

13. P029, Three F-T Reactor Trains.

Operations, Property and/or Equipment Description:

Three F-T Reactor Trains, with tailgas sent to the sponge oil column, catalyst regeneration and process vent emissions controlled by 150 mmBtu per hr. low pressure flare.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 3745-31-20	Particulate emissions (PE) shall not exceed 2.3 pounds per hour and 10.0 tons per rolling, 12-month period. Nitrogen oxides (NOx) emissions shall not exceed 30.0 pounds per hour and 131.4 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 25.2 pounds per hour and 110.3 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 0.03 pound per hour and 0.1 ton per rolling 12-month period. Sulfur dioxide (SOx) emissions shall not exceed 0.2 pounds per hour and 0.8 ton per rolling 12-month period. See b)(2)a. through b)(2)c.
b.	OAC rule 3745-31-05(A)(3)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-31-10 through 3745-31-20.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(D)	This permit to install takes into account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 upon VOC and S02 emissions as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-07(A)(1)	The visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
e.	OAC rule 3745-21-07(M)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.
f.	OAC rule 3745-21-09(EE)	See b)(2)a.

(2) Additional Terms and Conditions

a. The permittee shall operate and maintain a low pressure flare emission capture system capable of capturing and controlling VOC emissions from this emissions unit.

The VOC control equipment (low pressure flare) shall provide an efficiency (percent destruction) of not less than 98%, by weight, for VOC emissions vented to the control equipment.

b. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

c. The BACT determination for this emissions unit includes the use of a low pressure flare using only natural gas or tailgas as fuel.

c) Operational Restrictions

(1) A pilot flame shall be maintained at all times in the flare's pilot light burner.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall record the following information each day for the flare and process operations:

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.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation reports that identify all periods of time during which the pilot flame was not functioning properly or the flare was not maintained as required in this permit. The reports shall include the date, time, and duration of each such period.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed 30.0 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the flare from the pilot burner and F-T catalyst regeneration process.

E(NOx) = 0.301 mm scf/hr x 100 lbs NOx/10xE6 scf (AP-42 emission factor) = 30.0 lbs/hr

b. Emission Limitation:

NOx emissions shall not exceed 131.4 tons per rolling, 12-month period.

Applicable Compliance Method:

The rolling 12 month emission limitation shall be determined by multiplying the short-term allowable NOx emission limitation (30.0 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

c. Emission Limitation:

PE emissions shall not exceed 2.3 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the flare from the pilot burner and F-T catalyst regeneration process.

E(PE) = 0.301 mm scf/hr x 7.6 lbs PE/10xE6 scf (AP-42 emission factor) = 2.3 lbs/hr

d. Emission Limitation:

PE emissions shall not exceed 10.0 tons per rolling, 12-month period.

Applicable Compliance Method:

The rolling 12 month emission limitation was developed by multiplying the short-term allowable PE emission limitation (2.3 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 25.2 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the flare from the pilot burner and F-T catalyst regeneration process.

E(CO) = 0.301 mm scf/hr x 84 lbs CO/10xE6 scf (AP-42 emission factor) = 25.2 lbs/hr

f. Emission Limitation:

CO emissions shall not exceed 110.3 tons per rolling, 12-month period.

Applicable Compliance Method:

The rolling 12 month emission limitation was developed by multiplying the short-term allowable CO emission limitation (25.2 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if

compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the rolling 12 month emission limitation.

g. Emission Limitation:

VOC emissions shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the flare from the pilot burner and F-T catalyst regeneration process.

E(VOC) = 0.301 mm scf/hr x 5.5 lbs VOC/10xE6 scf (AP-42 emission factor) x 0.02= 0.03 lb/hr

h. Emission Limitation:

VOC emissions shall not exceed 0.10 ton per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.03 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

SOx emissions shall not exceed 0.2 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the flare from the pilot burner and F-T catalyst regeneration process.

E(SOx) = 0.301 mm scf/hr x 0.6 lb SOx/10xE6 scf (AP-42 emission factor) = 0.2 lb/hr

j. Emission Limitation:

SOx emissions shall not exceed 0.8 ton per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable SOx emission limitation (0.2 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

(2) The net heating value of the gas being combusted at the flare shall be calculated as follows:

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

where:

H_T = net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 degrees Celsius and 760 mm Hg, but the standard temperature of 20 degrees Celsius is used for determining the volume corresponding to one mole;

k = constant, 1.740×10^{-7} (1/ppm) (g mole/scm) (MJ/kcal), where the standard temperature for "g mole/scm" is 20 degrees Celsius;

C_i = concentration of sample component "i" in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-90; and

H_i = net heat of combustion of sample component "i", kcal/g mole at 25 degrees Celsius and 760 mm Hg. The heats of combustion may be determined using ASTM D4809-95 if published values are not available or cannot be calculated.

The conversion factor of "26.84 Btu scm/MJ scf" can be used to convert the net heating value of the gas (H_T) from MJ/scm to Btu/scf.

(3) The actual exit velocity of the flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure) of the flare header or headers that feed the flare, as determined by Reference Methods 2, 2A, 2C, or 2D (found in 40 CFR 60, Appendix A), as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

The conversion factor of "3.281 ft/m" can be used to convert the velocity from m/sec to ft/sec.

g) Miscellaneous Requirements

(1) None.

14. P030, F-T Catalyst Rotary Dryer.

Operations, Property and/or Equipment Description:

F-T Catalyst Rotary Dryer, with nitrogen heater and hot oil heater (4.0 mmBtu per hr. each)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 3745-31-20	Particulate emissions (PE) shall not exceed 0.18 pound per hour and 0.8 ton per rolling 12-month period. Nitrogen oxides (NOx) emissions shall not exceed 2.26 pounds per hour and 9.8 tons per rolling 12-month period. Carbon monoxide (CO) emissions shall not exceed 1.8 pounds per hour and 8.4 tons per rolling 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 0.12 pound per hour and 0.6 ton per rolling 12-month period. Sulfur dioxide (SOx) emissions shall not exceed 0.02 pounds per hour and 0.08 ton per rolling 12-month period. These limitations are the total allowable emissions for the 4.0 mm Btu/hr Nitrogen Heater and the 4.0 mm Btu/hr Hot Oil Heater.)
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-10	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-31-05(D)	This permit to install takes into account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 upon PE, NOx, CO, VOC and S02 emissions as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. use of only either natural gas or tailgas as fuel; and

ii. burn only gaseous fuels and employ good combustion practices to limit NOx emissions, CO emissions, VOC emissions, SO2 emissions, and PE/PM10 emissions.

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the total quantity and type of gaseous fuel(s) burned in this emissions unit during each reporting period.

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or tailgas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed 2.26 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters.

E(NOx) = 22,564 scf/hr x 100 lbs NOx/10xE6 scf (AP-42 emission factor) = 2.26 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

b. Emission Limitation:

NOx emissions shall not exceed 9.8 tons per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable NOx emission limitation (2.26 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

PE emissions shall not exceed 0.18 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters.

E(PE) = 22,564 scf/hr x 7.6 lbs PE/10xE6 scf (AP-42 emission factor) = 0.18 lb/hr

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5.

d. Emission Limitation:

PE emissions shall not exceed 0.8 ton per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable PE emission limitation (0.18 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 1.8 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters.

E(CO) = 22,564 scf/hr x 84 lbs CO/10xE6 scf (AP-42 emission factor) = 1.8 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 10.

f. Emission Limitation:

CO emissions shall not exceed 8.4 tons per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable CO emission limitation (1.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g. Emission Limitation:

VOC emissions shall not exceed 0.12 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heater.

E(VOC) = 22,564 scf/hr x 5.5 lbs VOC/10xE6 scf (AP-42 emission factor) = 0.12 lb/hr

If required, the permittee shall demonstrate compliance with the hourly VOC emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 25 or 25A.

h. Emission Limitation:

VOC emissions shall not exceed 0.60 ton per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.12 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

SOx emissions shall not exceed 0.02 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heaters.

E(SOx) = 22,564 scf/hr x 0.6 lb SOx/10xE6 scf (AP-42 emission factor) = 0.02 lb/hr

If required, the permittee shall demonstrate compliance with the hourly SOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 6.

j. Emission Limitation:

SOx emissions shall not exceed 0.08 tons per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable SOx emission limitation (0.02 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g) Miscellaneous Requirements

(1) None

15. P031, Equipment Leaks

Operations, Property and/or Equipment Description:

Equipment Leaks from Pumps, Compressors, Devices, Sampling Valves, Connections, Closed Vent Systems, and Control Devices.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 60, Subpart GGGa	See b)(2)a.
b.	OAC rule 3745-21-09(T)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60, Subpart GGGa.
c.	OAC rule 3745-31-10 through 3745-31-20	Volatile Organic Compound (VOC) emissions shall not exceed 1.7 tons per rolling 12-month period from this emissions unit.
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate for VOC is less than ten tons per year taking into account the federally enforceable BACT emission limit of 1.7 tons per rolling, 12-month period.

(2) Additional Terms and Conditions

a. The facility shall meet the requirements of 40 CFR 60.592a and 40 CFR 60.482-1a to 60.482-10a.

b. The BACT determination for this emissions unit includes:

i. the use of leakless/seatless or low-emission pumps, valves and compressors; and

ii. the use of a Leak Detection and Repair (LDAR) program for flanges.

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR 60.592a (40 CFR60.486a)

e) Reporting Requirements

(1) See 40 CFR 60.592a (40 CFR60.487a)

f) Testing Requirements

(1) See 40 CFR 60.592a (40 CFR60.485a)

(2) Compliance with emission limitations in b)(1) shall be determined in accordance with the following methods:

Emissions Limitation:

VOC emissions shall not exceed 1.7 tons per rolling 12-month period.

Applicable Compliance Method**:**

Compliance with the emission limitation may be demonstrated based on a one time calculation by using emission factors obtained from Table 2-2 of EPA's Protocol for Equipment Leak Emission Estimates (EAP-453/R-95-017) and the summation of the following equation for each component type:

Emissions(VOC) = EF x Wf x No. of Components x control efficiency

where: Ef = component specific emission factor.

Wf = the wt. fraction of worst case total organic carbon within the liquids used, assumed to be 100%.

Control eff. credit for use of leakless/seatless or low-emission pumps, valves and compressors = 99%

Control eff. for flanges under LDAR = 68%

The calculated and component summed results are as follows:

Component	Quantity	EFxWF in lb/hr	Potential TONS PER ROLLING 12-MONTH PERIOD @ 8760/2000	Control Eff.	Actual TONS PER ROLLING 12-MONTH PERIOD
Pump Seals	20	0.2513	22.0	99%	0.2
Valves	250	0.0240	26.3	99%	0.3

Flanges	540	0.00055	1.3	68%	0.4
Compressors seals	13	1.4021	79.8	99%	0.8
Total					**1.7**

g) Miscellaneous Requirements

(1) None

16. Emissions Unit Group - 4.0 mmBtu/hr gas-fired Heaters: B002, B003, B004

EU ID	Operations, Property and/or Equipment Description
B002	Reduction Gas Heater (4.0 mmBtu/hr) fueled by natural gas/tailgas.
B003	Oxidation Gas Heater (4.0 mmBtu/hr) fueled by natural gas/tailgas.
B004	Hydrogen Stripping Heater (4.0 mmBtu/hr) fueled by natural gas/tailgas.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 3745-31-20	Particulate emissions (PE) shall not exceed 0.09 pound per hour and 0.4 ton per rolling 12-month period. Nitrogen oxides (NOx) emissions shall not exceed 1.13 pounds per hour and 4.9 tons per rolling 12-month period. Carbon monoxide (CO) emissions shall not exceed 0.9 pound per hour and 4.2 tons per rolling 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 0.06 pound per hour and 0.3 ton per rolling 12-month period. Sulfur dioxide (SOx) emissions shall not exceed 0.01 pounds per hour and 0.04 ton per rolling 12-month period.
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-10	The emission limitation required by this

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-31-05(D)	This permit to install takes into account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 upon PE, NOx, CO, VOC and S02 emissions as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. use of only either natural gas or tailgas as fuel; and

ii. burn only gaseous fuels and employ good combustion practices to limit NOx emissions, CO emissions, VOC emissions, SO2 emissions, and PE/PM10 emissions.

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the total quantity and type of gaseous fuel(s) burned in this emissions unit during each reporting period.

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or tailgas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitation:

NOx emissions shall not exceed 1.13 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heater.

E(NOx) = 11,282 scf/hr x 100 lbs NOx/10xE6 scf (AP-42 emission factor) = 1.13 lbs/hr

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

b. Emission Limitation:

NOx emissions shall not exceed 4.9 tons per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable NOx emission limitation (1.13 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

PE emissions shall not exceed 0.09 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heater.

E(PE) = 11,282 scf/hr x 7.6 lbs PE/10xE6 scf (AP-42 emission factor) = 0.09 lb/hr

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 5.

d. Emission Limitation:

PE emissions shall not exceed 0.4 ton per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable PE emission limitation (0.09 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 0.9 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heater.

E(CO) = 11,282 scf/hr x 84 lbs CO/10xE6 scf (AP-42 emission factor) = 0.9 lb/hr

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 10.

f. Emission Limitation:

CO emissions shall not exceed 4.2 tons per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable CO emission limitation (0.9 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g. Emission Limitation:

VOC emissions shall not exceed 0.06 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heater.

E(VOC) = 11,282 scf/hr x 5.5 lbs VOC/10xE6 scf (AP-42 emission factor) = 0.06 lb/hr

If required, the permittee shall demonstrate compliance with the hourly VOC emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 25 or 25A.

h. Emission Limitation:

VOC emissions shall not exceed 0.30 ton per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.06 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

SOx emissions shall not exceed 0.01 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion, and the maximum amount of the low Btu fuel gas entering the heater.

E(SOx) = 11,282 scf/hr x 0.6 lb SOx/10xE6 scf (AP-42 emission factor) = 0.01 lb/hr

If required, the permittee shall demonstrate compliance with the hourly SOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 6.

j. Emission Limitation:

SOx emissions shall not exceed 0.04 ton per rolling 12-month period.

Applicable Compliance Method:

The tons per rolling 12-month period emission limitation was developed by multiplying the short-term allowable SOx emission limitation (0.01 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g) Miscellaneous Requirements

(1) None

17. Emissions Unit Group - Acid Gas Removal Units: P026, P027, P028

EU ID	Operations, Property and/or Equipment Description
P026	Syngas Cleanup Train 1.
P027	Syngas Cleanup Train 2.
P028	Syngas Cleanup Train 3.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 3745-31-20	CO: 308.7 lbs per hour and 1,351.7 tons per rolling 12-month period. H_2S: 0.93 lbs per hour and 4.0 tons per rolling 12-month period.
b.	OAC rule 3745-31-05(D)	COS: 0.67 lbs per hour and 2.87 tons per rolling 12-month period. (COS is the greatest single HAP emitted.)
c.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20.

(2) Additional Terms and Conditions

a. The Syngas Cleanup Train Number 1, consists of 2 fly ash filter units, 2 wet scrubber units, a sour CO shift unit, 2 mercury guard beds, an acid gas removal unit (Rectisol Process) and a sulfur guard bed.

b. The BACT determination for this emissions unit includes:

i. the only emission point from Syngas Cleanup Train No. 1 shall be the acid gas removal units' waste CO2 exhaust stack;

ii. limiting the carbon monoxide concentration of the acid gas removal units' waste CO2 exhaust stream to 406 ppm; and

iii. limiting the total H2S emissions of the acid gas removal units's waste CO2 exhaust stream to 1.0 ppm.

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) 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 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 pounds per hour and 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 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).

(2) Prior to the installation of the continuous carbon monoxide (CO) 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 4 or 4a (as appropriate). The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specifications 4 or 4a and 6. Once received, the letter(s)/document(s) 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) Each continuous carbon monoxide (CO) monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 4 or 4a and 6. At least 45 days before commencing certification testing of the continuous CO monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of CO emissions from the continuous monitor(s), 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.

e) Reporting Requirements

(1) 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 appropriate Ohio EPA District Office or local air agency, 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 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. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER), i.e., a summary of any exceedances during the calendar quarter, as specified 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. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, 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

f) Testing Requirements

(1) Within 60 days of installing the CEMs system required in d), 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 6; 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 6 and ORC section 3704.03(I).

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.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

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

a. The emissions testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of the emissions unit.

b. The emissions testing shall be conducted to demonstrate compliance with the applicable emissions limitations for CO, COS and H_2S, in the appropriate averaging period(s).

c. The following test methods shall be employed to demonstrate compliance with the applicable emissions limitations:

CO	Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A
COS	Methods 1 through 4 and Method 15 of 40 CFR Part 60, Appendix A.
H2S	Methods 1 through 4 and Method 15 of 40 CFR Part 60, Appendix A.

(3) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitations:

CO emissions shall not exceed 308.7 lbs per hour and 1,351.7 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per hour CO emissions limitation shall be demonstrated based upon the applicable emissions tests specified in f)(1).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(1).

b. Emission Limitations:

H_2S emissions shall not exceed 0.93 lb per hour and 4.0 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per hour H_2S emissions limitation shall be demonstrated based upon the applicable emissions tests specified in f)(1).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(1).

c. Emission Limitations:

COS emissions shall not exceed 0.67 lbs per hour and 2.87 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per hour COS emissions limitation shall be demonstrated based upon the applicable emissions tests specified in f)(1)

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(1).

g) Miscellaneous Requirements

(1) None

18. Emissions Unit Group - Coal or Biomass Drying and Milling: P001, P002, P003, P004, P005, P006, P007, P008, P009, P010

EU ID	Operations, Property and/or Equipment Description
P001	Coal or Biomass Drying & Milling Line 1, 200 tons per hr. includes Bunker 1, Hot Gas Generator 1 and Filling Vessel Vent 1.
P002	Coal or Biomass Drying & Milling Line 2, 200 tons per hr. includes Bunker 2, Hot Gas Generator 2 and Filling Vessel Vent 2.
P003	Coal or Biomass Drying & Milling Line 3, 200 tons per hr. includes Bunker 3, Hot Gas Generator 3 and Filling Vessel Vent 3.
P004	Coal or Biomass Drying & Milling Line 4, 200 tons per hr. includes Bunker 4, Hot Gas Generator 4 and Filling Vessel Vent 4.
P005	Coal or Biomass Drying & Milling Line 5, 200 tons per hr. includes Bunker 5, Hot Gas Generator 5 and Filling Vessel Vent 5.
P006	Coal or Biomass Drying & Milling Line 6, 200 tons per hr. includes Bunker 6, Hot Gas Generator 6 and Filling Vessel Vent 6.
P007	Coal or Biomass Drying & Milling Line 7, 200 tons per hr. includes Bunker 7, Hot Gas Generator 7 and Filling Vessel Vent 7.
P008	Coal or Biomass Drying & Milling Line 8, 200 tons per hr. includes Bunker 8, Hot Gas Generator 8 and Filling Vessel Vent 8.
P009	Coal or Biomass Drying & Milling Line 9, 200 tons per hr. includes Bunker 9, Hot Gas Generator 9 and Filling Vessel Vent 9.
P010	Coal or Biomass Drying & Milling Line 10, 200 tons per hr. includes Bunker 10, Hot Gas Generator 10 and Filling Vessel Vent 10.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	From the Coal Bunker Stack - PE/PM10 emissions shall not exceed 0.43 lb per hour and 1.9 tons per rolling 12-month period from the baghouse exhaust stack. From the Hot Gas Generator Stack - PE/PM10 emissions shall not exceed 0.6 lb per hour and 2.62 tons per rolling 12-month period. From the Hot Gas Generator Stack -

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Sulfur dioxide emissions: 0.24 lb/hour and 1.06 tons pr year. From the Hot Gas Generator Stack - Nitrogen oxide emissions: 1.32 lbs/hour and 5.8 tons per rolling 12-month period. From the Hot Gas Generator Stack - Carbon monoxide emissions: 2.23 lbs/hour and 9.75 tons per rolling 12-month period. From the Hot Gas Generator Stack - Organic compound emissions: 0.15 lbs/hour and 0.64 tons per rolling 12-month period. From the Coal Filling Vessel - PE/PM10 emissions shall not exceed 0.07 lb per hour and 0.32 ton per rolling 12-month period from the baghouse exhaust stack. (It is assumed that all the PE is 100% PM10.) See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions from this air contaminant source since the potential to emit of each pollutant is less than ten tons per year.
c.	OAC rule 3745-17-07(A)	The visible PE limitations established by this rule are less stringent than those specified in Subpart Y.
d.	40 CFR Part 60, Subpart Ja, Section 60.102a(g)(1)	The permittee shall not discharge from any fuel gas combustion device any gases that contain SO2 in excess of 20 ppmv (dry basis, corrected to 0% excess air) determined on a 3-hour rolling average basis and SO2 in excess of 8 ppmv (dry basis, corrected to 0% excess air) determined daily on a 365 successive day rolling average basis; or The permittee shall not burn in any fuel gas combustion device any fuel gas that contains H2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H2S in excess of 60 ppmv determined daily on a 365 successive day rolling average basis.
e.	40 CFR Part 63 Subpart Y, Section	Visible PE from the hot gas generator exhaust stack and the coal filling vessel

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	60.252(a)(1)	baghouse exhaust stack shall not exhibit 20% opacity or greater.
f.	40 CFR Part 63 Subpart Y, Section 60.252(a)(2)	The PE limitation of this rule is less stringent than the limit required by OAC rule 3745-31-10 thru -20.
g.	40 CFR Part 63 Subpart Y, Section 60.252(c)	Visible PE from the Coal Bunker Stack shall not exhibit 20% opacity or greater. See b)(2)c.

(2) Additional Terms and Conditions

a. Coal Milling and Drying Line 1 includes; a Coal Bunker with baghouse, Hot Gas Generator and Coal Filling Vessel with baghouse, as shown in Figure 6, Module 2, of the permit application.

b. The BACT determination for this emissions unit includes:

i. a totally enclosed coal bunker, including all coal transfer points;

ii. equipping the coal bunker and the coal filling vessel each with a baghouse dust collector capable of achieving a stack outlet PE loading of 0.005 gr/dscf of exhaust gases; and

iii. totally enclosed inlet and exit coal conveyors to the coal milling and drying line.

iv. use of a low NOx burner (rated heat input of 31.0 mmBtu/hr) in the Hot Gas Generator limiting emissions to 50 lbs NOx per 1.0 MMscf of gas burnt.

c. In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from the baghouse stacks. The presence or absence of any visible emissions from the baghouse stacks shall be noted in an operations log. If any visible emissions are observed from the stacks, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

(2) Comply with the applicable monitoring requirements of Section 60.107a of Subpart Ja.

(3) Comply with the applicable recordkeeping requirements of Section 60.108a of Subpart Ja.

e) Reporting Requirements

(1) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from the baghouse stacks and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

(2) Comply with the applicable reporting requirements of Section 60.108a of Subpart Ja.

f) Testing Requirements

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE of 0.6 lb per hour from the Hot Gas Generator stack and 0.07 lb/hour from the Coal Filling Vessel baghouse stack.

Emissions testing shall also be conducted to demonstrate compliance with the allowable mass emission rates for sulfur dioxide, nitrogen oxide, carbon monoxide and organic compounds from the Hot Gas Generator stack. The permittee shall conduct, or have conducted, emission testing for this or a representative emissions unit from the group of emissions units, P001-P010.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulates	Methods 1 through 4 and 5 of 40 CFR Part 60, Appendix A
SO2	Methods 1 through 4 and 6C of 40 CFR Part 60, Appendix A
NOx	Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A
CO	Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A
OC	Methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A

Alternative U.S. EPA-approved test methods may be used with prior approval from 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 appropriate Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA Northeast District Office. 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA Northeast District Office 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 appropriate Ohio EPA Northeast District Office 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 appropriate Ohio EPA Northeast District Office.

(2) Emission Limitation:

Coal Bunker Stack - PE/PM10 emissions shall not exceed 0.43 lb per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the baghouse grain loading emission limit of 0.005 gr/dscf by the design exhaust flow rate of 10,000 scfm and the conversion factors; 1.0 lb/7,000 gr and 60 min./hour.

(3) Emission Limitations (Hot Gas Generator Stack):

Sulfur dioxide emissions: 0.24 lb/hour and 1.06 tons per rolling 12-month period.

Nitrogen oxide emissions: 1.32 lbs/hour and 5.8 tons per rolling 12-month period.

Carbon monoxide emissions: 2.23 lbs/hour and 9.75 tons per rolling 12-month period.

Organic compound emissions: 0.15 lbs/hour and 0.64 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion of natural gas or fuel gas shall be determined by multiplying the volume (scf) of fuel burned in the Hot Gas Generator's burner by the emission factors in AP-42 Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Tables 1.4-1 and 1.4-2 (7/98), and appropriate conversion factors.

Compliance with the annual emission limits shall be assumed if compliance with the hourly emission limits is demonstrated.

(4) Emission Limitations:

a. Particulate emissions from the coal bunker baghouse stack shall not exceed 1.9 tons per rolling 12-month period

b. Particulate emissions from the hot gas generator stack baghouse stack shall not exceed 2.62 tons per rolling 12-month period.

c. Particulate emissions from the coal filling vessel baghouse stack shall not exceed 0.32 ton per rolling 12-month period

Applicable Compliance Method:

Compliance with the annual emission limits shall be assumed if compliance with the hourly emission limits is demonstrated.

(5) Emission Limitations:

The permittee shall not discharge from any fuel gas combustion device any gases that contain SO2 in excess of 20 ppmv (dry basis, corrected to 0% excess air) determined on a 3-hour rolling average basis and SO2 in excess of 8 ppmv (dry basis, corrected to 0% excess air) determined daily on a 365 successive day rolling average basis; or

The permittee shall not burn in any fuel gas combustion device any fuel gas that contains H2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H2S in excess of 60 ppmv determined daily on a 365 successive day rolling average basis.

Applicable Compliance Method:

Comply with the applicable testing requirements in Section 60.104a of Subpart Ja.

(6) Emission Limitations:

Visible PE from the Hot Gas Generator exhaust stack and the Coal Filling Vessel baghouse exhaust stack shall not exhibit 20% opacity or greater.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

(7) Emission Limitations:

Visible PE from the Coal Bunker Stack shall not exhibit 20% opacity or greater.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None

19. Emissions Unit Group - Coal or Biomass Silos: F011, F012, F013, F014

EU ID	Operations, Property and/or Equipment Description
F011	Coal Silos 1 & 2 w/common dust collector.
F012	Coal Silos 3 & 4 w/common dust collector.
F013	Coal Silos 5 & 6 w/common dust collector.
F014	Biomass Silos 1 & 2 w/common dust collector.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	PE/PM10 emissions shall not exceed 0.7 lb per hour and 3.0 tons per rolling 12-month period (for F011) and 0.9 lb per hour and 3.8 tons (for F012, F013, and F014) per year from the baghouse exhaust stack. (It is assumed that the PE is 100% PM10.) See b)(2)b.
b.	OAC RULE 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) from this air contaminant source since the calculated annual emission rate for PE is less than ten tons per year taking into account the federally enforceable BACT emission limits of 0.7 and 0.9 lb PE per hour.
c.	OAC rule 3745-17-07(A)	Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-08(B)	See b)(2)a.
e.	40 CFR Part 63 Subpart Y	See b)(2)c

(2) Additional Terms and Conditions

a. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.

b. The BACT determination for this emissions unit includes:

i. totally enclosed silos, including all transfer points;

ii. equipping the silos with a common baghouse dust collector capable of achieving a stack outlet PE loading of 0.005 gr/dscf of exhaust gases; and

iii. totally enclosed fill and exit conveyors to the silos.

c. In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from the baghouse stack. The presence or absence of any visible emissions from the baghouse stack shall be noted in an operations log. If any visible emissions are observed from the stack, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

e) Reporting Requirements

(1) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from the baghouse stack and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

f) Testing Requirements

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

a. The emission testing shall be conducted within 3 months after start-up.

b. The emission testing shall be conducted to demonstrate compliance with:

i. the allowable mass emission rate for PE of 0.7 or 0.9 lb/hour; and

ii. the visible PE limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. for particulates, Method 5 of 40 CFR Part 60, Appendix A; and

ii. for visible PE, Method 9 of 40 CFR Part 60, Appendix A.

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 Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

(2) Emission Limitations:

Particulate emissions shall not exceed 3.0 or 3.8 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated.

(3) Emission Limitations:

Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9. The initial performance test shall be conducted in accordance with the requirements listed in f)(1).

(4) Emission Limitations:

In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

Applicable Compliance Method

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in Section 60.11 of 40 CFR Part 60.

In accordance with Section 60.8, of 40 CFR Part 60, the permittee shall conduct initial performance tests within 60 days of achieving the maximum production rate at which the affected facility will be operated, but no longer than 180 days after initial startup.

The permittee shall comply with the requirements in f)(1)e. through f)(1)g. above, in regard to testing notice, Ohio EPA witness of testing and submitting written reports on results.

g) Miscellaneous Requirements

(1) None.

20. Emissions Unit Group - Combined Cycle Turbines: P018, P019

EU ID	Operations, Property and/or Equipment Description
P018	Combined Cycle Plant 1
P019	Combined Cycle Plant 2

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 3745-31-20	PE/PM10:18.21 lbs per hour (as a 3-hr average) and 78.67 tons per rolling 12-month period. NOx: 57.06 lbs per hour (as a 3-hr average) and 246.5 tons per rolling 12-month period. CO: 23.1 lbs per hour (as a 3-hr average) and 99.78 tons per rolling 12-month period. VOC: 26.62 lbs per hour (as a 3-hr average) and 114.99 tons per rolling 12-month period. SO_2: 21.06 lbs per hour (as a 3-hr average) and 90.97 tons per rolling 12-month period.
b.	OAC rule 3745-31-05(A)(3)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity, as a six-minute average. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20.
c.		

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR Part 60, Subpart Da	The PE/PM10, NOx and SO2 emissions limitations of this rule are less stringent than those established in accordance with the BACT requirements of OAC rules 3745-31-10 through 3745-31-20. Mercury (Hg) emissions shall not exceed 0.020 lb/GWh (20 X 10E -06 lb/MWh), as a 12-month rolling average.
d.	40 CFR Part 60, Subpart GG	Not applicable. See b)(2)b.
e.	40 CFR Part 60, Subpart KKKK	Not applicable. See b)(2)b.
f.	OAC rule 3745-17-07(A)	The visible emission limitations specified in this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A).
g.	OAC rule 3745-17-11(B)(4)	The emission limitations specified in this rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-10 through 3745-31-20.
h.	OAC chapter 3745-14 (NOx Budget Trading Program)	The permittee shall comply with all applicable requirements under the NOx Budget Trading Program in a timely manner.
i.	OAC chapter 3745-109 (Clean Air Interstate Rule (CAIR))	On July 11, 2008, the Washington DC Circuit Court vacated U.S. EPA's CAIR. U.S. EPA is reviewing the court's decisions and evaluating it's impacts.. Because Ohio's CAIR was based on the above federal rule, it's future implementation has yet to be determined.
j.	OAC chapter 3745-108 (Clean Air Mercury Rule (CAMR))	On Feb 8, 2008, the Washington DC Circuit Court vacated U.S. EPA's rule removing power plants from the CAA list of sources of HAPs. At the same time, the vacated CAMR. U.S. EPA is reviewing the court's decisions. Because Ohio's CAMR was based on the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		above federal rule, it's future implementation has yet to be determined.
k.	OAC rule 3745-31-28 (Case-by-case MACT)	Total HAPs: 1.6 lbs per hour (as a 3-hr average) and 6.9 tons per rolling 12-month period. Formaldehyde: 1.1 lbs per hour (as a 3-hr average) and 4.8 tons per rolling 12-month period. (Formaldehyde is the greatest single HAP emitted.)

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. use of only tailgas or natural gas as fuel;

ii. employ a Selective Catalytic Reduction (SCR) emissions control device to reduce NOx emissions to 5.0 ppmvd (at 15% O2) with a 10.0 ppmvd NH3 slip, when firing tail gas;

iii. employ water or steam injection in the combustion turbine in combination with the SCR emissions control device to reduce NOx emissions to 5.0 ppmvd (at 15% O2) when firing natural gas;

iv. employ a Catalytic Oxidation emissions control device along with good combustion practices to reduce CO emissions to 0.008 lb/mmBtu (as a rolling 24-hour average);

v. employ a Catalytic Oxidation emissions control device along with good combustion practices to reduce VOC emissions to 0.012 lb/mmBtu (as a rolling 24-hour average);

vi. employ good combustion practices in firing only gaseous fuels to reduce PM/PM10 emissions to 0.008 lb/mmBtu; and

vii. tailgas fired in this emissions unit shall contain no more than 0.006 grains H2S per 100 dscf or firing pipeline quality natural gas.

b. This emissions unit is subject to 40 CFR Part 60, Subpart Da and not subject to Subpart GG or Subpart KKKK, of Part 60. This emissions unit is a combined cycle gas turbine (both stationary combustion turbine and associated duct burner) that meets all of the applicability requirements of Section 60.40 Da(b).

c. The permittee shall prepare and submit to the Ohio EPA Northeast District Office a unit-specific monitoring plan for each monitoring system (opacity, SO_2, NO_x, CO_2 or O_2 and Hg) at least 45 days before commencing certification testing of the monitoring systems. The plan must address the requirements in 40 CFR 75 and paragraphs (s)(1) through (s)(6) of 40 CFR 60.49Da.

[40 CFR 60.13]; [40 CFR Part 60, Appendix F]; and [40 CFR Part 75]

c) Operational Restrictions

(1) The permittee shall only burn natural gas and/or other gaseous fuels in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 60, Subpart Da.

(2) The permittee shall maintain monthly records of the total quantity and type of gaseous fuel(s) burned in this emissions unit.

e) Reporting Requirements

(1) See 40 CFR Part 60, Subpart Da.

(2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or tailgas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(3) Pursuant to the NSPS, the source owner/operator 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. actual start-up date (within 15 days after such date); and

c. 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
50 West Town Street, Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049

and

Northeast District Office of the Ohio EPA
Division of Air Pollution Control
2110 E. Aurora Road
Twinsburg, Ohio 44087

f) Testing Requirements

(1) Compliance with the emission limitations in b) shall be determined in accordance with the following methods:

a. Emission Limitations:

Particulate matter less than ten microns (PM-10), filterable and condensible emissions, shall not exceed 0.008 pound per million Btu heat input(as a 3-hour average),18.21 pounds per hour(as a 3-hour average) and 78.67 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per million Btu and pound per hour PM-10 emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2)

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by compliance with the hourly emissions limit.

b. Emission Limitation:

Tailgas fired in this emissions unit shall contain no more than 0.006 grains H2S per 100 dscf or firing pipeline quality natural gas: and sulfur dioxide(SO2) emissions shall not exceed, 21.06 lbs per hour(as a 3-hour average), and 90.97 tons per rolling,12-month period.

Applicable Compliance Methods:

Compliance with the pound per hour SO2 emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2), the monitoring and record keeping requirements in d) and the reporting requirements in e).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the monitoring and record keeping required pursuant to d), and the associated emission factors derived from emissions testing as specified in d), and f)(2)

c. Emission Limitations:

Nitrogen oxides(NOx) emissions shall not exceed 5.0ppmvd at 15% O2, 57.06 lbs per hour(as a 3-hour average),and 246.5 tons per rolling 12-month period.

Applicable Compliance Methods:

Compliance with the ppmvd and pound per hour NOx emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2), the monitoring and record keeping requirements in d) and the reporting requirements in e)

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the monitoring and record keeping required pursuant to d) and the associated emission factors derived from emissions testing as specified in f)(2).

d. Emission Limitations:

Carbon monoxide(CO) emissions shall not exceed 0.008 lb per million Btu heat input, 23.01 lbs per hour(as a 3-hour average), and 99.78 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per million Btu and pound per hour CO emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2), the monitoring and record keeping requirements in d) and the reporting requirements in e).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the monitoring and record keeping required pursuant to d)and the associated emission factors derived from emissions testing as specified in f)(2).

e. Emission Limitations:

Volatile organic compound(VOC) emissions shall not exceed 0.012 lb per mmBtu actual heat input, 26.62 lbs per hour(as a 3-hour average) and 114.99 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the pound per million Btu and pound per hour VOC emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(2)

f. Emission Limitations:

Total HAPs emissions shall not exceed, 1.6 lbs per hour(as a 3-hour average) and 6.9 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the lbs per hour total HAPs emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2)

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the monitoring and record keeping required pursuant to d) and the associated emission factors derived from emissions testing as specified in f)(2).

g. Emission Limitations:

Formaldehyde emissions shall not exceed, 1.1 lbs per hour(as a 3-hour average) and 4.8 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the lbs per hour emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the associated emission factors derived from emissions testing as specified in f)(2)

h. Emission Limitations:

Mercury emissions shall not exceed 0.02 lb/GWh (20 X 10E -06 lb/MWh), as a rolling 12-month average, and 43.45 lbs per year.

Applicable Compliance Methods:

Compliance with the lb/GWh emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2), the monitoring and record keeping requirements in d) and the reporting requirements in e).

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by the monitoring and record keeping required pursuant to d) and the associated emission factors derived from emissions testing as specified in f)(2)

i. Emission Limitations:

Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity, as a six-minute average.

Applicable Compliance Methods:

Compliance with the visible particulate emissions limitations shall be demonstrated based upon the applicable emissions tests specified in f)(2), the monitoring and record keeping requirements in e) and the reporting requirements in e).

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

a. The emissions testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of the emissions unit.

b. The emissions testing shall be conducted to demonstrate compliance with the applicable emissions limitations for PM-10, NO_X, SO_2, VOC, CO, and opacity, in the appropriate averaging period(s).

c. The following test methods shall be employed to demonstrate compliance with the applicable emissions limitations:

PM-10	Method 201(40 CFR Part 51, Appendix M)
	Method 202(40 CFR Part 51, Appendix M)
SO2	Methods 1 through 4 and 6C of 40 CFR
	Part 60, Appendix A
NOx	Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A
CO	Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A
VOC	Methods 1 through 4 and 25, or Methods 1 through 4 and 25A (as appropriate), of 40 CFR Part 60, Appendix A
Total HAPs	Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A.
Formaldehyde	Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A
Mercury	40 CFR Part 60, Subpart Da, Section 60.50Da
Opacity	Method 9 of 40 CFR Part 60, Appendix A

g) Miscellaneous Requirements

(1) None.

21. Emissions Unit Group - Cooling Towers: P013, P014

EU ID	Operations, Property and/or Equipment Description
P013	Cooling Tower 1.
P014	Cooling Tower 2.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
(a)	OAC rules 3745-31-10 through 3745-31-20	PM10 emissions shall not exceed 2.4 lbs per hour and 10.5 tons per rolling 12-month period. [PE is assumed to be 100% PM10.] The permittee shall install a drift eliminator with a maximum drift rate of 0.0005%, by weight, onto this emissions unit. Visible particulate emissions shall not exceed 10% opacity as a 6-minute average. The presence of condensed water vapor shall not be deemed a violation for failure of stack emissions meeting this visible emission limitation.
(b)	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20.
	OAC rule 3745-17-07(A)	See b)(2)a.
	OAC rule 3745-17-11(B)	See b)(2)a.

(2) Additional Terms and Conditions

a. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.

b. The provisions of 40 CFR Part 63, Subpart Q, apply to all new and existing industrial process cooling towers that are operated with chromium-based water

treatment chemicals and are either major sources or are integral parts of facilities that are major sources as defined in 40 CFR 63.401. Since chromium-based water treatment chemicals will not be used in this emissions unit, the provisions of this subpart do not apply to this emissions unit.

c) Operational Restrictions

(1) The permittee shall maintain an average total dissolved solids (TDS) concentration of the cooling water less than or equal to 2,000 milligrams per liter.

(2) The permittee shall not use chromium-based water treatment chemicals in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall monitor the TDS content of the circulating cooling water on a daily basis.

(2) The permittee shall maintain daily records of the daily TDS content of the circulating cooling water, in mg/L.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the average TDS limitation. The reports shall identify corrective action taken to reduce the TDS concentration. These reports shall be submitted to the Ohio EPA Northeast District Office by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following method(s):

a. Emission Limitation:

PM10 emissions shall not exceed 2.4 lbs per hour.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated by the following one-time calculation.

$PM10 = Q \times (TDS / 10^6 \text{ ppm}) \times (Drift/100) \times (Density) \times (60 \text{ min/hr})$

where:

Q = maximum cooling tower circulating water flow rate (481,000 gallons/min)

TDS = the maximum TDS concentration in the circulating water 2,000 mg/L (2,000 ppm by weight);

Drift = the maximum drift loss, 0.0005%; and

Density = Density of water, 8.34 lb/gal

b. Emission Limitation:

PM10 emissions shall not exceed 10.5 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated by the following one-time calculation.

Multiply the allowable hourly emissions (2.4 lbs/hr) by the maximum annual hours of operation (8,760 hours per year) and divide by 2000 lbs per ton.

c. Emission Limitation:

The maximum drift rate shall not exceed 0.0005%.

Applicable Compliance Method:

Manufacturer's emissions data shall be used to demonstrate compliance with this limitation.

Within 90 days of startup, the permittee shall submit to the Ohio EPA-Northeast District Office written documentation provided by the vendor/manufacturer, of the maximum drift rate of 0.0005% for the drift eliminator and the premise, basis, and justification for the drift rate.

d. Emission Limitation:

Visible particulate emissions from any stack 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 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), Appendix A, U.S. EPA Reference Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

e. Emission Limitation:

The permittee shall maintain the TDS concentration of the cooling water less than or equal to 2,000 milligrams per liter.

Applicable Compliance Method:

The monitoring and recordkeeping requirements under d) shall serve as demonstration of compliance.

If required, compliance shall be demonstrated using test procedures that conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants". Alternative U.S. EPA approved test methods may be used with prior written approval from the Ohio EPA.

g) Miscellaneous Requirements

(1) None

22. Emissions Unit Group - Diesel Fuel Tanks: T001, T002, T003, T004, T005, T006, T007, T008

EU ID	Operations, Property and/or Equipment Description
T001	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 1.
T002	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 2.
T003	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 3.
T004	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 4.
T005	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 5.
T006	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 6.
T007	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 7.
T008	3.0 MM Gallon Cap. F-T Diesel Fuel, Fixed Roof, Storage Tank 8.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOC is less than ten tons per year.
b.	OAC rule 3745-21-09(L)	Exempt. See b)(2)a.
c.	OAC rules 3745-31-10 through 3745-31-20	VOC emissions shall not exceed 0.8 tons per rolling 12-month period. See b)(2)c.
d.	40 CFR Part 60, Subpart Kb	See b)(2)b.

(2) Additional Terms and Conditions

a. The permittee shall not place, store, or hold in this fixed roof tank any petroleum liquid which, as stored, has a true vapor pressure greater than 1.52 pounds per square inch absolute, unless the tank is equipped with an internal floating roof (or equivalent control approved by the Director) in accordance with the requirements

of paragraph (L)(1) of OAC rule 3745-21-09 prior to storing a petroleum liquid with a higher vapor pressure.

b. NSPS Subpart Kb does not apply to storage vessels with a capacity greater than 151 cubic meters (39,890 gallons) storing a liquid with a true maximum vapor pressure less than 3.5 kilopascals (0.508 psia), per Section 60.110b(b).

c. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available control technology requirements of OAC rules 3745-31-10 thru 3745-31-20.

c) Operational Restrictions

(1) The permittee shall not store a petroleum liquid with a true vapor pressure equal to or greater than 3.5 kilopascals (0.508 psia).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information for the fixed roof tank:

a. the types of petroleum liquids stored in the tank;

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each petroleum liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute; and

c. the number of tank turnovers per year.

(2) These records shall be maintained for at least 5 years and shall be made available to the director or his representative upon verbal or written request.

e) Reporting Requirements

(1) If the permittee places, stores, or holds, in the fixed roof tank, any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the Ohio EPA Northeast District Office) within 30 days of becoming aware of the occurrence. The date that such petroleum liquid was first stored in the tank, the date removed (if removed), the total gallons throughput of each petroleum liquid exceeding this vapor pressure, and the proposed method of compliance shall be included in the report.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1)a. shall be determined in accordance with the following methods:

Emissions Limitations:

VOC emissions shall not exceed 0.8 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated using: 'Tanks 4.0.9d', the latest version of Tanks computer software, or equivalent AP-42, Section 7.1, "Organic liquid Storage tanks' methodology issued by U.S. EPA for calculating tank emissions.

g) Miscellaneous Requirements

(1) None

23. Emissions Unit Group - Fire Pump Engines: P016, P017

EU ID	Operations, Property and/or Equipment Description
P016	Fire Pump Engine 1.
P017	Fire Pump Engine 2.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	The BACT determination for this emissions unit is equivalent to the requirements specified in 40 CFR Part 60, Subpart IIII. Also see b)(2)a, b)(2)b. and c)(4).
b.	OAC rule 3745-31-05(C)	See b)(2)d.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% as a 6-minute average, except as provided by rule.
d.	OAC rule 3745-17-11 (B)(5)	The emissions limitation specified by this rule is less restrictive than the emissions limitation specified under 40 CFR Part 60, Subpart IIII.
e.	OAC rule 3745-18-06(B)	This emissions unit is exempt from the requirements of this rule.
f.	40 CFR Part 60, Subpart IIII, Section 60.4204(d) and 60.4205(c) [Table 4 to Subpart IIII of Part 60]	Emissions of non-methane hydrocarbons (NMHC) and nitrogen oxides (NOx) combined shall not exceed 7.8 grams/hp-hr. Emissions of carbon monoxide (CO) shall not exceed 2.6 grams/hp-hr. Particulate emissions (PE) shall not exceed 0.40 gram/hp-hr. Also see b)(2)c., c)(1), c)(2), c)(3), and

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		c)(5).
g.	40 CFR Part 63.6590(a)	This paragraph exempts this emissions unit from all requirements under 40 CFR Part 63, Subpart ZZZZ.

(2) Additional Terms and Conditions

a. The emissions limitations established as BACT are:

PE: 0.27 lb/hour and 0.07 ton per rolling 12-month period;

CO: 1.72 lbs/hour and 0.43 tons per rolling 12-month period;

NOx: 4.89 lbs/hour and 1.23 tons per rolling 12-month period; and

NMHC: 0.26 lbs/hour and 0.07 ton per rolling 12-month period.

b. The BACT determination for this emissions unit also includes:

i. good combustion practices;

ii. good engine design;

iii. ignition timing retard;

iv. turbocharger; and

v. low-temperature aftercooler.

c. The permittee shall install a non-resettable hour meter prior to startup of the engine, per 40 CFR 60.4209(a).

d. Permit-to-install (PTI) 02-22896 takes into account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC 3745-31-05(A)(3).

c) Operational Restrictions

(1) Per 40 CFR 60.4211(c) the permittee shall purchase an engine certified to the emissions standards specified in 40 CFR 60.4205(c). The engine must be installed and configured according to the manufacturer's specifications.

(2) Per 40 CFR 60.4211 (a) the permittee shall operate and maintain the engine and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer.

(3) Per 40 CFR 60.4211(e) the engine may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of the engine in emergency situations. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State or local standards require maintenance and testing of the engine beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing as permitted in this section is prohibited.

(4) The maximum annual operating hours for this emissions unit shall not exceed 500, based upon a rolling, 12-month summation of the operating hours.

(5) The permittee shall combust only diesel fuel which meets the following specifications, as detailed in 40 CFR 80.510(b) and required by 40 CFR 60.4207(b):

a. sulfur content of 15 ppm, maximum; and

b. cetane index of 40, minimum or

c. aromatic content of 35 volume percent, maximum.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is undergoing maintenance checks or readiness testing and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. These checks are not required when operating under emergency conditions. 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 d)(1)d. 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.

(2) The permittee shall retain records of:

a. hours of operation recorded in the non-resettable hour meter;

b. the hours of operation over each rolling 12-month period;

c. time of operation of the engine; and

d. the reason the engine operated.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on the hours of operation. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

(2) The permittee shall submit semi-annual 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 Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month periods.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1)a. shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible particulate emissions (PE) shall not exceed 20% as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitation:

0.27 lb PE/hour and 0.07 ton per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 300 hp by the emission factor

of 0.40 gram/hp-hr taken from Table 1 of 40 CFR Part 89, Section 112 and the conversion factor of 1 gram equals 0.0022 lb.

Compliance with the annual emission limits shall be assumed if compliance with the hourly emission limits is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

c. Emission Limitation:

1.72 lbs CO/hour and 0.43 ton per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 300 hp by the emission factor of 2.6 grams/hp-hr taken from Table 1 of 40 CFR Part 89, Section 112 and the conversion factor of 1 gram equals 0.0022 lb.

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

d. Emission Limitation:

4.89 lbs NOx/hour and 1.23 tons per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 300 hp by the factor in Table 1 of 40 CFR Part 89, Section 112 of 6.4 grams/kW-hr and the conversion factor of 1 gram equals 0.0022 lb. 95% of the NMHC + NOx is assumed to be NOx.

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

e. Emission Limitation:

0.26 lb NMHC/hour and 0.07 ton per rolling 12-month period

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion shall be determined by multiplying the engine's rating of 300 hp by the factor of 6.4 grams/kW-hr from Table 1 of 40 CFR Part 89, Section 112 and the conversion factor of 1 gram equals 0.0022 lb. 5% of the NMHC + NOx is assumed to be NMHC.

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated and compliance with the rolling 12-month hours of operation limitation is demonstrated.

f. Emission Limitation:

Diesel fuel specifications: sulfur content of 15 ppm, maximum; and cetane index of 40, minimum or aromatic content of 35 volume percent, maximum.

Applicable Compliance Method:

Compliance with the fuel specifications shall be determined by any method allowed under 40 CFR Part 80 Subpart I.

g) Miscellaneous Requirements

(1) None

24. Emissions Unit Group - Fly Ash Handling Systems: F015, F016, F017, F018, F019, F020

EU ID	Operations, Property and/or Equipment Description
F015	Flyash handling system 1, intermediate vessels, silo and pneumatic transfer to trucks.
F016	Flyash handling system 2, intermediate vessels, silo and pneumatic transfer to trucks.
F017	Flyash handling system 3, intermediate vessels, silo and pneumatic transfer to trucks.
F018	Flyash handling system 4, intermediate vessels, silo and pneumatic transfer to trucks.
F019	Flyash handling system 5, intermediate vessels, silo and pneumatic transfer to trucks.
F020	Flyash handling system 6, intermediate vessels, silo and pneumatic transfer to trucks.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	Emissions of fugitive particulate matter (PE)/particulate matter of 10 microns or less (PM10) from the intermediate fly ash vessels shall not exceed 0.015 pound/hour and 0.065 ton per rolling 12-month period. Emissions of fugitive PE/PM10 from the fly ash storage silo shall not exceed 0.03 pound/hour and 0.13 ton per rolling 12-month period. (It is assumed that the PE is 100% PM10.) See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-31-10 through 3745-31-20.
c.	OAC rule 3745-17-07(B)(1)	Visible PE shall not exhibit 20% opacity or greater as a three-minute average.
d.	OAC rule 3745-17-08(B)	The emission limitation specified by this rule is less stringent than the emission

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		limitation established pursuant to OAC rule 3745-31-10 through 3745-13-20.

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. totally enclosed fly ash intermediate storage bins equipped with a passive dust collector;

ii. totally enclosed fly ash storage silo equipped with a passive dust collector;

iii. each passive dust collector shall be capable of achieving a stack outlet PE loading of 0.005 gr/dscf of exhaust gases or less;

iv. high moisture content in the ash (from previous processing);

v. pneumatic conveying;

vi. totally enclosed truck loading (including no open drop height); and

vii. covering, at all times, of open-bodied vehicles when transporting ash.

The above BACT determination notwithstanding, should any visible emissions be observed, the permittee shall implement additional measures as needed to comply with the requirements in this permit.

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from each of the passive dust collectors. The presence or absence of any visible emissions from the passive dust collectors shall be noted in an operations log. If any visible emissions are observed from the stacks, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

e) Reporting Requirements

(1) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from any of the passive dust collectors and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

(2)

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1)a. shall be determined in accordance with the following methods:

a. Emission Limitation:

Emissions of fugitive PE/PM10 from the intermediate fly ash vessels shall not exceed 0.015 pound/hour and 0.065 ton per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the anticipated passive dust collector grain loading emission rate of 0.005 gr/dscf by the anticipated air displacement rate of 438 cfm for the intermediate ash storage vessels and the conversion factors: 1.0 lb/7,000 gr and 60 min./hour.

b. Emission Limitation:

Emissions of fugitive PE/PM10 from the fly ash storage silo shall not exceed 0.03 pound/hour and 0.13 ton per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the anticipated passive dust collector grain loading emission rate of 0.005 gr/dscf by the anticipated air displacement rate of 876 cfm for the fly ash silos and the conversion factors: 1.0 lb/7,000 gr and 60 min./hour.

c. Emission Limitations:

Visible PE from each passive dust collector exhaust shall not exhibit 20% opacity or greater as a three-minute average.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None

25. Emissions Unit Group - Gasifiers 1-6: P020, P021, P022, P023, P024, P025

EU ID	Operations, Property and/or Equipment Description
P020	Gasifier No. 1
P021	Gasifier No. 2
P022	Gasifier No. 3.
P023	Gasifier No. 4.
P024	Gasifier No. 5.
P025	Gasifier No. 6.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20.
b.	OAC rule 3745-31-05(A)(3)(b)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate for VOC is less than ten tons per year taking into account the federally enforceable BACT emission limit of 4.1 tons per rolling, 12-month period.
c.	OAC rule 3745-17-07(A)	The visible particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10 through 3745-31-20.
d.	OAC rule 3745-17-10(B)(1)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rules 3745-31-10

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		through 3745-31-20.
e.	OAC rule 3745-31-10 through 3745-31-20	PE/PM10: 9.4 lbs per hour and 0.3 ton per rolling 12-month period. SO2: 28,166 lbs per hour and 732.3 tons per rolling 12-month period. NOx: 377.0 lbs per hour and 10.1 tons per rolling 12-month period. CO: 2,522.0 lbs per hour and 65.8 tons per rolling 12-month period. VOC.: 157.0 lbs per hour and 4.1 tons per rolling 12-month period. Total HAPs/COS: 13.2 lbs per hour and 0.3 tons per rolling 12-month period. H2S: 69.1 lbs per hour and 1.8 tons per rolling 12-month period. The flare stack 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.
f.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20.

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. use of a flare with a 98% by weight, design, VOC destruction efficiency**,** to burn exhausted syngas during all startups and shutdowns.

ii. The flare shall be designed, monitored and operated in conformance with the requirements for flares as listed in Section 60.18 of 40 CFR Part 60.

iii. employ good combustion practices in firing only gaseous fuels to reduce PM/PM10 emissions to 0.003 lb/mmBtu;

iv. employ good combustion practices in firing only gaseous fuels to limit SO2 emissions to 9.0 lbs/mmBtu;

v. employ good combustion practices in firing only gaseous fuels to reduce NOx emissions to 0.12 lb/mmBtu;

vi. employ good combustion practices in firing only gaseous fuels to reduce CO emissions to 0.8 lb/mmBtu; and

vii. employ good combustion practices in firing only gaseous fuels to reduce VOC emissions to 0.05 lb/mmBtu;

b. The high pressure flare shall control syngas emissions from the Gasifiers Numbers 1- 6 during startups and shutdowns. The raw syngas to be flared shall be filtered for particulates prior to being flared.

The high pressure flare shall be used to flare raw syngas during process upsets and emergencies. During process upsets and emergencies, raw syngas may be flared directly from a gasifier vessel, without being processed through the particulate and acid gas filtration equipment.

c. The high pressure flare shall be equipped with multiple pilot burners having a combined, design rated, heat input of 0.55 mmBtu per hour, and fired by natural gas. The maximum, design heat release rate of the flare shall be 3,140 mmBtu/hour, for the flaring of syngas.

d. The permittee shall properly install, operate, and maintain a thermocouple or any other equivalent device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals, and the requirements of Section 60.18 of 40 CFR Part 60.

c) Operational Restrictions

(1) For emissions units P025 - P030 (Gasifiers Nos. 1 - 6), each emissions unit shall be limited to a maximum total of 52 hours of flaring due to startup and shutdown events per rolling 12 -month period.

(2) Emissions units P025 - P030 (Gasifiers Nos. 1 - 6) shall be limited to a combined maximum total of 52 hours of flaring due to startup and shutdown events per rolling 12 - month period.

(3) The flare pilot shall be operated at all times when raw syngas may be vented to it.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall monitor the flare to ensure that it is operated and maintained in conformance with its design parameters and the requirements contained in this permit, and in the 'General control device requirements' for flares listed in Section 60.18 of 40 CFR Part 60..

(2) The permittee shall record each startup and shutdown event, identifying the gasifier no. and emissions unit no., the time and date and the rolling 12-month total no. of startups and shutdowns, to-date.

(3) The permittee shall record each process upset or emergency shutdown event during which raw syngas is sent directly to the high pressure flare, without being passed through the particulate and acid gas filtration units.

The permittee shall record the date, time, duration, volume of raw syngas flared, the amounts of the resulting air emissions and the reason for each such event.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation reports that identify all periods of time during which the pilot flame was not functioning properly or the flare was not maintained as required in this permit. The reports shall include the date, time, and duration of each such period.

(2) The permittee shall notify the Director (the Ohio EPA Northeast District Office) in writing of any record showing that the maximum number of startups and shutdown events for this emissions unit individually or, for the group of emissions units P025-P030, exceeded 52 hours of flaring due to startup and shutdown events. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA Northeast District Office) within 30 days after the exceedance occurs.

(3) The permittee shall submit quarterly reports to the Ohio EPA Northeast District Office which summarize the number of process upset or emergency shutdown events which occurred during the previous calendar quarter.

(4) The permittee shall submit all reports and notifications required in Section 60.18 of 40 CFR Part 60.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1)a. shall be determined in accordance with the following methods:

a. Emission Limitations:

Particulate matter less than ten microns (PM-10), filterable and condensible emissions, shall not exceed 9.4 pounds per hour and 0.3 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the 9.4 pounds per hour emissions limitation shall be demonstrated by multiplying the BACT based limit of 0.003 lb/mmBtu by the maximum flare heat input of 3,140 mmBtu/hour.

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by multiplying the hourly emission limitation by 52 hours per year

and the conversion factor 1.0 ton/2,000 lbs and the monitoring and record keeping required pursuant to d) above.

b. Emission Limitations:

SO2 emissions shall not exceed 28,166.0 lbs/hour and 732.3 tons per rolling 12-month period.

Applicable Compliance Methods:

Compliance with the 28,166.0 pounds per hour emissions limitation shall be demonstrated by multiplying the BACT based limit of 9.0 lbs per mmBtu by the maximum flare heat input of 3,140 mmBtu/hour.

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by multiplying the hourly emission limitation by 52 hours per year and the conversion factor 1.0 ton/2,000 lbs and the monitoring and record keeping required pursuant to d).

c. Emission Limitations:

Nitrogen oxides(NOx) emissions shall not exceed 377.0 lbs per hour and 10.1 tons per rolling 12-month period.0.12 lb per mmBtu and

Applicable Compliance Methods:

Compliance with the 377.0 lbs per hour NOx emissions limitations shall be demonstrated by multiplying the BACT based limit of 0.12 lb per mmBtu by the maximum flare heat input of 3,140 mmBtu/hour.

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by multiplying the hourly emission limitation by 52 hours per year and the conversion factor 1.0 ton/2,000 lbs and the monitoring and record keeping required pursuant to d).

d. Emission Limitations:

Carbon monoxide(CO) emissions shall not exceed 2,522.0 lbs per hour and 65.8 tons per rolling 12-month period.

Applicable Compliance Methods:

Compliance with the 2,522.0 lbs per hour CO emissions limitations shall be demonstrated by multiplying the BACT based limit of 0.8 lb per mmBtu by the maximum flare heat input of 3,140 mmBtu/hour.

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by multiplying the hourly emission limitation by 52 hours per year and the conversion factor 1.0 ton/2,000 lbs and the monitoring and record keeping required pursuant to d).

e. Emission Limitations:

Volatile organic compound(VOC) emissions shall not exceed 157.0 lbs per hour and 4.1 tons per rolling 12-month period.

Applicable Compliance Methods:

Compliance with the 157.0 lbs per hour VOC emissions limitations shall be demonstrated by multiplying the BACT based limit of 0.05 lb per mmBtu by the maximum flare heat input of 3,140 mmBtu/hour.

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by multiplying the hourly emission limitation by 52 hours per year and the conversion factor 1.0 ton/2,000 lbs and the monitoring and record keeping required pursuant to d).

f. Emission Limitations:

Total HAPs/COS emissions shall not exceed,13.2 lbs per hour and 0.3 tons per rolling 12-month period.

Applicable Compliance Methods:

Compliance with the 13.2 lbs per hour total HAPs/COS emissions limitations shall be lbs. per hour H2S emissions limitations shall be demonstrated based by multiplying an emission factor for Total HAPS/COS of 0.0042 lb/mmBtu heat input by the maximum hourly heat input rate during flaring of the gasifier. The listed emission factor is an engineering estimate based upon the design of the flare and anticipated characteristics of the flared syngas.

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by multiplying the hourly emission limitation by 52 hours per year and the conversion factor 1.0 ton/2,000 lbs and the monitoring and record keeping required pursuant to d).

g. Emission Limitations:

H2S emissions shall not exceed 69.1 lbs per hour and 1.8 tons per rolling 12-month period.

Applicable Compliance Methods:

Compliance with the 69.1 lbs per hour H2S emissions limitations shall be demonstrated based by multiplying an emission factor for H2S of 0.022 lb/mmBtu heat input by the maximum hourly heat input rate during flaring of the gasifier. The listed emission factor is an engineering estimate based upon the design of the flare and anticipated characteristics of the flared syngas.

Compliance with the tons per rolling, 12-month period emission limitation shall be demonstrated by multiplying the hourly emission limitation by 52 hours per year and the conversion factor 1.0 ton/2,000 lbs and the monitoring and record keeping required pursuant to d).

h. Emission Limitations:

The flare stack 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.

Applicable Compliance Methods:

Compliance with the visible particulate emissions limitations shall be demonstrated based upon the applicable emissions tests specified in Section A.V.4, the monitoring and record keeping requirements in d) and the reporting requirements in e).

(2) The flare shall comply with the requirements of Section 60.18 of 40 CFR Part 60.

g) Miscellaneous Requirements

(1) None

26. Emissions Unit Group - Naphtha Tanks: T009, T010, T011, T012

EU ID	Operations, Property and/or Equipment Description
T009	3.0 MM Gallon Capacity F-T Naphtha, Internal Floating Roof, Tank 1
T010	3.0 MM Gallon Capacity F-T Naphtha, Internal Floating Roof, Tank 2
T011	3.0 MM Gallon Capacity F-T Naphtha, Internal Floating Roof, Tank 3
T012	3.0 MM Gallon Capacity F-T Naphtha, Internal Floating Roof, Tank 4

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)(a)(ii)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate for VOC is less than ten tons per year taking into account the federally enforceable BACT emission limit of 0.88 tons per rolling 12-month period.
b.	OAC rule 3745-21-09(L)	See c)(1), d)(1), d)(2) and e)(1)
c.	OAC rules 3745-31-10 through 20	VOC emissions shall not exceed 0.88 tons per rolling 12-month period. See b)(2)a.
d.	40 CFR part 63, Subpart CC	Not applicable. See b)(2)b.
e.	40 CFR Part 60, Subpart Kb	See b)(2)b.
f.	40 CFR part 63, Subpart EEEE	See b)(2)c.
g.	40 CFR part 63, Subpart WW	See b)(2)d.

(2) Additional Terms and Conditions

a. The Best Available Control Technology requirements for this emissions unit include equipping this storage tank with a fixed roof in combination with an internal floating roof for the control of VOC and HAP emissions, which meets all of the requirements of 40 CFR part 60, Subpart Kb and 40 CFR Part 63, Subpart WW.

b. As defined in Section 63.641 of Subpart CC, this emissions unit is a Group 2 storage vessel. Therefore, in accordance with Section 63.640(n) of Subpart CC, this emissions unit, which is part of a new source, is required to comply only with the requirements of 40 CFR Part 60, Subpart Kb.

c. In accordance with Section 63.2346 of Subpart EEEE, the permittee shall comply with the requirements of 40 CFR part 63, Subpart WW 'National Emissions Standards for Storage Vessels (Tanks) - Control Level 2'.

d. The permittee shall comply with the storage vessel control requirements of Section 63.1062 and the floating roof requirements of Section 63.1063, in Subpart WW.

c) Operational Restrictions

(1) The permittee shall install the following control equipment and shall maintain tank vents, seals, and or covers as follows:

a. The fixed roof storage tank shall be equipped with an internal floating roof.

b. The automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports.

c. The rim vents, if present, shall be set to open or at the manufacturer's recommended setting when the roof is being floated off the roof leg supports.

d. All openings, except stub drains, shall be equipped with a cover, seal, or lid which is to be in a closed position at all times except when in actual use for tank gauging or sampling.

(2) See 40 CFR Part 60, Subpart Kb.

(3) See 40 CFR Part 63, Subpart EEEE.

(4) See 40 CFR Part 63, Subpart WW.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information for the fixed roof tank:

a. the types of petroleum liquids stored in the tank; and

b. the maximum true vapor pressure (in pounds per square inch absolute), as stored, of each petroleum liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.

These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

[OAC rule 3745-21-09(L)(3)]

(2) The permittee shall maintain a record of any period of time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit and per the rules.

[OAC rule 3745-21-09(L)(1)(b) and (c) and (L)(4)]

(3) See 40 CFR Part 60, Subpart Kb.

(4) See 40 CFR Part 63, Subpart EEEE.

(5) See 40 CFR Part 63, Subpart WW.

e) Reporting Requirements

(1) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of the occurrence, of any period of time in which the automatic bleeder vents, rim vents, and all openings other than stub drains were not maintained as required in this permit.

[OAC rule 3745-21-09(L)(4)]

(2) See 40 CFR Part 60, Subpart Kb.

(3) See 40 CFR Part 63, Subpart EEEE.

(4) See 40 CFR Part 63, Subpart WW.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) shall be determined in accordance with the following methods:

a. Emissions Limitations:

VOC emissions shall not exceed 0.88 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated using: 'Tanks 4.0.9d', the latest version of ‘Tanks’ computer software, or equivalent AP-42, Fifth Edition, Volume 1, Section 7.1, "Organic Liquid Storage Tanks', (11/06) methodology issued by U.S. EPA for calculating tank emissions..

g) Miscellaneous Requirements

(1) None.

27. Emissions Unit Group - Slag Dewatering Silos: F021, F022, F023, F024, F025, F026

EU ID	Operations, Property and/or Equipment Description
F021	Slag Dewatering Silo 1.
F022	Slag Dewatering Silo 2.
F023	Slag Dewatering Silo 3.
F024	Slag Dewatering Silo 4.
F025	Slag Dewatering Silo 5.
F026	Slag Dewatering Silo 6.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	Emissions of fugitive particulate matter (PE)/particulate matter of 10 microns or less (PM10) from the silo vent shall not exceed 1.9 tons per rolling 12-month period. Emissions of fugitive PE/PM10 from conveying and transferring to storage shall not exceed 1.9 tons per rolling 12-month period. (It is assumed that the PE is 100% PM10.) See b)(2)a.
b.	OAC rule 3745-31-05(D)	See b)(2)b.
c.	OAC rule 3745-17-07(B)(1)	Visible PE from the silo vent shall not exhibit 20% opacity or greater as a three-minute average.
d.	OAC rule 3745-17-08(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

(a) totally enclosed belt conveyors;

(b) minimizing drop heights at transfer points; and

(c) moisture content in the slag is 10-20%.

b. The above BACT determination notwithstanding, should any visible emissions from the silo vent be observed in excess of 20% opacity or greater as a three-minute average, the permittee shall implement additional measures as needed to comply with the requirements in this permit.

c. Permit-to-install (PTI) 02-22896 takes into account the restrictions (including the use of any applicable air pollution control equipment) established pursuant to OAC rules 3745-31-10 through 3745-31-20 as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each transfer point in accordance with the following frequencies:

slag transfer point	minimum transfer point inspection frequency
dewatering silo transfer to conveyor	daily
conveyor transfer to storage pile	daily

(2) Notwithstanding the frequency of inspection requirements specified above, the permittee may reduce the frequency of inspections for the transfer points from daily to weekly if the following conditions are met:

a. for 1 full quarter the inspections of the material handling operations indicate no need for implementing the above-mentioned control measures; and

b. the permittee continues to comply with all the record keeping and monitoring requirements specified in d).

The permittee shall revert to daily inspections of the material handling operations if the inspections of the material handling operations indicate the need for implementing the above-mentioned control measures. The permittee may again reduce the frequency of inspections from daily to weekly after obtaining 1 full quarter of inspections of the material handling operations that indicate no need for implementing the above-mentioned control measures.

(3) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit. The inspections shall be performed during representative, normal operating conditions.

(4) The permittee shall maintain records of the following information:

a. the date of each inspection where it was determined by the permittee that it was necessary to implement control measures;

b. the dates the control measures were implemented;

c. a description of the control measure(s) implemented; and

d. on a calendar quarter basis, the total number of days control measures were implemented.

(5) The information required in d)(3) shall be kept separately for (i) the dewatering silo transfer to conveyor and (ii) the transfer conveyor to the slag storage pile and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from the silo vent. The presence or absence of any visible emissions from the silo vent shall be noted in an operations log. If any visible emissions are observed, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

(2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(3) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from the silo vent and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

f) Testing Requirements

(1) Compliance with the emission limitations in b) shall be determined in accordance with the following methods:

a. Emission Limitation:

PE/PM10 emissions from the silo vent shall not exceed 1.9 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with fugitive PE and PM10 emissions limitations shall be determined by using the emission factor 0.02 lb PE/ton slag from Ohio EPA's RACM 'Reasonably Available Control Measures for Fugitive Dust', Table 2.2.2-1. These emission limits were based on a slag generation rate of 42.5 tons per hour and a 50% overall control efficiency for high moisture content assumed equivalent to watering.

b. Emission Limitations:

PE/PM10 emissions from conveying and transferring to storage shall not exceed 1.9 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with fugitive PE and PM10 emissions limitations shall be determined by using the emission factor 0.02 lb PE/ton slag for conveying and 0.02 lb PE/ton slag for transferring to storage from Ohio EPA's RACM 'Reasonably Available Control Measures for Fugitive Dust', Table 2.2.2-1. These emission limits were based on a slag generation rate of 42.5 tons per hour, a 50% overall control efficiency for high moisture content assumed equivalent to watering and 99% control efficiency for the covered conveyor.

c. Emission Limitations:

Visible PE from the silo vent shall not exhibit 20% opacity or greater.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.

28. Emissions Unit Group - Sulfur Recovery Units: P011, P012

EU ID	Operations, Property and/or Equipment Description
P011	Sulfur Recovery Process Unit 1.
P012	Sulfur Recovery Process Unit 2.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-31-10 through 3745-31-20	From the Thermal Oxidizer burner's natural gas combustion: PE/PM10: 0.2 lb per hour (as a 3-hr average) and 0.85 tons per rolling 12-month period. NOx: 1.27 lbs per hour (as a 3-hr average) and 5.55 tons per rolling 12-month period. CO: 2.13 lbs per hour (as a 3-hr average) and 9.32 tons per rolling 12-month period. VOC: 0.2 lbs per hour (as a 3-hr average) and 0.85 tons per rolling 12-month period. SO2: 0.015 lb per hour (as a 3-hr average) and 0.07 tons per rolling 12-

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		month period. From the incineration of the Sulfur Pit Sweep Air and the Spent Degassing Air by the TTO: SO2: 28.15 lbs per hr (as a 3-hr average) and 123.35 tons per rolling 12-month period. From the incineration of tailgas during startups and shutdowns: NOx: 1224.0 lbs per hour and 7.35 tons per rolling 12-month period. SO2: 4,867.5 lbs per hour and 29.2 tons per rolling 12-month period. CO: 52.5 lbs per hour and 0.32 tons per rolling 12-month period. See b)(2)a. below. See b)(2)b. below.
d.	40 CFR Part 60, Subpart Ja, Section 60.102a(f)(1)(i) - Emission Limitation for Sulfur Recovery Plants	Shall not discharge any gases into the atmosphere in excess of 250 ppmv as SO2 (dry basis) at zero percent excess air. See b)(2)c.
e.	40 CFR Part 63, Subpart UUU	See b)(2)d.

(2) Additional Terms and Conditions

a. The BACT determination for this emissions unit includes:

i. an acid gas sulfur recovery train, including an in-line Claus Plant, a SCOT Process Tailgas Treatment Unit, and a Tailgas Compression Unit, which during normal operation recycles tailgas to the Acid Gas Removal Unit without exhaust to the atmosphere.

ii. use of a tailgas thermal oxidizer (TTO) to control H_2S emissions from the acid gas sulfur recovery train during startups and shutdowns, and continuously from the sulfur pit sweep air and spent degassing air;

iii. use of only natural gas as fuel in the TTO;

iv. equip the TTO with Low NOx burners

v. comply with the listed Subpart Ja sulfur dioxide emission limitation and all other applicable requirements therein.

b. During startups and shutdowns tailgas from the Tailgas Treatment Unit (SCOT Process) shall be vented to the TTO for incineration. During normal operation, tailgas shall be sent to the Tailgas Compression Unit and then recycled to the Acid Gas Removal Unit for sulfur recovery.

c. The permittee shall prepare and submit to the Ohio EPA Northeast District Office a unit-specific monitoring plan for each monitoring system (SO_2 and O_2) at least 45 days before commencing certification testing of the monitoring systems. The plan must address the requirements in 40 CFR Part 60, Subpart Ja.

d. In accordance with 40 CFR Part 63, Subpart UUU, the permittee shall comply with Subpart UUU by meeting the applicable sulfur dioxide emission limitations of NSPS Subpart Ja.

c) Operational Restrictions

(1) The maximum annual operating hours for this emissions unit shall not exceed 12 hours of startup and shutdown events, based upon a rolling, 12-month summation of the operating hours. (The permittee has applied for 3 startup and shutdown events per rolling 12-month period for this emissions unit, during which tailgas must be incinerated by the TTO). Each startup and shutdown event takes 2 hours, for a total of 12 hours per rolling 12-month period.

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 operating hours levels specified in the following table:

Maximum Allowable

Month(s)	Cumulative Operating Hours
1	4 hours
1-2	4 hours
1-3	4 hours
1-4	4 hours
1-5	8 hours
1-6	8 hours
1-7	8 hours
1-8	8 hours
1-9	12 hours

1-10	12 hours
1-11	12 hours
1-12	12 hours

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours of startup and shutdown events.

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 60, Subpart Ja, Section 60.106.a, monitoring requirements for sulfur recovery plants.

(2) See 40 CFR Part 60, Subpart Ja, Section 60.108.a, record keeping requirements for sulfur recovery plants.

(3) See 40 CFR Part 63, Subpart UUU.

(4) The permittee shall maintain monthly records of the following information:

a. the operating hours of startup and shutdown events for each month; and

b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

e) Reporting Requirements

(1) See 40 CFR Part 60, Subpart Ja, Section 60.108.a, reporting requirements for sulfur recovery plants.

(2) See 40 CFR Part 63, Subpart UUU.

(3) The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation on the hours of operation; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation. These reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions.

(4) Pursuant to the NSPS, the source owner/operator 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. actual start-up date (within 15 days after such date); and

c. 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
50 West Town Street, Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049

and

Northeast District Office of the Ohio EPA
Division of Air Pollution Control
2110 E. Aurora Road
Twinsburg, Ohio 44087.

f) Testing Requirements

(1) See 40 CFR Part 60, Subpart Ja, Section 60.104.a, performance testing requirements for sulfur recovery plants.

(2) Emission Limitations (from the TTO burner's natural gas combustion:):

PE/PM10 emissions: 0.2 lb/hour and 0.85 ton per rolling 12-month period.

Nitrogen oxide emissions: 1.27 lbs/hour and 5.55 tons per rolling 12-month period.

Carbon monoxide emissions: 2.13 lbs/hour and 9.32 tons per rolling 12-month period.

VOC emissions: 0.2 lbs/hour and 0.85 ton per rolling 12-month period.

Sulfur dioxide emissions: 0.015 lb/hour and 0.07 tons pr year.

Applicable Compliance Method:

Compliance with the above emission limits for the products of combustion of natural gas shall be determined by multiplying the TTO's burner heat input rating of 24.0 mmBtu/hr by the emission factors in AP-42 Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Tables 1.4-1 and 1.4-2 (7/98), and appropriate conversion factors.

Compliance with the annual emission limits shall be assumed if compliance with the hourly emission limits is demonstrated.

(3) Emission Limitations (from the incineration of the Sulfur Pit Sweep Air and the Spent Degassing Air by the TTO):

SO2: 28.15 lbs per hr (as a 3-hr average) and 123.35 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the above emission limits shall be determined in accordance with the testing requirements in f)(5).

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limits is demonstrated.

(4) Emission Limitations (From the incineration of Tailgas during startups and shutdowns):

NOx: 1,224.0 lbs per hour and 7.35 tons per rolling 12-month period.

SO2: 4,867.5 lbs per hour and 29.2 tons per rolling 12-month period.

CO: 52.5 lbs per hour and 0.32 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the above emission limits shall be determined in accordance with the testing requirements in Section e)(4) below.

Compliance with the annual emission limit shall be demonstrated by the emission testing requirements in Section e(5) along with the recordkeeping requirements of Section e(4)

(5) Emission Limitations

Shall not discharge any gases into the atmosphere in excess of 250 ppmv as SO2 (dry basis) at zero percent excess air.

Applicable Compliance Method:

Compliance with the above emission limits shall be determined in accordance with the testing requirements in Section e)(5) below.

(6) The permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the following requirements:

a. The emissions testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial start-up of the emissions unit.

b. The emissions testing shall be conducted to demonstrate compliance with the applicable emissions limitations for NO_X, SO_2, and CO, in the appropriate averaging period(s).

c. The following test methods shall be employed to demonstrate compliance with the applicable emissions limitations:

SO2 Methods 1 through 4 and 6C of 40 CFR Part 60, Appendix A

NOx Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A

CO 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 Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at greater than 90% of the boiler heat input rating, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. 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 Ohio EPA, Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the Ohio EPA, Northeast District Office 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 Ohio EPA, Northeast District Office 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 Ohio EPA, Northeast District Office.

g) Miscellaneous Requirements

(1) None.

29. Emissions Unit Group - Transfer Towers: F004, F005, F006, F007, F008

EU ID	Operations, Property and/or Equipment Description
F004	Coal and Biomass Parallel Conveyors to transfer tower #1.
F005	Coal and Biomass Parallel Conveyors to transfer tower #2.
F006	Coal and Biomass Parallel Conveyors to transfer tower #3.
F007	Coal and Biomass Parallel Conveyors to transfer tower #4.
F008	Coal and Biomass Parallel Conveyors to transfer tower #5.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 3745-31-20	PE/PM10 emissions shall not exceed 0.9 lb per hour and 3.9 tons per rolling 12-month period from the baghouse exhaust stack. (It is assumed that the PE is 100% PM10.) See b)(2)b. below.
b.	OAC RULE 3745-31-05(A)(3)(A)(II)	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) from this air contaminant source since the calculated annual emission rate for PE is less than ten tons per year taking into account the federally enforceable BACT emission limit of 0.9 lbs PE per hour.
c.	OAC rule 3745-17-07(A)	Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-08(B)	See b)(2)b.i.,

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 63 subpart Y	See b)(2)b.iii. below.

(2) Additional Terms and Conditions

a. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 3745-31-20.

b. The BACT determination for this emissions unit includes:

i. a totally enclosed coal transfer tower, including all coal transfer points;

ii. equipping the transfer tower with a baghouse dust collector capable of achieving a stack outlet PE loading of 0.005 gr/dscf of exhaust gases; and

iii. In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks while the equipment is in operation for any visible particulate emissions from the baghouse stack. The presence or absence of any visible emissions from the baghouse stack shall be noted in an operations log. If any visible emissions are observed from the stack, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

e) Reporting Requirements

(1) The permittee shall submit on a semi-annual basis a report that (a) identifies all dates during which any visible particulate emissions were observed from the baghouse stack and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Ohio EPA Northeast District Office.

f) Testing Requirements

(1) The permittee shall conduct, or have conducted, emission testing for this or a representative emissions unit from the group of emissions units, F004-F008, in accordance with the following requirements:

a. The emission testing shall be conducted within 3 months after start-up.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE of 0.9 lb/hour.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for particulates, Method 5 of 40 CFR Part 60, Appendix A.

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 appropriate Ohio EPA Northeast District Office.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the specific emissions unit to be tested and the emissions unit or units that the testing will be representative of, 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA Northeast District Office 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 appropriate Ohio EPA Northeast District Office 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 appropriate Ohio EPA Northeast District Office.

(2) Emission Limitations:

Particulate emissions shall not exceed 3.9 tons per rolling 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limit shall be assumed if compliance with the hourly emission limit is demonstrated.

(3) Emission Limitations:

Visible PE from the baghouse exhaust stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

(4) Emission Limitations:

In accordance with Section 60.252(c) of 40 CFR Part 60, the permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in Section 60.11 of 40 CFR Part 60.

In accordance with Section 60.8, of 40 CFR Part 60, the permittee shall conduct initial performance tests within 60 days of achieving the maximum production rate at which the affected facility will be operated, but no longer than 180 days after initial startup.

The permittee shall comply with the requirements in f)(1)e. through f)(1)g., in regard to testing notice, Ohio EPA witness of testing and submitting written reports on results.

g) Miscellaneous Requirements

(1) None.