



08/06/2026

Haley Willis Chittick
EdgeConneX New Albany North
9850 Innovation Campus Way
NEW ALBANY, OH 43054

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0145000626
Permit Number: P0140005
Permit Type: Initial Installation
County: Licking

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

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 facility has been issued for the emissions unit(s) listed in the Authority. 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 (Ohio EPA) [Weekly Review and Public Notices](#) website. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Ohio EPA document search webpage: [eDocument Search](#). 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:

Andrea Moore
Permitting Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and
Ohio EPA DAPC, Central Office
50 West Town St. Suite 700
P.O. Box 1049
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published on the Ohio EPA [Weekly Review and Public Notices](#) website. 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, Central Office at (614) 644-2270.

Sincerely,

Robert Hodanbosi
Chief, Division of Air Pollution Control

cc: U.S. EPA Region 5 - Via E-Mail Notification
Ohio EPA-CDO

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: [*Weekly Review and Public Notices / Ohio Environmental Protection Agency*](#) or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-3037 email: [*HClerk@epa.ohio.gov*](mailto:HClerk@epa.ohio.gov)

Draft Air Pollution Permit-to-Install Initial Installation

EdgeConneX New Albany North
3356 Clover Valley Road NW

New Albany, OH 43031

ID#: P0140005

Date of Action: 08/06/2026

Permit Desc: Initial PTI for a data center and power generation facility

The permit and complete instructions for requesting information or submitting comments may be obtained at: <https://ohioepa.commentinput.com> - Search by entering the permit # P0140005 in the "Search Projects" search box.

Permit Strategy Write-Up

1. Check all that apply:

☐ Synthetic Minor Determination

☐ Netting Determination

2. Source Description:

EdgeConneX New Albany North is proposing a new data center and power generation facility. The facility has applied for an initial PTI for 30 natural gas (NG) engines (P001 – P030), 12 diesel emergency engines (P031 – P042), 4 diesel black start engines (P043 – P046), and a fire pump (P047). The site will also have 12 de minimis belly tanks.

3. Facility Emissions and Attainment Status:

EdgeConneX New Albany North will be located in New Albany, Ohio and Licking County is in attainment for all criteria pollutants. The facility will emit the products of combustion from natural gas and diesel fuel.

The facility has requested voluntary restrictions to avoid PSD and comply with state-only air dispersion modeling. Only 24 non-redundant NG engines are utilized for PTE calculations as the remaining 6 redundant NG engines will only operate in the event that a non-redundant NG engine is down. The NG engines will also vent to oxidation catalyst and SCR controls. The facility requested a voluntary restriction on the daily hours of operation of the diesel engines to ensure compliance with state-only air dispersion modeling. The facility will be major source for Title V and MACT.

Table 1: Facility PTE with Restrictions and Controls (TPY)

	NO _x	CO	SO ₂	PM _{2.5/10}	VOC	HAPs	Formaldehyde	Ammonia
*NG Engines (P001 – P030)	117	173	8.14	142	195	50.6	19.0	171
**Emergency Engines (P031 – P042)	11.6	1.66	8.97E-03	0.14	0.20	9.32E-03	4.67E-04	-
**Black Start Engines (P043 – P046)	3.87	0.55	2.99E-03	0.05	0.07	3.11E-03	1.56E-04	-
**Fire Pump (P047)	0.06	0.01	0.02	1.89E-03	1.55E-03	2.83E-04	8.63E-05	-
Belly Tanks	-	-	-	-	2.95E-03	3.92E-04	-	-
Total	130	174	8.17	142	195	50.9	18.9	171

*Only the 24 non-redundant engines are included in the PTE; includes startup and shutdown emissions

**PTE is based on 100 hr/yr allowed under NSPS for maintenance/testing

4. Source Emissions:

P001 – P030:

- OAC rule 3745-17-07(A) applies
 - Units are considered inherently clean as they only burn natural gas and therefore no VE monitoring is required.
- OAC rule 3745-17-11(B)(5)(b) applies. Units are greater than 600hp and considered “large internal combustion engines.”
- OAC rule 3745-18-06(F) does not apply as the units will only burn natural gas per 18-06(A)
- OAC rule 3745-31-05(A)(3) does not apply as the PTE for NO_x, CO, VOC, SO₂, PM₁₀, and PM_{2.5} are less than 10 TPY taking into consideration the use of the oxidation catalyst and SCR controls.
- OAC rule 3745-31-05(F) applies as the facility requested the following voluntary restrictions:
 - Rolling, 12-month emissions limitations on NO_x, CO, VOC, PM_{2.5}, and formaldehyde to ensure compliance with modeled emissions and avoid PSD
 - See calculations attached to permit detail page
 - Daily emissions limitations on NO_x, CO, PM_{2.5}, formaldehyde, and ammonia to ensure compliance with modeled emissions
 - See calculations attached to permit detail page
 - NO_x, CO, and VOC emissions shall be vented to an oxidation catalyst and SCR system except during startup and shutdown
 - Daily NG usage, rolling, 12-month NG usage, and start-up/shutdown events limited to not exceed daily and rolling, 12-month emission limits
- OAC rule 3745-110-03(F)(2) applies, however, the unit is subject to equivalent or more strict emission limitations under 40 CFR Part 60, Subpart JJJJ and will comply with this rule in lieu of 110-03(F)(2) per 110-02(A)(2)(b)
- 40 CFR Part 60, Subpart JJJJ applies for a 3,400 hp, non-emergency, natural gas-fired engine with lean burn combustion and vented to an oxidation catalyst and SCR system
 - Emissions testing required
- 40 CFR Part 63, Subpart ZZZZ applies for a new 4SLB RICE
 - Emissions testing required

P031 – P046:

- OAC rule 3745-17-07(A) applies
 - Due to only emitting the products of combusting ULSD, the EUs are considered inherently clean and therefore no visible emission monitoring is required
- OAC rule 3745-17-11(B)(5)(b) applies. Units are greater than 600hp and considered “large internal combustion engines.”
- OAC rule 3745-18-06(G) does not apply as the heat input capacity for each unit is equal to or less than 10 MMBtu/hr per 18-06(B).
- OAC rule 3745-31-05(A)(3) does not apply as the PTE for all pollutants is less than 10 TPY

- OAC rule 3745-31-05(E) applies to ensure compliance with state-only modeling:
 - Max daily operation of 1 hr for each engine
- OAC rule 3745-110-03 does not apply to each unit so long as they operate for equal to or less than 500 hours during any consecutive 12-month period per 110-03(K)(2)
- 40 CFR Part 60, Subpart IIII applies
- 40 CFR Part 63, Subpart ZZZZ applies
 - Emergency stationary rice subject to limited requirements

P047:

- OAC rule 3745-17-07(A) applies
 - Due to only emitting the products of combusting ULSD, the EUs are considered inherently clean and therefore no visible emission monitoring is required
- OAC rule 3745-17-11(B)(5)(a) applies. Units are equal to or less than 600hp are considered “small internal combustion engines.”
- OAC rule 3745-18-06(G) does not apply as the heat input capacity for each unit is equal to or less than 10 MMBtu/hr per 18-06(B).
- OAC rule 3745-31-05(A)(3) does not apply as the PTE for all pollutants is less than 10 TPY
- OAC rule 3745-31-05(E) applies to ensure compliance with state-only modeling:
 - Max daily operation of 1 hr for each engine
- OAC rule 3745-110-03 does not apply as the energy output capacity is less than 500hp per 110-03(K)(3)
- 40 CFR Part 60, Subpart IIII applies
- 40 CFR Part 63, Subpart ZZZZ applies
 - Emergency stationary RICE subject to limited requirements

Air Dispersion modeling:

- ORC 3704.03(F)(3)(c) and (F)(4) applies as ammonia and formaldehyde PTE is greater than 1 TPY. The facility submitted modeling that showed ammonia emissions to be ~1.37% of the MAGLC, 1-hr formaldehyde emissions to be ~1.28% of the 1-hr MAGLC alternative limit, and annual formaldehyde emissions to be ~2.65% of the annual MAGLC alternative limit.
- The facility’s PTE for NO₂, CO, PM₁₀, PM_{2.5}, and SO₂ exceed significant emission rates and therefore modeling has been submitted and has demonstrated compliance with the respective GAILs.

5. Conclusion:

Terms and conditions in P0140005 are consistent with current DAPC policy and guidance to ensure compliance with all state and federal regulations.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
NO _x	14.0
CO	173.3
VOC	195.0
PM _{2.5}	16.4
NH ₃	85.6
CH ₂ O	4.4



**Environmental
Protection
Agency**

Draft Permit-to-Install
EdgeConneX New Albany North
Permit Number: P0140005
Facility ID: 0145000626

Effective Date: To be entered upon final issuance



**Environmental
Protection
Agency**

DRAFT

Division of Air Pollution Control
Permit-to-Install
for
EdgeConneX New Albany North

Facility ID: 0145000626
Permit Number: P0140005
Permit Type: Initial Installation
Issued: 08/06/2026
Effective: To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install
for
EdgeConneX New Albany North

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Authorization

Facility ID: 0145000626
Facility Description: EdgeConneX New Albany North
Application Number(s): A0081397
Permit Number: P0140005
Permit Type: Permit-To-Install
Permit Fee: \$7,379.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 08/06/2026
Effective Date: To be entered upon final issuance

This document constitutes issuance of a Permit-to-Install for the emissions unit(s) identified on the following page to:

EdgeConneX New Albany North
3356 Clover Valley Road NW
New Albany, OH 43031

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

Ohio EPA DAPC, Central Office
50 West Town St. Suite 700
P.O. Box 1049
Columbus, OH 43216-1049
(614) 644-2270

The above-named entity is hereby granted this Permit-to-Install for the air contaminant source(s) (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 described emissions unit(s) 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

John Logue

Director

Authorization (continued)

Permit Number: P0140005

Permit Description: Initial PTI for a data center and power generation facility

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

Emissions Unit ID:	P047
Company Equipment ID:	FP-1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: Diesel Engines

Emissions Unit ID:	P031
Company Equipment ID:	C32-1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P032
Company Equipment ID:	C32-2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P033
Company Equipment ID:	C32-3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P034
Company Equipment ID:	C32-4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P035
Company Equipment ID:	C32-5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P036
Company Equipment ID:	C32-6
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P037
Company Equipment ID:	C32-7
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P038
Company Equipment ID:	C32-8
Superseded Permit Number:	

Effective Date: To be entered upon final issuance

General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P039
Company Equipment ID:	C32-9
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P040
Company Equipment ID:	C32-10
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P041
Company Equipment ID:	C32-11
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P042
Company Equipment ID:	C32-12
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P043
Company Equipment ID:	BS-1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P044
Company Equipment ID:	BS-2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P045
Company Equipment ID:	BS-3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P046
Company Equipment ID:	BS-4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name:Natural Gas Engines

Emissions Unit ID:	P001
Company Equipment ID:	WAR-1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P002
Company Equipment ID:	WAR-2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P003

Company Equipment ID:	WAR-3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P004
Company Equipment ID:	WAR-4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P005
Company Equipment ID:	WAR-5
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P006
Company Equipment ID:	WAR-6
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P007
Company Equipment ID:	WAR-7
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P008
Company Equipment ID:	WAR-8
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P009
Company Equipment ID:	WAR-9
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P010
Company Equipment ID:	WAR-10
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P011
Company Equipment ID:	WAR-11
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P012
Company Equipment ID:	WAR-12
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P013
Company Equipment ID:	WAR-13
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P014
Company Equipment ID:	WAR-14
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P015

Company Equipment ID:	WAR-15
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P016
Company Equipment ID:	WAR-16
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P017
Company Equipment ID:	WAR-17
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P018
Company Equipment ID:	WAR-18
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P019
Company Equipment ID:	WAR-19
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P020
Company Equipment ID:	WAR-20
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P021
Company Equipment ID:	WAR-21
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P022
Company Equipment ID:	WAR-22
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P023
Company Equipment ID:	WAR-23
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P024
Company Equipment ID:	WAR-24
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P025
Company Equipment ID:	WAR-25
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P026
Company Equipment ID:	WAR-26
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P027

Effective Date: To be entered upon final issuance

Company Equipment ID:	WAR-27
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P028
Company Equipment ID:	WAR-28
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P029
Company Equipment ID:	WAR-29
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P030
Company Equipment ID:	WAR-30
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

List of Commonly Used Abbreviations

AP-42 = U.S. EPA's Compilation of Air Pollution Emissions Factors	HVLP = high volume, low pressure	PER = Permit Evaluation Report
ASTM = American Society for Testing and Materials	LAER = lowest achievable emission rate	PM = particulate matter
BACT = Best Available Control Technology	lb(s)/hr = pound(s) per hour	PM ₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns
BAT = Best Available Technology	LDAR = leak detection and repair	PM _{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
CAA = Clean Air Act	LPG = liquefied petroleum gas/propane	ppb = parts per billion
CAM = compliance assurance monitoring	MACT = maximum achievable control technology	ppm = parts per million
CEMS = continuous emissions monitoring system	MAGLC = maximum acceptable ground level concentration	PSD = Prevention of Significant Deterioration
CFC = chlorofluorocarbon	mg/m ³ = milligrams per cubic meter	psi = pounds per square inch
CFR = Code of Federal Regulations	MM = million	psia = pounds per square inch absolute
CH ₄ = methane	MMBtu = million British Thermal Units	PTE = potential-to-emit
CI = compression ignition	MSDS = material safety data sheet	PTI = Permit-to-Install
CO = carbon monoxide	MSW = municipal solid waste	PTIO = Permit-to-Install and Operate
CO ₂ = carbon dioxide	NAAQS = National Ambient Air Quality Standard	PTO = Permit-to-Operate
COM = continuous opacity monitor	NESHAP = National Emission Standard for Hazardous Air Pollutants	PWR = process weight rate
DAPC = Division of Air Pollution Control	NG = natural gas	RACM = reasonably available control measures
DO/LAA = District Office/Local Air Agency	ng/m ³ = nanograms per cubic meter	RACT = reasonably available control technology
dscf = dry standard cubic foot	NH ₃ = ammonia	RATA = relative accuracy test audit
EAC = emissions activity category	NMHC = non-methane hydrocarbons	RTO = regenerative thermal oxidizer
eDocs = electronic documents database	NMOC = non-methane organic compound	SB265 = Senate Bill 265
ERAC = Environmental Review Appeals Commission	NO = nitrogen oxide	scfm = standard cubic feet per minute
ESP = electrostatic precipitator	NO ₂ = nitrogen dioxide	SI = spark ignition
EU = emissions unit	NO _x = nitrogen oxides	SIP = State Implementation Plan
FEPTIO = Federally Enforceable Permit-to-Install and Operate	NSPS = New Source Performance Standard	SO ₂ = sulfur dioxide
FER = Fee Emissions Report	NSR = New Source Review	SSMP = startup, shutdown, and malfunction plan
FR = Federal Register	NTV = Non-Title V	TDS = total dissolved solids
GACT = generally achievable control technology	O&M = operation and maintenance	TLV = threshold limit value
GHG = greenhouse gases	OAC = Ohio Administrative Code	TO = thermal oxidizer
gr/dscf = grains per dry standard cubic foot	OC = organic compound	TPH = ton(s) per hour
H ₂ S = hydrogen sulfide	Ohio EPA = Ohio Environmental Protection Agency	TPY = ton(s) per year
H ₂ SO ₄ = sulfuric acid	ORC = Ohio Revised Code	TSP = total suspended particulates
HAP = hazardous air pollutant	Pb = lead	VE = visible particulate emissions
HCl = hydrogen chloride	PBR = Permit-By-Rule	VMT = vehicle miles traveled
HF = hydrogen fluoride	PCB = polychlorinated biphenyl	VOC = volatile organic compound
Hg = mercury	PE = particulate emissions	WPP = work practice plan
hp = horsepower	PEMS = predictive emissions monitoring system	µg/m ³ = micrograms per cubic meter

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), Compliance Requirements
 - (4) Standard Term and Condition A.8., Air Pollution Nuisance
 - (5) Standard Term and Condition A.9., Reporting Requirements
 - (6) Standard Term and Condition A.10., Applicability
 - (7) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (8) Standard Term and Condition A.14., Public Disclosure
 - (9) 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
 - (10) Standard Term and Condition A.16., Fees
 - (11) 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, Central 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, Central 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, Central 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 semiannual 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, Central 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, Central 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, Central 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, Central 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 once by twelve 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 shut down 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 any other 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 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.



**Environmental
Protection
Agency**

Draft Permit-to-Install
EdgeConneX New Albany North

Permit Number: P0140005

Facility ID: 0145000626

Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group - Natural Gas Engines: P001 through P030

EU ID	Operations, Property and/or Equipment Description
P001 – P030	Wartsila 18V50SG 18,875 kW natural gas-fired 4SLB reciprocating engine venting to an oxidation catalyst and SCR 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) b)(1)f, d)(8) through d)(11), and e)(3)

- 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 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions shall not exceed 0.062 pounds per million Btu of actual heat input.
c.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO _x , CO, VOC, SO ₂ , PM ₁₀ , and PM _{2.5} emissions from this air contaminant source because the PTE is less than 10 tons per year as vented to the oxidation catalyst and SCR system.
d.	OAC rule 3745-31-05(F)	Daily Emissions Limitations: NO_x emissions from emissions units P001 through P030 combined shall not exceed 628 pounds per day, excluding startup and shutdown emissions. CO emissions from emissions units P001 through P030 combined shall not exceed 469 pounds per day, excluding startup and shutdown emissions. PM_{2.5} emissions from emissions units P001 through P030 combined shall not exceed



		777 pounds per day, excluding startup and shutdown emissions. CH₂O emissions from emissions units P001 through P030 combined shall not exceed 51.8 pounds per day, excluding startup and shutdown emissions. NH₃ emissions from emissions units P001 through P030 combined shall not exceed 469 pounds per day, excluding startup and shutdown emissions. Rolling, 12-Month Emissions Limitations: NO_x emissions from emissions units P001 through P030 combined shall not exceed 14.0 tons per rolling, 12-month period, including startup and shutdown emissions CO emissions from emissions units P001 through P030 combined shall not exceed 173.3 tons per rolling, 12-month period, including startup and shutdown emissions. VOC emissions from emissions units P001 through P030 combined shall not exceed 195.0 tons per rolling, 12-month period, including startup and shutdown emissions. PM_{2.5} emissions from emissions units P001 through P030 combined shall not exceed 16.4 tons per rolling, 12-month period, including startup and shutdown emissions. CH₂O emissions from emissions units P001 through P030 combined shall not exceed 4.4 tons per rolling, 12-month period, including startup and shutdown emissions. See b)(2)a. below.
e.	OAC rule 3745-110-02(A)(2)(b) and OAC rule 3745-110-03(F)(2)	The permittee shall comply with 40 CFR Part 60, Subpart JJJJ in lieu of OAC Chapter 3745-110 because the emissions limitations and requirements of 40 CFR Part 60, Subpart JJJJ are more stringent than the emissions limitations and requirements of OAC Chapter 3745-110.
f.	ORC 3704.03(F)(3)(c) and (F)(4)	See d)(8) through d)(11) below.



	[Toxic Air Contaminant Statute]	
g.	40 CFR Part 60, Subpart JJJJ [40 CFR 60.4230 – 60.4248] 40 CFR 60.4233(e) [The affected source is a greater than 500 hp non-emergency natural gas-fired engine with lean burn combustion and vented to an oxidation catalyst and SCR system.]	The exhaust emissions from this engine shall not exceed: 1.0 grams of NO _x per horsepower hour or 82 ppmvd at 15% O ₂ ; 2.0 grams of CO per horsepower hour or 270 ppmvd at 15% O ₂ ; and 0.7 grams of VOC (excluding formaldehyde) per horsepower hour or 60 ppmvd at 15% O ₂ .
h.	40 CFR Part 60, Subpart A [40 CFR 60.1 – 60.19]	Table 3 to 40 CFR Part 60, Subpart JJJJ- "Applicability of General Provisions to Subpart JJJJ" identifies which parts of the General Provisions in 40 CFR Part 60.1 – 60.19 apply.
i.	40 CFR Part 63, Subpart ZZZZ [40 CFR 63.6580 - 40 CFR 63.6675] [The affected source is a new 4SLB stationary RICE with a site rating of more than 500 bhp located at a major source of HAP emissions.]	See b)(2)b. and b)(2)c. below.
j.	40 CFR Part 63, Subpart A [40 CFR 63.1 – 63.16]	Table 8 to 40 CFR Part 63, Subpart ZZZZ- "Applicability of General Provisions to Subpart ZZZZ" identifies which parts of the General Provisions in 40 CFR Part 63.1 – 63.16 apply.

(2) Additional Terms and Conditions

- a. The legally and practically enforceable emission limitations in b)(1)d. are established for the purpose of representing potential to emit (PTE) and are based on the operational restrictions contained in c)(1). The legally and practically enforceable emission limitations are voluntary restrictions.
- b. The 4SLB stationary RICE shall meet one of the following emissions limitations except during periods of startup:
 - i. Reduce CO emissions by 93 percent or more; or
 - ii. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O₂.
- c. During periods of startup, the permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations in b)(2)b. apply.

c) Operational Restrictions



- (1) The following operational restrictions have been included in this permit for the purpose of establishing legally and practically enforceable requirements which represent PTE [See b)(2)a.]:

- a. The permittee shall burn only natural gas in this emissions unit.
- b. The maximum fuel usage in emissions units P001 through P030 shall be limited by the following formulas for each day:

$$628 \text{ pounds of NO}_x \geq \sum_{i=1}^n \text{EF}_{\text{NO}_x,i} \text{NG}_i$$

$$469 \text{ pounds of CO} \geq \sum_{i=1}^n \text{EF}_{\text{CO},i} \text{NG}_i$$

$$777 \text{ pounds of PM}_{2.5} \geq \sum_{i=1}^n \text{EF}_{\text{PM}_{2.5},i} \text{NG}_i$$

$$51.8 \text{ pounds of CH}_2\text{O} \geq \sum_{i=1}^n \text{EF}_{\text{CH}_2\text{O},i} \text{NG}_i$$

$$469 \text{ pounds of NH}_3 \geq \sum_{i=1}^n \text{EF}_{\text{NH}_3,i} \text{NG}_i$$

where:

i = each emissions unit, P001 through P030

$\text{EF}_{\text{NO}_x,i}$ = the controlled NO_x emissions factor for the engine, in lb/scf, for each emissions unit, i, based on the manufacturer's technical specifications. The controlled NO_x emissions factors for emissions units P001 through P030 are provided in Table 1 below.

$\text{EF}_{\text{CO},i}$ = the controlled CO emissions factor for the engine, in lb/scf, for each emissions unit, i, based on the manufacturer's technical specifications. The controlled CO emissions factors for emissions units P001 through P030 are provided in Table 1 below.

$\text{EF}_{\text{PM}_{2.5},i}$ = the $\text{PM}_{2.5}$ emissions factor for the engine, in lb/scf, for each emissions unit, i, based on the manufacturer's technical specifications. The $\text{PM}_{2.5}$ emissions factors for emissions units P001 through P030 are provided in Table 1 below.

$\text{EF}_{\text{CH}_2\text{O},i}$ = the controlled formaldehyde emissions factor for the engine, in lb/scf, for each emissions unit, i, based on the manufacturer's technical specifications. The controlled formaldehyde emissions factors for emissions units P001 through P030 are provided in Table 1 below.

$\text{EF}_{\text{NH}_3,i}$ = the ammonia emissions factor for the engine, in lb/scf, for each emissions unit, i, based on the manufacturer's technical specifications. The ammonia emissions factors for emissions units P001 through P030 are provided in Table 1 below.

Table 1: Controlled Emissions Factors for P001 through P030 in Pounds per SCF

	NO_x	CO	VOC	$\text{PM}_{2.5}$	CH_2O	NH_3
P001 – P030	8.44E-06	1.26E-05	1.43E-05	1.05E-05	1.39E-06	1.26E-05



NG_i = the amount of fuel used by each emissions unit, i , during the day, in scf

- c. The maximum fuel usage and number of startups and shutdowns shall be limited by the following formulas for each rolling, 12-month period:

$$\begin{aligned}
 14.0 \text{ tons of NO}_x &\geq \sum_{i=1}^n \frac{EF_{NO_x,i} Q_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SUEF_{NO_x,i} SU_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SDEF_{NO_x,i} SD_i}{2,000 \frac{\text{lb}}{\text{ton}}} \\
 173.3 \text{ tons of CO} &\geq \sum_{i=1}^n \frac{EF_{CO,i} Q_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SUEF_{CO,i} SU_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SDEF_{CO,i} SD_i}{2,000 \frac{\text{lb}}{\text{ton}}} \\
 195.0 \text{ tons of VOC} &\geq \sum_{i=1}^n \frac{EF_{VOC,i} Q_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SUEF_{VOC,i} SU_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SDEF_{VOC,i} SD_i}{2,000 \frac{\text{lb}}{\text{ton}}} \\
 16.4 \text{ tons of PM}_{2.5} &\geq \sum_{i=1}^n \frac{EF_{PM_{2.5},i} Q_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SUEF_{PM_{2.5},i} SU_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SDEF_{PM_{2.5},i} SD_i}{2,000 \frac{\text{lb}}{\text{ton}}} \\
 4.4 \text{ tons of CH}_2\text{O} &\geq \sum_{i=1}^n \frac{EF_{CH_2O,i} Q_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SUEF_{CH_2O,i} SU_i}{2,000 \frac{\text{lb}}{\text{ton}}} + \sum_{i=1}^n \frac{SDEF_{CH_2O,i} SD_i}{2,000 \frac{\text{lb}}{\text{ton}}}
 \end{aligned}$$

where:

i = each emissions unit, P001 through P030

$EF_{NO_x,i}$ = the controlled NO_x emissions factor for the engine, in lb/scf, for each emissions unit, i , based on the manufacturer's technical specifications. The controlled NO_x emissions factors for emissions units P001 through P030 are provided in Table 1 under c)(1)b.

$EF_{CO,i}$ = the controlled CO emissions factor for the engine, in lb/scf, for each emissions unit, i , based on the manufacturer's technical specifications. The controlled CO emissions factors for emissions units P001 through P030 are provided in Table 1 under c)(1)b.

$EF_{VOC,i}$ = the controlled VOC emissions factor for the engine, in lb/scf, for each emissions unit, i , based on the manufacturer's technical specifications. The controlled VOC emissions factors for emissions units P001 through P030 are provided in Table 1 under c)(1)b.

$EF_{PM_{2.5},i}$ = the $PM_{2.5}$ emissions factor for the engine, in lb/scf, for each emissions unit, i , based on the manufacturer's technical specifications. The $PM_{2.5}$ emissions factors for emissions units P001 through P030 are provided in Table 1 under c)(1)b.



$EF_{CH_2O,i}$ = the controlled formaldehyde emissions factor for the engine, in lb/scf, for each emissions unit, i, based on the manufacturer's technical specifications. The controlled formaldehyde emissions factors for emissions units P001 through P030 are provided in Table 1 under c)(1)b.

Q_i = the amount of fuel used by each emissions unit, i, during the rolling, 12-month period, in scf

$SUEF_{NO_x,i}$ = the NO_x emissions factor for engine startup, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The NO_x emissions factors for startup of emissions units P001 through P030 are provided in Table 2 below.

$SUEF_{CO,i}$ = the CO emissions factor for engine startup, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The CO emissions factors for startup of emissions units P001 through P030 are provided in Table 2 below.

$SUEF_{VOC,i}$ = the VOC emissions factor for engine startup, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The VOC emissions factors for startup of emissions units P001 through P030 are provided in Table 2 below.

$SUEF_{PM_{2.5},i}$ = the $PM_{2.5}$ emissions factor for engine startup, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The $PM_{2.5}$ emissions factors for startup of emissions units P001 through P030 are provided in Table 2 below.

$SUEF_{CH_2O,i}$ = the formaldehyde emissions factor for engine startup, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The formaldehyde emissions factors for startup of emissions units P001 through P030 are provided in Table 2 below.

Table 2: Startup Emissions Factors for P001 through P030 in Pounds per Event

	NO_x	CO	VOC	$PM_{2.5}$	CH_2O
P001 – P030	13.5	13.0	3.0	3.0	0.29

SU_i = the number of startup events that occurred for each emissions unit, i, during the rolling, 12-month period

$SDEF_{NO_x,i}$ = the NO_x emissions factor for engine shutdown, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The NO_x emissions factors for shutdown of emissions units P001 through P030 are provided in Table 3 below.

$SDEF_{CO,i}$ = the CO emissions factor for engine shutdown, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The CO emissions factors for shutdown of emissions units P001 through P030 are provided in Table 3 below.

$SDEF_{VOC,i}$ = the VOC emissions factor for engine shutdown, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The VOC emissions factors for shutdown of emissions units P001 through P030 are provided in Table 3 below.

$SDEF_{PM_{2.5},i}$ = the $PM_{2.5}$ emissions factor for engine shutdown, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The $PM_{2.5}$



emissions factors for shutdown of emissions units P001 through P030 are provided in Table 3 below.

$SDEF_{CH_2O,i}$ = the formaldehyde emissions factor for engine shutdown, in lb/event, for each emissions unit, i, based on the manufacturer's technical specifications. The formaldehyde emissions factors for shutdown of emissions units P001 through P030 are provided in Table 3 below.

Table 3: Shutdown Emissions Factors for P001 through P030 in Pounds per Event

		NO _x	CO	VOC	PM _{2.5}	CH ₂ O
P001 P030	–	0.45	0.4	0.10	0.10	0.01

SD_i = the number of shutdown events that occurred for each emissions unit, i, during the rolling, 12-month period

- d. The NO_x, CO, and VOC emissions from this emissions unit shall be vented to an oxidation catalyst and SCR system at all times when the emissions unit is in operation except during startup and shutdown.
- e. The permittee must meet the following operating limitations, except during periods of engine startup:
 - i. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and
 - ii. Maintain the temperature of the engine exhaust so that the catalyst inlet temperature is greater than or equal to 450 degrees F and less than or equal to 1,350 degrees F.

(2) See 40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248).

(3) See 40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 – 63.6675).

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 install, operate, and maintain the oxidation catalyst and SCR system, including the ammonia injection system, in accordance with the manufacturer's recommendations, instructions, and/or operating manual, with any modifications deemed necessary by the permittee. The permittee shall maintain the SCR catalyst bed temperature below the maximum temperature established by the manufacturer.
- (3) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, and/or operating manual for the oxidation catalyst and SCR system, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Ohio EPA, DO/LAA upon request.
- (4) The permittee shall maintain the following information for maintenance and repairs performed on the oxidation catalyst and SCR system:
 - a. the date of the maintenance and/or repair;



- b. a description of the maintenance and/or repairs performed; and
 - c. the name of person(s) who performed the maintenance and/or repair.
- (5) The permittee shall properly install, operate, and maintain equipment that continuously monitors and records the following information for the oxidation catalyst and SCR system at all times when the associated engine is in operation:
- a. the NO_x concentration at the inlet to the control system;
 - b. the pressure drop across the control system;
 - c. the NO_x concentration at the SCR catalyst bed exhaust; and
 - d. the temperature of the SCR catalyst bed.

Each monitoring device shall be equipped with a mechanism to detect parameters that exceed manufacturer's recommended thresholds and trigger an alarm to operators when the control system is not operating within the manufacturer's recommended conditions.

- (6) The permittee shall maintain records of the following daily information for emissions units P001 through P030:
- a. the amount of natural gas burned in each make/model of engine, in scf; and
 - b. the daily NO_x, CO, PM_{2.5}, CH₂O, and NH₃ emissions from emissions units P001 through P030, combined, excluding startup and shutdown emissions, in pounds.

The daily NO_x, CO, PM_{2.5}, CH₂O, and NH₃ emissions from emissions units P001 through P030 shall be calculated using the emissions factors that are specified in Tables 1 above.

- (7) The permittee shall maintain records of the following monthly information for emissions units P001 through P030:
- a. the amount of natural gas burned in each make/model of engine, in scf;
 - b. the number of startups that occurred for each make/model of engine;
 - c. the number of shutdowns that occurred for each make/model of engine;
 - d. the rolling, 12-month summation of NO_x emissions from emissions units P001 through P030, combined, including startup and shutdown emissions, in tons;
 - e. the rolling, 12-month summation of CO emissions from emissions units P001 through P030, combined, including startup and shutdown emissions, in tons;
 - f. the rolling, 12-month summation of VOC emissions from emissions units P001 through P030, combined, including startup and shutdown emissions, in tons;
 - g. the rolling, 12-month summation of PM_{2.5} emissions from emissions units P001 through P030, combined, including startup and shutdown emissions, in tons; and
 - h. the rolling, 12-month summation of CH₂O emissions from emissions units P001 through P030, combined, including startup and shutdown emissions, in tons.

The rolling, 12-month summation of NO_x, CO, VOC, PM_{2.5}, and CH₂O emissions from emissions units P001 through P030 shall be calculated using the emissions factors that are specified in Tables 1 through 3 above.

- (8) The PTI application for EUs P001 through P047 was evaluated based on the actual materials and the design parameters of the EUs' exhaust systems, as specified by the permittee. The *Toxic Air Contaminant Statute*, ORC 3704.03(F), was applied to these EUs for each toxic air contaminant listed in OAC rule 3745-114-01 using data from the permit application; and



modeling was performed for each toxic air contaminant emitted at over one ton per year (tpy) using an air dispersion model such as AERSCREEN, AERMOD, ISCST3 or other Ohio EPA-approved model. The predicted one-hour maximum ground-level concentration results from the approved air dispersion model, were compared to the maximum acceptable ground-level concentration (MAGLC), calculated as described in Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A," as follows:

- a. The exposure limit, expressed as a time-weighted average concentration for a conventional eight-hour workday and a 40-hour workweek, for each toxic compound emitted from the EUs (as determined from the raw materials processed and/or coatings or other materials applied), has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. Threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices shall be used, if the chemical is listed; or
 - ii. Short-term exposure limit (STEL) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent eight-hour TLV.
- b. The TLV is divided by 10 to adjust the standard from the working population to the general public.
- c. This standard is adjusted to account for the duration of the exposure or the operating hours of the EUs, that is, 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week.
- d. The resulting calculation shall be used to determine the MAGLC:
$$\frac{TLV}{10} \times \frac{8}{24} \times \frac{5}{7} = 4 \frac{TLV}{168} = MAGLC$$
- e. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 TPY or more) or *worst-case* scenario:
 - i. Toxic Contaminant: ammonia
TLV (mg/m³): 17.4
Maximum Hourly Emission Rate (lb/hr): 19.6 lb/hr from EUs P001 through P030 combined
Predicted One-Hour Maximum Ground-Level Concentration (µg/m³): 5.70
MAGLC (µg/m³): 414.6
 - ii. Toxic Contaminant: formaldehyde
TLV (mg/m³): 0.12
Maximum Hourly Emission Rate for Annual Modeling (lb/hr): 1.00 from EUs P001 through P030 combined, 1.42 x 10⁻⁴ from EUs P031 through P046 combined, 2.69 x 10⁻⁴ from EU P047



Maximum Hourly Emission Rate for One-Hour Modeling (lb/hr): 2.16 from EUs P001 through P030 combined, 5.19×10^{-4} from EUs P031 through P046 combined, 4.72×10^{-3} from EU P047

Predicted Annual and One-Hour Maximum Ground-Level Concentration ($\mu\text{g}/\text{m}^3$): 0.021 (annual) and 0.63 (1-hour)

Alternative acceptable concentration ($\mu\text{g}/\text{m}^3$): 0.8 (annual) and 49 (1-hour max)

The permittee has demonstrated that emissions of ammonia and formaldehyde from EUs P001 through P047 are calculated to be less than 80 percent of the MAGLC for ammonia and less than 80 percent of the 1-hour max alternative acceptable concentration for formaldehyde; any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F).

- (9) Prior to making any physical changes to or changes in the method of operation of the EUs that could impact the parameters or values that were used in the predicted one-hour maximum ground-level concentration, the permittee shall re-model any change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the one-hour maximum ground-level concentration include, but are not limited to, the following:
- Changes in the composition of the materials used or the use of new materials, that would result in the emissions of a new toxic air contaminant with a lower TLV than the lowest TLV previously modeled.
 - Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application.
 - Physical changes to the EUs or exhaust parameters (for example, increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines the *Toxic Air Contaminant Statute*, ORC 3704.03(F), will be satisfied for the above changes, Ohio EPA will not consider a change to be a *modification* under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), has been documented. If each change meets the definition of a *modification*, the permittee shall apply for and obtain a final PTI prior to the change. The director may consider any significant departure from the operations of the EUs described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground-level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the *Toxic Air Contaminant Statute* ORC 3704.03(F):
- A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (for example, the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.).
 - The MAGLC for each significant toxic contaminant or worst-case contaminant, calculated per the *Toxic Air Contaminant Statute*, ORC 3704.03(F).



- c. A copy of the computer model run(s), that established the predicted one-hour maximum ground-level concentration that demonstrated the EUs to be in compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions.
 - d. The documentation of the initial evaluation of compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the EUs or the materials applied.
- (11) The permittee shall maintain a record of any change made to a parameter or value entered in the dispersion model used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted one-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (12) See 40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248).
- (13) See 40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 – 63.6675).
- 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.
 - (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. All exceedances of the daily NO_x, CO, PM_{2.5}, CH₂O, and NH₃ emissions limitations; and
 - b. All exceedances of the rolling, 12-month NO_x, CO, VOC, PM_{2.5}, and CH₂O emissions limitations.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions in Section A of this permit.
 - (3) The permittee shall submit annual reports that include any changes to any parameter or value entered in the dispersion model used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted one-hour maximum ground-level concentration. The report shall include:
 - a. The original model input.
 - b. The updated model input.
 - c. The reason for each change to any input parameter.
 - d. A summary of the results of the updated modeling, including the input changes.
 - e. A statement that the model results indicate that the one-hour maximum ground-level concentration is less than 80 percent of the MAGLC.

If no changes to the emissions, EUs or the exhaust stacks have been made during the reporting period, then the report shall include a statement to that effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.
 - (4) See 40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248).
 - (5) See 40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 – 63.6675).

f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this EU in accordance with the following requirements:
- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the EU will be operated, but not later than 180 days after initial startup of the EU.
 - b. The emission testing shall be conducted to demonstrate initial compliance with the NO_x, CO, and VOC emissions standards established under 40 CFR 60.4233(e), and the minimum CO reduction requirement or the formaldehyde concentration limitation established under 40 CFR 63.6600(b). The emission testing shall be conducted to verify the manufacturer's controlled emissions factors specified in Table 1 of c)(1)b. above.
 - c. Subsequent performance tests for NO_x, CO, and VOC shall be conducted every 8,760 hours or 3 years, whichever comes first in accordance with 40 CFR 60.4243(b)(2)(ii).
 - d. Subsequent performance tests for CO reduction or formaldehyde concentration shall be conducted semiannually in accordance with Table 3 to 40 CFR Part 63, Subpart ZZZZ. The frequency of subsequent performance tests may be reduced to annually after compliance has been demonstrated during two consecutive tests. If the results of any subsequent annual performance test indicate the EU is not in compliance with the CO or formaldehyde emission limitations, or the EU deviates from any operating limitations, then semiannual performance tests must be resumed.
 - e. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations and verify the emissions factors established based on the manufacturer's technical specifications:

Emissions Factors	Limits/Emissions	Test Methods and Procedures
NO _x , CO, and VOC limits established pursuant to 40 CFR Part 60, Subpart JJJJ		The methods and procedures specified in 40 CFR 60.4244 and Table 2 to 40 CFR Part 60, Subpart JJJJ.
CO reduction requirement or the formaldehyde concentration limitation established pursuant to 40 CFR Part 63, Subpart ZZZZ		The methods and procedures specified in 40 CFR 63.6620 and Table 4 to 40 CFR Part 63, Subpart ZZZZ
NO _x emissions factor in Table 1 of c)(1)b.		Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A
CO emissions factor in Table 1 of c)(1)b.		Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A

VOC emissions factor in Table 1 of c)(1)b.	VOC emissions shall be calculated by summing the VOC emissions, as propane, and formaldehyde emissions. The VOC emissions, as propane, shall be determined using Methods 1 through 4 and 18 or 25A, as applicable, of 40 CFR Part 60, Appendix A. The formaldehyde emissions shall be determined using Methods 1 through 4 of 40 CFR Part 60, Appendix A, and Method 320 or 323 of 40 CFR Part 63, Appendix A or ASTM D6348-03, provided in ASTM D6348-03 Annex A5, the percent R must be greater than or equal to 70 and less than or equal to 130.
PM _{2.5} emissions factor in Table 1 of c)(1)b.	Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201A and 202 of 40 CFR Part 51, Appendix M
CH ₂ O emissions factor in Table 1 of c)(1)b.	The CH ₂ O emissions shall be determined using Methods 1 through 4 of 40 CFR Part 60, Appendix A, and Method 320 or 323 of 40 CFR Part 63, Appendix A or ASTM D6348-03, provided in ASTM D6348-03 Annex A5, the percent R must be greater than or equal to 70 and less than or equal to 130.
NH ₃ emissions factor in Table 1 of c)(1)b.	Methods 1 through 4 of 40 CFR Part 60, Appendix A and Method 320 of 40 CFR part 63, Appendix A or Conditional Test Method 027.

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

- f. During the emissions testing, the EU shall be operated under operational conditions approved in advance by the appropriate Ohio DO/LAA. 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 (ITT) notification form described below, the permittee shall provide a description of the EU 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 appropriate Ohio EPA DO/LAA 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 60 days prior to the proposed test date(s), the permittee shall submit an ITT notification to the appropriate Ohio EPA DO/LAA. The ITT notification shall describe in detail the proposed test methods and procedures, the EU 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 DO/LAA's refusal to accept the results of the emission test(s).

- h. Personnel from the appropriate Ohio EPA DO/LAA 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 EU and the testing procedures provide a valid characterization of the emissions from the EU 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(s) responsible for the tests and submitted to the appropriate Ohio EPA DO/LAA within 60 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA DO/LAA.

(2) 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. Emissions Limitation

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

Applicable Compliance Method

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR Part 60, Appendix A.

b. Emissions Limitation

Particulate emissions shall not exceed 0.062 pounds per million Btu of actual heat input.

Applicable Compliance Method

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

c. Emissions Limitations

NO_x emissions from emissions units P001 through P030 combined shall not exceed 628 pounds per day, excluding startup and shutdown emissions.

CO emissions from emissions units P001 through P030 combined shall not exceed 469 pounds per day, excluding startup and shutdown emissions.

PM_{2.5} emissions from emissions units P001 through P030 combined shall not exceed 777 pounds per day, excluding startup and shutdown emissions.

CH₂O emissions from emissions units P001 through P030 combined shall not exceed 51.8 pounds per day, excluding startup and shutdown emissions.

NH₃ emissions from emissions units P001 through P030 combined shall not exceed 469 pounds per day, excluding startup and shutdown emissions.

Applicable Compliance Method



Compliance with these emissions limitations shall be determined in accordance with the recordkeeping specified in d)(6) above.

d. Emissions Limitations

NO_x emissions from emissions units P001 through P030 combined shall not exceed 14.0 tons per rolling, 12-month period, including startup and shutdown emissions

CO emissions from emissions units P001 through P030 combined shall not exceed 173.3 tons per rolling, 12-month period, including startup and shutdown emissions.

VOC emissions from emissions units P001 through P030 combined shall not exceed 195.0 tons per rolling, 12-month period, including startup and shutdown emissions.

PM_{2.5} emissions from emissions units P001 through P030 combined shall not exceed 16.4 tons per rolling, 12-month period, including startup and shutdown emissions.

CH₂O emissions from emissions units P001 through P030 combined shall not exceed 4.4 tons per rolling, 12-month period, including startup and shutdown emissions.

Applicable Compliance Method

Compliance with these emissions limitations shall be determined in accordance with the recordkeeping specified in d)(7) above.

e. Emissions Limitations

The exhaust emissions from this engine shall not exceed:

1.0 grams of NO_x per horsepower hour or 82 ppmvd at 15% O₂;

2.0 grams of CO per horsepower hour or 270 ppmvd at 15% O₂; and

0.7 grams of VOC (excluding formaldehyde) per horsepower hour or 60 ppmvd at 15% O₂.

Applicable Compliance Method

Compliance shall be demonstrated through emissions testing performed in accordance with f)(1) above and the requirements specified in 40 CFR 60.4243(b)(2), 40 CFR 60.4244, and Table 2 to 40 CFR Part 60, Subpart JJJJ.

f. Emissions Limitation

The 4SLB stationary RICE shall meet one of the following emissions limitations except during periods of startup: reduce CO emissions by 93 percent or more; or limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O₂.

Applicable Compliance Method

Initial compliance shall be demonstrated through emissions testing performed in accordance with f)(1) above and the requirements specified in 40 CFR 63.6630 and Table 5 to 40 CFR Part 63, Subpart ZZZZ. Continuous compliance shall be demonstrated through emissions testing performed in accordance with f)(1) above and the requirements specified in 40 CFR 63.6640 and Table 6 to 40 CFR Part 63, Subpart ZZZZ.

g) Miscellaneous Requirements

(1) None.

2. Emissions Unit Group - Diesel Engines: P031 through P047

EU ID	Operations, Property and/or Equipment Description
P031 – P042	Cat C32 1000 kW Diesel-Fired Emergency Generator
P043 – P046	Diesel-Fired Black Start Engine

- 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) b)(1)d., b)(1)f., c)(2), d)(7) through d)(10), and e)(2)

- 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 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions from the engine's exhaust shall not exceed 0.062 lb/MMBtu actual heat input.
c.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO _x , CO, VOC, PM ₁₀ , PM _{2.5} and SO ₂ emissions from this air contaminant source since the potentials to emit are less than 10 tons per year.
d.	OAC rule 3745-31-05(E) [State-only enforceable restriction to comply with state-only modeling]	See c)(2) below.
e.	OAC rule 3745-110-03	See b)(2)e. below.
f.	ORC 3704.03(F)(3)(c) and (F)(4) [Toxic Air Contaminant Statute]	See d)(7) through d)(10) below.
g.	40 CFR Part 60, Subpart IIII 40 CFR 60.4202(b)(2) 40 CFR 60.4205(b) 40 CFR 60.4207(b)	The emissions unit shall be certified to meet the following emissions standards: 0.20 grams PM/kW-hr;



	40 CFR Part 1039, Appendix I, Tier 2 40 CFR 1039.105	6.4 grams NO _x + NMHC/kW-hr; 3.5 grams CO/kW-hr; 20 percent opacity during the acceleration mode; 15 percent opacity during the lugging mode; and 50 percent opacity during the peaks in either the acceleration or lugging modes. See b)(2)a. through b)(2)d. and c)(1) below.
h.	40 CFR Part 60, Subpart A	Table 8 to 40 CFR Part 60, Subpart IIII- "Applicability of General Provisions to Subpart IIII" identifies which parts of the General Provisions in 40 CFR Part 60.1-19 apply.
i.	40 CFR Part 63, Subpart ZZZZ [40 CFR 63.6580 - 40 CFR 63.6675] [The affected source is a new emergency stationary reciprocating internal combustion engine (RICE) with a site rating of more than 500 brake HP located at a major source of HAP emissions.]	See b)(2)f. below.

(2) Additional Terms and Conditions

- a. 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.
- b. 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), including the Tier 2 standards in 40 CFR 1039, Appendix I for engines greater than or equal to 750 horsepower (560 kilowatt) and the smoke standards as specified in 40 CFR 1039.105.
- c. The emergency stationary ICE must comply with the applicable requirements specified in 40 CFR 60.4211(f) in order to be considered an emergency stationary ICE under Part 60, Subpart IIII.
- d. The emergency stationary CI ICE shall burn only ultra-low sulfur diesel (ULSD) that meets the following per-gallon standards:
 - i. A maximum sulfur content of 15 ppm (0.0015% sulfur by weight); and
 - ii. A cetane index or aromatic contents, as follows:
 - (a) A minimum cetane index of 40; or
 - (b) A maximum aromatic content of 35 volume percent.
- e. For the purpose of meeting the exemption in OAC rule 3745-110-03(K)(2), the emergency stationary CI ICE shall not be operated in any consecutive 12-month



period to equal or exceed 500 hours of operation. If the engine operation equals or exceeds 500 hours during any consecutive 12-month period, the NOx emissions shall not exceed 3.0 g/hp-hr; and the permittee shall demonstrate compliance in accordance with OAC 3745-110-03(H) and OAC rule 3745-110-05.

- f. Pursuant to 40 CFR 63.6590(b)(1)(i), this emissions unit does not have to meet the requirements of 40 CFR Part 63, Subparts A and ZZZZ, except for the initial notification requirements of 40 CFR 63.6645(f).

c) **Operational Restrictions**

- (1) The emergency stationary CI ICE 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 60, Subpart IIII; 40 CFR Part 1039, Control of Emissions from New and In-use Nonroad CI Engines; and 40 CFR Part 1068, the General Compliance Provisions for Highway, Stationary, and Nonroad 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.
- (2) The maximum daily operating hours for this emissions unit shall not exceed 1 hour.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall maintain the manufacturer's certification, to the applicable Tier 2 emission standards in 40 CFR 1039, Appendix I, 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.
- (2) The permittee shall maintain documents provided by the oil supplier for each shipment of fuel oil to demonstrate compliance with the ULSD requirement. These documents must include the receipt or bill of lading that includes confirmation that the fuel meets the ULSD standard.
- (3) For each day during which the permittee burns a fuel other than ULSD, the permittee shall maintain a record of the type, percent sulfur content, and quantity of fuel burned in this emissions unit.
- (4) The emergency stationary CI ICE shall be installed with a non-resettable hour meter prior to startup of the engine.
- (5) The permittee shall maintain daily records of the total number of hours the engine was in operation.
- (6) The permittee shall maintain monthly records of the following information:
 - a. the total number of hours the engine was in operation;
 - b. the number of hours spent in emergency operation;
 - c. what classified the operation as an emergency;
 - d. the number of hours spent in non-emergency operation;
 - e. the number of hours in maintenance checks and readiness testing; and



- f. the rolling, 12-month summation of the number of hours the engine was in operation.
- (7) The PTI application for EUs P001 through P047 was evaluated based on the actual materials and the design parameters of the EUs' exhaust systems, as specified by the permittee. The *Toxic Air Contaminant Statute*, ORC 3704.03(F), was applied to these EUs for each toxic air contaminant listed in OAC rule 3745-114-01 using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year (tpy) using an air dispersion model such as AERSCREEN, AERMOD, ISCST3 or other Ohio EPA-approved model. The predicted one-hour maximum ground-level concentration results from the approved air dispersion model, were compared to the maximum acceptable ground-level concentration (MAGLC), calculated as described in Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A," as follows:
- a. The exposure limit, expressed as a time-weighted average concentration for a conventional eight-hour workday and a 40-hour workweek, for each toxic compound emitted from the EUs (as determined from the raw materials processed and/or coatings or other materials applied), has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
- i. Threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices shall be used, if the chemical is listed; or
- ii. Short-term exposure limit (STEL) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent eight-hour TLV.
- b. The TLV is divided by 10 to adjust the standard from the working population to the general public.
- c. This standard is adjusted to account for the duration of the exposure or the operating hours of the EUs, that is, 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week.
- d. The resulting calculation shall be used to determine the MAGLC:
- $$\frac{TLV}{10} \times \frac{8}{24} \times \frac{5}{7} = 4 \frac{TLV}{168} = MAGLC$$
- e. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 TPY or more) or *worst-case* scenario:
- i. Toxic Contaminant: formaldehyde
- TLV (mg/m³): 0.12
- Maximum Hourly Emission Rate for Annual Modeling (lb/hr): 0.997 from EUs P001 through P030 combined, 1.42×10^{-4} from EUs P031 through P046 combined, 2.69×10^{-4} from EU P047
- Maximum Hourly Emission Rate for One-Hour Modeling (lb/hr): 2.16 from EUs P001 through P030 combined, 5.19×10^{-4} from EUs P031 through P046 combined, 4.72×10^{-3} from EU P047



Predicted Annual and One-Hour Maximum Ground-Level Concentration ($\mu\text{g}/\text{m}^3$): 0.021 (annual) and 0.63 (1-hour)

Alternative acceptable concentration ($\mu\text{g}/\text{m}^3$): 0.8 (annual) and 49 (1-hour max)

The permittee has demonstrated that emissions of formaldehyde from EUs P001 through P047 are calculated to be less than 80 percent of the 1-hour max alternative acceptable concentration for formaldehyde; any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F).

- (8) Prior to making any physical changes to or changes in the method of operation of the EUs that could impact the parameters or values that were used in the predicted one-hour maximum ground-level concentration, the permittee shall re-model any change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the one-hour maximum ground-level concentration include, but are not limited to, the following:
- Changes in the composition of the materials used or the use of new materials, that would result in the emissions of a new toxic air contaminant with a lower TLV than the lowest TLV previously modeled.
 - Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application.
 - Physical changes to the EUs or exhaust parameters (for example, increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines the *Toxic Air Contaminant Statute*, ORC 3704.03(F), will be satisfied for the above changes, Ohio EPA will not consider a change to be a *modification* under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), has been documented. If each change meets the definition of a *modification*, the permittee shall apply for and obtain a final PTI prior to the change. The director may consider any significant departure from the operations of the EUs described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground-level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (9) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the *Toxic Air Contaminant Statute* ORC 3704.03(F):
- A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (for example, the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.).
 - The MAGLC for each significant toxic contaminant or worst-case contaminant, calculated per the *Toxic Air Contaminant Statute*, ORC 3704.03(F).
 - A copy of the computer model run(s), that established the predicted one-hour maximum ground-level concentration that demonstrated the emissions units to be in compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions.



- d. The documentation of the initial evaluation of compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units or the materials applied.
- (10) The permittee shall maintain a record of any change made to a parameter or value entered in the dispersion model used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted one-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
 - (1) The permittee shall submit to Ohio EPA, DO/LAA a revised EAC form that identifies the serial number for the engine within 30 days after placement on its concrete pad.
 - (2) The permittee shall submit annual reports that include any changes to any parameter or value entered in the dispersion model used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted one-hour maximum ground-level concentration. The report shall include:
 - a. The original model input.
 - b. The updated model input.
 - c. The reason for each change to any input parameter.
 - d. A summary of the results of the updated modeling, including the input changes.
 - e. A statement that the model results indicate that the one-hour maximum ground-level concentration is less than 80 percent of the MAGLC.

If no changes to the emissions, EUs or the exhaust stacks have been made during the reporting period, then the report shall include a statement to that effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.
 - (3) See 40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 – 63.6675).
- 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. Emissions Limitation

Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as specified by rule.

Applicable Compliance Method

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR Part 60, Appendix A.
 - b. Emissions Limitation

Particulate emissions from the engine's exhaust shall not exceed 0.062 lb/MMBtu actual heat input.

Applicable Compliance Method



Compliance shall be determined based on the manufacturer's technical data sheet specifying maximum PM emissions rates that are equal to or less than 0.05 g/kWh (0.04 g/hp-hr) at 100% load and 0.05 g/kWh (0.03 g/hp-hr) at 75% load.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

c. Emissions Limitations

The emissions unit shall be certified to meet the following emissions standards:

0.20 grams PM/kW-hr;

6.4 grams NO_x + NMHC/kW-hr; and

3.5 grams CO/kW-hr;

20 percent opacity during the acceleration mode;

15 percent opacity during the lugging mode; and

50 percent opacity during the peaks in either the acceleration or lugging modes.

Applicable Compliance Method

Compliance with the emissions limitations shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's instructions.

g) Miscellaneous Requirements

(1) None.

3. P047, FP-1

Operations, Property and/or Equipment Description:

Diesel Fire Pump

- 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) b)(1)d., b)(1)f., c)(2), d)(7) through d)(10), and e)(2)

- 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 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions from the engine's exhaust shall not exceed 0.310 lb/MMBtu actual heat input.
c.	OAC rule 3745-31-05(A)(3)(a)(ii)	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO _x , CO, VOC, PM ₁₀ , PM _{2.5} and SO ₂ emissions from this air contaminant source since the potentials to emit are less than 10 tons per year.
d.	OAC rule 3745-31-05(E) [State-only enforceable restriction to comply with state-only modeling]	See c)(2) below.
e.	OAC rule 3745-110-03	See b)(2)e. below.
f.	ORC 3704.03(F)(3)(c) and (F)(4) [Toxic Air Contaminant Statute]	See d)(7) through d)(10) below.
g.	40 CFR Part 60, Subpart IIII 40 CFR 60.4202(d) 40 CFR 60.4205(c) 40 CFR 60.4207(b) 40 CFR Part 1039, Appendix I, Tier 3 40 CFR 1039.105	The emissions unit shall be certified to meet the following emissions standards: 0.20 grams PM/kW-hr; 4.0 grams NO _x + NMHC/kW-hr; 3.5 grams CO/kW-hr; 20 percent opacity during the acceleration mode;



		15 percent opacity during the lugging mode; and 50 percent opacity during the peaks in either the acceleration or lugging modes. See b)(2)a. through b)(2)d. below.
h.	40 CFR Part 60, Subpart A	Table 8 to 40 CFR Part 60, Subpart IIII- "Applicability of General Provisions to Subpart IIII" identifies which parts of the General Provisions in 40 CFR Part 60.1-19 apply.
i.	40 CFR Part 63, Subpart ZZZZ [40 CFR 63.6580 - 40 CFR 63.6675] [The affected source is a new emergency stationary reciprocating internal combustion engine (RICE) with a site rating of more than 500 brake HP located at a major source of HAP emissions.]	See b)(2)f. below.

(2) Additional Terms and Conditions

- a. 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.
- b. 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(d), including the Tier 3 standards in 40 CFR 1039, Appendix I for engines greater than or equal to 130 kilowatt and less than or equal to 560 kilowatt and the smoke standards as specified in 40 CFR 1039.105.
- c. The emergency stationary ICE must comply with the applicable requirements specified in 40 CFR 60.4211(f) in order to be considered an emergency stationary ICE under Part 60, Subpart IIII.
- d. The emergency stationary CI ICE shall burn only ULSD that meets the following per-gallon standards:
 - i. A maximum sulfur content of 15 ppm (0.0015% sulfur by weight); and
 - ii. A cetane index or aromatic contents, as follows:
 - (a) A minimum cetane index of 40; or
 - (b) A maximum aromatic content of 35 volume percent.
- e. OAC rule 3745-110-03(F) does not apply to this stationary ICE because the energy output capacity is less than 500 hp.
- f. Pursuant to 40 CFR 63.6590(b)(1)(i), this emissions unit does not have to meet the requirements of 40 CFR Part 63, Subparts A and ZZZZ, except for the initial notification requirements of 40 CFR 63.6645(f).

c) Operational Restrictions



- (1) The emergency stationary CI ICE 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 60, Subpart IIII; 40 CFR Part 1039, Control of Emissions from New and In-use Nonroad CI Engines; and 40 CFR 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) The maximum daily operating hours for this emissions unit shall not exceed 1 hour.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall maintain the manufacturer's certification, to the applicable Tier 3 emission standards in 40 CFR 1039, Appendix I, 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.
 - (2) The permittee shall maintain documents provided by the oil supplier for each shipment of fuel oil to demonstrate compliance with the ULSD requirement. These documents must include the receipt or bill of lading that includes confirmation that the fuel meets the ULSD standard.
 - (3) For each day during which the permittee burns a fuel other than ULSD, the permittee shall maintain a record of the type, percent sulfur content, and quantity of fuel burned in this emissions unit.
 - (4) The emergency stationary CI ICE shall be installed with a non-resettable hour meter prior to startup of the engine.
 - (5) The permittee shall maintain daily records of the total number of hours the engine was in operation.
 - (6) The permittee shall maintain monthly records of the following information:
 - a. the total number of hours the engine was in operation;
 - b. the number of hours spent in emergency operation;
 - c. what classified the operation as an emergency;
 - d. the number of hours spent in non-emergency operation;
 - e. the number of hours in maintenance checks and readiness testing; and
 - f. the rolling, 12-month summation of the number of hours the engine was in operation.
 - (7) The PTI application for EUs P001 through P047 was evaluated based on the actual materials and the design parameters of the EUs' exhaust systems, as specified by the permittee. The *Toxic Air Contaminant Statute*, ORC 3704.03(F), was applied to these EUs for each toxic air contaminant listed in OAC rule 3745-114-01 using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year (tpy) using an air dispersion model such as AERSCREEN, AERMOD, ISCST3 or other Ohio EPA-approved model. The predicted one-hour maximum ground-level concentration results from the approved air dispersion model, were compared to the maximum acceptable ground-level



concentration (MAGLC), calculated as described in Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A," as follows:

- a. The exposure limit, expressed as a time-weighted average concentration for a conventional eight-hour workday and a 40-hour workweek, for each toxic compound emitted from the EUs (as determined from the raw materials processed and/or coatings or other materials applied), has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. Threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices shall be used, if the chemical is listed; or
 - ii. Short-term exposure limit (STEL) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent eight-hour TLV.
- b. The TLV is divided by 10 to adjust the standard from the working population to the general public.
- c. This standard is adjusted to account for the duration of the exposure or the operating hours of the EUs, that is, 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week.
- d. The resulting calculation shall be used to determine the MAGLC:

$$\frac{TLV}{10} \times \frac{8}{24} \times \frac{5}{7} = 4 \frac{TLV}{168} = MAGLC$$

- e. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 TPY or more) or *worst-case* scenario:
 - i. Toxic Contaminant: formaldehyde
TLV (mg/m³): 0.12
Maximum Hourly Emission Rate for Annual Modeling (lb/hr): 1.00 from EUs P001 through P030 combined, 1.42 x 10⁻⁴ from EUs P031 through P046 combined, 2.69 x 10⁻⁴ from EU P047
Maximum Hourly Emission Rate for One-Hour Modeling (lb/hr): 2.16 from EUs P001 through P030 combined, 5.19 x 10⁻⁴ from EUs P031 through P046 combined, 4.72 x 10⁻³ from EU P047
Predicted Annual and One-Hour Maximum Ground-Level Concentration (µg/m³): 0.021 (annual) and 0.63 (1-hour)
Alternative acceptable concentration (µg/m³): 0.8 (annual) and 49 (1-hour max)

The permittee has demonstrated that emissions of formaldehyde from EUs P001 through P047 are calculated to be less than 80 percent of the 1-hour max alternative acceptable concentration for formaldehyde; any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F).



- (8) Prior to making any physical changes to or changes in the method of operation of the EUs that could impact the parameters or values that were used in the predicted one-hour maximum ground-level concentration, the permittee shall re-model any change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the one-hour maximum ground-level concentration include, but are not limited to, the following:
- Changes in the composition of the materials used or the use of new materials, that would result in the emissions of a new toxic air contaminant with a lower TLV than the lowest TLV previously modeled.
 - Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application.
 - Physical changes to the EUs or exhaust parameters (for example, increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
- If the permittee determines the *Toxic Air Contaminant Statute, ORC 3704.03(F)*, will be satisfied for the above changes, Ohio EPA will not consider a change to be a *modification* under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the *Toxic Air Contaminant Statute, ORC 3704.03(F)*, has been documented. If each change meets the definition of a *modification*, the permittee shall apply for and obtain a final PTI prior to the change. The director may consider any significant departure from the operations of the EUs described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground-level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.
- (9) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the *Toxic Air Contaminant Statute ORC 3704.03(F)*:
- A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (for example, the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.).
 - The MAGLC for each significant toxic contaminant or worst-case contaminant, calculated per the *Toxic Air Contaminant Statute, ORC 3704.03(F)*.
 - A copy of the computer model run(s), that established the predicted one-hour maximum ground-level concentration that demonstrated the emissions units to be in compliance with the *Toxic Air Contaminant Statute, ORC 3704.03(F)*, initially and for each change that requires re-evaluation of the toxic air contaminant emissions.
 - The documentation of the initial evaluation of compliance with the *Toxic Air Contaminant Statute, ORC 3704.03(F)*, and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units or the materials applied.
- (10) The permittee shall maintain a record of any change made to a parameter or value entered in the dispersion model used to demonstrate compliance with the *Toxic Air Contaminant Statute, ORC 3704.03(F)*, through the predicted one-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.



e) Reporting Requirements

- (1) The permittee shall submit to Ohio EPA, DO/LAA a revised EAC form that identifies the serial number for the engine within 30 days after placement on its concrete pad.
- (2) The permittee shall submit annual reports that include any changes to any parameter or value entered in the dispersion model used to demonstrate compliance with the *Toxic Air Contaminant Statute*, ORC 3704.03(F), through the predicted one-hour maximum ground-level concentration. The report shall include:
 - a. The original model input.
 - b. The updated model input.
 - c. The reason for each change to any input parameter.
 - d. A summary of the results of the updated modeling, including the input changes.
 - e. A statement that the model results indicate that the one-hour maximum ground-level concentration is less than 80 percent of the MAGLC.

If no changes to the emissions, EUs or the exhaust stacks have been made during the reporting period, then the report shall include a statement to that effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

- (3) See 40 CFR Part 63, Subpart ZZZZ (40 CFR 63.6580 – 63.6675).

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. Emissions Limitation

Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Reference Method 9 in 40 CFR Part 60, Appendix A.

b. Emissions Limitation

Particulate emissions from the engine's exhaust shall not exceed 0.310 lb/MMBtu actual heat input.

Applicable Compliance Method

Compliance shall be determined based on the manufacturer's technical data sheet specifying not-to-exceed PM emissions rates that are equal to or less than 0.11 g/kW-hr.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

c. Emissions Limitations

The emissions unit shall be certified to meet the following emissions standards:



0.20 grams PM/kW-hr;
4.0 grams NO_x + NMHC/kW-hr;
3.5 grams CO/kW-hr;
20 percent opacity during the acceleration mode;
15 percent opacity during the lugging mode; and
50 percent opacity during the peaks in either the acceleration or lugging modes.

Applicable Compliance Method

Compliance with the emissions limitations shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's instructions.

g) Miscellaneous Requirements

(1) None.