Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

4/2/2020

Certified Mail

No	TOXIC REVIEW
Yes	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED
Yes	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Palmira Farinha
Petmin USA Incorporated
P.O.Box 14280
Cleveland, OH 44114

RE: **DRAFT AIR POLLUTION PERMIT-TO-INSTALL**
Facility ID: 0204012023
Permit Number: P0127678
Permit Type: Initial Installation
County: Ashtabula

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 Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Star Beacon. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. 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
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

And Ohio EPA DAPC, Northeast District Office
2110 East Aurora Rd.
Twinsburg, OH 44087

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)963-1200.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

cc: U.S. EPA Region 5 - *Via E-Mail Notification*
Ohio EPA-NEDO; Pennsylvania; Canada

Ashtabula County

PUBLIC NOTICE PUBLIC HEARING
Issuance of Draft Air Pollution PSD Permit
Petmin, U.S.A.

Issue Date: April 2, 2020
Permit Number: P0126768
Permit Type: PSD
Facility ID: 0204012023
Facility Location: 1003 Bridge Street
Ashtabula, OH 44004

Permit/Facility Description: Permit-to-install (PTI) for a new nodular pig iron manufacturing facility. The Project will utilize a direct reduced iron (DRI) reactor, gas-based direct reduction process, to produce 526,739 tons per year of pig iron. The Project will be located within the footprint of the Kinder Morgan - Pinney Dock facility in the city of Ashtabula, Ashtabula County, Ohio. The facility will be a PSD/Title V major stationary source.

The Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft air pollution control Prevention of Significant Deterioration (PSD) installation permit for the listed facility. The draft permit is being issued to solicit comments from any interested party for the director to consider prior to making a final decision. This permit will replace the existing PTI and is being issued due to design changes of the facility.

The proposed allowable emission rates of PSD pollutants from the facility in tons per year are: Nitrogen Oxides (NO_x) 484.57; PM less than or equal to 10 microns (PM_{10}) 63.97; PM less than or equal to 2.5 microns ($PM_{2.5}$) 52.40; Sulfur Dioxide (SO_2) 3.63; Volatile Organic Compounds (VOC) 16.80; Carbon Monoxide (CO) 546.22; Greenhouse Gas/Carbon Dioxide equivalent 391,357.

Air dispersion modeling was performed to show allowed emission levels will not cause or contribute to an exceedance of any National Ambient Air Quality Standard (NAAQS). The maximum air pollutant concentrations and averaging periods that are expected from this facility are the following in micrograms per cubic meter: 102.4 nitrogen dioxide 1-hour; 30.87 nitrogen dioxide annual, 24.62 $PM_{2.5}$ 24-hour, 9.28 $PM_{2.5}$ annual, and 43.58 PM_{10} 24-hour. No air toxics modeling was required for this project. All other pollutants were too small to model.

NOTE: In response to the COVID-19 pandemic, the State of Ohio has issued orders regarding social distancing and limitations on the number of people gathering in public places and establishments. As a result, Ohio EPA will not be holding any in-person public hearings until these orders are revised or lifted that would allow such gatherings.

A public hearing on the draft air permit will be held exclusively online on May 7, 2020 @ 6:00 pm. Individuals may register for the Webinar through Ohio EPA's website at: http://epa.ohio.gov/virtual. During the online information session that begins at 6 p.m., individuals participating in the webinar may submit questions through the webinar application. A webinar hearing will immediately follow during which the public can submit comments through the webinar application on the record about the permit application. The webinar may be accessed through Ohio EPA's website: http://epa.ohio.gov/virtual. The hearing is required by law. Written comments on the draft permit must be received by 5:00 pm on May 11, 2020. Comments received after this date may not be considered a part of the official record. Written comments may be submitted online at the hearing or emailed to: Anthony Becker, Ohio EPA Northeast District Office; anthony.becker@epa.ohio.gov.

The draft permit may be obtained at: http://epa.ohio.gov/dapc/newpermits/issued by clicking on "Electronic

Copies of Issued Permits" and entering the permit number P0127678. Physical copies of the permit or copies of supporting records will not be available at this time in response to the COVID-19 pandemic.

Persons interested in joining Ohio EPA's mailing list concerning this or similar actions may contact Paul Braun at paul.braun@epa.ohio.gov, or 614-644-3734.

Ohio Environmental Protection Agency

Permit Strategy Write-Up
Petmin, U.S.A. DRAFT
Permit Number: P0127678
Facility ID: 0204012023

STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS FOR PETMIN, U.S.A. ASHTABULA, OHIO (ASHTABULA COUNTY) PTI NUMBER P0127678

April 2, 2020

Ohio Environmental Protection Agency
Division of Air Pollution Control
Lazarus Government Center
50 West Town Street, Suite 700
Columbus, Ohio 43216

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

Petmin U.S.A.(Petmin) is proposing to construct a new nodular pig iron manufacturing facility. The Project will utilize a direct reduced iron (DRI) reactor, gas-based direct reduction process, to produce 526,739 tons per year of pig iron. The Project will be located within the footprint of the Kinder Morgan - Pinney Dock facility in the city of Ashtabula, Ashtabula County, Ohio. The facility will be a PSD/Title V major stationary source.

The area is designated as attainment for NSR-regulated criteria pollutants, including those triggering PSD review: nitrogen oxides (NOX), particulate matter (PM), PM with a diameter equal to or less than 10 micrometers (PM10), PM with a diameter equal to or less than 2.5 micrometers (PM2.5) and carbon monoxide (CO). Emissions of sulfur dioxide (SO2), and volatile organic compounds (VOC) will be less than PSD applicability thresholds but will be regulated under best available technology (BAT) in the Permit-to-Install (PTI). Emissions of greenhouse gases (GHGs) exceeded the PSD applicability threshold and will be subject to PSD review.

Facility Description

The Project will produce nodular pig iron (merchant pig iron) using the DRI process along with an electric arc furnace (EAF) for purifying the metal. Taconite pellets are unloaded from lake vessels and stored at Kinder Morgan - Pinney dock, who will be responsible for loading pellets into a hopper. Petmin's process begins at the point where taconite pellets are loaded for transport via conveyor system to the screening building. The pellets are sized, fines are removed. The screened pellets are transported via enclosed conveyor system to the EAF building. The pellets are coated in a cementitious slurry and are fed into the DRI reactor. Heated, recirculating, reducing gas reacts with the pellets, producing metallic iron. The hot DRI pellets are loaded and liquified in the EAF. The liquified DRI is polished by removing impurities using fluxes, achieving the chemistry for nodular iron. The EAF is tapped. The nodular pig iron is loaded into a ladle. Once loaded, it is transported to the caster, where it is poured into molds, allowed to cool, then released from the molds to produce solidified, nodular pig iron ingots.

CO2 will be removed from a portion of the quenched gas stream (exiting the reduction reactor) through an absorption/desorption process. The absorption tower extracts CO2 and H2S from the quenched gas and into the water stream. The desorption column will release the H2S and CO2 gases from the liquid stream. From there, the CO2 off gas containing H2S can be treated either directly by Petmin or by an onsite CO2 plant run by a third party. In either scenario, the H2S will be removed from the CO2 off gas and treated. In scenario 1, the H2S is treated and CO2 is purified by the independent third party operating the CO2 processing plant. In scenario 2, off gas is sent to Petmin's thermal oxidizer to convert H2S to SO2 gas. The SO2 stream is sent to an absorption column to remove the sulfur, and the sulfur-lean gas is released to the atmosphere. In the event that the CO2 removal process is not feasible (i.e. during startup, shutdown or maintenance), the dirty gas will be sent to a flare.

The process includes the generation of byproducts. Taconite fines are stored in bins, later transported off-site. Remet (off-spec DRI) is stockpiled, later reintroduced into the process. Slag created at the EAF will be handled by a separate company.

New Source Review (NSR)/PSD Applicability

The emissions units will generate NSR-regulated emissions of PM/PM_{10}/$PM_{2.5}$, CO, NO_X, VOC and SO2 and GHGs. A PSD analysis is required for pollutant emissions exceeding the PSD threshold levels. Nonattainment NSR is not applicable, due to the attainment status of the area. Of the pollutants emitted by the proposed source, all but VOC and SO_2 will result in a net increase in annual emissions above PSD major source or significant emission rate levels. Table 1 below summarizes pollutant changes and emissions allowed under the draft PTI (also see the permit application).

TABLE 1
PRELIMINARY POLLUTANT EMISSION RATES
Petmin USA

Air Pollutant	Total PTE/Allowable (tpy)	Project Net Increase (tpy)	PSD/NSR Threshold (tpy)
CO	546.22	546.22	100
NO_X	484.57	484.57	40
PM_{10}	63.97	63.97	15
$PM_{2.5}$*	52.40	52.40	10
VOC	16.80	16.80	40
SO_2	3.63	3.63	40
GHGs/CO_2e	391,397	391,397	75,000

*NO_X is a precursor for PM_{10}/$PM_{2.5}$

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 facility is subject to PSD regulations which mandate a case by case BACT analysis be performed for PSD triggering pollutants. The application uses a "top down" approach to evaluate the latest demonstrated control techniques and select the appropriate controls.

Ohio Environmental Protection Agency

Permit Strategy Write-Up
Petmin, U.S.A. DRAFT
Permit Number: P0127678
Facility ID: 0204012023

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).

Summary of BACT Analysis
There are similar installations in operation and included in the RBLC. The following tables show the results of the BACT analysis, including technologies identified (see application for further details).

TABLE 1
Summary of BACT/BAT Emission Limits and Control Technologies for the 15.17 MMBtu/hr, natural gas-fired startup boiler, emissions unit B001:

Pollutant	Emission Limits	Control Technology
$PM_{10}/PM_{2.5}$	1.1E-1 lb/hr (filterable and condensable) and 4.9E-1 ton per rolling, 12-month period.	Good combustion practices and the use of natural gas
NO_X	The low NO_X burner is designed to meet 4.18E-02 lb/MMBtu. 6.3E-1 lb/hr and 2.78 tons per rolling, 12-month period.	Low-NO_X burners, good combustion practices and the use of natural gas
CO	1.25 lbs/hr and 5.47 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas
GHGs	1,784 lbs/hr and 7,814 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas

TABLE 2
Summary of BACT/BAT Emission Limits and Control Technologies for the unpaved plant roadways and parking areas, emissions unit F001:

Pollutant	Emission Limits	Control Technology
Fugitive PM_{10} Fugitive $PM_{2.5}$	2.2E-1 ton/year. 2.0E-2 ton/year.	Use of wet suppression and/or commercial dust suppressants

TABLE 3

Summary of Proposed BACT/BAT Emission Limits and Control Technologies for the 218.9 MMBtu/hr, natural gas and process gas-fired process gas heater, with optional top-gas treatment for waste gas removal, controlled by a thermal oxidizer and scrubber, emissions unit P001:

Pollutant	Emission Limits	Control Technology
$PM_{10}/PM_{2.5}$	1.63 lbs/hr (filterable and condensable) and 7.14 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas
NO_X	18.88 lbs/hr and 82.71 tons per rolling, 12-month period.	Low NO_X burners, use of natural gas and good combustion practices
CO	11.17 lbs/hr and 48.92 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas
GHGs	70,203 lbs/hr and 307,490 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas

TABLE 4

Summary of BACT/BAT Emission Limits and Control Technologies for the 158 HP, diesel-fired black start generator, emissions unit P007:

Pollutant	Emission Limits	Control Technology
$PM_{10}/PM_{2.5}$	0.015 gram/bhp-hr (filterable) and 2.61E-4 ton/year.	Tier IV engine Good combustion practices Limited operation
NO_X	0.30 gram/bhp-hr and 5.22E-3 ton/year.	Tier IV engine Tier IV NSPS standards certified by engine manufacturer. Limited operation
CO	3.7 gram/bhp-hr and 6.44E-2 ton/year.	Tier IV engine Tier IV NSPS standards certified by engine manufacturer. Limited operation
GHGs	522.1 grams/bhp-hr and 9.09 tons/year.	Tier IV engine Good combustion practices Limited operation

TABLE 5

Summary of Proposed BACT/BAT Emission Limits and Control Technologies for the quenching & wastewater pretreatment, equipped with a flare and scrubber, emissions unit P008:

Pollutant	Emission Limits	Control Technology
$PM_{10}/PM_{2.5}$	5.0E-2 lb/hr (filterable and condensable) and 2.2E-1 ton per rolling, 12-month period.	Good combustion practices and the use of natural gas
NO_X	E-1 lb/hr and 1.97 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas
CO	2.05 lbs/hr and 8.97 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas The flare is designed to meet a control efficiency of ninety-eight (98) percent for CO emissions
GHGs	777.46 lbs/hr and 3,405 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas

TABLE 6

Summary of BACT/BAT Emission Limits and Control Technologies for the Electric Arc Furnace, including DRI loading, smelting, tapping, pouring, and casting, emissions unit P901:

Pollutant	Emission Limits	Control Technology
PM_{10}	2.5E-3 gr/dscf (filterable and condensable), 12.43 lbs/hr and 54.44 tons per rolling, 12-month period.	The baghouse is designed with a control efficiency of 2.5E-3 gr/dscf for PM_{10} emissions.
$PM_{2.5}$	E-3 gr/dscf (filterable and condensable), 9.94 lbs/hr and 43.55 tons per rolling, 12-month period.	The baghouse is designed with a control efficiency of 2.0E-3 gr/dscf for $PM_{2.5}$ emissions.
PM_{10}/ $PM_{2.5}$	Visible emissions of fugitive dust from this emissions unit shall not exceed six (6) percent opacity as a six-minute average. Visible particulate emissions from any stack serving this emissions unit shall not exceed three (3) percent opacity as a 6-minute average.	The baghouse is designed with a control efficiency of 2.5E-3 gr/dscf for PM_{10}. Emissions and 2.0E-3 gr/dscf for $PM_{2.5}$ emissions.
NO_X	1.4 lbs/ton of MPI produced.	Use of Direct Evacuation Control
CO	1.8 lbs/ton of MPI produced.	Use of Direct Evacuation Control
GHGs (CO_2e)	186.41 lbs/ton of MPI produced.	Good combustion practices

TABLE 7

Summary of BACT/BAT Emission Limits and Control Technologies for raw materials handling, including screening and transfer via conveyor system, emissions unit P902:

Pollutant	Emission Limits	Control Technology
Fugitive PM_{10} Fugitive $PM_{2.5}$	5.6E-1 ton per rolling, 12-month period. 1.6E-1 ton per rolling, 12-month period.	Outdoor material handling operations: covered conveyors and transfer points
Stack $PM_{10}/PM_{2.5}$	2.5E-3 gr/dscf (filterable and condensable), 1.7E-1 lb/hr and 7.3E-1 ton per rolling, 12-month period.	The baghouse shall be designed to meet an outlet concentration of 2.5E-3 gr/dscf of $PM_{10}/PM_{2.5}$

TABLE 8

Summary of BACT/BAT Emission Limits and Control Technologies for two 3,131 HP, diesel-fired emergency generators, emissions units P005 and P006:

Pollutant	Emission Limits	Control Technology
$PM_{10}/PM_{2.5}$	0.022 gram/bhp-hr (filterable only)	Tier IV engine Good combustion practices Limited operation
NO_X	0.50 gram/bhp-hr	Tier IV engine Tier IV NSPS standards certified by engine manufacturer. Emergency use.
CO	2.6 gram/bhp-hr	Tier IV engine Tier IV NSPS standards certified by engine manufacturer. Limited operation
GHGs	526.6 grams/bhp-hr.	Tier IV engine Good combustion practices

TABLE 9

Summary of Proposed BACT/BAT Emission Limits and Control Technologies for three 15.00 MMBtu/hr, natural gas-fired ladle dryers / preheaters, vented to the EAF baghouse, emissions units P002, P003 and P004:

Pollutant	Emission Limits	Control Technology
$PM_{10}/PM_{2.5}$	1.1E-1 lb/hr (filterable and condensable) and 4.9E-1 ton per rolling, 12-month period.	Good combustion practices and the use of natural gas
NO_X	1.41E-01 lb/MMBtu, 2.12 lbs/hr and 9.29 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas
CO	3.44E-02 lb/MMBtu, 5.2E-1 lb/hr and 2.26 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas
GHGs	1,764.7 lbs/hr and 7,729 tons per rolling, 12-month period.	Good combustion practices and the use of natural gas

TABLE 10

Summary of BACT/BAT Emission Limits and Control Technologies for two diesel-fired emergency fire pumps, emissions units P009 and P010:

Pollutant	**Emission Limits**	**Control Technology**
$PM_{10}/PM_{2.5}$	**0.15 gram/bhp-hr (filterable only)**	**Tier II engine Good combustion practices Limited operation**
NO_X/NMHC	**3.0 gram/bhp-hr**	**Tier II engine Tier II NSPS standards certified by engine manufacturer. Emergency use.**
CO	**2.6 gram/bhp-hr**	**Tier II engine Tier II NSPS standards certified by engine manufacturer. Limited operation**
GHGs	**521.6 grams/bhp-hr.**	**Tier II engine Good combustion practices**

Modeling Review

AYER Quality Engineering, Inc. (AYER) submitted on December 17, 2019 air dispersion modeling on behalf of Petmin, U.S.A. (Petmin) for nitrogen oxides (NOx) and particulate matter with a diameter equal to or less than 10 microns (PM10), and particulate matter with a diameter equal to or less than 2.5 microns (PM2.5), and carbon monoxide (CO). Additional revised modeling was submitted to Ohio EPA for PM2.5 on February 5, 2020. This was an updated modeling analysis in support of revised emission rates, primarily of CO and PM. The revised modeling is part of application A0064851.

Potential annual emissions for the proposed project are shown in Table 4 of the Application, and are replicated here:

CO: 546.22 TPY

NOx: 484.57 TPY

PM_{10}: 63.97 TPY

$PM_{2.5}$: 52.40 TPY

SO_2: 3.63 TPY

Based on these potential emissions from the proposed facility, the project triggers Federal Prevention of Significant Deterioration (PSD) modeling requirements for its emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$. An analysis of the project's impacts on soils, vegetation and visibility, have been included. Modeling is not required for greenhouse gases, and quantitative analyses have been included to account for chemical transformation of NOx and VOC to ozone as well as the secondary formation of $PM_{2.5}$ from chemical precursors.

AYER used the AERMOD (version 19191) dispersion model to show compliance with the PSD increments for CO, NOx, PM10 and PM2.5 and National Ambient Air Quality Standards (NAAQS). The facility performed an analysis of secondarily formed pollutants utilizing U.S. EPA guidance concerning Modeled Emission Rates for Precursors (MERPS).

Modeling Information

This project is proposed to be located in Ashtabula County, OH. The coordinates of the of the center of the property, represented in the Universal Transverse Mercator (UTM) coordinate system, are approximately 517,363 m East, 4,639,234 m North in UTM Zone 17 (NAD83).

When modeling, all concentrations were computed in micrograms per cubic meter ($\mu g/m^3$). No deposition or depletion was modeled for any case. The latest version of AERMOD (version 19191) with the rural regulatory default option was selected in the control parameters. Elevated terrain and building parameters were considered in the modeling. Source elevations for all sources within the project boundary were determined using to-scale plot plans that included site-specific elevation data.

Detailed emissions and source parameter data are provided in Section 5.0 of the Application.

Ground-level concentrations were calculated within Cartesian receptor grids and at receptors placed along the facility fence-line to determine the location of the maximum estimated impacts. Details on the receptor grids included in the modeling domain are presented in Section 5.4.2 of the Application.

Five years of meteorological data have been used in accordance with Ohio Engineering Guide #69: Guideline on Air Quality Models. AYER used five years (2013-2017) of surface meteorological data from the Ashtabula County Airport (WBAN#04857) and five years of upper air data collected at the Buffalo Niagara International Airport (WBAN# 14733). Meteorological data was processed by Ohio EPA modeling staff.

Ambient Air Quality Monitoring Requirements

Significant Monitoring Concentrations (SMCs) represent a modeled impact that may compel the facility to conduct additional air quality monitoring prior to construction, if it is determined that existing monitors are not representative or have less than one year of complete data. For the Petmin project, the modeled impacts for NO_2, CO, $PM_{2.5}$, and PM_{10} were below their respective SMCs, thus no additional action would be required. Lastly, the project's ozone precursor emissions exceeded the threshold established for preconstruction ozone monitoring. Ohio EPA determined that the existing ozone monitor located in Ashtabula County, Ohio was sufficient to satisfy preconstruction monitoring requirements.

RESULTS

Class I

The proposed facility is located approximately 348 kilometers from the nearest Class I area. The project's impacts were evaluated in accordance with the *Federal Land Managers AQRV Workgroup Phase I Report – Revised, 2010* using the screening criteria method (Q/D). The Q/D value obtained was 1.5, significantly less than the FLM's recommendation of 10. As such, no additional Class I analyses are required or necessary.

Class II

PSD Significant Impact Level (SIL)

Ohio EPA analyzed the submitted modeling analysis of the significant impact of criteria pollutants (CO, NO_2, PM_{10} and $PM_{2.5}$) exceeding PSD significant emission rates and compared the estimated concentrations with the appropriate SILs. The project exceeded appropriate SILs for both 1-hour and annual NO_2, 24-hour and annual PM2.5, and 24-hour and annual PM10. Modeling for CO indicated insignificant impacts.

PSD Increment and NAAQS

PSD Increment modeling was submitted and reviewed for annual NO2, 24-hour and annual PM2.5, and 24-hour and annual PM10. NAAQS modeling was submitted and reviewed for 1-hour and annual NO2, 24-hour and annual PM2.5, and 24-hour PM10. Cumulative modeling demonstrated no exceedance of any NAAQS. Note that the modeling report submitted by AYER incorrectly identifies the maximum modeled concentration for annual NO2 as 5.10 µg/m3. Further, the revised PM2.5 modeling submitted on February 5, 2020 yields a PM2.5 24-hour increment that differs from what is reported in the AYER modeling report. The correct increment is reported here.

It is Ohio EPA practice that any new source will not consume more than one-half of the available PSD increment. Exceptions to this policy are granted on a case-by-case basis when modeled results are more than 50% but less than 83% of the increment. The results of the increment modeling are shown in Table 1, below:

Table 1: PSD Increment model results.

Pollutant	Averaging Time	MAX Modeled Concentration (μg/m3)	PSD Class II Increment (μg/m3)
PM10	24-hr	3.53	30
PM10	Annual	0.41	17
PM2.5	24-hr	3.06	9
PM2.5	Annual	0.41	4
NO2	Annual	2.21	25

No PSD increment was exceeded for any pollutant or averaging period.

National Ambient Air Quality Standards

For those pollutants and averaging periods for which initial SIL screen modeling demonstrated modeled concentrations above the SIL, it must be demonstrated that the proposed project will not cause an exceedance of the NAAQS, inclusive of interactive sources and conservative background concentrations. The results of the NAAQS modeling analysis are shown in Table 2, below:

Table 2: NAAQS Modeling Results

Pollutant	Averaging Time	MAX Modeled Concentration (including background) (μg/m3)	NAAQS (μg/m3)
PM10	24-hr	43.58	150
PM2.5	24-hr	24.62	35
PM2.5	Annual	9.28	12
NO2	1-hour	102.4	188
NO2	Annual	30.87	100

Secondary $PM_{2.5}$ Formation Analysis

Pursuant to USEPA guidance for addressing secondary formation of $PM_{2.5}$ in a NAAQS compliance demonstration under the PSD program, AYER submitted an analysis of secondary $PM_{2.5}$ formation based on the SO_2 and NO_x emissions from the facility. Ohio EPA reviewed the analysis submitted and is in agreement that secondary $PM_{2.5}$ formation will not contribute to an exceedance of any $PM_{2.5}$ SILs. AYER assessed the project's impacts using the December 2, 2016 and February 23, 2017 Draft Modeled Emission Rates for Precursors (MERPs) Tier 1 assessment techniques.

Ozone Formation Analysis

AYER applied the above Draft MERPs methodology to ozone and determined that secondarily formed ozone from this project will be insignificant.

Air Toxics Modeling

No air toxics analyses were required for this project.

Soils, Vegetation, and Visibility Analyses

EPA Air Quality Criteria documents were reviewed by AYER 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 secondary NAAQS limits.

Conclusion

Based upon 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 this permit be issued to Petmin, U.S.A. to construct the nodular pig iron facility.

DRAFT

Division of Air Pollution Control
Permit-to-Install
for
Petmin USA Incorporated

Facility ID:	0204012023
Permit Number:	P0127678
Permit Type:	Initial Installation
Issued:	4/2/2020
Effective:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install
for
Petmin USA Incorporated

Table of Contents

Authorization

Facility ID:	0204012023
Facility Description:	Merchant Pig Iron Production
Application Number(s):	A0064851
Permit Number:	P0127678
Permit Description:	New facility to convert iron ore pellets to merchant pig iron.
Permit Type:	Initial Installation
Permit Fee:	$5,025.00 DO *NOT send payment at this time, subject to change before final issuance*
Issue Date:	4/2/2020
Effective Date:	To be entered upon final issuance

This document constitutes issuance to:

Petmin USA Incorporated
1003 Bridge Street
Ashtabula, OH 44004

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

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Rd.
Twinsburg, OH 44087
(330)963-1200

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

Laurie A. Stevenson
Director

Authorization (continued)

Permit Number: P0127678
Permit Description: New facility to convert iron ore pellets to merchant pig iron.

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:	Startup boiler
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F001**
Company Equipment ID:	Plant Roadways
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P001**
Company Equipment ID:	Process gas heater
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P007**
Company Equipment ID:	Black Start Generator
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P008**
Company Equipment ID:	Quenching & pre-wastewater treatment
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P901**
Company Equipment ID:	EAF
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P902**
Company Equipment ID:	Material Handling
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: Emergency Fire Pumps

Emissions Unit ID:	**P009**
Company Equipment ID:	High Pressure Emergency Diesel Engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P010**
Company Equipment ID:	Low Pressure Emergency Diesel Engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: Emergency Generators

Emissions Unit ID:	**P005**
Company Equipment ID:	Emergency Generator #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P006**
Company Equipment ID:	Emergency Generator #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: Ladle Preheaters

Emissions Unit ID:	**P002**
Company Equipment ID:	Ladle preheater
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P003**
Company Equipment ID:	Ladle preheat (backup)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P004**
Company Equipment ID:	Ladle drying station
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 of 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) 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 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 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this

permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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

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

(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.

c) 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 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) not exempt from the requirement to obtain a Permit-to-Install.

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 permittee 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 by marking the affected emissions unit(s) as "permanently shut down" in "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown 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 reporting requirements identified in this permit covering the last period the emissions unit operated.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, 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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" 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 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 new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in "Air Services" once the transfer is legally completed. The change must be submitted through "Air Services" within thirty days of the ownership transfer date.

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, Startup boiler

Operations, Property and/or Equipment Description:

15.17 MMBtu/hr, natural gas-fired startup boiler.

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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 1.1E-1 lb/hr (filterable and condensable) and 4.9E-1 ton per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 6.3E-1 lb/hr and 2.78 tons per rolling, 12-month period. Source design characteristic: The burner is designed to meet 4.18E-02 lb of NO_x/MMBtu. Carbon monoxide (CO) emissions shall not exceed 1.25 lbs/hr and 5.47 tons per rolling, 12-month period. Carbon dioxide equivalent (CO_2e) emissions shall not exceed 1,784 lbs/hr and 7,814 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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 PM_{10}, $PM_{2.5}$, NO_x, CO, sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
c.	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rules 3745-31-10 through 20.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-18-06(A)	This emissions unit is exempt from this rule when natural gas is the only fuel burned.
f.	40 CFR Part 60, Subpart Dc	This emissions unit is not subject to the emission limitations listed in 40 CFR Part 60, Subpart Dc as long as natural gas is the only fuel burned. See b)(2)a, d)(2) and e)(1).
g.	40 CFR Part 63, Subpart JJJJJJ	This emissions unit is not subject to the requirements in this Subpart, because it is a gas-fired boiler as defined by the Subpart.

(2) Additional Terms and Conditions

a. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).

c) Operational Restrictions

(1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) The permittee shall record and maintain records of the amount of each fuel combusted during each calendar month.

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas 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 Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PM_{10} and $PM_{2.5}$ emissions shall not exceed 1.1E-1 lb/hr (filterable and condensable) and 4.9E-1 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = $PM_{10}/PM_{2.5}$ emission rate, in lbs/hr;
A = emission factor, 7.45E-03 lb of PE/PM_{10}/MMBtu, AP-42 Section 1.4, July 98 (filterable and condensable); and
B = 15.17 MMBtu/hr, heat input.

Compliance with the annual $PM_{10}/PM_{2.5}$ emission limitation (4.9E-1 ton per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 1.1E-1 lb/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

If required, the permittee shall demonstrate compliance with this $PM_{10}/PM_{2.5}$ emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 51, Appendix M, Methods 201 or 201A and 202.

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

b. Emission Limitation:

NO_x emissions shall not exceed 6.3E-1 lb/hr and 2.78 tons per rolling, 12-month period.

Source design characteristic**:**

The burner is designed to meet 4.18E-02 lb of NO_x/MMBtu.

The source design characteristic was established based on the information provided by the permittee in permit application #A0064851.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = NO_x emission rate, in lbs/hr;
A = emission factor, 4.18E-02 lb of NO_x/MMBtu - burner manufacturer; and
B = 15.17 MMBtu/hr, heat input.

Compliance with the annual NO_x emission limitation (2.78 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 6.3E-1 lb/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

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

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

c. Emission Limitation:

CO emissions shall not exceed 1.25 lbs/hr and 5.47 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = CO emission rate, in lbs/hr;
A = emission factor, 8.24E-02 lb of CO/MMBtu, AP-42 Section 1.4, July 98; and
B = 15.17 MMBtu/hr, heat input.

Compliance with the annual CO emission limitation (5.47 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 1.25 lbs/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

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

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

d. Emission Limitation:

CO_2e emissions shall not exceed 1,784 lbs/hr and 7,814 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = CO_2e emission rate, in lbs/hr;
A = emission factor, 1.176E+02 lbs of CO_2e/MMBtu, AP-42 Section 1.4, July 98; and
B = 15.17 MMBtu/hr, heat input.

Compliance with the annual CO_2e emission limitation (7,814 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 1,784 lbs/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

e. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.

2. F001, Plant Roadways

Operations, Property and/or Equipment Description:

Unpaved plant roadways and 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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	2.2E-1 ton/year of fugitive particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}). 2.0E-2 ton/year of fugitive particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$). Develop and implement a site-specific work practice plan designed as described in paragraph d)(1) below to minimize or eliminate fugitive dust emissions.
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 PM_{10} or $PM_{2.5}$ emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
c.	OAC rule 3745-17-07(B)(5)	There shall be no visible particulate matter emissions from any unpaved roadways and parking areas except for a period of time not to exceed thirteen (13) minutes during any 60-minute observation period.
d.	OAC rule 3745-17-08(B)	See b)(2)a. through b)(2)c.

(2) Additional Terms and Conditions

a. The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to treat the unpaved roadways and parking areas by commercial dust suppressants and/or watering at sufficient treatment frequencies to ensure compliance. Control measures shall be implemented at the frequency identified by inspections performed in accordance with the Work Practice Plan. Nothing in this paragraph shall prohibit the permittee from employing other equally effective control measures to ensure compliance.

b. The permittee shall promptly remove, in such a manner as to minimize or prevent re-suspension, 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.

c. 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.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Work Practice Plan

The permittee shall develop and implement a site-specific work practice plan designed to minimize or eliminate fugitive dust from the permittees unpaved roadways and parking areas. This work practice plan shall include, at a minimum, the following elements:

a. An identification of each roadway or parking area, or segment of roadway or parking area, for which the plan applies. The permittee can select whether to develop a plan based on segments or entire roads.

b. A determination of the frequency that each roadway, parking area or segment will be inspected to determine if additional control measures are needed. The frequency of inspection can either be common for all segments of the roadway or parking areas or may be identified separately for various segments of the roadway or parking areas.

c. The identification of the record keeping form/record that will be used to track the inspection and treatment of the roadways. This form/record should include, at a minimum, the following elements:

i. Roadway, parking area, or segment inspected;

ii. Date inspected;

iii. Name of employee responsible for inspection;

iv. Result of the inspection (needs treated or does not need treated);

v. A description of why no treatment was needed;

vi. Date treated;

vii. Name of employee responsible for roadway, parking area, or segment treatment; and

viii. Method used to treat the roadway, parking area, or segment.

d. A description of how and where the records shall be maintained.

The permittee shall begin using the Work Practice Plan within 30 days from the date Ohio EPA approved the initial plan. As needs warrant, the permittee can modify the Work Practice Plan. The permittee shall submit a copy of proposed revisions to the Work Practice Plan to the Ohio EPA Northeast District Office for review and approval. The permittee can begin using the revised Work Practice Plan once the Ohio EPA Northeast District Office has approved its use.

(2) Work Practice Plan Inspections

Except as otherwise provided in this section, the permittee shall perform inspections of each of the roadway segments and parking areas at frequencies described in the Work Practice Plan. The purpose of the inspections is to determine the need for implementing 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) Work Practice Plan Record Keeping

The permittee shall maintain records of the following information:

a. The records required to be collected under the Work Practice Plan, and

b. The date and reason any element of the Work Practice Plan was not implemented.

The permittee shall maintain these records in accordance to the Standard Terms and Conditions of Part A of this permit.

e) Reporting Requirements

(1) Within 90 days prior to startup, the permittee shall submit their proposed Work Practice Plan to the Ohio EPA through the Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall submit semiannual 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.

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

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

2.2E-1 ton/year of fugitive PM_{10}; 2.0E-2 ton/year of fugitive $PM_{2.5}$

Applicable Compliance Method:

Compliance with fugitive PM_{10} and $PM_{2.5}$ limitations shall be determined by using the emission factor equations in Section 13.2.2, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 12/03) for unpaved roadways. These emission limits were based on the following assumptions by the permittee:

108 miles traveled per year for Slag Pot Carriers;

1,485 miles traveled per year for Slag Trucks;

289 miles traveled per year for Fines Trucks;

4,148 miles traveled per year for Maintenance Trucks;

2,420 miles per year for CO_2 Trucks; and

95% control efficiency for PM_{10}, and $PM_{2.5}$ emissions.

b. Emission Limitation:

There shall be no visible particulate matter emissions from any unpaved roadways and parking areas except for a period of time not to exceed thirteen (13) minutes during any 60-minute observation period.

Applicable Compliance Method:

If required, compliance with the visible particulate matter emission 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"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

3. P001, Process gas heater

Operations, Property and/or Equipment Description:

218.9 MMBtu/hr, natural gas and process gas-fired process gas heater, with optional top-gas treatment for waste gas removal, controlled by a thermal oxidizer and scrubber.

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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 1.63 lbs/hr (filterable and condensable) and 7.14 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 18.88 lbs/hr and 82.71 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 11.17 lbs/hr and 48.92 tons per rolling, 12-month period. Carbon dioxide equivalent (CO_2e) emissions shall not exceed 70,203 lbs/hr and 307,490 tons per rolling, 12-month period. See b)(2)a.
b.	ORC 3704.03(T) and OAC rule 3745-31-05(A)(3)	The Best Available Technology (BAT) requirements established pursuant to ORC rule 3704.03(T) and OAC rule 3745-31-05(A)(3) have been determined to be equivalent to OAC rules 3745-31-10 through 20 for NO_x and CO.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	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 PM_{10}, $PM_{2.5}$, sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
d.	OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rules 3745-31-10 through 20.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.
f.	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-05(F).
g.	OAC rule 3745-31-05(F)	SO_2 emissions shall not exceed 7.9E-1 lb/hr and 3.46 tons per rolling, 12-month period. See b)(2)b.
h.	OAC rule 3745-110-03(K)(20)	Exempt. See b)(2)c.

(2) Additional Terms and Conditions

a. In the event, the permittee does not demonstrate compliance by meeting the limit(s) of 18.88 lbs/hr for NO_x or 11.17 lbs/hr for CO through initial performance testing as specified in sections f)(1)b, f)(1)c and f)(2), then the permittee shall re-evaluate BACT and re-submit a permit modification along with supportive documentation to the Ohio EPA for this emissions unit within 60 days at the completion of the tests.

b. The permittee shall operate the top-gas treatment for waste gas removal at all times when the emissions unit is in operation, except when the top-gas is transported off-site to be treated by an independent, regulated processing plant. When operating the top-gas treatment at this facility, waste gas generated by this

process shall be vented to a thermal oxidizer and SO_2 removal scrubber at all times.

c. The requirements of this rule do not apply since the emissions unit is subject to a BACT limitation for NO_x.

c) Operational Restrictions

(1) The permittee shall burn only natural gas and process gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas and process gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) For top-gas treatment at this facility, the permittee shall properly install, operate, and maintain continuous temperature monitor(s) and recorder(s) that measure(s) and record(s) the combustion temperature within the thermal oxidizer when the emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the combustion temperature on a continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

In order to maintain compliance with the applicable emission limitation contained in this permit, the acceptable combustion temperature within the thermal oxidizer, during any period of time when the emissions unit controlled by the thermal oxidizer is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(3) For top-gas treatment at this facility, whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) For top-gas treatment at this facility, the permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the SO_2 removal scrubber (in pounds per square inch, gauge), the SO_2 removal scrubber liquid flow rate (in gallons per minute), and the SO_2 removal scrubber liquid pH during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the SO_2 removal scrubber and the SO_2 removal scrubber liquid's pH and flow rate on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable liquid flow rate and the liquid pH shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

In order to maintain compliance with the applicable emission limitation contained in this permit, the acceptable range or limit for the pressure drop across the SO2 removal scrubber, the liquid flow rate, and the liquid pH shall be based upon the manufacturer's

specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

(5) For top-gas treatment at this facility, whenever the monitored value for any parameter (pressure drop, liquid flow rate, PH) deviates from the range(s) or minimum limit(s) established in accordance with this permit for the SO_2 scrubber, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drops, flow rate, and pH readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the pressure drop, liquid flow rate, and pH are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop, liquid flow rate, or pH based upon information obtained during future performance tests that demonstrate compliance with the SO_2 emission rate for this emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring

requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(6) The permittee shall collect and record the following information for each day when operating the top-gas treatment process:

a. a log of the downtime for the thermal oxidizer and/or monitoring equipment, when the associated emissions unit was in operation;

b. a log of the downtime for the SO_2 scrubber and/or monitoring equipment, when the associated emissions unit was in operation; and

c. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer and/or scrubber.

e) Reporting Requirements

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

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all period of time during which the average temperature within thermal oxidizer did not comply with the temperature limitation specified by the manufacturer and/or the temperature limitation established following any required compliance demonstration;

b. any records of downtime (date and length of time) for the thermal oxidizer, and/or the monitoring equipment when the emissions unit was in operation using the top-gas treatment process at this facility;

c. each period of time (start time and date, and end time and date) when the pressure drop across the SO_2 removal scrubber, the liquid flow rate, or the liquid pH was outside of the appropriate range or limit specified by the manufacturer and/or outside of the acceptable range for each parameter following any required compliance demonstration;

d. any records of downtime (date and length of time) for the SO_2 scrubber, and/or the monitoring equipment when the emissions unit was in operation using the top-gas treatment process at this facility; and

e. any period of time (start time and date, and end time and date) when the emissions unit was in operation using the top-gas treatment process at this facility and emissions were not vented to the thermal oxidizer and/or SO_2 scrubber.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

PM_{10} and $PM_{2.5}$ emissions shall not exceed 1.63 lbs/hr (filterable and condensable) and 7.14 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = PM_{10}/$PM_{2.5}$ emission rate, in lbs/hr;
A = emission factor, 7.45E-03 lb of PM_{10}/$PM_{2.5}$/MMBtu, AP-42 Section 1.4, July 98 (filterable and condensable); and
B = 218.9 MMBtu/hr, heat input.

Compliance with the annual PM_{10} and $PM_{2.5}$ emission limitation (7.14 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 1.63 lbs/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

If required, the permittee shall demonstrate compliance with this PM_{10}/$PM_{2.5}$ emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 51, Appendix M, Methods 201 or 201A and 202.

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

b. Emission Limitations:

NO_x emissions shall not exceed 18.88 lbs/hr, and 82.71 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B*(1/C)*D

where:

E = NO_x emission rate, in lbs/hr;
A = NO_x emission factor: 42.2 ppmv from manufacturer design;
B = 46.01 molecular weight of NO_x;
C = 385.1E6 – conversion factor (lb/scf) from AP-42 Appendix A; and
D = 3,745,240 scf/hr – gas flowrate from permit application A0064851.

Compliance with the annual NO_x emissions limitation (82.71 tons per rolling 12-month period) shall be determined by multiplying the maximum hourly allowable emissions limitation of 18.88 lbs/hr by the maximum number of hours in a 12-month rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emissions limitation, then the permittee will be in compliance with the annual emissions limitation.

The permittee shall demonstrate compliance with the emission limitation of 18.88 lbs/hr through performance tests conducted in accordance with the provisions in term f)(2) below.

c. Emission Limitation:

CO emissions shall not exceed 11.17 lbs/hr and 48.92 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B*(1/C)*D

where:

E = CO emission rate, in lbs/hr;
A = CO emission factor: 41 ppmv from manufacturer design;
B = 28.01 molecular weight of CO;
C = 385.1E6 – conversion factor (lb/scf) from AP-42 Appendix A; and
D = 3,745,240 scf/hr – gas flowrate from permit application A0064851.

Compliance with the annual CO emission limitation (48.92 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 11.17 lbs/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

The permittee shall demonstrate compliance with the emission limitation of 11.17 lbs/hr through performance tests conducted in accordance with the provisions in term f)(2) below.

d. Emission Limitations:

CO_2e emissions shall not exceed 70,203 lbs/hr and 307,490 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equations:

E = A*B*(1/C)*D

where:

E = CO_2e emission rate, in lbs/hr;
A = CO_2 mission factor: 164,021 ppmv from manufacturer design;
B = 44.01 molecular weight of CO_2;
C = 385.1E6 – conversion factor (lb/scf) from AP-42 Appendix A; and
D = 3,745,240 scf/hr – gas flowrate from permit application A0064851.

Compliance with the annual CO_2e emissions limitation (307,490 tons per rolling 12-month period) shall be determined by multiplying the maximum hourly allowable emissions limitation of 70,203 lbs/hr by the maximum number of hours in a 12-month rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emissions limitation, then the permittee will be in compliance with the annual emissions limitation.

e. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

f. Emission Limitations:

SO_2 emissions (excluding SO_2 emissions from products of combustion from firing gaseous fuel in the process gas heater) shall not exceed 7.9E-1 lb/hr and 3.46 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B*(1/C)*D

where:

E = SO_2 emission rate, in lbs/hr;
A = SO_2 emission factor: 12 ppmv from manufacturer design;
B = 64.06 molecular weight of SO_2;
C = 385.1E6 – conversion factor (lb/scf) from AP-42 Appendix A; and
D = 396,244.5 scf/hr – gas flowrate from permit application A0064851.

Compliance with the annual SO_2 emissions limitation (3.46 tons per rolling 12-month period) shall be determined by multiplying the maximum hourly allowable emissions limitation of 7.9E-1 lb/hr by the maximum number of hours in a 12-month rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emissions limitation, then the permittee will be in compliance with the annual emissions limitation.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 6.

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

(2) 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 6-months after startup of the process gas heater, emissions unit P001.

b. The emission testing shall be conducted to demonstrate compliance with the allowable NO_x and CO emission limits.

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

for NO_x: Methods 7 or 7E of 40 CFR Part 60, Appendix A; and
for CO: Method 10 of 40 CFR Part 60, Appendix A.

Methods 1 through 4 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. During the emission testing, the emissions unit shall be operated under operational conditions approved in advance by the Ohio EPA Northeast District Office. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under “worst case” conditions expected during the life of the permit. As part of the information provided in the “Intent to Test” notification form described below, the permittee shall provide

a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe “worst case” operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the Ohio EPA Northeast District Office that the proposed operating conditions constitute “worst case”. Failure to test under the approved conditions may result in Ohio EPA not accepting the test results as a demonstration of compliance.

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.

g) Miscellaneous Requirements

(1) None.

4. P007, Black Start Generator

Operations, Property and/or Equipment Description:

158 HP, diesel-fired black start generator

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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 0.015 gram/bhp-hr (filterable) and 2.61E-4 ton/year. Nitrogen oxides (NO_x) emissions shall not exceed 0.30 gram/bhp-hr and 5.22E-3 ton/year. Carbon monoxide (CO) emissions shall not exceed 3.7 gram/bhp-hr and 6.44E-2 ton/year. Carbon dioxide (CO_2) emissions shall not exceed 522.1 gram/bhp-hr and 9.09 tons/year. See b)(1)c. and c)(5).
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 PM_{10}, $PM_{2.5}$, NO_x, CO, sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(F)	The emission limitations for PM, NO_x and CO specified by this rule are equivalent to the ton/year emission limitations established under OAC rule 3745-31-10 through 20. See c)(5).
d.	40 CFR Part 60, Subpart IIII Tier IV Standards	The emission limitations for PM, NO_x and CO specified by this rule are equivalent to the emission limitations established under OAC rule 3745-31-10 through 20. The exhaust emissions from this engine shall not exceed: 0.14-gram VOC (NMHC)/bhp-hr Smoke emission limitations: As specified in 40 CFR 1039.105(a)(3), Tier IV engines are exempted from the smoke emission limitations when the particulate emission limitation is below 0.05 gram/bhp-hr (0.07 g/KWh) because an engine of such low PM level has inherently low smoke emission.
e.	40 CFR 60.4207(b) 40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight. See b)(2)d, c)(2), d)(1), and e)(1)a.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply.
g.	40 CFR Part 63, Subpart ZZZZ	A new area source operating in compliance with 40 CFR Part 60, Subpart IIII is the demonstration of compliance for 40 CFR Part 63, Subpart ZZZZ.
h.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions shall not exceed 0.310 lb/MMBtu of actual heat input. The emission limitation specified by this rule is less stringent than the emission limitation established under OAC rule 3745-31-10 through 20.
i.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		opacity as a 6-minute average, except as provided by the rule.
j.	OAC rule 3745-18-06(B)	Exemption due to having a maximum heat input less than 10 MMBtu/hr.
k.	OAC rule 3745-110-03(K)(16) and (K)(20)	Exempt. See b)(2)e.

(2) Additional Terms and Conditions

a. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).

b. The stationary compression ignition (CI) internal combustion engine (ICE) is subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart IIII, the standards of performance for stationary CI ICE.

c. The stationary CI ICE has been or shall be purchased certified by the manufacturer, for its useful life*, to emission standards as stringent as those identified in 40 CFR 60.4201(a) and found in 40 CFR 1039.101, Tables 1, for engines greater than or equal to 75 horsepower (56 kilowatt) and less than 175 horsepower (130 kilowatt), and to the opacity standards found in 40 CFR 1039.105.

d. The quality of the diesel fuel burned in this emissions unit shall meet the following specifications on an “as received” basis:

i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015-pound sulfur dioxide/MMBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight; and

ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the above-mentioned specifications shall be determined by purchase orders specifying that each shipment of oil received is ULSD compliant.

e. The requirements of this rule do not apply since:

i. the emissions unit is subject to a BACT limitation for NO_x.

c) Operational Restrictions

(1) The stationary CI ICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and the permittee shall only change those emission–related settings that are allowed by the manufacturer. The CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89, Control of Emissions from New and In-use Non-road CI ICE; and Part 1068, the General Compliance Provisions for Engine Programs. The permittee shall operate and maintain the stationary CI ICE to achieve the emissions standards established in 40 CFR 60.4204 over the entire life of the engine(s).

(2) Diesel fuel burned in the CI, ICE shall not exceed the limit for sulfur as specified by 40 CFR 80.510(b), i.e., the maximum sulfur content of diesel fuel shall not exceed 15 ppm or 0.0015% sulfur by weight.

(3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

(4) The permittee shall install a non-resettable hour meter prior to startup of the engine.

(5) The permittee shall operate this emissions unit for not more than 100 hours in a calendar year.

d) Monitoring and/or Recordkeeping Requirements

(1) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of each purchase order that identifies the total quantity of diesel oil received and a specification that each shipment of oil received is ULSD compliant. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.

(2) The permittee shall maintain the manufacturer's certification, that demonstrates compliance with the emission standards in Table 1 of 40 CFR 1039.101 and the opacity standards in 40 CFR 1039.105, on site or at a central location for all facility CI ICE; and the certification shall be made available for review upon request. If the manufacturer's certification is not kept on site, the permittee shall maintain a log for the location of each ICE, and it shall identify the agency-assigned emissions unit number, the manufacturer's identification number, and the certificate identification number. The manufacturer's operations manual and any written instructions or procedures developed by the permittee and approved by the manufacturer shall be maintained at the same location as the ICE.

(3) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the permittee shall keep records of the date, time, and any corrective action(s) taken in response to the notification from the backpressure monitor, that the high backpressure limit of the engine has been approached or exceeded.

(4) The permittee shall maintain monthly log of the number of hours the engine is in operation, recorded through the non-resettable hour meter.

e) Reporting Requirements

(1) The permittee shall submit a quarterly deviation report identifying the following:

a. any period of time (date and number of hours) that the quality of oil burned in this emissions unit did not meet the requirements established in 40 CFR 80.510(b), based upon the required fuel records; and the amount of non-compliant fuel burned on each such occasion;

b. if the stationary CI Internal combustion engine is equipped with a diesel particulate filter, any period of time (date and number of hours) that the engine exceeded high backpressure limit of the engine; and any corrective action(s) taken on each such occasion; and

c. any exceedance of the annual 100-hour limitation for operating this emissions unit, as documented by the non-resettable hour meter and operating log.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Opacity Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitations:

PM (PM_{10} + $PM_{2.5}$) emissions shall not exceed 0.015 gram/bhp-hr (filterable) (0.02 gram/KW-hr) and 2.61E-4 ton/year.

Applicable Compliance Methods:

Compliance with the emission limitation (0.015-gram PM (PM_{10} + $PM_{2.5}$)/bhp-hr) shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 1 of 40 CFR 1039.101, the Tier 4 exhaust emission standards for diesel engines greater than or equal to 75 horsepower (56 kilowatt) and less than 175 horsepower (130 kilowatt).

If required, the permittee shall demonstrate compliance with the short-term emission limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

Compliance with the annual PM (PM_{10} + $PM_{2.5}$) emission limitation (2.61E-4 ton/year, filterable) shall be determined by multiplying together the short-term emission limitation (0.015 gram PM (PM_{10} + $PM_{2.5}$)/bhp-hr) by horse power rating of the engine (158 HP) by the restricted hours of operation (100 hours/year) and by conversion factor (1 lb/454 grams) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the short-term emission limitation (0.015-gram PM (PM_{10} + $PM_{2.5}$)/bhp-hr), then the permittee will be in compliance with the annual emission limitation.

c. Emission Limitation:

NO_x emissions shall not exceed 0.30 gram/bhp-hr (0.40 gram/KW-hr) and 5.22E-3 ton/year.

Applicable Compliance Method:

Compliance with the emission limitation (0.30-gram NO_x/bhp-hr) shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 1 of 40 CFR 1039.101, the Tier 4 exhaust emission standards for diesel engines greater than or equal to 75 horsepower (56 kilowatt) and less than 175 horsepower (130 kilowatt).

If required, the permittee shall demonstrate compliance with the emission limitation through performance tests conducted in accordance with the provisions in term f)(2) below.

Compliance with the annual NO_x emission limitation (5.22E-3 ton/year) shall be determined by multiplying together the short-term emission limitation (0.30 gram NO_x/bhp-hr) by horse power rating of the engine (158 HP) by the restricted hours of operation (100 hours/year) and by conversion factor (1 lb/454 grams) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the short-term emission limitation (0.30-gram NO_x/bhp-hr), then the permittee will be in compliance with the annual emission limitation.

d. Emission Limitation:

CO emissions shall not exceed 3.7 gram/bhp-hr (5.0 grams/kW-hr) and 6.44E-2 ton/year.

Applicable Compliance Method:

Compliance with the emission limitation shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 1 of 40 CFR 1039.101, the Tier 4 exhaust emission standards for diesel engines greater

than or equal to 75 horsepower (56 kilowatt) and less than 175 horsepower (130 kilowatt).

If required, the permittee shall demonstrate compliance with the emission limitation through performance tests conducted in accordance with the provisions in term f)(2) below.

Compliance with the annual CO emission limitation (6.44E-2 ton/year) shall be determined by multiplying together the short-term emission limitation (3.7 gram CO/bhp-hr) by horse power rating of the engine (158 HP) by the restricted hours of operation (100 hours/year) and by conversion factor (1 lb/454 grams) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the short-term emission limitation (3.7-gram CO/bhp-hr), then the permittee will be in compliance with the annual emission limitation.

e. Sulfur Content Limitations for Diesel Fuel:

The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight.

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements for the sulfur content of each shipment of diesel oil received. If meeting the standards in 40 CFR 80.510(c), this calculates to approximately 0.0015 lb SO_2/MMBtu.

f. Emission Limitation:

CO_2 emissions shall not exceed 522.1 gram/bhp-hr and 9.09 tons/year.

Applicable Compliance Method:

Compliance with the short-term emission limitation (521.6 grams/bhp-hr) shall be determined by the following equation:

E = A

where:

E = CO_2 emission rate, in grams of CO_2/bhp-hr;
A = emission factor, 521.6 grams of CO_2/bhp-hr (1.15 lb/hp-hr), AP-42 Section 3.3, Table 3.3-1, October 96.

Compliance with the annual CO_2 emission limitation (9.09 tons/year) shall be determined by multiplying together the short-term emission limitation (522.1 gram CO_2/bhp-hr) by horse power rating of the engine (158 HP) by the restricted hours of operation (100 hours/year) and by conversion factor (1 lb/454 grams) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the short-term emission limitation (522.1-gram CO_2/bhp-hr), then the permittee will be in compliance with the annual emission limitation.

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

a. in accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065.

g) Miscellaneous Requirements

(1) None.

5. P008, Quenching & wastewater pretreatment

Operations, Property and/or Equipment Description:

Quenching & wastewater pretreatment, equipped with a flare and scrubber.

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) d)(4).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	**Flaring emissions:** Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 5.0E-2 lb/hr (filterable and condensable) and 2.2E-1 ton per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 4.5E-1 lb/hr and 1.97 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 2.05 lbs/hr and 8.97 tons per rolling, 12-month period. The flare is designed to meet a control efficiency of ninety-eight (98) percent for CO emissions. Carbon dioxide equivalent (CO_2e) emissions shall not exceed 777.46 lbs/hr and 3,405 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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 PM_{10}, $PM_{2.5}$, NO_x, CO, sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the controlled potential to emit is less than 10 tons per year.
c.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rules 3745-31-10 through 20.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-05(F).
f.	OAC rule 3745-31-05(F)	**Flaring emissions:** SO_2 emissions shall not exceed 2.0E-3 lb/hr and 1.0E-2 ton per rolling, 12-month period. **Wastewater pretreatment, scrubber emissions:** Ammonia (NH_3) emissions shall not exceed 2.64E-3 lb/hr and 1.2E-2 ton per rolling, 12-month period.
g.	OAC rule 3745-110-03(K)(16) and (K)(20)	Exempt. See b)(2)a.
h.	OAC rule 3745-114-01	See d)(4).

(2) Additional Terms and Conditions

a. The requirements of this rule do not apply since:

i. NO_x emissions are restricted to less than 25 tons per year; and

ii. the emissions unit is subject to a BACT limitation for NO_x.

b. The permittee shall properly install, operate, and maintain a device to continuously monitor the flare's 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) Operational Restrictions

(1) The flare shall be operated with a flame present at all times when gases are vented to it. The presence of the pilot flame shall be monitored using a thermocouple or other equivalent device to detect the presence of a flame.

(2) The acceptable range or limit for the pressure drop across the NH_3 scrubber, the liquid flow rate, and the liquid pH shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall record all periods of time during which there is no pilot flame, or the flare is inoperable when the emissions unit is in operation and process gas is vented to the flare.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the NH_3 scrubber (in pounds per square inch, gauge), the NH_3 scrubber liquid flow rate (in gallons per minute), and the NH_3 scrubber liquid pH during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the NH_3 scrubber and the NH_3 scrubber liquid's pH and flow rate on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable liquid flow rate and the liquid pH shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drops, flow rate, and pH readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

(3) These range(s) and/or limit(s) for the pressure drop, liquid flow rate, and pH are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop, liquid flow rate, or pH based upon information obtained during future performance tests that demonstrate compliance with the NH_3 emission rate for this emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit’s maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air

contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation reports that identify all periods of time during which there was no pilot flame, or the flare was inoperable when the emissions unit was in operation and process gas was vented to the flare. The reports shall include the date, time, and duration of each such period.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the pressure drop across the NH_3 scrubber, the liquid flow rate, or the liquid pH was outside of the appropriate range or limit specified by the manufacturer and/or outside of the acceptable range for each parameter following any required compliance demonstration; and

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the NH_3 scrubber.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations (flaring emissions):

PM_{10} and $PM_{2.5}$ emissions shall not exceed 5.0E-2 lb/hr (filterable and condensable) and 2.2E-1 ton per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equations:

E = A*B

where:

E = $PM_{10}/PM_{2.5}$ emission rate, in lb/hr;
A = emission factor, 7.45E-03 lb of PE/PM_{10}/MMBtu, AP-42 Section 1.4, July 98 (filterable and condensable); and
B = 6.61 MMBtu/hr, heat input.

Compliance with the annual PM_{10} and $PM_{2.5}$ emission limitation (2.2E-1 ton per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 5.0E-2 lb/hr by the maximum number of hours in a

12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

b. Emission Limitations (flaring emissions):

NO_x emissions shall not exceed 4.5E-1 lb/hr and 1.97 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equations:

E = A*B

where:

E = NO_x emission rate, in lb/hr;
A = emission factor, 6.80E-02 lb of NO_x/MMBtu, AP-42 Section 13.5, December 16; and
B = 6.61 MMBtu/hr, heat input.

Compliance with the annual NO_x emissions limitation (1.97 tons per rolling 12-month period) shall be determined by multiplying the maximum hourly allowable emissions limitation of 4.5E-1 lb/hr by the maximum number of hours in a 12-month rolling period (8,760 hr/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emissions limitation, then the permittee will be in compliance with the annual emissions limitation.

c. Emission Limitations (flaring emissions):

CO emissions shall not exceed 2.05 lbs/hr and 8.97 tons per rolling, 12-month period.

The flare is designed to meet a control efficiency of ninety-eight (98) percent for CO emissions.

Applicable Compliance Methods:

The control efficiency was established based on the information provided by the permittee in permit application #A0064851.

Compliance with the hourly emission limitation shall be determined by the following equations:

E = A*B

where:

E = CO emission rate, in lb/hr;

A = emission factor, 3.10E-01 lb of CO/MMBtu, AP-42 Section 13.5, December 16; and
B = 6.61 MMBtu/hr, heat input.

Compliance with the annual CO emissions limitation (8.97 tons per rolling 12-month period) shall be determined by multiplying the maximum hourly allowable emissions limitation of 2.05 lbs/hr by the maximum number of hours in a 12-month rolling period (8,760 hr/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emissions limitation, then the permittee will be in compliance with the annual emissions limitation.

d. Emission Limitations (flaring emissions):

CO_2e emissions shall not exceed 777.46 lbs/hr and 3,405 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equations:

E = A*B

where:

E = CO_2e emission rate, in lbs/hr;
A = emission factor, 1.176E+02 lbs of CO_2e/MMBtu, AP-42 Section 1.4, July 98; and
B = 6.61 MMBtu/hr, heat input.

Compliance with the annual CO_2e emissions limitation (3,405 tons per rolling 12-month period) shall be determined by multiplying the maximum hourly allowable emissions limitation of 777.46 lbs/hr by the maximum number of hours in a 12-month rolling period (8,760 hr/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emissions limitation, then the permittee will be in compliance with the annual emissions limitation.

e. Emission Limitation (flaring emissions):

SO_2 emissions shall not exceed 2.0E-3 lb/hr and 1.0E-2 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equations:

E = A*B

where:

E = SO_2 emission rate, in lb/hr;
A = emission factor, 2.37E-04 lb of SO_2/MMBtu, EF developed by the equipment manufacturer, based on a mass balance of gas sulfur contents, as provided in permit application #A0064851; and
B = 6.61 MMBtu/hr, heat input.

Compliance with the annual SO_2 emissions limitation (1.0E-2 ton per rolling 12-month period) shall be determined by multiplying the maximum hourly allowable emissions limitation of 2.0E-3 lb/hr by the maximum number of hours in a 12-month rolling period (8,760 hr/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emissions limitation, then the permittee will be in compliance with the annual emissions limitation.

f. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g. Emission Limitations (NH_3 scrubber):

NH_3 emissions shall not exceed 2.64E-3 lb/hr and 1.2E-2 ton per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = [A/B]*[C/D]*F

where:

E = NH_3 emission rate, in lbs/hr;
A = concentration, 1 ppmv from manufacturer design;
B = 1,000,000 parts;
C = 17.03 lb/lb-mol, molecular weight of NH_3;
D = 385.4 number of cubic feet in a pound-mole of gas at standard temperature and pressure; and
F = 60,000 scf/hr, volumetric flowrate of scrubber in standard cubic feet.

Compliance with the annual NH_3 emission limitation (1.2E-2 ton per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 2.64E-3 lb/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

If required, the permittee shall demonstrate compliance with this NH_3 emission limitation through emission tests performed in accordance with the procedures specified in US EPA conditional test method CTM-027, October 1997.

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

g) Miscellaneous Requirements

(1) None.

6. P901, EAF

Operations, Property and/or Equipment Description:

Electric Arc Furnace, including DRI loading, smelting, tapping, pouring, and casting.

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) d)(4).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}), including filterable and condensable, shall not exceed 2.5E-3 gr/dscf, 12.43 lbs/hr and 54.44 tons per rolling, 12-month period. The baghouse shall be designed to meet an outlet concentration of 2.5E-3 gr/dscf of PM_{10}. Particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$), including filterable and condensable, shall not exceed 2.0E-3 gr/dscf, 9.94 lbs/hr and 43.55 tons per rolling, 12-month period. The baghouse shall be designed to meet an outlet concentration of 2.0E-3 gr/dscf of $PM_{2.5}$. Nitrogen oxides (NO_x) emissions shall not exceed 1.4 lbs/ton of MPI produced. . Carbon monoxide (CO) emissions shall not exceed 1.8 lbs/ton of MPI produced.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Carbon dioxide equivalent (CO_2e) emissions shall not exceed 186.41 lbs/ton of MPI produced. Visible particulate emissions from any stack serving this emissions unit shall not exceed three (3) percent opacity as a 6-minute average. Visible emissions of fugitive dust from this emissions unit shall not exceed six (6) percent opacity as a 6-minute average. See b)(2)a. and b)(2)b.
b.	ORC 3704.03(T) and OAC rule 3745-31-05(A)(3)	The Best Available Technology (BAT) requirements established pursuant to ORC rule 3704.03(T) and OAC rule 3745-31-05(A)(3) have been determined to be equivalent to OAC rules 3745-31-10 through 20 for PM_{10}, $PM_{2.5}$, NO_x and CO.
c.	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 sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
d.	OAC rule 3745-17-07(B)(3)	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant OAC rules 3745-31-10 through 20.
e.	OAC rule 3745-17-07(B)(1)	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant OAC rules 3745-31-10 through 20.
f.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant OAC rules 3745-31-10 through 20.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent that the emission limitation established pursuant OAC rules 3745-31-10 through 20.
h.	OAC rule 3745-114-01	See d)(4).

(2) Additional Terms and Conditions

a. In the event, the permittee does not demonstrate compliance by meeting the limit(s) of 2.5E-3 gr/dscf, 12.43 lbs/hr for PM_{10} emissions, 2.0E-3 gr/dscf, 9.94 lbs/hr for $PM_{2.5}$ emissions, 1.4 lbs/ton of MPI produced for NO_x emissions and 1.8 lbs/ton of MPI produced for CO emissions through initial performance testing as specified in sections f)(1)a and f)(2), then the permittee shall re-evaluate BACT and re-submit a permit modification along with supportive documentation to the Ohio EPA for this emissions unit within 60 days at the completion of the tests.

b. The emissions from this emissions unit shall be vented to the EAF baghouse at all times the emissions unit is in operation.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack (EAF baghouse egress) and for any visible emissions of fugitive dust from the egress points (i.e., EAF building, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and 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 emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident

under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions 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 properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across each baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across each baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop for each baghouse shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever any of the monitored values for pressure drop deviates from the limit(s) or range(s) established in accordance with this permit for screen building baghouse or EAF baghouse, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drops readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

(3) This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification

(4) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit’s maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit-to-install.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from any stack (EAF baghouse egress) serving this emissions unit;

b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., EAF building) serving this emissions unit; and

c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the pressure drops across each baghouse (EAF baghouse) was outside of the range specified

by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

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

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

PM_{10} emissions shall not exceed 2.5E-3 gr/dscf and 12.43 lbs/hr.

$PM_{2.5}$ emissions shall not exceed 2.0E-3 gr/dscf and 9.94 lbs/hr.

NO_x emissions shall not exceed 1.4 lbs/ton of MPI produced.

CO emissions shall not exceed 1.8 lbs/ton of MPI produced.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

b. Emission Limitation:

PM_{10} emissions shall not exceed 54.44 tons per rolling, 12-month period.

$PM_{2.5}$ emissions shall not exceed 43.55 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation(s) (ton per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation(s) (lbs/hr) by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation for each pollutant through performance testing as required in terms f)(1)a. and f)(2), then the permittee will be in compliance with each annual emission limitation.

c. Emission Limitation:

CO_2e emissions shall not exceed 186.41 lbs/ton of MPI produced.

Applicable Compliance Method:

Compliance shall be determined by the following equation:

E = A

where:

E = CO_2e emission rate, in lbs of CO_2e/ton of MPI; and
A = emission factor, 186.41 lbs of CO_2e/ton of MPI, EF developed by the equipment manufacturer, as provided in permit application #A0064851.

d. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed three (3) percent opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed six (6) percent opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation for fugitive dust shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

(2) 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 6-months after startup of the EAF, emissions unit P901.

b. The emission testing shall be conducted to demonstrate compliance with the allowable PM_{10}, $PM_{2.5}$, NO_x and CO emission limitations.

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

for PM_{10}: Method 201 or 201A and 202 of 40 CFR Part 51, Appendix M;

for $PM_{2.5}$: Method 201A and 202 of 40 CFR Part 51, Appendix M;

for NO_x: Methods 7 or 7E of 40 CFR Part 60, Appendix A;

for CO: Method 10 of 40 CFR Part 60, Appendix A; and

Methods 1 through 4 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. A record of pressure drop values across each baghouse shall be maintained during the emission test in order to verify manufacturer's recommended pressure drop range or to revise and establish an acceptable pressure drop range. Data shall be recorded at 15-minute increments or less throughout the entire test while sampling.

e. A record of merchant pig iron produced for each heat shall be maintained during the emission test in order to calculate emissions rates, in units of *pounds of a pollutant per ton MPI produced*.

f. During the emission testing, the emissions unit shall be operated under operational conditions approved in advance by the Ohio EPA Northeast District Office. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under "worst case" conditions expected during the life of the permit. As part of the information provided in the "Intent to Test" notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe "worst case" operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the Ohio EPA Northeast District Office that the proposed operating conditions constitute "worst case". Failure to test under the approved conditions may result in Ohio EPA not accepting the test results as a demonstration of compliance.

g. 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).

h. 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.

i. 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.

7. P902, Material Handling

Operations, Property and/or Equipment Description:

Raw materials handling, including screening and transfer via conveyor system.

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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	**Outdoor conveyor transfer:** 5.6E-1 ton/year of fugitive particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) 1.6E-1 ton/year of fugitive particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) See b)(2)a. **Indoor primary screening and conveyor transfer:** $PM_{10}/PM_{2.5}$ emissions from the stack(s) serving this emissions unit shall not exceed 2.5E-3 gr/dscf, 1.7E-1 lb/hr and 7.3E-1 ton per rolling, 12-month period for indoor material handling operations. The baghouse shall be designed to meet an outlet concentration of 2.5E-3 gr/dscf of $PM_{10}/PM_{2.5.}$ Visible particulate emissions from any stack serving this emissions unit shall not exceed three (3) percent opacity as a 6-minute average. See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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 PM_{10} or $PM_{2.5}$ emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from this emissions unit shall not exceed twenty (20) percent opacity 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 OAC rules 3745-31-10 through 20.
e.	OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant OAC rules 3745-31-10 through 20.
f.	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant OAC rules 3745-31-10 through 20.

(2) Additional Terms and Conditions

a. The following material handling operations for this emissions unit are subject to OAC rules 3745-17-07(B)(1), 3745-17-08(B) and 3745-31-10 through 20:

i. outdoor material transfer by conveyors; and
ii. outdoor material transfer at conveyor to conveyor transfer points.

b. The following material handling operations for this emissions unit are subject to OAC rules 3745-17-07(A)(1), 3745-17-11, 3745-17-07(B)(1) and 3745-31-10 through 20 (for the baghouse emissions).

i. indoor materials screening;
ii. indoor material transfer by conveyors; and
iii. indoor material transfer at conveyor to conveyor transfer points.

The emissions from the above material handling operations from this emissions unit shall be vented to the baghouse(s) at all times the emissions unit is in operation.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from each stack (screen building baghouse egress) and for any visible emissions of fugitive dust from the egress points (i.e., outdoor conveyors and transfer points, screen building, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and 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 emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions 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 properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across each baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across each baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop for the baghouse shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever any of the monitored values for pressure drop deviates from the limit(s) or range(s) established in accordance with this permit for the screen building baghouse, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drops readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across each baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from any stack (screen building baghouse egress) serving this emissions unit;

b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., outdoor conveyors and transfer points, screen building, etc.) serving this emissions unit; and

c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the pressure drops across each baghouse (screen building baghouse baghouse) was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

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

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations (outdoor material handling operations):

Fugitive PM_{10} emissions shall not exceed 5.6E-1 ton/year.

Fugitive $PM_{2.5}$ emissions shall not exceed 1.6E-1 ton/year.

Applicable Compliance Method:

Compliance shall be determined by the following equation:

E = A*B*C*(1/D)*(1 – CE/100)

where:

E = PM_{10} and $PM_{2.5}$ emission rates, in tons/year;
A = emission factors: 1.10E-03 lb/ton of PM_{10}, 3.11E-04 lb/ton of $PM_{2.5}$, AP-42 Section 11.19.2, August 04 (conveyor transfer points);
B = maximum 12-month rolling throughput, in tons/year, 850,000 tons/year;
C = number of transfer points: 9;
D = 2,000 lbs/ton; and
CE = control efficiency for the application of water, 80% (RACM).

Repeat this equation for each pollutant: PM_{10} and $PM_{2.5}$.

b. Emission Limitations (indoor primary screening and conveyor transfer):

$PM_{10}/PM_{2.5}$ emissions from the stack(s) serving this emissions unit shall not exceed 2.5E-3 gr/dscf, 1.7E-1 lb/hr and 7.3E-1 ton per rolling, 12-month period for indoor material handling operations.

Applicable Compliance Method:

Compliance shall be determined by the following equation:

E = (A*B*C*D)

where:

E = $PM_{10}/PM_{2.5}$ emission rates, in lbs/hr;
A = baghouse outlet limit (vendor guarantee): 2.5E-3 gr/dscf of $PM_{10}/PM_{2.5}$;
B = baghouse flowrate, 7,800 scfm;
C = conversion, 60 minutes/hr; and
D = conversion, 1 pound/7,000 grains.

Compliance with the annual $PM_{10}/PM_{2.5}$ emission limitation (7.3E-1 ton per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 1.7E-1 lb/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

If required, the permittee shall demonstrate compliance with these emission limitations through emission tests performed in accordance with the following methods:

for PM_{10}: Method 201 or 201A and 202 of 40 CFR Part 51, Appendix M; and
for $PM_{2.5}$: Method 201A and 202 of 40 CFR Part 51, Appendix M.

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

c. Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed twenty (20) percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance with the visible particulate emission limitation for fugitive dust shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

d. Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed three (3) percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.

8. Emissions Unit Group - Emergency Fire Pumps: P009 and P010

EU ID	Operations, Property and/or Equipment Description
P009	Diesel-fired emergency fire pump (high pressure)
P010	Diesel-fired emergency fire pump (low Pressure)

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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 0.15 gram/bhp-hr (filterable). Nitrogen oxides (NO_x) and non-methane hydrocarbons (NMHC) emissions shall not exceed 3.0 gram/bhp-hr. Carbon monoxide (CO) emissions shall not exceed 2.6 gram/bhp-hr. Carbon dioxide (CO_2) emissions shall not exceed 521.6 gram/bhp-hr.
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 PM_{10}, $PM_{2.5}$, NO_x, CO, sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	40 CFR Part 60, Subpart IIII Tier II Standards	The emission limitation for PM, NO_x + NMHC, CO specified by this rule are equivalent to the emission limitations established under OAC rule 3745-31-10 through 20.
d.	40 CFR 60.4207(b) 40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight. See terms b)(2)d, c)(2), d)(1), and e)(1)a.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply.
f.	40 CFR Part 63, Subpart ZZZZ	A new area source operating in compliance with 40 CFR Part 60, Subpart IIII is the demonstration of compliance for 40 CFR Part 63, Subpart ZZZZ.
g.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions shall not exceed 0.310 lb/MMBtu of actual heat input. The emission limitation specified by this rule is less stringent than the emission limitation established under OAC rule 3745-31-10 through 20.
h.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.
i.	OAC rule 3745-18-06(B)	Exemption due to having a maximum heat input less than 10 MMBtu/hr.
j.	OAC rule 3745-110-03(K)(16) and (K)(20)	Exempt. See b)(2)f.

(2) Additional Terms and Conditions

a. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).

b. The fire pump stationary compression ignition (CI) internal combustion engine (ICE) is subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart IIII, the standards of performance for stationary CI ICE.

c. The fire pump stationary CI ICE has been or shall be purchased certified by the manufacturer, for its useful life*, to emission standards as stringent as those identified in 40 CFR 60.4205(c) and 40 CFR 60.4202(d) and found in Table 4 to Subpart IIII, for engines of the same model year and National Fire Protection Association (NFPA) nameplate power.

d. The quality of the diesel fuel burned in this emissions unit shall meet the following specifications on an “as received” basis:

   i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015-pound sulfur dioxide/MMBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight; and

   ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

   Compliance with the above-mentioned specifications shall be determined by purchase orders specifying that each shipment of oil received is ULSD compliant.

e. The emergency stationary ICE shall meet the following criteria, as applicable:

   i. The stationary ICE shall be operated to provide electrical power or mechanical work during an emergency situation, to include power for critical networks or equipment at the facility when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or where the stationary ICE is used to pump water for a fire or flood, etc.;

   ii. The stationary ICE may be operated under limited circumstances for emergency demand response or periods where there is a deviation of voltage or frequency of 5% or more above the standard and as specified in 40 CFR 60.4211(f); and

   iii. The stationary ICE may operate as part of a financial arrangement with another entity in situations as allowed in 40 CFR 60.4211(f)(2)(ii) or (iii) and 40 CFR 60.4211(f)(3)(i).

   The emergency stationary ICE must comply with the applicable requirements specified in 40 CFR 60.4211(f) in order to be considered emergency stationary ICE under 40 CFR Part 60, Subpart IIII.

f. The requirements of this rule do not apply since:

i. the emissions unit is subject to a BACT limitation for NO_x.

c) Operational Restrictions

(1) The fire pump stationary CI ICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and the permittee shall only change those emission–related settings that are allowed by the manufacturer. The CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89, Control of Emissions from New and In-use Non-road CI ICE; and Part 1068, the General Compliance Provisions for Engine Programs. The permittee shall operate and maintain the stationary CI ICE to achieve the emissions standards established in 40 CFR 60.4205 over the entire life of the engine(s).

(2) Diesel fuel burned in the CI, ICE shall not exceed the limit for sulfur as specified by 40 CFR 80.510(c), i.e., the maximum sulfur content of diesel fuel shall not exceed 15 ppm or 0.0015% sulfur by weight.

(3) The permittee shall install a non-resettable hour meter prior to startup of the engine. Non-emergency situations, maintenance checks and readiness testing of the emergency ICE shall be limited to 100 hours per year; however, there is no time limit on operations during emergency situations. The permittee may petition the Director for approval of additional hours for maintenance checks and readiness testing. Any operation of the emergency ICE during anything other than emergency situations, non-emergency situations for 50 hours per year as described in c)(4) and maintenance or readiness testing is prohibited.

(4) The emergency stationary ICE must be operated according to the following requirements in order to be considered an emergency stationary ICE under 40 CFR Part 60, Subpart IIII, otherwise it shall meet all of the requirements for non-emergency engines.

a. The emergency stationary ICE may be used at the facility in emergency situations with no restriction on time.

b. The emergency stationary ICE may be operated for any combination of the following purposes for a maximum of 100 hours per calendar year:

i. The emergency stationary ICE may be used at the facility in non-emergency situations for 50 hours per year but cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial agreement except where meeting all of the conditions identified in 40 CFR 60.4211(f)(3)(i).

ii. The emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. Maintenance and testing of the emergency ICE may exceed 100

hours per calendar year, if the permittee maintains records indicating that federal, state, or local standards require the additional hours, or the permittee may petition the Director for approval of additional hours for maintenance checks and readiness testing.

iii. The emergency stationary ICE may be operated for emergency demand response for periods during which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, 40 CFR 60.17), or other authorized entity (as determined by the Reliability Coordinator), has declared an Energy Emergency Alert Level 2, as defined in the NERC Reliability Standard EOP-002-3.

iv. The emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5% or greater below standard voltage or frequency.

In order to qualify for the emergency standards, the permittee shall only operate the emergency stationary RICE during emergencies, for maintenance and testing, for emergency demand response, for 50 hours per year for non-emergencies situations, and as allowed in 40 CFR 60.4211(f).

d) Monitoring and/or Recordkeeping Requirements

(1) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of each purchase order that identifies the total quantity of diesel oil received and a specification that each shipment of oil received is compliant with b)(2)d. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.

(2) The permittee shall maintain the manufacturer's certification, to the applicable Tier 2 emission standards in Table 1 of 40 CFR 89.112 or Tier emission standards equivalent or more stringent than emission standards in Table 1 of 40 CFR 89.112, on site or at a central location for all facility ICE and it shall be made available for review upon request. If the manufacturer's certification is not kept on site, the permittee shall maintain a log for the location of each ICE, and it shall identify the agency-assigned emissions unit number, the manufacturer's identification number, and the identification number of the certificate. The manufacturer's operations manual and any written instructions or procedures developed by the permittee and approved by the manufacturer shall be maintained at the same location as the ICE.

(3) The permittee shall maintain records or a log for the operation of the engine in emergency and non-emergency service, as recorded through the non-resettable hour meter. The permittee shall keep the following information for the emergency CI stationary ICE:

a. the number of hours the engine is in operation, recorded through the non-resettable hour meter;

b. the number of hours spent in emergency operation;

c. the number of hours spent in non-emergency operation;

d. the number of hours in maintenance checks and readiness testing; and

e. what classified the operation as an emergency?

(4) If the engine is used for emergency response demand, for periods of deviation of voltage or frequency, or as part of a financial arrangement with another entity, as specified in 40 CFR 60.4211(f)(2)(ii) or (iii) or 40 CFR 60.4211(f)(3), the permittee must keep records of:

a. the notification of the emergency situation;

b. the date(s) of each emergency situation; and

c. the start time and end time of engine operation for these purposes.

e) Reporting Requirements

(1) The permittee shall submit a quarterly deviation report identifying the following:

a. any period of time (date and number of hours) that the quality of oil burned in this emissions unit did not meet the requirements established in 40 CFR 80.510(c), based upon the required fuel records; and the amount of non-compliant fuel burned on each such occasion; and

b. any exceedance of the annual 100-hour (or otherwise approved for additional hours) limitation on maintenance checks and readiness testing, as documented by the non-resettable hour meter and operations log.

(2) The permittee shall submit an annual report, including the information identified in 40 CFR 60.4214(d) for each emergency stationary ICE that is employed for one of the following purposes:

a. operates or is contractually obligated to have the engine(s) available for more than 15 hours per calendar year for emergency demand response or to supply power during periods where there is a deviation of voltage or frequency of 5% or more below the standard voltage or frequency; or

b. operates the engine(s) in non-emergency situations as identified in 40 CFR 60.4211(f)(3), including the supply of power as part of a financial agreement with another entity, where these conditions can be met.

(3) The annual report required by 40 CFR 60.4214(d) must contain the following information:

a. the company name and address where the engine is located;

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

c. the engine horsepower and model year;

d. the latitude and longitude of the engine in decimal degrees reported to the fifth decimal place;

e. the number of hours of operation in emergency and non-emergency service, including the time of operations for maintenance checks and readiness testing, as recorded by the non-resettable hour meter;

f. the hours of operation for the purposes of emergency demand response, including the date, start time, and end time;

g. the hours of operation for the purposes of supplying power during periods where there was a deviation of voltage or frequency of 5% or greater below standard voltage or frequency, including the date, start time, and end time;

h. the number of hours the engine is contractually obligated to be available for the purposes of emergency demand response or deviations from normal voltage or frequency, as specified in 40 CFR 60.4211(f)(2)(ii) and (iii);

i. the hours of operation in non-emergency situations and used to supply power as part of a financial arrangement with another entity, in accordance with 40 CFR 60.4211(f)(3)(i), including the date, start time, and end time;

j. identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine; and

k. any deviation from the requirements to operate for the purpose of emergency demand response or as part of a financial arrangement with another entity, in accordance with 40 CFR 60.4211(f)(2)(ii) or (f)(3)(i).

The first annual report must cover the calendar year or part of the calendar year for which the engine started operations and must be submitted no later than March 31 of the following calendar year. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

In addition to submitting the annual report to the Northeast District office of the Ohio EPA, the annual report must also be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Opacity Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not

exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitation:

PM (PM_{10} + $PM_{2.5}$) emissions shall not exceed 0.15 gram/bhp-hr (0.20 gram/KW-hr) (filterable).

Applicable Compliance Method:

Compliance with the emission limitation (0.15-gram PM (PM_{10} + $PM_{2.5}$)/bhp-hr) shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 4 of 40 CFR 60, Subpart IIII, for diesel engines for an engine of the same model year and maximum engine power.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

c. Emission Limitation:

NO_x + NMHC emissions shall not exceed 3.0 gram/bhp-hr (4.0 gram/KW-hr).

Applicable Compliance Method:

Compliance with the emission limitation (3.0-gram NO_x + NMHC/bhp-hr) shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 4 of 40 CFR 60, Subpart IIII, for diesel engines for an engine of the same model year and maximum engine power.

If required, the permittee shall demonstrate compliance with the emission limitation through performance tests conducted in accordance with the provisions in term f)(2) below.

d. Emission Limitation:

CO emissions shall not exceed 2.6 grams/bhp-hr (3.5 grams CO/kW-hr).

Applicable Compliance Method:

Compliance with the emission limitation (2.6-gram CO/bhp-hr) shall be based on

the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 4 of 40 CFR 60, Subpart IIII, for diesel engines for an engine of the same model year and maximum engine power.

If required, the permittee shall demonstrate compliance with the emission limitation through performance tests conducted in accordance with the provisions in term f)(2) below.

e. Sulfur Content Limitations for Diesel Fuel:

The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight.

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements for the sulfur content of each shipment of diesel oil received. If meeting the standards in 40 CFR 80.510(c), this calculates to approximately 0.0015 lb SO_2/MMBtu.

f. Emission Limitation:

CO_2 emissions shall not exceed 521.6 grams/bhp-hr.

Applicable Compliance Method:

Compliance with the short-term emission limitation (521.6 grams/bhp-hr) shall be determined by the following equation:

E = A

where:

E = CO_2 emission rate, in grams of CO_2/bhp-hr;
A = emission factor, 521.6 grams of CO_2/bhp-hr (1.15 lb/hp-hr), AP-42 Section 3.3, Table 3.3-1, October 96.

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

a. in accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065.

g) Miscellaneous Requirements

(1) None.

9. Emissions Unit Group - Emergency Generators: P005 and P006

EU ID	Operations, Property and/or Equipment Description
P005	3,131 HP, diesel-fired emergency generator
P006	3,131 HP, diesel-fired emergency generator

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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 0.022 gram/bhp-hr (filterable). Nitrogen oxides (NO_x) emissions shall not exceed 0.50 gram/bhp-hr. Carbon monoxide (CO) emissions shall not exceed 2.6 gram/bhp-hr. Carbon dioxide (CO_2) emissions shall not exceed 526.6 gram/bhp-hr.
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 PM_{10}, $PM_{2.5}$, NO_x, CO, sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(F)	The permittee shall install and operate a certified Tier IV engine. The exhaust emissions from this engine shall not exceed: 0.022-gram PM/bhp-hr 0.50-gram NO_x/bhp-hr 0.14-gram VOC (NMHC)/bhp-hr 2.6 grams CO/bhp-hr Per 40 CFR 1039.105, Tier IV engines with PM emission standards at or below 0.05 gram/bhp-hr (0.07 g/kWh) are exempted from smoke emission standards.
d.	40 CFR Part 60, Subpart IIII Tier II Standards	The exhaust emissions from this engine shall not exceed: 0.15-gram PM/bhp-hr 4.8 grams NO_x + NMHC/bhp-hr 2.6 grams CO/bhp-hr Smoke emission limitations: 20% opacity during the acceleration mode 15% opacity during the lugging mode 50% opacity during the peaks in either the acceleration or lugging modes The emission limitations for PM and NO_x specified by this rule are less stringent than the emission limitations established under OAC rule 3745-31-05(F) and OAC rule 3745-31-10 through 20. The emission limitation for CO specified by this rule is equivalent to the emission limitation established under OAC rule 3745-31-05(F) and OAC rule 3745-31-10 through 20. The smoke emission limitations specified by this rule are identical to the smoke

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emission limitations specified in 40 CFR 1039.105 for Tier IV engines. Tier IV engines are exempted from the smoke emission limitations when the particulate emission limitation is below 0.05 gram/bhp-hr (0.07 g/KWh) because an engine of such low PM level has inherently low smoke emission.
e.	40 CFR 60.4207(b) 40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight. See terms b)(2)d, c)(2), d)(1), and e)(1)a.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1 - 60.19)	Table 8 to Subpart IIII of 40 CFR Part 60 – Applicability of General Provisions to Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 - 60.19 apply.
g.	40 CFR Part 63, Subpart ZZZZ	A new area source operating in compliance with 40 CFR Part 60, Subpart IIII is the demonstration of compliance for 40 CFR Part 63, Subpart ZZZZ.
h.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions shall not exceed 0.062 lb/MMBtu of actual heat input. The emission limitation specified by this rule is less stringent that the emission limitation for PE pursuant to OAC rule 3745-31-05(F).
i.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.
j.	OAC rule 3745-18-06(B)	Exemption due to having a maximum heat input less than 10 MMBtu/hr.
k.	OAC rule 3745-110-03(K)(16) and (K)(20)	Exempt.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)f.

(2) Additional Terms and Conditions

a. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).

b. The emergency stationary compression ignition (CI) internal combustion engine (ICE) is subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart IIII, the standards of performance for stationary CI ICE.

c. The emergency stationary CI ICE has been or shall be purchased certified by the manufacturer to emission standards as stringent as those identified in 40 CFR 60.4202(b)(2) and found in Tier 2 of 40 CFR 89.112, Table 1, for engines greater than or equal to 750 horsepower (560 kilowatt) and certified to the opacity standards found in 40 CFR 89.113.

d. The quality of the diesel fuel burned in this emissions unit shall meet the following specifications on an “as received” basis:

i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015-pound sulfur dioxide/MMBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight; and

ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the above-mentioned specifications shall be determined by purchase orders specifying that each shipment of oil received is ULSD compliant.

e. The emergency stationary ICE shall meet the following criteria, as applicable:

i. The stationary ICE shall be operated to provide electrical power or mechanical work during an emergency situation, to include power for critical networks or equipment at the facility when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or where the stationary ICE is used to pump water for a fire or flood, etc.;

ii. The stationary ICE may be operated under limited circumstances for emergency demand response or periods where there is a deviation of voltage or frequency of 5% or more above the standard and as specified in 40 CFR 60.4211(f); and

iii. The stationary ICE may operate as part of a financial arrangement with another entity in situations as allowed in 40 CFR 60.4211(f)(2)(ii) or (iii) and 40 CFR 60.4211(f)(3)(i).

The emergency stationary ICE must comply with the applicable requirements specified in 40 CFR 60.4211(f) in order to be considered emergency stationary ICE under 40 CFR Part 60, Subpart IIII.

f. The requirements of this rule do not apply since:

i. NO_x emissions are restricted to less than 25 tons per year; and

ii. the emissions unit is subject to a BACT limitation for NO_x.

c) Operational Restrictions

(1) The emergency stationary CI ICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and the permittee shall only change those emission–related settings that are allowed by the manufacturer. The CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89 and 40 CFR 1039, 'Control of Emissions from New and In-use Non-road CI ICE' and 40 CFR Part 1068, 'General Compliance Provisions for Highway, Stationary, and Nonroad Programs'. The permittee shall operate and maintain the stationary CI ICE to achieve the emission standards established in 40 CFR 60.4205 and the emission standards established in this permit over the entire life of the engine(s).

(2) Diesel fuel burned in the CI, ICE shall not exceed the limit for sulfur as specified by 40 CFR 80.510(b), i.e., the maximum sulfur content of diesel fuel shall not exceed 15 ppm or 0.0015% sulfur by weight.

(3) The permittee shall install a non-resettable hour meter prior to startup of the engine. Non-emergency situations, maintenance checks and readiness testing of the emergency ICE shall be limited to 100 hours per year; however, there is no time limit on operations during emergency situations. The permittee may petition the Director for approval of additional hours for maintenance checks and readiness testing. Any operation of the emergency ICE during anything other than emergency situations, non-emergency situations for 50 hours per year as described in c)(4) and maintenance or readiness testing is prohibited.

(4) The emergency stationary ICE must be operated according to the following requirements in order to be considered an emergency stationary ICE under 40 CFR Part 60, Subpart IIII, otherwise it shall meet all of the requirements for non-emergency engines.

a. The emergency stationary ICE may be used at the facility in emergency situations with no restriction on time.

b. The emergency stationary ICE may be operated for any combination of the following purposes for a maximum of 100 hours per calendar year:

i. The emergency stationary ICE may be used at the facility in non-emergency situations for 50 hours per year but cannot be used for peak

shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial agreement except where meeting all of the conditions identified in 40 CFR 60.4211(f)(3)(i).

ii. The emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. Maintenance and testing of the emergency ICE may exceed 100 hours per calendar year, if the permittee maintains records indicating that federal, state, or local standards require the additional hours, or the permittee may petition the Director for approval of additional hours for maintenance checks and readiness testing.

iii. The emergency stationary ICE may be operated for emergency demand response for periods during which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, 40 CFR 60.17), or other authorized entity (as determined by the Reliability Coordinator), has declared an Energy Emergency Alert Level 2, as defined in the NERC Reliability Standard EOP-002-3.

iv. The emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5% or greater below standard voltage or frequency.

(5) In order to qualify for the emergency standards, the permittee shall only operate the emergency stationary RICE during emergencies, for maintenance and testing, for emergency demand response, for 50 hours per year for non-emergencies situations, and as allowed in 40 CFR 60.4211(f).

d) Monitoring and/or Recordkeeping Requirements

(1) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of each purchase order that identifies the total quantity of diesel oil received and a specification that each shipment of oil received is ULSD compliant. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.

(2) The permittee shall maintain the manufacturer's certification, to the applicable Tier 2 emission standards in Table 1 of 40 CFR 89.112 or Tier emission standards equivalent or more stringent than emission standards in Table 1 of 40 CFR 89.112, on site or at a central location for all facility ICE and it shall be made available for review upon request. If the manufacturer's certification is not kept on site, the permittee shall maintain a log for the location of each ICE, and it shall identify the agency-assigned emissions unit number, the manufacturer's identification number, and the identification number of the certificate. The manufacturer's operations manual and any written instructions or procedures developed

by the permittee and approved by the manufacturer shall be maintained at the same location as the ICE.

(3) The permittee shall maintain records or a log for the operation of the engine in emergency and non-emergency service, as recorded through the non-resettable hour meter. The permittee shall keep the following information for the emergency CI stationary ICE:

a. the number of hours the engine is in operation, recorded through the non-resettable hour meter;

b. the number of hours spent in emergency operation;

c. the number of hours spent in non-emergency operation;

d. the number of hours in maintenance checks and readiness testing; and

e. what classified the operation as an emergency?

(4) If the engine is used for emergency response demand, for periods of deviation of voltage or frequency, or as part of a financial arrangement with another entity, as specified in 40 CFR 60.4211(f)(2)(ii) or (iii) or 40 CFR 60.4211(f)(3), the permittee must keep records of:

a. the notification of the emergency situation;

b. the date(s) of each emergency situation; and

c. the start time and end time of engine operation for these purposes.

e) Reporting Requirements

(1) The permittee shall submit a quarterly deviation report identifying the following:

a. any period of time (date and number of hours) that the quality of oil burned in this emissions unit did not meet the requirements established in 40 CFR 80.510(b), based upon the required fuel records; and the amount of non-compliant fuel burned on each such occasion; and

b. any exceedance of the annual 100-hour (or otherwise approved for additional hours) limitation on maintenance checks and readiness testing, as documented by the non-resettable hour meter and operations log.

(2) The permittee shall submit an annual report, including the information identified in 40 CFR 60.4214(d) for each emergency stationary ICE that is employed for one of the following purposes:

a. operates or is contractually obligated to have the engine(s) available for more than 15 hours per calendar year for emergency demand response or to supply power during periods where there is a deviation of voltage or frequency of 5% or more below the standard voltage or frequency; or

b. operates the engine(s) in non-emergency situations as identified in 40 CFR 60.4211(f)(3), including the supply of power as part of a financial agreement with another entity, where these conditions can be met.

(3) The annual report required by 40 CFR 60.4214(d) must contain the following information:

a. the company name and address where the engine is located;

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

c. the engine horsepower and model year;

d. the latitude and longitude of the engine in decimal degrees reported to the fifth decimal place;

e. the number of hours of operation in emergency and non-emergency service, including the time of operations for maintenance checks and readiness testing, as recorded by the non-resettable hour meter;

f. the hours of operation for the purposes of emergency demand response, including the date, start time, and end time;

g. the hours of operation for the purposes of supplying power during periods where there was a deviation of voltage or frequency of 5% or greater below standard voltage or frequency, including the date, start time, and end time;

h. the number of hours the engine is contractually obligated to be available for the purposes of emergency demand response or deviations from normal voltage or frequency, as specified in 40 CFR 60.4211(f)(2)(ii) and (iii);

i. the hours of operation in non-emergency situations and used to supply power as part of a financial arrangement with another entity, in accordance with 40 CFR 60.4211(f)(3)(i), including the date, start time, and end time;

j. identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine; and

k. any deviation from the requirements to operate for the purpose of emergency demand response or as part of a financial arrangement with another entity, in accordance with 40 CFR 60.4211(f)(2)(ii) or (f)(3)(i).

The first annual report must cover the calendar year or part of the calendar year for which the engine started operations and must be submitted no later than March 31 of the following calendar year. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

In addition to submitting the annual report to the Northeast District office of the Ohio EPA, the annual report must also be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report

is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Opacity Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed twenty (20) percent opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitations:

PM (PM_{10} + $PM_{2.5}$) emissions shall not exceed 0.022 gram/bhp-hr (0.03 gram/KW-hr) (filterable).

Applicable Compliance Methods:

Compliance with the emission limitation (0.022-gram PM (PM_{10} + $PM_{2.5}$)/bhp-hr) shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 1 of 40 CFR 1039.101, the Tier 4 exhaust emission standards for diesel engines greater than 750 horsepower (560 kilowatts), application – generator sets.

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

c. Emission Limitations:

NO_x emissions shall not exceed 0.50 gram/bhp-hr (0.67 gram/KW-hr).

Applicable Compliance Method:

Compliance with the emission limitation (0.50-gram NO_x/bhp-hr) shall be based on the manufacturer's certification and by maintaining the engine according to the

manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 1 of 40 CFR 1039.101, the Tier 4 exhaust emission standards for diesel engines greater than 750 horsepower (560 kilowatts), application – generator sets.

If required, the permittee shall demonstrate compliance with the emission limitation through performance tests conducted in accordance with the provisions in term f)(2) below.

d. Emission Limitation:

VOC (NMHC) emissions shall not exceed 0.14 gram/bhp-hr (0.19 gram/KW-hr).

Applicable Compliance Method:

Compliance with the emission limitation shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 1 of 40 CFR 1039.101, the Tier 4 exhaust emission standards for diesel engines greater than 750 horsepower (560 kilowatts), application – generator sets.

If required, the permittee shall demonstrate compliance with the emission limitation through performance tests conducted in accordance with the provisions in term f)(2) below.

e. Emission Limitation:

CO emissions shall not exceed 2.6 grams/bhp-hr (3.5 grams CO/kW-hr).

Applicable Compliance Method:

Compliance with the emission limitation shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The gram/bhp-hr limit is the emission limitation from Table 1 of 40 CFR 1039.101, the Tier 4 exhaust emission standards for diesel engines greater than 750 horsepower (560 kilowatts), application – generator sets.

If required, the permittee shall demonstrate compliance with the emission limitation through performance tests conducted in accordance with the provisions in term f)(2) below.

f. Sulfur Content Limitations for Diesel Fuel:

The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight.

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements for the sulfur content of each shipment of diesel oil received. If meeting the standards in 40 CFR 80.510(b), this calculates to approximately 0.0015 lb SO_2/MMBtu.

g. Emission Limitation:

CO_2 emissions shall not exceed 526.6 grams/bhp-hr.

Applicable Compliance Method:

Compliance with the short-term emission limitation (526.6 grams/bhp-hr) shall be determined by the following equation:

E = A

where:

E = CO_2 emission rate, in grams of CO_2/bhp-hr;
A = emission factor, 526.6 grams of CO_2/bhp-hr (1.16 lb/hp-hr), AP-42 Section 3.4, Table 3.4-1, October 96.

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

a. in accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065.

g) Miscellaneous Requirements

(1) None.

10. Emissions Unit Group - Ladle Preheaters: P002, P003 and P004

EU ID	Operations, Property and/or Equipment Description
P002	15.00 MMBtu/hr, natural gas-fired ladle dryer / preheater, vented to the EAF baghouse.
P003	15.00 MMBtu/hr, natural gas-fired ladle dryer / preheater, vented to the EAF baghouse.
P004	15.00 MMBtu/hr, natural gas-fired ladle dryer / preheater, vented to the EAF baghouse.

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 operation(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 are identified below. 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 20 (Prevention of Significant Deterioration of Air Quality)	Particulate matter emissions less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter emissions less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$) shall not exceed 1.1E-1 lb/hr (filterable and condensable) and 4.9E-1 ton per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 2.12 lbs/hr and 9.29 tons per rolling, 12-month period. Source design characteristic: The burner is designed to meet 1.41E-01 lb of NO_x/MMBtu. Carbon monoxide (CO) emissions shall not exceed 5.2E-1 lb/hr and 2.26 tons per rolling, 12-month period. Source design characteristic: The burner is designed to meet 3.44E-02 lb of CO/MMBtu.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Carbon dioxide equivalent (CO_2e) emissions shall not exceed 1,764.7 lbs/hr and 7,729 tons per rolling, 12-month period.
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 PM_{10}, $PM_{2.5}$, NO_x, CO, sulfur dioxide (SO_2) and volatile organic compounds (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
c.	OAC rule 3745-17-11	See b)(2)b.
d.	OAC rule 3745-17-07(A)(1)	See b)(2)c.
e.	OAC rule 3745-18-06(A)	See b)(2)d.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to the EAF baghouse at all times the emissions unit is in operation.

b. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(22), is equal to zero.

c. This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

d. This emissions unit is exempt from the sulfur dioxide emissions limitation specified in OAC rule 3745-18-06(E), pursuant to OAC rule 3745-18-06(C) because the process weight input is less than one thousand pounds per hour.

c) Operational Restrictions

(1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas 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 Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PM_{10} and $PM_{2.5}$ emissions shall not exceed 1.1E-1 lb/hr (filterable and condensable) and 4.9E-1 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = $PM_{10}/PM_{2.5}$ emission rate, in lbs/hr;
A = emission factor, 7.45E-03 lb of PE/PM_{10}/MMBtu, AP-42 Section 1.4, July 98 (filterable and condensable); and
B = 15.00 MMBtu/hr, heat input.

Compliance with the annual $PM_{10}/PM_{2.5}$ emission limitation (4.9E-1 ton per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 1.1E-1 lb/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

If required, the permittee shall demonstrate compliance with this $PM_{10}/PM_{2.5}$ emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 51, Appendix M, Methods 201 or 201A and 202.

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

b. Emission Limitation:

NO_x emissions shall not exceed 2.12 lbs/hr and 9.29 tons per rolling, 12-month period.

Source design characteristic:

The burner is designed to meet 1.41E-01 lb of NO_x/MMBtu.

The source design characteristic was established based on the information provided by the permittee in permit application #A0064851.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = NO_x emission rate, in lbs/hr;
A = emission factor, 1.41E-01 lb of NO_x/MMBtu - burner manufacturer; and
B = 15.00 MMBtu/hr, heat input.

Compliance with the annual NO_x emission limitation (9.29 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 2.12 lbs/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

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

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

c. Emission Limitation:

CO emissions shall not exceed 5.2E-1 lb/hr and 2.26 tons per rolling, 12-month period.

Source design characteristic:

The burner is designed to meet 3.44E-02 lb of CO/MMBtu.

The source design characteristic was established based on the information provided by the permittee in permit application #A0064851.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = CO emission rate, in lbs/hr;
A = emission factor, 3.44E-02 lb of CO/MMBtu - burner manufacturer; and
B = 15.00 MMBtu/hr, heat input.

Compliance with the annual CO emission limitation (2.26 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 5.2E-1 lb/hr by the maximum number of hours in a 12-month, rolling period (8,760 hrs/year) and then dividing by 2,000 lbs/ton. Therefore, if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

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

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

d. Emission Limitation:

CO_2e emissions shall not exceed 1,764.7 lbs/hr and 7,729 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the following equation:

E = A*B

where:

E = CO_2e emission rate, in lbs/hr;
A = emission factor, 1.176E+02 lbs of CO_2e/MMBtu, AP-42 Section 1.4, July 98; and
B = 15.00 MMBtu/hr, heat input.

Compliance with the annual CO_2e emission limitation (7,729 tons per rolling, 12-month period) shall be determined by multiplying the maximum hourly allowable emission limitation of 1,764.7 lbs/hr by the maximum number of hours in a 12-month, rolling period (8,760 hr/year) and then dividing by 2,000 lbs/ton. Therefore,

if compliance is demonstrated with the hourly emission limitation, then the permittee will be in compliance with the annual emission limitation.

g) Miscellaneous Requirements

(1) None.