



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

2/13/2013

Certified Mail

Don Easterling
NASA John H. Glenn Research Center - Lewis Field
21000 Brookpark Road
Cleveland, OH 44135-3191

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 1318001169
Permit Number: P0112840
Permit Type: Administrative Modification
County: Cuyahoga

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging 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 Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/dapc/pemitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
CDAQ; Pennsylvania; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install**

for

NASA John H. Glenn Research Center - Lewis Field

Facility ID: 1318001169
Permit Number: P0112840
Permit Type: Administrative Modification
Issued: 2/13/2013
Effective: 2/13/2013



Division of Air Pollution Control
Permit-to-Install
for
NASA John H. Glenn Research Center - Lewis Field

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. Federally Enforceable Standard Terms and Conditions	4
2. Severability Clause	4
3. General Requirements	4
4. Monitoring and Related Record Keeping and Reporting Requirements.....	5
5. Scheduled Maintenance/Malfunction Reporting	6
6. Compliance Requirements	6
7. Best Available Technology	7
8. Air Pollution Nuisance	7
9. Reporting Requirements	7
10. Applicability	8
11. Construction of New Sources(s) and Authorization to Install	8
12. Permit-To-Operate Application	9
13. Construction Compliance Certification	9
14. Public Disclosure	9
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations	10
16. Fees.....	10
17. Permit Transfers	10
18. Risk Management Plans	10
19. Title IV Provisions	10
B. Facility-Wide Terms and Conditions.....	11
C. Emissions Unit Terms and Conditions	13
1. B030, Generator-10x10 B114	14
2. B032, Generator-8x6 B053 (Z204).....	22



Authorization

Facility ID: 1318001169
 Facility Description: Research and development center.
 Application Number(s): M0002080
 Permit Number: P0112840
 Permit Description: Administrative modification to PTI #13-04353 (issued final 2/9/2006) for emissions unit B030 (2.3 mmBtu/hr diesel generator) and B032 (1.12 mmBtu/hr diesel generator). For B030, the modification is needed to correct nitrogen oxides and carbon monoxide lb/hr and annual limitations; update OAC rule 3745-17-07(A)(1) language; include citation of NOx RACT exemption term; correct emission factor and CO lb/hr; change emissions unit description to reflect de-rating of horse power output to 280 HP; and include citation of 40 CFR Part 63 Subpart ZZZZ terms and conditions throughout the permit document. For emissions unit B032, update OAC rule 3745-17-07(A)(1) language; include citation of 40 CFR Part 63 Subpart ZZZZ terms and conditions throughout the permit document; correct NOx emission factor typo and citation of NOx RACT exemption language.

Permit Type: Administrative Modification
 Permit Fee: \$200.00
 Issue Date: 2/13/2013
 Effective Date: 2/13/2013

This document constitutes issuance to:

NASA John H. Glenn Research Center - Lewis Field
21000 Brookpark Road
Cleveland, OH 44135-3191

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

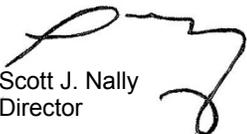
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erievue Plaza
Cleveland, OH 44114
(216)664-2297

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0112840

Permit Description: Administrative modification to PTI #13-04353 (issued final 2/9/2006) for emissions unit B030 (2.3 mmBtu/hr diesel generator) and B032 (1.12 mmBtu/hr diesel generator). For B030, the modification is needed to correct nitrogen oxides and carbon monoxide lb/hr and annual limitations; update OAC rule 3745-17-07(A)(1) language; include citation of NOx RACT exemption term; correct emission factor and CO lb/hr; change emissions unit description to reflect de-rating of horse power output to 280 HP; and include citation of 40 CFR Part 63 Subpart ZZZZ terms and conditions throughout the permit document. For emissions unit B032, update OAC rule 3745-17-07(A)(1) language; include citation of 40 CFR Part 63 Subpart ZZZZ terms and conditions throughout the permit document; correct NOx emission factor typo and citation of NOx RACT exemption language.

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

Emissions Unit ID:	B030
Company Equipment ID:	Generator-10x10 B114
Superseded Permit Number:	13-04353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B032
Company Equipment ID:	Generator-8x6 B053 (Z204)
Superseded Permit Number:	13-04353
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
NASA John H. Glenn Research Center - Lewis Field
Permit Number: P0112840
Facility ID: 1318001169
Effective Date: 2/13/2013

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Cleveland Division of Air Quality.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Cleveland Division of Air Quality. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Cleveland Division of Air Quality every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Cleveland Division of Air Quality concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Cleveland Division of Air Quality.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have



been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Cleveland Division of Air Quality. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



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

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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



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

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

16. Fees

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

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

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

19. Title IV Provisions

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



B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.



C. Emissions Unit Terms and Conditions



1. B030, Generator-10x10 B114

Operations, Property and/or Equipment Description:

10 X 10 (280 Horsepower) Diesel Generator with a maximum heat input of 2.3 mmBtu/hr

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-04353 issued 2/9/2006	Nitrogen oxide (NOx) emissions shall not exceed 10.14 pounds per hour. Carbon monoxide (CO) emissions shall not exceed 2.19 pounds per hour. Sulfur dioxide (SO ₂) emissions shall not exceed 0.7 pound per hour. The requirements of this rule include compliance with OAC rules 3745-17-07(A), and 3745-17-11(B)(5)(a), and 3745-31-05(C).
b.	OAC rule 3745-31-05(C) Synthetic Minor to avoid PSD and Nonattainment NSR	PE shall not exceed 2.58 tons per year (TPY)* NOx emissions shall not exceed 35.49 TPY* CO emissions shall not exceed 7.67 TPY* SO ₂ emissions shall not exceed 2.4 TPY* *TPY limits are based on a rolling, 12-month summation of the annual hours of operation. See c)(2) below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this engine shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule
d.	OAC rule 3745-17-11(B)(5)(a)	Particulate emissions (PE) shall not exceed 0.310 lb/mmBtu of actual heat input
e.	OAC rule 3745-18-06	The SO ₂ emission limitation specified in this rule is less stringent than the SO ₂ emission limitation established pursuant to OAC rule 3745-31-05 (A)(3).
f.	40 CFR Part 63 Subpart ZZZZ (40 CFR 63.6580 to 63.6675) In accordance with 40 CFR 63.6585, this emissions unit is a stationary reciprocating internal combustion engine (RICE) subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines.	The existing stationary compression ignition (CI) RICE, located at an area source for hazardous air pollutants (HAPs), shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ no later than May 3, 2013.
g.	40 CFR 63.6603(a) Table 2d #1 to Subpart ZZZZ	By 5/3/13, comply with the maintenance / operational requirements from the NESHAP for existing area source CI RICE less than or equal to 300 horsepower (HP)
h.	40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this engine shall not exceed 15 ppm or 0.0015% sulfur by weight.

(2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-110-03 paragraphs (A) through (F) do not apply to this emissions unit as specified under OAC rule 3745-110-03(J)(3).



- b. The quality of the diesel fuel burned in this engine shall meet the following specifications on an “as received” basis:
 - i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015 pound sulfur dioxide/MMBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight;
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent; and
 - iii. a heating value greater than 135,000 Btu/gallon.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

- c. The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 63.6595(a)(1)	The compliance date for Part 63 Subpart ZZZZ for existing CI RICE is 5/3/13.
Applicable Tables from Part 63, Subpart ZZZZ	Compliance requirements in Table 2d #1; continuous compliance in Table 6 #9; general provision from Subpart A in Table 8.
40 CFR 63.6603(a)	Maintain compliance with operational limitations in Table 2d #1 (inspection and maintenance requirements) to Part 63 Subpart ZZZZ.
40 CFR 63.6665	Meet all of the general provisions of Subpart A, from Sections 63.1 through 63.15, that apply to the CI RICE, as identified in Table 8 to Subpart ZZZZ.

c) Operational Restrictions

- (1) The permittee shall only combust diesel fuel oil, with a maximum sulfur content of 0.0015% sulfur by weight in this emissions unit.
- (2) The maximum annual operating hours for this emissions unit shall not exceed 7000 hours, based upon a rolling, 12-month summation of the operating hours.
- (3) Following the compliance date of the NESHAP, 5/3/13, unless meeting the requirements of 40 CFR 63.6625(i), the permittee shall change the oil and filter every 1,000 hours of operation or annually, whichever comes first; shall inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and shall inspect all hoses and



belts every 500 hours of operation or annually, whichever comes first, and replace them as necessary. A log shall be maintained for the hours of operation between each oil and filter change and the date of each oil/filter change and inspection.

- (4) The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 80.510(b)	Compliance with 80.510(b) for the quality of diesel fuel burned CI RICE. Standard for diesel fuel oil.
40 CFR 63.6605	General duty to minimize emissions, with good air pollution control practices for minimizing emissions; and compliance required at all times.
40 CFR 63.6625(e)	Operate & maintain RICE according to mfg. instructions and develop a facility maintenance plan for the RICE that meets the requirements of Subpart ZZZZ Table 2d #1.
40 CFR 63.6625(h)	Minimize idle and startup time, not to exceed 30 minutes.
40 CFR 63.6625(i)	Oil analysis program, option to extend the oil change frequency.

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

- (1) The permittee shall maintain records of the sulfur content of all fuels received for use in this emission unit.
- (2) For each day during which the permittee combusts a fuel other than diesel fuel with a maximum sulfur content of 0.0015% sulfur by weight in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.
- (3) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours for each month; and
 - b. the rolling, 12-month summation of the operating hours.
- (4) For each shipment of oil received for burning in this engine, the permittee shall maintain records of the total quantity of the diesel oil received and the oil supplier's (or permittee's) analyses for sulfur content, in parts per million (40 CFR 80.510) or percent by weight. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR 80.580, using the appropriate ASTM methods. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.



- (5) The permittee shall maintain a record of the diesel fuel burned in this RICE during each calendar year. The fuel oil usage can be calculated at the end of each year using the best method available to estimate the annual throughput which might include, but shall not be limited to: any flow meter installed on the engine, records of the volume of diesel fuel oil received with each delivery, the fuel oil levels recorded from the diesel storage tank, and/or the recorded or estimated hours of operation along with the manufacture's documentation of the fuel flow rate.
- (6) The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 63.6635	Except for monitor malfunctions, associated repairs, and required quality assurance activities, must continuously monitor that the RICE is operating. Must use all valid data (not recorded during malfunctions, repairs, or required quality assurance or control activities) in calculations used to report emissions or operating levels.
40 CFR 63.6655(a)	Keep records of: 1. each notification and report submitted to comply with Subpart ZZZZ; 2. the occurrence and duration of each malfunction of the RICE; and 3. corrective actions taken during each period of malfunction to minimize emissions and restore normal operations.
40 CFR 63.6640(a) and 40 CFR 63.6655(d)	Keep the records required in #9 of Table 6 to Subpart ZZZZ to demonstrate continuous compliance.
40 CFR 63.6655(e)(3)	Records of maintenance and inspections conducted in order to demonstrate compliance with Table 2d and to demonstrate that the RICE was operated and maintained according to the facility's maintenance plan.
40 CFR 80.510(b)	Maintain records for the quality of diesel fuel burned in the CI RICE, i.e., for the standards identified in 40 CFR 80.510(b).
40 CFR 63.6625(h)	Maintain a record of each idle and/or startup time that exceeded 30 minutes.
40 CFR 63.6660	Records readily available and retained for at least 5 years after the date of occurrence or date of report according to 63.10(b)(1).



e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day when a fuel other than diesel fuel with a maximum sulfur content of 0.0015% sulfur by weight was combusted in this emission unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ which identify the following:
 - a. any exceedance of the hours of operation limitation; and
 - b. any exceedance of the fuel sulfur content restriction.
- (3) The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 80.510(b)	Identify in the quarterly report any period of time (date and number of hours), during the reporting period, that the quality of oil burned in this engine did not meet the requirements established in 40 CFR 80.510(b).
40 CFR 63.6640(b);	Submit in the quarterly report each instance in which the operational requirements in Table 2d were not met.
40 CFR 63.6640(e)	Submit in the quarterly report each instance in which the applicable requirements in Table 8 to Subpart ZZZZ, the general provisions from Subpart A, were not met.

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

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
 NOx emissions shall not exceed 10.14 pounds per hour.



Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum heat input of 2.3 mmBtu/hr by the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1, 4.41lbsNO_x/mmBtu, to arrive at the pound/hour limitation.

b. Emission Limitation:

CO emissions shall not exceed 2.19 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum heat input of 2.3 mmBtu/hr by the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1, 0.95 lb CO/mmBtu, to arrive at the pound/hour limitation.

c. Emission Limitation:

SO₂ emissions shall not exceed 0.7 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum heat input of 2.3 mmBtu/hour by the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1, 0.29 lb SO₂/mmBtu, to arrive at the pound per hour limitation.

d. Emission Limitation:

PE shall not exceed 0.31 lb/mmBtu of actual heat input.

Applicable Compliance Method:

Compliance shall be based on the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1 of 0.31 lb PE/mmBtu.

e. Emission Limitations:

NO_x emissions shall not exceed 35.49 TPY

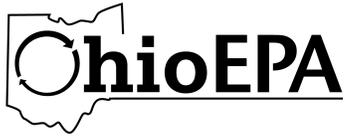
CO emissions shall not exceed 7.67TPY

SO₂ emissions shall not exceed 2.4 TPY

PE shall not exceed 2.58 TPY

Applicable Compliance Methods:

Compliance with the ton/year limitations shall be determined by multiplying the pound / hour limit by the actual annual hours of operation, based on a rolling, 12-month summation, determined from the record keeping specified in d) above and dividing by 2,000 pounds/ton.



f. Emission Limitation:

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

Applicable Compliance Method:

Compliance with the opacity limitation shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) This emissions unit was installed 1/1/1981.
- (2) This emissions unit was physically altered (de-rated) to maximum rating of 270 horsepower. The citation of 280 horsepower in the unit description is used only as a conservative estimate.



2. B032, Generator-8x6 B053 (Z204)

Operations, Property and/or Equipment Description:

8 X 6 (269 Horsepower) Diesel Generator with a maximum heat input of 1.12 mmBtu/hr

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-04353 issued 2/9/2006	Particulate emissions (PE) shall not exceed 1.5 tons per year (TPY). Nitrogen oxide (NOx) emissions shall not exceed 4.94 pounds per hour and 21.6 TPY. Carbon monoxide (CO) emissions shall not exceed 1.06 pounds per hour and 4.7 TPY. Sulfur dioxide (SO ₂) emissions shall not exceed 0.32 pound per hour and 1.4 TPY. The requirements of this rule include compliance with OAC rules 3745-17-07(A), and 3745-17-11(B)(5)(a).
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the exhaust stack serving this engine shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
c.	OAC rule 3745-17-11(B)(5)(a)	PE shall not exceed 0.310 lb/mmBtu of actual heat input.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-18-06	The SO ₂ emission limitation specified in this rule is less stringent than the SO ₂ emission limitation established pursuant to 3745-31-05(A)(3).
e.	40 CFR Part 63 Subpart ZZZZ (40 CFR 63.6580 to 63.6675) In accordance with 40 CFR 63.6585, this emissions unit is a stationary reciprocating internal combustion engine (RICE) subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines.	The existing stationary compression ignition (CI) RICE, located at an area source for hazardous air pollutants (HAPs), shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ no later than May 3, 2013.
f.	40 CFR 63.6603(a) Table 2d #1 to Subpart ZZZZ	By 5/3/13, comply with the maintenance / operational requirements from the NESHAP for existing area source CI RICE less than or equal to 300 horsepower (HP).
g.	40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this engine shall not exceed 15 ppm or 0.0015% sulfur by weight.

(2) Additional Terms and Conditions

- a. The quality of the diesel fuel burned in this engine shall meet the following specifications on an "as received" basis:
 - i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015 pound sulfur dioxide/MMBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight;
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent; and
 - iii. a heating value greater than 135,000 Btu/gallon.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.



- b. The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 63.6595(a)(1)	The compliance date for Part 63 Subpart ZZZZ for existing CI RICE is 5/3/13.
Applicable Tables from Part 63, Subpart ZZZZ	Compliance requirements in Table 2d #1; continuous compliance in Table 6 #9; general provision from Subpart A in Table 8.
40 CFR 63.6603(a)	Maintain compliance with operational limitations in Table 2d #1 (inspection and maintenance requirements) to Part 63 Subpart ZZZZ.
40 CFR 63.6665	Meet all of the general provisions of Subpart A, from Sections 63.1 through 63.15, that apply to the CI RICE, as identified in Table 8 to Subpart ZZZZ.

- c. The uncontrolled NOx emissions from this emissions source do not exceed 25 TPY. The requirements of OAC rule 3745-110-03 paragraphs (A) through (F) do not apply to this emissions unit as specified under OAC rule 3745-110-03(J)(15).

c) Operational Restrictions

- (1) The permittee shall only combust diesel fuel with a maximum sulfur content of 0.0015% sulfur in this emission unit.
- (2) Following the compliance date of the NESHAP, 5/3/13, unless meeting the requirements of 40 CFR 63.6625(i), the permittee shall change the oil and filter every 1,000 hours of operation or annually, whichever comes first; shall inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace them as necessary. A log shall be maintained for the hours of operation between each oil and filter change and the date of each oil/filter change and inspection.
- (3) The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 80.510(b)	Compliance with 80.510(b) for the quality of diesel fuel burned CI RICE. Standard for diesel fuel oil.
40 CFR 63.6605	General duty to minimize emissions, with good air pollution control practices for minimizing emissions; and compliance required at all times.



40 CFR 63.6625(e)	Operate & maintain RICE according to mfg. instructions and develop a facility maintenance plan for the RICE that meets the requirements of Subpart ZZZZ Table 2d #1.
40 CFR 63.6625(h)	Minimize idle and startup time, not to exceed 30 minutes.
40 CFR 63.6625(i)	Oil analysis program, option to extend the oil change frequency.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee combusts a fuel other than diesel fuel, with a maximum sulfur content of 0.0015% by weight the permittee shall maintain a record of the type and quantity of fuel burned in this emission unit. The permittee shall also maintain documentation of the sulfur contents of all fuels used.
- (2) For each shipment of oil received for burning in this engine, the permittee shall maintain records of the total quantity of the diesel oil received and the oil supplier's (or permittee's) analyses for sulfur content, in parts per million (40 CFR 80.510) or percent by weight. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR 80.580, using the appropriate ASTM methods. These records shall be retained for a minimum of 5 years and shall be available for inspection by the Director or his/her representative.
- (3) The permittee shall maintain a record of the diesel fuel burned in this RICE during each calendar year. The fuel oil usage can be calculated at the end of each year using the best method available to estimate the annual throughput which might include, but shall not be limited to: any flow meter installed on the engine, records of the volume of diesel fuel oil received with each delivery, the fuel oil levels recorded from the diesel storage tank, and/or the recorded or estimated hours of operation along with the manufacturer's documentation of the fuel flow rate.
- (4) The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 63.6635	Except for monitor malfunctions, associated repairs, and required quality assurance activities, must continuously monitor that the RICE is operating. Must use all valid data (not recorded during malfunctions, repairs, or required quality assurance or control activities) in calculations used to report emissions or operating levels.
40 CFR 63.6655(a)	Keep records of: 1. each notification and report submitted to comply with Subpart ZZZZ; 2. the occurrence and duration of each malfunction of the RICE; and 3. corrective actions taken during each period of malfunction to minimize emissions and restore normal operations.



40 CFR 63.6640(a) and 40 CFR 63.6655(d)	Keep the records required in #9 of Table 6 to Subpart ZZZZ to demonstrate continuous compliance.
40 CFR 63.6655(e)(3)	Records of maintenance and inspections conducted in order to demonstrate compliance with Table 2d and to demonstrate that the RICE was operated and maintained according to the facility's maintenance plan.
40 CFR 80.510(b)	Maintain records for the quality of diesel fuel burned in the CI RICE, i.e., for the standards identified in 40 CFR 80.510(b).
40 CFR 63.6625(h)	Maintain a record of each idle and/or startup time that exceeded 30 minutes.
40 CFR 63.6660	Records readily available and retained for at least 5 years after the date of occurrence or date of report according to 63.10(b)(1).

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day during which a fuel other than diesel fuel with a maximum sulfur content of 0.0015% by weight was combusted in this emission unit. Each report shall be submitted within 30 days of the deviation.
- (2) The permittee shall comply with the following applicable requirements identified in 40 CFR Part 63, Subpart ZZZZ:

Applicable Rule	Requirement
40 CFR 80.510(b)	Identify any period of time (date and number of hours), during the reporting period, that the quality of oil burned in this engine did not meet the requirements established in 40 CFR 80.510(b).
40 CFR 63.6640(b);	Submit a report for each instance in which the operational requirements in Table 2d were not met.
40 CFR 63.6640(e)	Submit a report for each instance in which the applicable requirements in Table 8 to Subpart ZZZZ, the general provisions from Subpart A, were not met.

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



f) Testing Requirements

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

a. Emission Limitation:

NO_x emissions shall not exceed 4.94 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum heat input of 1.12 mmBtu/hr by the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1, 4.41 lbsNO_x/mmBtu, to arrive at the pounds per hour limitation.

b. Emission Limitation:

CO emissions shall not exceed 1.06 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum heat input of 1.12 mmBtu/hr by the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1, 0.95 lb CO/mmBtu, to arrive at the pounds per hour limitation.

c. Emission Limitation:

SO₂ emissions shall not exceed 0.32 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the maximum heat input of 1.12 mmBtu/hr by the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1, 0.29 lb SO₂/mmBtu, to arrive at the pounds per hour limitation.

d. Emission Limitation:

PE shall not exceed 0.31 lb/mmBtu of actual heat input.

Applicable Compliance Method:

Compliance shall be based on the emission factor specified in AP-42, 5th Edition, Section 3.3, Table 3.3-1 of 0.31 lb PE/mmBtu.

e. Emission Limitations:

PE shall not exceed 1.5 TPY

NO_x emissions shall not exceed 21.6 TPY

CO emissions shall not exceed 4.7 TPY

SO₂ emissions shall not exceed 1.4 TPY



Applicable Compliance Methods:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

f. Emission Limitation:

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

Applicable Compliance Method:

Compliance with the opacity limitation shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) This emissions unit was installed 6/1/1997.