



Environmental Protection Agency

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

2/22/2012

Certified Mail

Jim Stice
DP&L, Killen Generating Station
14869 U.S. Route 52
Manchester, OH 45144

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0701000060
Permit Number: P0107275
Permit Type: OAC Chapter 3745-31 Modification
County: Adams

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

Dear Permit Holder:

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

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
309 South Fourth Street, Room 222
Columbus, OH 43215

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. If you have any questions regarding this permit, please contact the Portsmouth City Health Dept., Air Pollution Unit. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: U.S. EPA
Portsmouth; Kentucky; West Virginia



Response to Comments

Facility ID:	0701000060
Facility Name:	DP&L, Killen Generating Station
Facility Description:	Electric Generating Station
Facility Address:	14869 U.S. Route 52 Manchester, OH 45144 Adams County
Permit:	P0107275, Permit-To-Install - OAC Chapter 3745-31 Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Peoples Defender on 12/28/2011. The comment period ended on 01/27/2012.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: DP&L comments from Gary Bramble sent 01/27/2012.

- a. Comment: We noticed that in the Table of Contents B004 is referred to as a “Combustion Turbine Unit.” This is a good descriptor and we ask that you also use it on page 2.
- b. Response: The permit has been revised to correct the description.

2. Topic: DP&L comments from Gary Bramble sent 01/27/2012.

- a. Comment: The phrase “...procedures specified in f)(2) below.” Is used on the bottom of page 18, bottom of page 25, and top of page 34. In each instance it is not clear to what it refers.
- b. Response: The permit terms clearly reference section f)(2) Emission Testing Requirements.

3. Topic: DP&L comments from Gary Bramble sent 01/27/2012.

- a. Comment: Overall: It has been DP&L’s understanding that we will be authorized to combust B10, B15, or B20 blends, i.e. B20 fuel or less. If language in this permit specifies only B20 or exactly B20, we ask that the language be adjusted to accommodate lesser blends.



- b. Response: The Operations, Property and/or Equipment Description for emission units B002, B003, and B004 will be revised to clarify the permit allows DP&L Killen to burn B20(biodiesel based liquid fuel) or less.

4. Topic:DP&L comments from Gary Bramble sent 01/27/2012.

- a. Comment: Page 34 deals with future stack testing of the combustion turbine unit. We would like to do two sets of tests. One set with B20 fuel; and one set with distillate fuel, without B20. However, because the combustion turbine unit is rarely used and difficult to schedule, we propose slightly different emission testing language. Perhaps something like the following:

Emission testing shall be performed on one of the first 7 operating days that the unit is fired with biodiesel fuel. The blend used for testing should be close to a B20 blend, i.e. B18, 19, or B20.

In addition, emission testing shall be performed on one of the first 7 operating days that the unit is fired with authorized distillate fuel (without biodiesel)

- b. Response: The permit terms have been revised.



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
DP&L, Killen Generating Station**

Facility ID: 0701000060
Permit Number: P0107275
Permit Type: OAC Chapter 3745-31 Modification
Issued: 2/22/2012
Effective: 2/22/2012



Division of Air Pollution Control
Permit-to-Install
for
DP&L, Killen Generating Station

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Authorization

Facility ID: 0701000060
Facility Description: Electric Generating Station
Application Number(s): A0040501, A0041078, A0042770
Permit Number: P0107275
Permit Description: Chapter 31 modification to allow DP&L Killen Station to implement a renewable energy project involving substitution of biodiesel-based liquid fuel (B20) for distillate (No. 2) fuel oil currently used in all stationary combustion equipment at Killen.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$950.00
Issue Date: 2/22/2012
Effective Date: 2/22/2012

This document constitutes issuance to:

DP&L, Killen Generating Station
14869 U.S. Route 52
Manchester, OH 45144

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

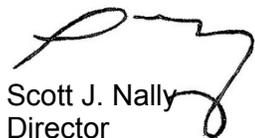
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Portsmouth City Health Dept., Air Pollution Unit
605 Washington Street
3rd Floor
Portsmouth, OH 45662
(740)353-5156

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: P0107275
Permit Description: Chapter 31 modification to allow DP&L Killen Station to implement a renewable energy project involving substitution of biodiesel-based liquid fuel (B20) for distillate (No. 2) fuel oil currently used in all stationary combustion equipment at Killen.

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

- Emissions Unit ID: B002**
Company Equipment ID: Auxiliary Boiler A
Superseded Permit Number: 07-001
General Permit Category and Type: Not Applicable
- Emissions Unit ID: B003**
Company Equipment ID: Auxiliary Boiler B
Superseded Permit Number: 07-001
General Permit Category and Type: Not Applicable
- Emissions Unit ID: B004**
Company Equipment ID: Combustion Turbine Unit
Superseded Permit Number: 07-089
General Permit Category and Type: Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

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

2. Severability Clause

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

3. General Requirements

- a) 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 Portsmouth City Health Dept., Air Pollution Unit.
 - (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, and (ii) 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 Portsmouth City Health Dept., Air Pollution Unit. 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 Portsmouth City Health Dept., Air Pollution Unit 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 Portsmouth City Health Dept., Air Pollution Unit 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 Portsmouth City Health Dept., Air Pollution Unit 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 Portsmouth City Health Dept., Air Pollution Unit.
- 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 Portsmouth City Health Dept., Air Pollution Unit. 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. **B002, Auxiliary Boiler A**

Operations, Property and/or Equipment Description:

Babcock and Wilcox distillate oil-fired (number 1 and number 2 fuel oil, kerosene and diesel fuel, but excluding number 4 fuel oil) auxiliary boiler, having a nominal capacity of 95.7 mmBtu/hr. Auxiliary Boiler A. Chapter 31 modification to burn B20 (biodiesel based liquid fuel) or less as an alternate to distillate No. 2 fuel oil in all stationary combustion equipment.

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 paragraph 3745-31-05(A)(3), as effective 11/30/01	While burning biodiesel fuel B20: Nitrogen oxides (NO _x) emissions shall not exceed 0.23lb/mmBtu actual heat input and 7.77 tons per year. See b)(2)a. Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-10(B), and 3745-18-06(D).
b.	OAC paragraph 3745-31-05(A)(3), as effective 12/01/06	See b)(2)b.
c.	OAC paragraph 3745-31-05(E)	See b)(2)c.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.
f.	OAC rule 3745-18-06(D)	Sulfur dioxide (SO ₂) emissions shall not exceed 1.6 lbs/mmBtu actual heat input.
g.	40 CFR Part 63, Subpart DDDDD	See b)(2)d.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) or OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the this emissions unit since the NO_x limit of 7.77 tpy is less than 10 tpy.

- c. Permit to Install P0107275 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of state modeling:

- i. restricting the annual amount of biodiesel fuel (B20) burned in this emissions unit to 500,000 gallons per year.

- d. On May 16, 2011, U.S. EPA decided to Stay the Boiler MACT (40 CFR Part 63, Subpart DDDDD). This delay of effectiveness will remain in place until the proceedings for judicial review are completed or U.S. EPA completes its reconsideration of the rules, whichever is earlier, and the Agency publishes a notice in the Federal Register announcing that the rules are in effect. Upon being effective, this emissions unit will be subject to 40 CFR Part 63, Subpart DDDDD.

c) Operational Restrictions

- (1) The quality of oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide limitation specified in b)(1)f above.
- (2) The permittee shall burn only distillate oil (number 1 and number 2 fuel oil, kerosene and diesel fuel, or a blend of number 2 fuel oil and biodiesel fuel (B20), but excluding number 4 fuel oil) in this emissions unit.
- (3) The maximum annual biodiesel fuel (B20) burned in this emissions unit shall not exceed 500,000 gallons based upon a rolling, 12-month summation of the renewable fuel use.



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

Table with 2 columns: Month(s) and Maximum Allowable Biodiesel Fuel (B20) Use (gallons). Rows list months 1 through 1-12 with corresponding gallon limits ranging from 150,000 to 500,000.

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual renewable fuel usage limitation shall be based upon a rolling, 12- month summation of the renewable fuel usage in gallons.

- (4) The biodiesel content of the fuel burned in this emission unit shall not exceed 20% by volume.
d) Monitoring and/or Recordkeeping Requirements
(1) For each shipment of oil received for burning in this emission unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analysis for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu).
(2) The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.
(3) For each day during which the permittee burns a prohibited fuel (i.e., one other than distillate oil as defined in c)(2) above), the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
(4) The permittee shall maintain monthly records of the following information:
a. the biodiesel fuel (B20) use for each month; and

- b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the biodiesel fuel (B20) use, in gallons.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative usage of biodieselfuel (B20), in gallons, for each calendar month.

- (5) If for each shipment of biodiesel fuel received the concentration of the fuel exceeds the (B20) limit as received because the permittee wants to blend the fuel on site, then the permittee has committed to keeping a spreadsheet on site identifying the information of the biodiesel use in d)(4) above and to sample the biodiesel fuel (B20) storage tank on at least a semi-annual basis.

e) Reporting Requirements

- (1) The permittee shall notify the Director (the Portsmouth Local Air Agency) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from d)(1) above. The notification shall include a copy of such record and shall be sent to the Director (the Portsmouth Local Air Agency) within 45 days after the deviation occurs.
- (2) The permittee shall submit deviation (excursion) reports that identify each day when a prohibited fuel (i.e., one other than distillate oil) was burned in this emission unit. Each report shall be submitted within 30 days after the deviation occurs.
- (3) The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month renewable fuel usage rate limitation and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative renewable fuel usage levels.
- (4) The permittee shall submit deviation (excursion) reports that identify all exceedances of the biodiesel concentrations identified in d)(5) above, should the results from the biodieselfuel storage tank exceed (B20) or greater than 20% biodiesel from the semi-annual testing.

f) Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the allowable mass emission rate for particulates may be determined by dividing an emission factor of particulate per 1000 gallons of oil combusted by the heat content of the oil (in mmBtu/1000 gallons) as determined through the fuel analysis required in d)(2) above. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (09/98).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:

SO₂ emissions shall not exceed 1.6 lbs/mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the allowable SO₂ emission limitation shall be demonstrated by documenting that the sulfur content of each shipment of oil received during a calendar month meets the limitation.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

d. Emission Limitation:**While burning biodiesel fuel B20:**

NO_x emissions shall not exceed 0.23lb/MMBtu actual heat input and 7.77 tons per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the allowable mass emission rate for NO_x in accordance with the methods and procedures specified in f)(2) below.

The annual emission rate is based upon the allowable NO_x emissions rate of 0.23 pound per mmBtu, from the March 2010 test, times the total annual heat input based upon the restriction of 500,000 gallons per year and nominal heat content of 135,200 Btu/gal, divided by 2000 lbs/ton. Compliance with the annual NO_x emission limitation shall be demonstrated by the B20 recordkeeping as specified in d)(4).

(2) Emission Testing Requirements

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

- a. The emission testing shall be conducted within 6 months after commencing operation of this emissions unit firing with biodiesel fuel (B20) as identified in this permit to install; unless otherwise approved by the Portsmouth Local Air Agency to coincide with the required periodic testing pursuant to the terms and conditions for this emissions unit contained in the permittee's Title V Operating Permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM and NO_x when firing with biodiesel fuel (B20) as specified in b)(1)a and b)(1)e.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) and emissions factors:
 - i. for PM, 40 CFR Part 60, Appendix A, Methods 1 through 4 and Methods 5 or 17 and the procedures specified in OAC rule 3745-17-03(B)(9); and
 - ii. for NO_x, 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7.

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

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity and combusting biodiesel fuel (B20), unless otherwise specified or approved by the Portsmouth Local Air Agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).
- f. Personnel from the Portsmouth Local Air Agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency.

- g) Miscellaneous Requirements
 - (1) None.

2. **B003, Auxiliary Boiler B**

Operations, Property and/or Equipment Description:

Babcock and Wilcox distillate oil-fired (number 1 and number 2 fuel oil, kerosene and diesel fuel, but excluding number 4 fuel oil) auxiliary boiler, having a nominal capacity of 95.7 mmBtu/hr. Auxiliary Boiler B. Chapter 31 modification to allow DP&L Killen to burn B20(biodiesel based liquid fuel) or less as an alternate to distillate No. 2 fuel oil in all stationary combustion equipment.

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 paragraph 3745-31-05(A)(3), as effective 11/30/01	While burning biodiesel fuel B20: Nitrogen oxides (NO _x) emissions shall not exceed 0.23 lb/mmBtu actual heat input and 7.77 tons per year. See b)(2)a. Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-10(B), and 3745-18-06(D).
b.	OAC paragraph 3745-31-05(A)(3), as effective 12/01/06	See b)(2)b.
c.	OAC paragraph 3745-31-05(E)	See b)(2)c.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.
f.	OAC rule 3745-18-06(D)	Sulfur dioxide (SO ₂) emissions shall not exceed 1.6 lbs/mmBtu actual heat input.
g.	40 CFR Part 63, Subpart DDDDD	See b)(2)d.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) or OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the this emissions unit since the NO_x limit of 7.77 tpy is less than 10 tpy.

c. Permit to Install P0107275 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. restricting the annual amount of biodiesel fuel (B20) burned in this emissions unit to 500,000 gallons per year.

d. On May 16, 2011, U.S. EPA decided to Stay the Boiler MACT (40 CFR Part 63, Subpart DDDDD). This delay of effectiveness will remain in place until the proceedings for judicial review are completed or U.S. EPA completes its reconsideration of the rules, whichever is earlier, and the Agency publishes a notice in the Federal Register announcing that the rules are in effect. Upon being effective, this emissions unit will be subject to 40 CFR Part 63, Subpart DDDDD.

c) Operational Restrictions

(1) The quality of oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide limitation specified in b)(1)f above.

(2) The permittee shall burn only distillate oil (number 1 and number 2 fuel oil, kerosene and diesel fuel, or a blend of number 2 fuel oil and biodiesel fuel (B20), but excluding number 4 fuel oil) in this emissions unit.

(3) The maximum annual biodiesel fuel (B20) burned in this emissions unit shall not exceed 500,000 gallons based upon a rolling, 12-month summation of the renewable fuel use.

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

<u>Month(s)</u>	<u>Maximum Allowable Biodiesel Fuel(B20) Use (gallons)</u>
1	150,000 gallons
1-2	150,000 gallons
1-3	150,000 gallons
1-4	300,000 gallons
1-5	3000,000 gallons
1-6	300,000 gallons
1-7	450,000 gallons
1-8	450,000 gallons
1-9	450,000 gallons
1-10	5000,000 gallons
1-11	500,000 gallons
1-12	500,000 gallons

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual renewable fuel usage limitation shall be based upon a rolling, 12- month summation of the renewable fuel usage in gallons.

- (4) The biodiesel content of the fuel burned in this emission unit shall not exceed 20% by volume.

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

- (1) For each shipment of oil received for burning in this emission unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analysis for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads or barges from the same supplier's batch and the quality of the oil for those loads may be represented by single batch analysis from the supplier.
- (2) The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240 and D4294), or equivalent methods as approved by the Director.
- (3) For each day during which the permittee burns a prohibited fuel (i.e., one other than distillate oil as defined in c)(2)above), the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (4) The permittee shall maintain monthly records of the following information:
 - a. the biodiesel fuel (B20) use for each month; and

- b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the biodiesel fuel (B20) use, in gallons.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative usage of biodiesel fuel (B20), in gallons, for each calendar month.

- (5) If for each shipment of biodiesel fuel received the concentration of the fuel exceeds the (B20) limit as received because the permittee wants to blend the fuel on site, then the permittee has committed to keeping a spreadsheet on site identifying the information of the biodiesel use in d)(4) above and to sample the biodiesel fuel (B20) storage tank on at least a semi-annual basis.

e) Reporting Requirements

- (1) The permittee shall notify the Director (the Portsmouth Local Air Agency) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from d)(1) above. The notification shall include a copy of such record and shall be sent to the Director (the Portsmouth Local Air Agency) within 45 days after the deviation occurs.
- (2) The permittee shall submit deviation (excursion) reports that identify each day when a prohibited fuel (i.e., one other than distillate oil) was burned in this emission unit. Each report shall be submitted within 30 days after the deviation occurs.
- (3) The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month renewable fuel usage rate limitation and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative renewable fuel usage levels.
- (4) The permittee shall submit deviation (excursion) reports that identify all exceedances of the biodiesel concentrations identified in d)(5) above, should the results from the biodiesel fuel storage tank exceed (B20) or greater than 20% biodiesel from the semi-annual testing.

f) Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

Particulate emissions shall not exceed 0.020 lb/mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the allowable mass emission rate for particulates may be determined by dividing an emission factor of particulate per 1000 gallons of oil combusted by the heat content of the oil (in mmBtu/1000 gallons) as determined through the fuel analysis required in d)(2) above. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.3, Table 1.3-1 (09/98).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:

SO₂ emissions shall not exceed 1.6 lbs/mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the allowable SO₂ emission limitation shall be demonstrated by documenting that the sulfur content of each shipment of oil received during a calendar month meets the limitation.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

d. Emission Limitation:**While burning biodiesel fuel B20:**

NO_x emissions shall not exceed 0.23 lb/mmBtu actual heat input and 7.77 tons per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the allowable mass emission rate for NO_x in accordance with the methods and procedures specified in f)(2) below.

The annual emission rate is based upon the allowable NO_x emissions rate of 0.23 pound per mmBtu, from the March 2010 test, times the total annual heat input based upon the restriction of 500,000 gallons per year and nominal heat content of 135,200 Btu/gal divided by 2000 lbs/ton. Compliance with the annual NO_x emission limitation shall be demonstrated by the B20 recordkeeping as specified in d)(4).

(2) Emission Testing Requirements

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

- a. The emission testing shall be conducted within 6 months after commencing operation of this emissions unit firing with biodieselfuel (B20) as identified in this permit to install; unless otherwise approved by the Portsmouth Local Air Agency to coincide with the required periodic testing pursuant to the terms and conditions for this emissions unit contained in the permittee's Title V Operating Permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM and NO_x when firing with biodieselfuel (B20) as specified in b)(1)a and b)(1)e.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) and emissions factors:
 - i. for PM, 40 CFR Part 60, Appendix A, Methods 1 through 4 and Methods 5 or 17 and the procedures specified in OAC rule 3745-17-03(B)(9); and
 - ii. for NO_x, 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7.

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

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity and combusting biodiesel (B20) fuel, unless otherwise specified or approved by the Portsmouth Local Air Agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).
- f. Personnel from the Portsmouth Local Air Agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency.

- g) Miscellaneous Requirements
 - (1) None.

3. B004, (Combustion Turbine Unit)

Operations, Property and/or Equipment Description:

No.2 fuel oil-fired stationary combustion turbine (General Electric, Model PG5341P) with diesel fuel-fired starter; 299.4 MMBtu peak rated heat input, controlled with a water injection system. Chapter 31 modification to burn B20 (biodiesel based liquid fuel) or less as an alternate to distillate No. 2 fuel oil in all stationary combustion equipment to derate the unit to less than 24.9 MW during operation and to remove the black start status from the turbine in order to generate MW to serve the grid, and to add water injection system as control to meet the 40 CFR Part 60, Subpart GG limit.

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.	ORC 3704.03(T) Best Available Technology (BAT)	Nitrogen oxides (NO _x) emissions shall not exceed 0.60 lb/mmBtu actual heat input. See b)(2)a. Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-11(B)(4), and 3745-18-06(F), and 40 CFR Part 60, Subpart GG.
b.	OAC paragraph 3745-31-05(E)	See b)(2)a.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-11(B)(4)	Particulate emissions shall not exceed 0.040 lb/mmBtu actual heat input.
e.	OAC rule 3745-18-06(F)	Sulfur dioxide (SO ₂) emissions shall not exceed 0.5 lb/mmBtu actual heat input.
f.	40 CFR Part 60, Subpart GG	The sulfur content of the distillate oil fired in this emissions unit shall not exceed 0.8%, by weight. NO _x emissions shall not exceed 75ppmvd at 15% oxygen.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)b.
g.	OAC rule 3745-110-03(E)(2)(b) NOx - Reasonably Available Control Technology (RACT)	This emissions unit is exempt pursuant to paragraph (J) of rule 3745-110-03.
h.	40 CFR Part 63, Subpart YYYY [40 CFR 63.6080-63.6175] National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines.	See b)(2)e.

(2) Additional Terms and Conditions

- a. Permit to Install P0107275 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of state modeling.
 - i. restricting the annual amount of biodiesel fuel (B20) burned in this emissions unit to 271,200 gallons per year;
 - ii. restricting the annual hours of operation for this emission unit to 500 hours;
 - iii. the installation of a water injection system to reduce NO_x emissions; and
 - iv. derating the unit to less than 24.9 MW during any operating hour.
- b. The emissions limits based on this applicable rule are less stringent than the limits established pursuant to ORC 3704.03 (T). Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.
- c. If this emissions unit meets the requirements of 40 CFR 75.19(a)(1), (a)(2) and (b), the low mass emissions (LME) excepted methodology in 40 CFR 75.19(c) may be used in lieu of continuous emission monitoring systems or, if applicable, in lieu of methods under Appendices D, E, and G to 40 CFR Part 75, for the purpose of determining the unit heat input, NO_x, SO₂, and CO₂ mass emissions, and the NO_x emission rate under 40 CFR Part 75. If the permittee of a qualifying emissions unit elects to use the LME methodology, it must be used for all parameters that are required to be monitored by the applicable program(s).
- d. This emissions unit is being derated to less than 24.9 MW during any source operating hour to avoid the Acid Rain requirements of 40 CFR Part 75.
- e. This emissions unit is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines, 40 CFR Part 63, Subpart YYYY.

In accordance with 40 CFR Part 63.6090(4)...”Existing stationary combustion turbines in all subcategories do not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary for any existing stationary combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification.”

c) Operational Restrictions

- (1) This emissions unit shall not exceed 500 hours of operation per year, as a rolling, 12-month summation.
- (2) The quality of the oil burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide limitation in b)(1)e above.
- (3) The permittee shall burn only distillate oil (number 1 and number 2 fuel oil, kerosene and diesel fuel, or a blend of number 2 fuel oil and biodieselfuel(B20), but excluding number 4 fuel oil) in this emissions unit.
- (4) The maximum annual biodiesel fuel (B20)burned in this emissions unit shall not exceed 271,200 gallons based upon a rolling, 12-month summation of the renewable fuel use.

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

<u>Month(s)</u>	<u>Maximum Allowable Biodiesel Fuel (B20) Use (gallons)</u>
1	67,800 gallons
1-2	67,800 gallons
1-3	67,800 gallons
1-4	135,600 gallons
1-5	135,600 gallons
1-6	135,600 gallons
1-7	203,400 gallons
1-8	203,400 gallons
1-9	203,400 gallons
1-10	271,200 gallons
1-11	271,200 gallons
1-12	271,200 gallons

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual renewable fuel usage limitation shall be based upon a rolling, 12- month summation of the renewable fuel usage in gallons.

- (5) Start-up shall be defined as the time necessary to bring a turbine on line from a no load condition to fully activated water injection and shall not exceed a maximum of 60 minutes. Shutdownperiods shall not exceed 60 minutes.

- (6) This emissions unit shall not exceed 24.9 MW during any operating hour.
 - (7) The biodiesel content of the fuel burned in this emission unit shall not exceed 20% by volume.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall maintain monthly records of the rolling, 12-month summation of hours of operation for this emission unit.
 - (2) For each shipment of oil received for burning in this emission unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analysis for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads or barges from the same supplier's batch and the quality of the oil for those loads may be represented by single batch analysis from the supplier.
 - (3) The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D2880, D129, D1552, D4057, D240), or equivalent methods as approved by the Director.
 - (4) For each day during which the permittee burns a prohibited fuel (i.e., one other than distillate oil as defined in c)(3) above), the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
 - (5) The permittee shall maintain monthly records of the following information:
 - a. the biodiesel fuel (B20) use for each month; and
 - b. the distillate fuel use for each month; and
 - c. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the biodiesel fuel (B20) use, in gallons.
 - d. If for each shipment of biodiesel fuel received the concentration of the fuel exceeds the (B20) limit as received because the permittee wants to blend the fuel on site, then the permittee has committed to keeping a spreadsheet on site identifying the information of the biodiesel use in d)(5)a above and to sample the biodiesel fuel (B20) storage tank on at least a semi-annual basis.
 - e. Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative usage of biodiesel fuel (B20), in gallons, for each calendar month.
 - (6) The information management system for this emissions unit shall be capable of monitoring and recording electric output (in MW), fuel flow (gallons) and hours of operation.

- (7) For each low mass emissions unit for which fuel-and-unit-specific NO_x emission rates are determined in accordance with 40 CFR 75.19(c)(1)(iv) and which has add-on NO_x emission controls of any kind or uses dry lowNO_x technology, the permittee shall develop and keep on-site a quality assurance plan which explains the procedures used to document proper operation of the NO_x emission controls. The plan shall include the parameters monitored (e.g., water-to-fuel ratio) and the acceptable ranges for each parameter used to determine proper operation of the unit's NO_x controls.

e) Reporting Requirements

- (1) The permittee shall notify the Director (the Portsmouth Local Air Agency) in writing of any record which shows a deviation of the operating hours restriction from c)(1) above. The notification shall include a copy of such record and shall be sent to the Director (the Portsmouth Local Air Agency) within 45 days after the deviation occurs.
- (2) The permittee shall notify the Director (the Portsmouth Local Air Agency) in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from d)(2) above. The notification shall include a copy of such record and shall be sent to the Director (the Portsmouth Local Air Agency) within 45 days after the deviation occurs.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a prohibited fuel (i.e., one other than distillate oil) was burned in this emission unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month renewable fuel usage rate limitation and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative renewable fuel usage levels.
- (5) The permittee shall submit deviation (excursion) reports that identify all exceedances of the biodiesel concentrations identified in d)(5)d above, should the results from the biodiesel fuel storage tank exceed (B20) or greater than 20% biodiesel from the semi-annual testing.
- (6) The permittee shall submit deviation (excursion) reports that identify all exceedances of the 24.9 MW limitation during any given hour that the emissions unit is in operation as identified in c)(6).

f) Testing Requirements

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

Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

Particulate emissions shall not exceed 0.040 lb/mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the allowable mass emission rate for particulates may be based upon an emission factor of 0.0043 lb/mmBtu. This emission factor is specified in USEPA reference is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.1, Table 3.1-2a (04/00).

The permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

c. Emission Limitation:

SO₂ emissions shall not exceed 0.5 lb/mmBtu actual heat input.

Applicable Compliance Method:

Compliance with the allowable SO₂ emission limitation shall be demonstrated by documenting that the sulfur content of each shipment of oil received during a calendar month meets the limitation.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

d. Emission Limitation:

NO_x emissions shall not exceed 0.60 lb/mmBtu actual heat input.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the allowable mass emission rate for NO_x in accordance with the methods and procedures specified in f)(2) below.

e. Emission Limitation:

NO_x emissions shall not exceed 75ppmvd at 15% oxygen.

The permittee shall demonstrate compliance with the allowable mass emission rate for NO_x in accordance with the methods and procedures specified in f)(2) below and the equations from 40 CFR Part 60.332.

Applicable Compliance Method:

$$\text{STD} = 0.0075(14.4)/Y + F$$

where:

STD= allowable ISO corrected (if required as given in 60.335(b)1)) NO_x emissions concentration (percent by volume at 15 percent oxygen and on a dry basis);

Y= manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and determined to be 14.38 as provided in email; and

F= NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(4) of 40 CFR 60.332.

(2) Emission Testing Requirements

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

- a. The emission testing shall be conducted within 6 months after commencing operation of this emissions unit while firing biodiesel fuel (B20) (excluding preventative maintenance) as identified in this permit to install; unless otherwise approved by the Portsmouth Local Air Agency to coincide with the required periodic testing pursuant to the terms and conditions for this emissions unit contained in the permittee's Title V Operating Permit.
- b. In addition, the emission testing shall be conducted within 6 months after commencing operation of this emissions unit while firing authorized distillate fuel oil (excluding preventative maintenance) as identified in this permit to install; unless otherwise approved by the Portsmouth Local Air Agency to coincide with the required periodic testing pursuant to the terms and conditions for this emissions unit contained in the permittee's Title V Operating Permit.
- c. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PM and NO_x when firing with biodiesel fuel (B20), and distillate fuel (without biodiesel) as specified in b)(1)a, b)(1)d and b)(1)f.
- d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) and emission factors:
 - i. for PM: 40 CFR Part 60, Appendix A, Methods 1 through 4, and Method 5 or 17, and the procedures specified in OAC rule 3745-17-03(B)(9); and

- ii. forNO_x: 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7.

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

- e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by the Portsmouth Local Air Agency.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth Local Air Agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth Local Air Agency's refusal to accept the results of the emission test(s).
- g. Personnel from the Portsmouth Local Air Agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth Local Air Agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth Local Air Agency.

g) **Miscellaneous Requirements**

- (1) None.