



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

**RE: DRAFT PERMIT TO INSTALL
SUMMIT COUNTY
Application No: 16-02001**

DATE: 3/15/00

FirstEnergy Corp - Terex Substation
Bob Williams
76 South Main St
Akron, OH 44308

CERTIFIED MAIL

Y	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1600** will be due. Please do not submit any payment now.

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

Very truly yours,

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA
WV

ARAQMD
PA

Akron Metro Area Trans Study



Permit To Install

Issue Date: To be entered upon final issuance

Terms and Conditions

Effective Date: To be entered upon final issuance

DRAFT PERMIT TO INSTALL 16-02001

Application Number: 16-02001

APS Premise Number: 1677011100

Permit Fee: **To be entered upon final issuance**

Name of Facility: FirstEnergy Corp - Terex Substation

Person to Contact: Bob Williams

Address: 76 South Main St
Akron, OH 44308

Location of proposed air contaminant source(s) [emissions unit(s)]:

**5325 Darrow Rd
Hudson, Ohio**

Description of proposed emissions unit(s):

Temporary diesel powered electrical generating units-eight (8) portable engine/generator sets.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

3. Records Retention Requirements

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.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. 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 emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

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

7. 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.

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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 prove to be inadequate or cannot meet applicable standards.

10. 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.

11. 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).

12. Best Available Technology

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

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

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

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15. 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 this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	0.69
SO₂	12.2
CO	5.22
NO_x	99.9
VOC	1.45

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #1 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions) See A2.a - A.2.e. below.
	OAC rule 3745-31-05(D)	99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

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Facility ID: 1677011100
Emissions Unit ID: B001

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742
1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBtu}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)

99.9 tpy NO_x

99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)

1.45 tpy VOC

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

Gilchrist - 3275 Gilchrist Road, Mogadore
Pine - Fairlawn Service Center, Akron
West Akron - 345 N. Cleveland-Massillon Road, Akron
Boardman - 6409 Southern Boulevard, Youngstown
Zenith - S.R. 7 at Penelec R/W, Conneaut
Kipling/Euclid - 1422 Babbitt Road, Euclid
Krick/Northfield - 7401 Northfield Road, Walton Hills
Crestwood - 737 Bradley Road, Westlake
Darwin - 780 Canterbury Road, Westlake
Graham/Groveswood - 9200 Clinton Road, Brooklyn
Terex - 5325 Darrow Road, Hudson
Bridge - 2550 Mahoning Avenue, NW, Warren
Burton - 1430 Burton Road, SE, Warren
Elm - 2183 Hoagland-Blackstub Road, Warren
Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe
Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee

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Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B001

must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #2 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions) See A2.a - A.2.e below.
	OAC rule 3745-31-05(D)	99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B002

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742
1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBtu}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)
99.9 tpy NO_x
99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)
1.45 tpy VOC

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B002

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

- Gilchrist - 3275 Gilchrist Road, Mogadore
- Pine - Fairlawn Service Center, Akron
- West Akron - 345 N. Cleveland-Massillon Road, Akron
- Boardman - 6409 Southern Boulevard, Youngstown
- Zenith - S.R. 7 at Penelec R/W, Conneaut
- Kipling/Euclid - 1422 Babbitt Road, Euclid
- Krick/Northfield - 7401 Northfield Road, Walton Hills
- Crestwood - 737 Bradley Road, Westlake
- Darwin - 780 Canterbury Road, Westlake
- Graham/Grovewood - 9200 Clinton Road, Brooklyn
- Terex - 5325 Darrow Road, Hudson
- Bridge - 2550 Mahoning Avenue, NW, Warren
- Burton - 1430 Burton Road, SE, Warren
- Elm - 2183 Hoagland-Blackstub Road, Warren
- Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B002

Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #3 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions)
	OAC rule 3745-31-05(D)	99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B003

1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBtu}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)

99.9 tpy NO_x

99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)

1.45 tpy VOC

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B003

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

Gilchrist - 3275 Gilchrist Road, Mogadore
Pine - Fairlawn Service Center, Akron
West Akron - 345 N. Cleveland-Massillon Road, Akron
Boardman - 6409 Southern Boulevard, Youngstown
Zenith - S.R. 7 at Penelec R/W, Conneaut
Kipling/Euclid - 1422 Babbitt Road, Euclid
Krick/Northfield - 7401 Northfield Road, Walton Hills
Crestwood - 737 Bradley Road, Westlake
Darwin - 780 Canterbury Road, Westlake
Graham/Groveswood - 9200 Clinton Road, Brooklyn
Terex - 5325 Darrow Road, Hudson
Bridge - 2550 Mahoning Avenue, NW, Warren
Burton - 1430 Burton Road, SE, Warren
Elm - 2183 Hoagland-Blackstub Road, Warren
Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe
Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B003

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #4 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions) See A2.a - A.2.e below.
	OAC rule 3745-31-05(D)	99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B004

1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBtu}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)

99.9 tpy NO_x

99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)

1.45 tpy VOC

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B004

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

Gilchrist - 3275 Gilchrist Road, Mogadore
Pine - Fairlawn Service Center, Akron
West Akron - 345 N. Cleveland-Massillon Road, Akron
Boardman - 6409 Southern Boulevard, Youngstown
Zenith - S.R. 7 at Penelec R/W, Conneaut
Kipling/Euclid - 1422 Babbitt Road, Euclid
Krick/Northfield - 7401 Northfield Road, Walton Hills
Crestwood - 737 Bradley Road, Westlake
Darwin - 780 Canterbury Road, Westlake
Graham/Groveswood - 9200 Clinton Road, Brooklyn
Terex - 5325 Darrow Road, Hudson
Bridge - 2550 Mahoning Avenue, NW, Warren
Burton - 1430 Burton Road, SE, Warren
Elm - 2183 Hoagland-Blackstub Road, Warren
Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe
Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B004

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #5 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions) See A2.a - A.2.e below.
	OAC rule 3745-31-05(D)	99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B005

1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBtu}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)

99.9 tpy NO_x

99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)

1.45 tpy VOC

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B005

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

Gilchrist - 3275 Gilchrist Road, Mogadore
Pine - Fairlawn Service Center, Akron
West Akron - 345 N. Cleveland-Massillon Road, Akron
Boardman - 6409 Southern Boulevard, Youngstown
Zenith - S.R. 7 at Penelec R/W, Conneaut
Kipling/Euclid - 1422 Babbitt Road, Euclid
Krick/Northfield - 7401 Northfield Road, Walton Hills
Crestwood - 737 Bradley Road, Westlake
Darwin - 780 Canterbury Road, Westlake
Graham/Grovewood - 9200 Clinton Road, Brooklyn
Terex - 5325 Darrow Road, Hudson
Bridge - 2550 Mahoning Avenue, NW, Warren
Burton - 1430 Burton Road, SE, Warren
Elm - 2183 Hoagland-Blackstub Road, Warren
Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe
Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B005

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #6 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions) See A2.a - A.2.e below.
	OAC rule 3745-31-05(D)	99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B006

1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBtu}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)

99.9 tpy NO_x

99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)

1.45 tpy VOC

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B006

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

Gilchrist - 3275 Gilchrist Road, Mogadore
Pine - Fairlawn Service Center, Akron
West Akron - 345 N. Cleveland-Massillon Road, Akron
Boardman - 6409 Southern Boulevard, Youngstown
Zenith - S.R. 7 at Penelec R/W, Conneaut
Kipling/Euclid - 1422 Babbitt Road, Euclid
Krick/Northfield - 7401 Northfield Road, Walton Hills
Crestwood - 737 Bradley Road, Westlake
Darwin - 780 Canterbury Road, Westlake
Graham/Groveswood - 9200 Clinton Road, Brooklyn
Terex - 5325 Darrow Road, Hudson
Bridge - 2550 Mahoning Avenue, NW, Warren
Burton - 1430 Burton Road, SE, Warren
Elm - 2183 Hoagland-Blackstub Road, Warren
Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe
Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B006

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #7 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions) See A2.a - A.2.e below.
	OAC rule 3745-31-05(D)	99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B007

1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBtu}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)

99.9 tpy NO_x

99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)

1.45 tpy VOC

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B007

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

Gilchrist - 3275 Gilchrist Road, Mogadore
Pine - Fairlawn Service Center, Akron
West Akron - 345 N. Cleveland-Massillon Road, Akron
Boardman - 6409 Southern Boulevard, Youngstown
Zenith - S.R. 7 at Penelec R/W, Conneaut
Kipling/Euclid - 1422 Babbitt Road, Euclid
Krick/Northfield - 7401 Northfield Road, Walton Hills
Crestwood - 737 Bradley Road, Westlake
Darwin - 780 Canterbury Road, Westlake
Graham/Groveswood - 9200 Clinton Road, Brooklyn
Terex - 5325 Darrow Road, Hudson
Bridge - 2550 Mahoning Avenue, NW, Warren
Burton - 1430 Burton Road, SE, Warren
Elm - 2183 Hoagland-Blackstub Road, Warren
Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe
Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B007

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Temporary Portable Diesel Generator Set #8 - (11.76 mmBTU/hr, 1,635 BHP) Cummins Model KTA50-G3	OAC rule 3745-31-05(A)(3)	0.062 lb particulates per mmBtu actual heat input 0.69 tpy particulates 5.15 lb/hr sulfur dioxide (SO ₂) 12.2 tpy SO ₂ 2.20 lb/hr carbon monoxide (CO) 5.22 tpy CO 42.17 lbs/hr nitrogen oxides (NO _x) 99.9 tpy NO _x 0.61 lbs/hr volatile organic compounds (VOC) 1.45 tpy VOC 10% opacity as a 6-minute average, except during start-up and shutdown (stack emissions)
	OAC rule 3745-31-05(D)	See A2.a - A.2.e below. 99.9 tpy NO _x for entire facility (emissions units B001 - B008), as a rolling 12-month summation. See A.2.f below.
	OAC rule 3745-17-07(A)	See A.2.g below.
	OAC rule 3745-17-11(B)(5)(b)	See A.2.g below.

| OAC rule 3745-18-06(G)

| See A.2.g below.

2. Additional Terms and Conditions

- 2.a** The permittee shall only burn low sulfur diesel fuel, containing less than 0.05% sulfur by weight, in this emissions unit.
- 2.b** The diesel generator shall be equipped with a turbocharger, variable timing, and aftercooler to minimize NO_x emissions.
- 2.c** The permittee shall neither locate nor operate more than a total of 8 generators at this facility at any time.
- 2.d** The permittee shall only relocate this emissions unit to an approved site as specified in section F.1 below.
- 2.e** The permittee shall obtain a new permit to install in the event that the generator is scrapped out and replaced with a new unit.
- 2.f** The NO_x emissions from either this emissions unit or the entire facility (B001 - B008) shall not exceed 99.9 tpy based on a rolling 12-month summation.
- 2.g** The emissions limit based on this applicable rule is equivalent or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.h** The stack height shall be no less than 9 feet at ground level.

B. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit or the entire facility shall not exceed 4,742, based upon a rolling, 12-month summation of the operating hours.

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

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1-1	3,161
1-2	4,742
1-3	4,742
1-4	4,742
1-5	4,742
1-6	4,742
1-7	4,742

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B008

1-8	4,742
1-9	4,742
1-10	4,742
1-11	4,742
1-12	4,742

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information:
 - a. the operating hours for each day; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall also submit annual reports which specify the total number operating hours for both this emissions unit and the entire facility. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

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

1.a **Emission Limitation:**

0.062 lb particulates per mmBtu actual heat input
0.69 tpy particulates

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.08 g/hp-hr.

$$(0.08 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.29 \text{ lb/hr}$$

$$(0.29 \text{ lb/hr}) * (1 \text{ hr/11.76mmBTU}) = 0.025 \text{ lb particulates per mmBTU}$$

$$(0.29 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 0.69 \text{ tpy particulates}$$

If required, the permittee shall demonstrate compliance by testing in accordance with OAC rule 3745-17-03(B)(10) and Method 5, 40 CFR Part 60, Appendix A.

1.b **Emission Limitation:**

5.15 lb/hr sulfur dioxide (SO₂)
12.2 tpy SO₂

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the facility of 1.43 g/hp-hr.

$$(1.43 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 5.15 \text{ lb/hr}$$

$$(5.15 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 12.2 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 6, 40 CFR Part 60, Appendix A.

1.c **Emission Limitation:**

2.20 lb/hr carbon monoxide (CO)
5.22 tpy CO

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.61 g/hp-hr.

$$(0.61 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 2.20 \text{ lb/hr}$$

$$(2.20 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton/2000lbs}) = 5.22 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with

Method 10, 40 CFR Part 60, Appendix A.

1.d **Emission Limitation:**

42.17 lbs/hr nitrogen oxides (NO_x)

99.9 tpy NO_x

99.9 tpy NO_x for entire facility (emissions units B001 - B008), as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 11.7 g/hp-hr.

$$(11.7 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 42.17 \text{ lb/hr}$$

$$(42.17 \text{ lbs/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 99.9 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR Part 60, Appendix A.

1.e **Emission Limitation:**

0.61 lbs/hr volatile organic compounds (VOC)

1.45 tpy VOC

Applicable Compliance Method:

Compliance shall be based upon an emission factor supplied by the manufacturer of 0.17 g/hp-hr.

$$(0.17 \text{ g/hp-hr}) * (1,635 \text{ BHP}) * (2.2046 \text{ lb/1000g}) = 0.61 \text{ lb/hr}$$

$$(0.61 \text{ lb/hr}) * (4,742 \text{ hr/yr}) * (\text{ton}/2000 \text{ lbs}) = 1.45 \text{ tpy}$$

If required, the permittee shall demonstrate compliance by testing in accordance with Method 25, 40 CFR Part 60, Appendix A.

1.f **Emission Limitation:**

10% opacity as a 6-minute average
(stack emissions)

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

F. Miscellaneous Requirements

1. Relocation of the Emissions Unit

Under the terms and conditions of permits to install numbers 16-02001 through 16-02017, the number of identical Portable Diesel Generator Sets approved to be installed at each site is limited. This emissions unit is approved for use in any one of the following sites as long as the number of units does not exceed the number authorized for that site:

Gilchrist - 3275 Gilchrist Road, Mogadore
Pine - Fairlawn Service Center, Akron
West Akron - 345 N. Cleveland-Massillon Road, Akron
Boardman - 6409 Southern Boulevard, Youngstown
Zenith - S.R. 7 at Penelec R/W, Conneaut
Kipling/Euclid - 1422 Babbitt Road, Euclid
Krick/Northfield - 7401 Northfield Road, Walton Hills
Crestwood - 737 Bradley Road, Westlake
Darwin - 780 Canterbury Road, Westlake
Graham/Groveswood - 9200 Clinton Road, Brooklyn
Terex - 5325 Darrow Road, Hudson
Bridge - 2550 Mahoning Avenue, NW, Warren
Burton - 1430 Burton Road, SE, Warren
Elm - 2183 Hoagland-Blackstub Road, Warren
Lincoln/Lloyd - 29454 Lakeland Boulevard, Wickliffe
Marble - 38040 St. Clair Street, Willoughby
Astor - 904 Moore Road, Avon

2. Notice of Relocation of the Emissions Unit to Listed Sites

The applicant shall provide a written notice to Akron Regional Air Quality Management District and the appropriate field office having jurisdiction over the new site within a minimum of thirty days after the relocation to one of the above listed sites.

FirstEnergy Corp - Terex Substation
PTI Application: 16-02001
Issued: To be entered upon final issuance

Facility ID: 1677011100
Emissions Unit ID: B008

3. Notice of Relocation of the Emissions Unit to Non Listed Sites

If this permittee wishes to move this emissions unit to a site not listed in term F.1., the permittee must first (1) obtain a new permit to install, (2) comply with the requirements of Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), or (3) comply with the requirements of OAC rule 3745-31-03(A)(1)(p)(ii).

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators

CITY/TWP Hudson

SIC CODE 4911

SCC CODE 2-01-001-01

EMISSIONS UNIT ID B001

EMISSIONS UNIT DESCRIPTION Generator 1

DATE INSTALLED 4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no

NESHAP? no

PSD? no

OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

YES

X

NO

IDENTIFY THE AIR CONTAMINANTS:

NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators

CITY/TWP Hudson

SIC CODE 4911

SCC CODE 2-01-001-01

EMISSIONS UNIT ID B002

EMISSIONS UNIT DESCRIPTION Generator 1

DATE INSTALLED 4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no

NESHAP? no

PSD? no

OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

YES

X

NO

IDENTIFY THE AIR CONTAMINANTS:

NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators CITY/TWP Hudson

SIC CODE 4911 SCC CODE 2-01-001-01 EMISSIONS UNIT ID B003

EMISSIONS UNIT DESCRIPTION Generator 1

DATE INSTALLED 4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators

CITY/TWP Hudson

SIC CODE 4911

SCC CODE 2-01-001-01

EMISSIONS UNIT ID B004

EMISSIONS UNIT DESCRIPTION Generator 1

DATE INSTALLED 4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no

NESHAP? no

PSD? no

OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

YES

X

NO

IDENTIFY THE AIR CONTAMINANTS:

NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators

CITY/TWP Hudson

SIC CODE 4911

SCC CODE

2-01-001-01

EMISSIONS UNIT ID

B005

EMISSIONS UNIT DESCRIPTION

Generator 1

DATE INSTALLED

4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no

NESHAP? no

PSD? no

OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

YES

X

NO

IDENTIFY THE AIR CONTAMINANTS:

NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators CITY/TWP Hudson

SIC CODE 4911 SCC CODE 2-01-001-01 EMISSIONS UNIT ID B006

EMISSIONS UNIT DESCRIPTION Generator 1

DATE INSTALLED 4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators CITY/TWP Hudson

SIC CODE 4911 SCC CODE 2-01-001-01 EMISSIONS UNIT ID B007

EMISSIONS UNIT DESCRIPTION Generator 1

DATE INSTALLED 4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no NESHAP? no PSD? no OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators

CITY/TWP Hudson

SIC CODE 4911

SCC CODE 2-01-001-01

EMISSIONS UNIT ID B008

EMISSIONS UNIT DESCRIPTION Generator 1

DATE INSTALLED 4/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.29 lbs/hr	0.1	0.062 lb/mmBtu	0.69
PM ₁₀					
Sulfur Dioxide		5.15 lbs/hr	1.6	5.15 lbs/hr	12.2
Organic Compounds		0.61 lb/hr	0.2	0.61 lb/hr	1.45
Nitrogen Oxides		42.17 lbs/hr	13.5	42.17 lbs/hr	99.9
Carbon Monoxide		2.20 lbs/hr	0.7	2.20 lbs/hr	5.22
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? no

NESHAP? no

PSD? no

OFFSET POLICY? no

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

low sulfur fuel, turbocharger, aftercoolers

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

YES

X

NO

IDENTIFY THE AIR CONTAMINANTS:

NOx

NEW SOURCE REVIEW FORM B

PTI Number: 16-02001

Facility ID: 1677011100

FACILITY NAME FirstEnergy Corp - Terex Substation

FACILITY DESCRIPTION 8 diesel generators

CITY/TWP Hudson

Please describe any hard copy information is being submitted with this recommendation (Please send hard copy information to Pam McGraner, DAPC Central Office - Air Quality Modeling and Planning):

NONE

Please provide any additional permit specific notes as you deem necessary:

This is the first of 17 PTI's for FirstEnergy.

Permit To Install Synthetic Minor Write-Up

A. Source Description

FirstEnergy is planning to install 8 temporary portable generators in Hudson, Ohio, Summit County.

The facility will generate electricity during the summer peaking seasons and will consist of eight 11.76 mmBtu/hr diesel-fired electric generators. FirstEnergy wishes to limit the hours of operation to avoid Title V and PSD permitting requirements.

B. Facility Emissions

The facility will emit particulates, sulfur dioxide, organic compounds, nitrogen oxides and carbon monoxide. The only pollutants that have a major source potential to emit are NO_x and SO₂. The facility has a potential to emit of 1,477 tpy NO_x and 180 tpy SO₂.

C. Operating Limitations

FirstEnergy has agreed to limit their hours of operation to 4,742 hours. This would restrict the facility's emissions to 99.9 tpy NO_x and 12.2 tpy SO₂ per 12-month period.

D. Conclusions

By restricting hours of operation, the terms and conditions of this permit to install will limit the facility's NO_x emissions to less than Title V thresholds and to avoid PSD permitting requirements. Excursion reports will be required each emissions unit to ensure compliance.

Please fill in the following for this permit:

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	0.69
SO ₂	12.2
CO	5.22
NO _x	99.9
VOC	1.45