

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install **08-04153**

DPL Energy Inc

- A. Source Description: DPL Energy is installing four natural gas and No. 2 fuel oil fired stationary simple cycle combustion turbines. Each turbine has a heat input rating of 1115.2 mmBtu/hour and a production rating of 80 MW. The turbines are each equipped with dry low NOx combustors and water injection controls. These four turbines are an addition to the three 1115 mmBtu/hour natural gas and No. 2 fuel oil fired stationary simple cycle combustion turbines and four 30 mmBtu/hour No. 2 fuel oil fired stationary large bore internal combustion engines already in operation at the Tait Station.
- B. Facility Emissions and Attainment Status: Without restrictions on operation, potential VOC and formaldehyde emissions from this project would be 96.36 TPY VOC and 13.84 TPY formaldehyde. With the federally enforceable limitations in this permit, the potential emissions are 31.64 TPY VOC and 5.92 TPY formaldehyde from this project. This facility is located in Montgomery County which is currently designated as attainment for all pollutants.
- C. Source Emission: VOC emissions are limited to 7.91 TPY per turbine, giving total emissions of 31.64 TPY VOC from this project. The DPL Tait Station is major for NSR purposes, the restricted potential emissions of VOC are below the major modification threshold of forty tons which would require PSD review. To ensure that these limits are not exceeded, operating hours limitations have been established for each turbine when burning natural gas and fuel oil. Formaldehyde emissions are limited to 1.48 TPY per turbine, giving total emissions of 5.92 TPY formaldehyde from this project. This is below the threshold of 10 TPY for an individual HAP which would require MACT review. Formaldehyde emissions are also limited by the operating hours restrictions established for each turbine when burning natural gas and fuel oil. Stack testing is required for these turbines to verify the formaldehyde emission factor.
- D. Conclusion: The operating hours limitation serves as a federally enforceable limit on the emissions of VOC to below PSD major modification thresholds and the emissions of formaldehyde to below MACT applicability. With the corresponding record keeping and reporting, compliance with these federally enforceable VOC and formaldehyde emission limitations shall be ensured.

STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT
UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS

FOR DP&P TAIT
DAYTON, OHIO
PTI NUMBER 08-04153

MARCH 22, 2001

Ohio Environmental Protection Agency
Division of Air Pollution Control
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43215

The Clean Air Act and regulations promulgated thereunder require that major air pollution sources undergoing construction or modification comply with all applicable Prevention of Significant Deterioration (PSD) provisions and nonattainment area New Source Review requirements. The federal PSD rules govern emission increases in attainment areas for major sources, which are sources with the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act, or 100 tons per year or more if the source is included in one of 28 source categories. In nonattainment areas, the definition of major source is one having at least 100 tons per year potential emissions. A major modification is one resulting in a

contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the PSD and NSR requirements by rule under OAC 3745-31.

Both PSD and nonattainment rules require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new source or major modification to a major source. The principal requirements of the PSD regulations are:

- 1) Best Available Control Technology (BACT) review - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new source is a major source.
- 2) Ambient Air Quality Review - An analysis must be completed to ensure the continued maintenance of the National Ambient Air Quality Standards (NAAQS) and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the Clean Air Act.

For nonattainment areas, the requirements are:

- 1) Lowest Achievable Emissions Rate (LAER) - New major sources must install controls that represent the lowest emission levels (highest control efficiency) that has been achieved in practice.
- 2) The emissions from the new major source must be offset by a reduction of existing emissions of the same pollutant by at least the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 CFR Part 51.
- 3) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing State Implementation Plan (SIP) or are on an approved schedule resulting in full compliance with the SIP.

For rural ozone nonattainment areas, the requirements are:

- 1) LAER - New major sources must install controls that represent the lowest emissions levels (highest control efficiency) that has been achieved in practice.
- 2) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, New Source Performance Standards (NSPS), SIP emission standards and public participation requirements must be followed in all cases.

Site Description

The facility is in Dayton, Ohio, which is located in Montgomery County. This area is classified as attainment for all of the criteria pollutants, particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds (ozone) and lead.

Facility Description

Dayton Power and Light operates a power peaking station located in Dayton, Ohio. They are proposing to install four new, 80 megawatt (MW) General Electric simple-cycle combustion turbines to meet peak power needs. The new GE model 7-EA units will burn natural gas with number 2 fuel oil for backup.

New Source Review (NSR)/PSD Applicability

This process will generate criteria pollutant emissions of particulate, NO_x, CO, SO₂ and VOC. For PSD purposes, the Tait station is considered a major facility. A PSD analysis is required for any increase in emissions of a pollutant exceeding the PSD threshold emissions level, or the significance levels. Of the pollutants emitted, PM₁₀, NO_x, CO, SO₂, Arsenic, Beryllium and Sulfuric Acid Mist will result in a net increase above PSD levels. New Source Review is not applicable, due to attainment status. There are federally enforceable limitations upon the emissions units such that Maximum Achievable Control Technology (MACT) requirements are not applicable.

TABLE 1

PRELIMINARY POLLUTANT EMISSION RATES
MODIFICATION TO INCREASE EMISSION RATES
DP&L - Tait Station

<u>AIR</u> <u>POLLUTANT</u>	<u>TOTAL TPY</u> <u>INCREASE</u>	<u>TOTAL TPY</u> <u>ALLOWABLE</u>	<u>PSD</u> <u>THRESHOLD</u>
NO _x	1374.72	1374.72	40
CO	984	984	100
PM/PM ₁₀	46.12	46.12	15
SO ₂	138.6	138.6	40
VOC	31.66	31.66	40
Arsenic	0.04	0.04	Any
Benzene	0.20	0.20	NA
Beryllium	0.0008	0.0008	0.0004
Sulfuric Acid	12.64	12.64	7

Formaldehyde

5.92

5.92

NA

Control Technology Review

As part of the application for any source regulated under the PSD requirements, an analysis must be conducted that demonstrates that Best Available Control Technology (BACT) will be employed by the source. The DP&L Tait facility is subject to PSD regulations which mandate a case-by-case BACT analysis be performed for PSD triggering pollutants. The application used a "top-down" approach to determine an appropriate level of control.

NO_x

Several technologies were evaluated for control of NO_x emissions. The following table summarizes the results of the evaluation.

NO_x Control	Description
SCONOX	The manufacturer of this control system states that it is not feasible for use on simple cycle or "peaking" units, which typically have higher operating temperatures and fluctuating temperature levels.
SCR	<p>The applicant reviewed permits issued to other simple cycle turbines. Some are similar to the new GE7EA units and some are other makes and ages. In preparing the application, the applicant found that there are no similar turbines with SCR successfully being used. DP&L believes that SCR is infeasible for the GE7EA units they are proposing, and that it is only workable and effective for some older models of turbines that have lower temperatures but need to utilize add-on controls to reduce emissions to the 15 ppm levels considered BACT for simple cycle, peaking units.</p> <p>However, the applicant did conduct a cost effectiveness study to determine what the cost would be, <u>if</u> the problem of high operating temperatures could be overcome. The original study found that the cost of control would be 8,812 dollars per ton, and this BACT information and the cost breakdown can be found in the May 23, 2000 application supplement.</p> <p>The applicant submitted further information by letter in August that updated the final cost effectiveness value to 30,480 dollars per ton. It was learned that SCR cannot be used when oil is being burned (PREPA installation experience). In addition, the original submittal calculated the cost based upon a reduction in emissions to 5 ppm, however, the Sempra Energy project in California (LAER project) was permitted but unsuccessful in achieving this emissions rate (the rate is expected to be around 10 ppm).</p>

XONOX	It was found that this is not a demonstrated technology.
Lean Burn or Dry Low NO _x	This technology is considered the baseline for natural gas fueled units, at 15 ppm (it is less effective for oil than water injection). DP&L selected this technology for gas combustion.
Water Injection	This technology is considered the baseline for oil fueled units, at 42 ppm (it is less effective for gas than lean burn). DP&L selected this technology for use when combusting oil.

The final BACT chosen for NO_x control is 15 ppm as a daily average when burning natural gas and 42 ppm as a daily average when burning fuel oil, excluding start-up and shutdown periods.

CO

Several technologies were evaluated for control of CO emissions. The following table summarizes the results of the evaluation.

CO Control	Description
SCONOX	This is an undemonstrated, emerging technology.
XONON	This is still an emerging technology.
Catalytic Oxidation	This add-on control was found to be feasible, however, at 3782 dollars per ton, it is not considered to be cost effective.
Lean Burn	This technology is considered the baseline for control of gas and oil fueled units, at 25 ppm (gas) and 20 ppm (oil). The applicant found that this is considered BACT for simple cycle units throughout the country. DP&L selected this technology as feasible and cost effective.

PM₁₀ and SO₂

This use of natural gas and fuel oil with a maximum sulfur content of 0.05 percent will be considered BACT for these pollutants.

Non-Criteria Pollutants

Use of natural gas as the primary fuel and number 2 fuel oil has been considered BACT for these pollutants.

Ambient Air Quality Monitoring Requirements

The DP&L Tait Station facility to be modified is located in AQCR 173. The area is attainment for all criteria pollutants. U.S. EPA regulations require the establishment of baseline air quality in the vicinity of the proposed project. This is normally accomplished using representative air quality monitoring data. Air quality monitoring can be utilized to demonstrate that the project will have less than a threshold impact. This threshold impact is identified as the PSD monitoring de minimus level. If the projected impact from the proposed project exceeds this level, ambient data must be collected or existing representative data must be identified.

DP&L Tait Station has conducted ambient air quality modeling to determine the potential impact due to the proposed installation. The following are the projected impacts:

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Predicted Concentration</u>	<u>Monitoring De minimus Concentration</u>
PM10	24-hour	13.9 ug/m ³	10 ug/m ³
SO ₂	24-hour	10.9 ug/m ³	13 ug/m ³
NO _x	Annual	5.3 ug/m ³	14 ug/m ³
CO	8-hour	2677.9 ug/m ³	532 ug/m ³

Predicted impacts exceed the monitoring threshold for PM10 and CO but not for SO₂ and NO_x. However, Ohio EPA has identified existing ambient data which it judged to be representative of the current air quality within the impact area of DP&L Tait Station. Therefore, DP&L Tait Station would not be required to conduct pre-construction monitoring.

Modeling

Air quality dispersion was conducted to assess the effect of this modification on the national ambient air quality standards (NAAQS) and PSD increments. ISCST3 (version 99155) was used in the regulatory default, urban mode. Five years of meteorological data (Dayton/Dayton, 1987-1991) were used. Additional modeling using CTSCREEN (version 94111) has been used to determine the peak impacts of these sources on local terrain above stack tip. Building downwash was incorporated into the ISCST3 estimates.

Predicted impacts of CO, SO₂, PM10 and NO_x were above their corresponding PSD significant impact increments. Additional modeling for compliance with both the NAAQS and PSD increments was required.

Increment

All areas surrounding the DP&L Tait Station facility are Class II PSD areas. It is the Ohio EPA policy that no individual project consumes more than 50% of the available PSD increment. For CO and Pb, projects are constrained to no more than 25% of the NAAQS. The following is the summary of the impact of increment consuming sources (peak annual and high-second-high short term impacts, except PM10 6th high 24-hour over five years):

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Predicted Concentration</u>	<u>PSD Increment Concentration</u>
PM10	24-hour	14.9 ug/m ³	30 ug/m ³
	Annual	1.4 ug/m ³	17 ug/m ³
SO ₂	3-hour	132.0 ug/m ³	512 ug/m ³
	24-hour	57.8 ug/m ³	91 ug/m ³
	Annual	8.1 ug/m ³	20 ug/m ³
NO _x	Annual	8.2 ug/m ³	25 ug/m ³

NAAQS

Existing sources at the facility, existing sources above the PSD significant rates within the DP&L Tait Station significant impact area (SIA) and sources greater than 100 tons/year outside of the SIA are modeled to determine the combined impact of existing significant sources. A background value is added to account for minor sources not explicitly included in the modeling.

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Predicted Concentration</u>	<u>NAAQS Concentration</u>	<u>Concentration With Background</u>
PM10	24-hour	93.0 ug/m ³	150 ug/m ³	136.0 ug/m ³
	Annual	6.9 ug/m ³	50 ug/m ³	27.9 ug/m ³
SO ₂	3-hour	416.7 ug/m ³	1300 ug/m ³	544.7 ug/m ³
	24-hour	201.0 ug/m ³	365 ug/m ³	259.0 ug/m ³
	Annual	21.2 ug/m ³	80 ug/m ³	34.2 ug/m ³
NO _x	Annual	46.7 ug/m ³	100 ug/m ³	95.7 ug/m ³

Secondary Impact Analysis

DP&L Tait Station has demonstrated that the predicted pollutant concentrations throughout the study area are below the secondary NAAQS thresholds. The secondary NAAQS are designed to limit the amount of pollutants in the ambient air to levels below those which could have an adverse impact on human welfare, soils and vegetation. The modeling analyses demonstrate that no significant impacts on human welfare, soils or vegetation will occur from the proposed modification.

Growth: No expansion of employees (only 2 more employees are needed) nor growth in the area population is expected.

Soil and Vegetation: EPA Air Quality Criteria documents were reviewed for information on pollutants and adverse effects on the type of vegetation and soils in the area. No adverse impact upon soils or vegetation is expected. The modeled concentrations are below the primary and secondary NAAQS limits.

Visibility: The Tait station is located more than 200 miles from the closest class I area (Mammoth Cave). Primary or secondary pollutants associated with this project are not anticipated to affect local or class I visibility.

Toxics Analysis

The Ohio Air Toxics Policy requires evaluation of increases in air toxics above the one ton/year threshold. Emissions rates are modeled to determine whether they exceed the Maximum Acceptable Ground Level Concentration (MAGLC) which is defined under the Air Toxics Policy. There were no air toxics exceeding the MAGLC.

Conclusions

Based upon the review of the permit to install application and the supporting documentation provided by DP&L, the Ohio EPA staff has determined the installation will comply with all applicable State and Federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to DP&L - Tait Station for the installation of four simple cycle turbines.



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
MONTGOMERY COUNTY

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov.
Center

Application No: 08-04153

DATE: 3/22/2001

DPL Energy Inc
Carrie Burks
9200 Chautauqua Rd
Miamisburg, OH 45342-4103

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of \$16500 will be due. Please do not submit any payment now.

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

Very truly yours,

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

CC: USEPA RAPCA KY IN Miami Valley Reg Plan Com



Permit To Install

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Terms and Conditions

DRAFT PERMIT TO INSTALL 08-04153

Application Number: 08-04153
APS Premise Number: 0857042072
Permit Fee: **To be entered upon final issuance**
Name of Facility: DPL Energy Inc
Person to Contact: Carrie Burks
Address: 9200 Chautauqua Rd
 Miamisburg, OH 45342-4103

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

2191 Arbor Blvd
Dayton, Ohio

Description of proposed emissions unit(s):

4 turbines; storage tank.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

DPL Energy Inc

Facility ID: 0857042072

PTI Application: 08-04153

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping 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:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. 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:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. 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 appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.11 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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.
- iv. 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.

2. 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 appropriate Ohio EPA District Office or local air agency 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).

3. 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.

4. 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.

5. Severability Clause

DPL Energy Inc**Facility ID: 0857042072****PTI Application: 08-04153****Issued: To be entered upon final issuance**

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.

6. 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 reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, 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, reopening 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.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that 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, the State, and citizens under the Act. All other terms and conditions of this permit

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shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. 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.
 - ii. 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.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency 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:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. 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.

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10. Permit To Operate Application

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

11. Best Available Technology

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

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B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from 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 appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

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

4. 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.

5. Termination of Permit To Install

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

6. Construction of New Sources(s)

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

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

7. 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.

8. 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).

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9. Construction Compliance Certification

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

10. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
Particulates/PM-10	46.12
Nitrogen oxides	1374.72
Carbon monoxide	984
Sulfur dioxide	138.6
Arsenic	0.04
Benzene	0.20
Beryllium	0.0008
Sulfuric acid mist	12.64
Volatile organic compounds	31.66
Formaldehyde	5.92

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. NSPS REQUIREMENTS

The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60:

<u>Source Number</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
P001 - P004	four 80 MW stationary gas turbines	Subpart GG

The application and enforcement of these standards are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
 DAPC - Permit Management Unit
 P.O. Box 163669
 Columbus, OH 43216-3669

and

Regional Air Pollution Control Agency
 451 W. Third Street
 P.O. Box 972
 Dayton, OH 45422

2. PSD REQUIREMENTS

The source described in this Permit to Install is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency 40 CFR 52.21. The authority to apply and enforce the PSD regulations has been delegated to the Ohio Environmental Protection Agency. The terms and conditions of this permit and the requirements of the PSD regulations are also enforceable by the United States Environmental Protection Agency.

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In accordance with 40 CFR 124.15, 124.19 and 124.20, the following shall apply: (1) the effective date of this permit shall be 30 days after the service of notice to any public commentors of the final decision to issue, modify, or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service of notice; and (2) if an appeal is made to the Environmental Appeals Board of the United States Environmental Protection Agency, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United States Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 20460

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P001 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 4 - Tait CT4, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20

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PTI A

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<p>Synthetic minor to avoid PSD rule requirements</p>	<p>Subpart GG</p>	<p><u>Applicable Emissions Limitations/Control Measures</u></p>
<p>OAC rule 3745-31-05(D) Synthetic minor to avoid MACT rule requirements</p>		<p>Particulate/PM10 emissions: 0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil; 11.53 tons as a rolling, 12-month summation.</p>
<p>OAC rule 3745-17-07(A)(1)</p>		<p>Nitrogen Oxide emissions: 15 ppmv at 15% oxygen on a dry basis, as a daily average, when firing natural gas, excluding start-up and shutdown; 178 lbs/hour when firing natural gas;</p>
<p>OAC rule 3745-31-05(A)(3)</p>		<p>42 ppmv at 15% oxygen on a dry basis, as a daily average, when firing No.2 fuel oil, excluding start-up and shutdown; 269 lbs/hour when firing No. 2 fuel oil; 343.68 tons as a rolling, 12-month summation.</p>
<p>40 CFR Part 75</p>		<p>Carbon monoxide emissions: 301 lbs/hour when firing natural gas; 800 lbs/hour when firing No. 2 fuel oil; 246 tons as a rolling, 12-month summation.</p>
<p>OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) OAC rule 3745-23-06 NSPS 40 CFR Part 60</p>		<p>Sulfur dioxide emissions: 0.0026 lb/mmBtu actual heat input, when firing natural gas</p>

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0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil	Formaldehyde emissions: 1.48 tons, as a rolling, 12-month summation.
34.65 tons, as a rolling, 12-month summation	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
Arsenic emissions, occurs during oil-firing only:	
0.01 lb/hour and 0.01 ton, as a rolling, 12-month summation	0.000713 lb formaldehyde/mmBtu actual heat input
Beryllium emissions, occurs during oil-firing only:	
0.0003 lb/hour and 0.0002 ton, as a rolling, 12-month summation	0.06 lb/hour and 0.05 ton Benzene, as a rolling, 12-month summation
Sulfuric acid mist emissions, occurs during oil-firing only:	The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05(D); and OAC rule 3745-17-07(A)(1).
0.0054 lb/mmBtu, actual heat input; 3.16 tons, as a rolling, 12-month summation	See Part I, term A.4.
Volatile organic compound emissions:	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.
4 lbs/hour when firing natural gas;	
5.5 lbs/hour when firing No. 2 fuel oil;	
7.91 tons, as a rolling, 12-month summation.	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.d** The listed carbon monoxide emission limitations are equivalent to the requirements of OAC rule 3745-21-08(B) which states that all new stationary sources of carbon monoxide shall minimize carbon monoxide emissions by use of the best available control techniques and operating practices in accordance with the best current technology. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

PM10 Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NOx burners (DNLB) when firing natural gas and water injection when firing fuel oil and the ppmv NOx levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines.

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Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Arsenic emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Benzene emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Beryllium emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

- 2.f** The permittee shall install and operate systems to monitor and record and report emissions of NOx in accordance with this permit, in lieu of the following Subpart GG requirements:

Section 60.334(a) continuous monitoring system to monitor and record fuel consumption and the ratio of water to fuel being fired in each turbine.

Section 60.334(c) excess emissions reporting.

- 2.g** The hourly arsenic, benzene, and beryllium emission limitations are being established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and/or reporting requirements to ensure compliance with these limits.

- 2.h** Start-up shall be defined as the time necessary to bring a turbine on line from a no load condition to synchronization and shall not exceed a maximum of 15 minutes. Shutdown periods shall not exceed 15 minutes.

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 2504** while burning natural gas and 1054** when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of this emissions unit, the permittee shall not exceed the cumulative operating hours specified in the following table:

Month	Maximum allowable cumulative operating hours while burning natural gas	Maximum allowable cumulative operating hours while burning No. 2 fuel oil

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1	626	264
1 - 2	1252	527
1 - 3	1878	791
1 - 4	2504	1054
1 - 5	2504	1054
1 - 6	2504	1054
1 - 7	2504	1054
1 - 8	2504	1054
1 - 9	2504	1054
1 - 10	2504	1054
1 - 11	2504	1054
1 - 12	2504	1054

**The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 3,755 hours annually of natural gas combustion.

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

2. The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05% sulfur, by weight.

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III. Monitoring and/or Recordkeeping Requirements

1. Statement of Certification - NO_x Monitoring
 - a. Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.
 - b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous NO_x monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and 40 CFR Part 75. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office. Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and 40 CFR Part 75.
 - c. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions units in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75.
 - d. The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
 - e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and

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available for inspection during regular office hours.

2. Statement of Certification - CO Monitoring

- a. Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.
- b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.
- c. The permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions units in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
- d. The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one-minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
- e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

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3. In accordance with Subpart GG, Section 60.334(b), the permittee shall monitor the sulfur content of the fuel being fired in the turbine. The frequency of determination of this value shall be as follows:
 - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
 - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. The permittee may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used to comply with paragraph (b) of Section 60.334.
4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.
5. The permittee shall determine fuel sulfur content in accordance with the requirements of Subpart GG, Section 60.335(d) and (e).
6. The permittee shall maintain monthly records of the following information:
 - a. The summation of the operating hours for this emissions unit, in hours/month, when burning natural gas and/or when burning No. 2 fuel oil.
 - b. During the first twelve calendar months of operation following startup, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil. Following the first twelve calendar months of operation following startup, the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil.
 - c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil
 - d. The rolling, 12-month summation of the particulates/PM10, NO_x, CO, SO₂, arsenic, benzene, beryllium, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for this emissions unit.

IV. Reporting Requirements

1. Continuous NO_x Emissions Monitoring
 - a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and

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corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in the terms and conditions of this permit (178 lbs/hour and 15 ppmvd at 15% oxygen when burning natural gas and 269 lbs/hour and 42 ppmvd at 15% oxygen when burning No. 2 fuel oil). These reports shall also contain the total NO_x emissions for the calendar quarter (in tons).

- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NO_x monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NO_x emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

2. Continuous CO Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable limits specified in the terms and conditions of this permit (301 lbs/hour when burning natural gas and 800 lbs/hour when burning No. 2 fuel oil). These reports shall also contain the total CO emissions for the calendar quarter (in tons).
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and

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corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

- c. If there are no CO excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.
3. The permittee shall notify the Regional Air Pollution Control Agency if the sulfur content of the fuel oil burned in this emissions unit exceeds the 0.05% by weight limitation. Such reports shall be submitted within 30 days of the exceedance.
 4. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of number two fuel oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
 - a. The total quantity of oil received in each shipment (gallons).
 - b. The weighted* average sulfur content (percent by weight) of the oil received during each calendar month.
 - c. The weighted* average heat content (Btu/gallon) of the oil received during each calendar month
 - d. The weighted* average SO₂ emission rate (lb/mmBtu of actual heat input) of the oil combusted during each calendar month (the SO₂ emission rate shall be calculated as specified in OAC rule 3745-18-04(F)).

*In proportion to the quantity of oil received in each shipment during each calendar month.
 5. The permittee shall submit quarterly deviation reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:
 - a. For the first twelve calendar months of operation following startup of this emissions unit, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil.
 - b. Beginning after the first twelve calendar months of operation following startup of this

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emissions unit, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil.

- c. Any exceedances of the rolling, 12-month summation of particulates/PM10, NO_x, CO, SO₂, arsenic, benzene, beryllium, sulfuric acid mist, VOC, or formaldehyde emission limitations.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

6. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and shall cover the previous calendar quarter.

V. Testing Requirements

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

- a. Emission Limitation -

0.013 lb particulate emissions/mmBtu actual heat input, when firing natural gas
 0.026 lb particulate emissions/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 51, Appendix M, Method 201 or 201A and 202, as specified in A.V.2.

- b. Emission Limitation -

11.53 tons particulate emissions, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly particulate emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning

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natural gas, and dividing by 2,000 lbs/ton.

- ii. The monthly particulate emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the particulate emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

c. Emission Limitation -

15 ppmvd NOx at 15% oxygen, based on a daily average, while burning natural gas, excluding start-up and shutdown

42 ppmvd NOx at 15% oxygen, based on a daily average, while burning No. 2 fuel oil, excluding start-up and shutdown

178 lbs/hour nitrogen oxides, while burning natural gas

269 lbs/hour nitrogen oxides, while burning No. 2 fuel oil

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Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO_x emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. based upon a daily averaging period and CFR Part 60 requirements.

d. Emission Limitation -

343.68 tons NO_x, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6 and shall be determined through the use of CEMs as specified in A.III.1.

The monthly NO_x emissions shall be added to the total NO_x emissions from the previous eleven months to determine the rolling, 12-month summation of NO_x emissions.

e. Emission Limitation -

301 lbs CO/hour, while burning natural gas
800 lbs CO/hour, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon the continuous emissions monitoring requirement and the monitoring/record keeping as specified in A.III.2. Compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, as specified in A.V.2.

f. Emission Limitation -

246 tons CO, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through the use of CEMs as specified in A.III.2.

The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

g. Emission Limitation -

0.0026 lb SO₂/mmBtu actual heat input, while burning natural gas
0.055 lb SO₂/mmBtu actual heat input, while burning No. 2 fuel oil

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Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method (such as, ASTM method D3031), or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.3. and the use of the equations specified in OAC rule 3745-18-04(F).

h. Emission Limitation -

34.65 tons SO₂, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the SO₂ emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly SO₂ emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO₂/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly SO₂ emissions from the burning of No. 2 fuel oil shall be determined by multiplying the weighted average SO₂ emission rate determined in A.III.4. (lb/mmBtu) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the SO₂ emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

i. Emission Limitation -

0.01 lb/hour arsenic

Applicable Compliance Method -

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Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when firing No. 2 fuel oil. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 108.

j. Emission Limitation -

0.01 ton arsenic, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when burning No. 2 fuel oil by the actual heat input of this emissions unit for the month when the emissions unit is burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly arsenic emissions shall be added to the total arsenic emissions from the previous eleven months to determine the rolling, 12-month summation of arsenic emissions.

k. Emission Limitation -

0.013 lb/hour benzene

Applicable Compliance Method -

When firing natural gas, compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu. When firing No. 2 fuel oil, compliance shall be determined by multiplying the maximum hourly heat input capacity of the emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 25.

l. Emission Limitation -

0.02 ton benzene, as a rolling, 12-month summation

Applicable Compliance Method -

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Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the benzene emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly benzene emissions from the burning of natural gas shall be determined by multiplying the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly benzene emissions from the burning of No. 2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the benzene emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

m. Emission Limitation -

0.0003 lb/hour beryllium

Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb beryllium/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 104.

n. Emission Limitation -

0.0002 ton beryllium, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb/mmBtu when burning No. 2 fuel oil by the actual heat input of this emissions unit for the month when the emissions unit was burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly beryllium emissions shall be added to the total beryllium emissions from the previous eleven months to determine the rolling, 12-month summation of beryllium emissions.

o. Emission Limitation -

0.0054 lb sulfuric acid mist/mmBtu actual heat input

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Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Method 8 as specified in A.V.2.

p. Emission Limitation -

3.16 tons sulfuric acid mist, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions shall be added to the total sulfuric acid mist emissions from the previous eleven months to determine the rolling, 12-month summation of sulfuric acid mist emissions.

q. Emission Limitation -

4 lbs/hour VOC, while burning natural gas
5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25, and/or 25A, as specified in A.V.2.

r. Emission Limitation -

7.91 tons VOC, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

i. The monthly VOC emissions from the burning of natural gas shall be determined

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by multiplying the average emissions in lb VOC/hour while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.

- ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the VOC emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

s. Emission Limitation -

0.000713 lb formaldehyde/mmBtu actual heat input

Applicable Compliance Method -

When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.

t. Emission Limitation -

1.48 tons formaldehyde, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
- ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the formaldehyde emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

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u. Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

v. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3, A.III.4, and A.III.5.

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w. Emission Limitation -

2,504 hours of operation, as a rolling, 12-month summation while burning natural gas
1,054 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil
1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not
burned, with total natural gas operation not to exceed 3,755 hours as a rolling, 12-month
summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 60 days after start-up of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NO_x, CO, VOC, formaldehyde (while burning natural gas), and sulfuric acid mist (while burning No. 2 fuel oil) emission rates.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for particulates/PM10, Method 201 or 201A and Method 202 for condensibles of 40 CFR Part 51, Appendix M; for NO_x, Method 7 of 40 CFR Part 60, Appendix A; for CO, Method 10 of 40 CFR Part 60, Appendix A; for VOC, Method 18, 25, and/or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Method 8 of 40 CFR Part 60, Appendix A - if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions unit is operating at its maximum capacity while combusting natural gas and No. 2 fuel oil, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

** the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

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Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - natural gas and No. 2 fuel oil fired simple cycle combustion turbine No. 4 - Tait CT4, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P001) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case"

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pollutant(s):

Pollutant: formaldehyde

TLV (mg/m3): 0.37

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.6971

MAGLC (ug/m3): 8.81

Pollutant: beryllium

TLV (mg/m3): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.0008

MAGLC (ug/m3): 0.05

Pollutant: arsenic

TLV (mg/m3): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.0123

MAGLC (ug/m3): 0.24

Pollutant: benzene

TLV (mg/m3): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.2142

MAGLC (ug/m3): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m3): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 13.56

MAGLC (ug/m3): 23.81

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

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- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P002 - natural gas and No. 2 fuel oil fired simple cycle combustion turbine No. 5 - Tait CT5, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20

	Emissions Unit ID: P002
	<u>Applicable Emissions Limitations/Control Measures</u>
40 CFR Part 75	Particulate/PM10 emissions: 0.013 lb/mmBtu actual heat input when firing natural gas;
OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) OAC rule 3745-23-06 NSPS 40 CFR Part 60 Subpart GG	0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil;
OAC rule 3745-31-05(D) Synthetic minor to avoid PSD rule requirements	11.53 tons as a rolling, 12-month summation.
OAC rule 3745-31-05(D) Synthetic minor to avoid MACT rule requirements	Nitrogen Oxide emissions: 15 ppmv at 15% oxygen on a dry basis, as a daily average, when firing natural gas, excluding start-up and shutdown; 178 lbs/hour when firing natural gas;
OAC rule 3745-17-07(A)(1)	42 ppmv at 15% oxygen on a dry basis, as a daily average, when firing No.2 fuel oil, excluding start-up and shutdown; 269 lbs/hour when firing No. 2 fuel oil;
OAC rule 3745-31-05(A)(3)	343.68 tons as a rolling, 12-month summation.
	Carbon monoxide emissions: 301 lbs/hour when firing natural gas;
	800 lbs/hour when firing No. 2 fuel oil;
	246 tons as a rolling, 12-month summation.
	Sulfur dioxide emissions: 0.0026 lb/mmBtu actual heat input, when firing natural gas
	0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil
	34.65 tons, as a rolling, 12-month summation

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<p>Arsenic emissions, occurs during oil-firing only: 0.01 lb/hour and 0.01 ton, as a rolling, 12-month summation</p>	<p>Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.</p> <p>0.000713 lb formaldehyde/mmBtu actual heat input</p>
<p>Beryllium emissions, occurs during oil-firing only: 0.0003 lb/hour and 0.0002 ton, as a rolling, 12-month summation</p>	<p>0.06 lb/hour and 0.05 ton Benzene, as a rolling, 12-month summation</p>
<p>Sulfuric acid mist emissions, occurs during oil-firing only: 0.0054 lb/mmBtu, actual heat input; 3.16 tons, as a rolling, 12-month summation</p>	<p>The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05(D); and OAC rule 3745-17-07(A)(1).</p> <p>See Part I, term A.4.</p>
<p>Volatile organic compound emissions: 4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil; 7.91 tons, as a rolling, 12-month summation.</p>	<p>The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.</p>
<p>Formaldehyde emissions: 1.48 tons, as a rolling, 12-month summation.</p>	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.d** The listed carbon monoxide emission limitations are equivalent to the requirements of OAC rule 3745-21-08(B) which states that all new stationary sources of carbon monoxide shall minimize carbon monoxide emissions by use of the best available control techniques and operating practices in accordance with the best current technology. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

PM10 Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NO_x burners (DNLB) when firing natural gas and water injection when firing fuel oil and the ppmv NO_x levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines.

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Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Arsenic emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Benzene emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Beryllium emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

- 2.f** The permittee shall install and operate systems to monitor and record and report emissions of NO_x in accordance with this permit, in lieu of the following Subpart GG requirements:

Section 60.334(a) continuous monitoring system to monitor and record fuel consumption and the ratio of water to fuel being fired in each turbine.

Section 60.334(c) excess emissions reporting.

- 2.g** The hourly arsenic, benzene, and beryllium emission limitations are being established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and/or reporting requirements to ensure compliance with these limits.

- 2.h** Start-up shall be defined as the time necessary to bring a turbine on line from a no load condition to synchronization and shall not exceed a maximum of 15 minutes. Shutdown periods shall not exceed 15 minutes.

II. Operational Restrictions

- The maximum annual operating hours for this emissions unit shall not exceed 2504** while burning natural gas and 1054** when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of this emissions unit, the permittee shall not exceed the cumulative operating hours specified in the following table:

Month	Maximum allowable cumulative operating hours while burning natural gas	Maximum allowable cumulative operating hours while burning No. 2 fuel oil

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1	626	264
1 - 2	1252	527
1 - 3	1878	791
1 - 4	2504	1054
1 - 5	2504	1054
1 - 6	2504	1054
1 - 7	2504	1054
1 - 8	2504	1054
1 - 9	2504	1054
1 - 10	2504	1054
1 - 11	2504	1054
1 - 12	2504	1054

**The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 3,755 hours annually of natural gas combustion.

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

2. The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05% sulfur, by weight.

III. Monitoring and/or Recordkeeping Requirements

1. Statement of Certification - NO_x Monitoring

- a. Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.
- b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous NO_x monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and 40 CFR Part 75. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office. Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and 40 CFR Part 75.
- c. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions units in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75.
- d. The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
- e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

2. Statement of Certification - CO Monitoring

- a. Prior to the installation of the continuous CO monitoring system, the permittee shall

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- submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.
- b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.
 - c. The permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions units in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
 - d. The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one-minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
 - e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
3. In accordance with Subpart GG, Section 60.334(b), the permittee shall monitor the sulfur content of the fuel being fired in the turbine. The frequency of determination of this value shall be as follows:
 - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined

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on each occasion that fuel is transferred to the storage tank from any other source.

- b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. The permittee may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used to comply with paragraph (b) of Section 60.334.
4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.
5. The permittee shall determine fuel sulfur content in accordance with the requirements of Subpart GG, Section 60.335(d) and (e).
6. The permittee shall maintain monthly records of the following information:
 - a. The summation of the operating hours for this emissions unit, in hours/month when burning natural gas and/or when burning No. 2 fuel oil.
 - b. During the first twelve calendar months of operation following startup, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil. Following the first twelve calendar months of operation following startup, the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil.
 - c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil
 - d. The rolling, 12-month summation of the particulates/PM10, NO_x, CO, SO₂, arsenic, benzene, beryllium, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for this emissions unit.

IV. Reporting Requirements

1. Continuous NO_x Emissions Monitoring
 - a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in the terms and conditions of this permit (178 lbs/hour and 15 ppmvd at 15% oxygen when burning natural gas and 269 lbs/hour and 42 ppmvd at 15% oxygen when burning No. 2 fuel oil). These reports shall also contain the total NO_x emissions for the calendar quarter (in tons).

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- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NOx emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

2. Continuous CO Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable limits specified in the terms and conditions of this permit (301 lbs/hour when burning natural gas and 800 lbs/hour when burning No. 2 fuel oil). These reports shall also contain the total CO emissions for the calendar quarter (in tons).
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess CO emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the

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emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

3. The permittee shall notify the Regional Air Pollution Control Agency if the sulfur content of the fuel oil burned in this emissions unit exceeds the 0.05% by weight limitation. Such reports shall be submitted within 30 days of the exceedance.
 4. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of number two fuel oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
 - a. The total quantity of oil received in each shipment (gallons).
 - b. The weighted* average sulfur content (percent by weight) of the oil received during each calendar month.
 - c. The weighted* average heat content (Btu/gallon) of the oil received during each calendar month
 - d. The weighted* average SO₂ emission rate (lb/mmBtu of actual heat input) of the oil combusted during each calendar month (the SO₂ emission rate shall be calculated as specified in OAC rule 3745-18-04(F)).
- *In proportion to the quantity of oil received in each shipment during each calendar month.
5. The permittee shall submit quarterly deviation reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:
 - a. For the first twelve calendar months of operation following startup of this emissions unit, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil.
 - b. Beginning after the first twelve calendar months of operation following startup of this emissions unit, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil.
 - c. Any exceedances of the rolling, 12-month summation of particulates/PM₁₀, NO_x, CO, SO₂, arsenic, benzene, beryllium, sulfuric acid mist, VOC, and formaldehyde emission limitations.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

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6. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and shall cover the previous calendar quarter.

V. Testing Requirements

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

- a. Emission Limitation -

0.013 lb particulate emissions/mmBtu actual heat input, when firing natural gas
0.026 lb particulate emissions/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 51, Appendix M, Methods 201 or 201A and 202, as specified in A.V.2.

- b. Emission Limitation -

11.53 tons particulate emissions, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly particulate emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly particulate emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the particulate emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

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c. Emission Limitation -

15 ppmvd NOx at 15% oxygen, based on a daily average, while burning natural gas, excluding start-up and shutdown

42 ppmvd NOx at 15% oxygen, based on a daily average, while burning No. 2 fuel oil, excluding start-up and shutdown

178 lbs/hour nitrogen oxides, while burning natural gas

269 lbs/hour nitrogen oxides, while burning No. 2 fuel oil

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Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO_x emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. based upon a daily averaging period and CFR Part 60 requirements.

d. Emission Limitation -

343.68 tons NO_x, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6 and shall be determined through the use of CEMs as specified in A.III.1. The monthly NO_x emissions shall be added to the total NO_x emissions from the previous eleven months to determine the rolling, 12-month summation of NO_x emissions.

e. Emission Limitation -

301 lbs CO/hour, while burning natural gas
800 lbs CO/hour, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon the continuous emissions monitoring requirement and the monitoring/record keeping as specified in A.III.2. Compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, as specified in A.V.2.

f. Emission Limitation -

246 tons CO, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6 and shall be determined through the use of CEMs as specified in A.III.2. The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

g. Emission Limitation -

0.0026 lb SO₂/mmBtu actual heat input, while burning natural gas
0.055 lb SO₂/mmBtu actual heat input, while burning No. 2 fuel oil

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Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method (such as, ASTM method D3031), or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.3. and the use of the equations specified in OAC rule 3745-18-04(F).

h. Emission Limitation -

34.65 tons SO₂, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6 and shall be determined through a summation of the SO₂ emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly SO₂ emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO₂/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly SO₂ emissions from the burning of No. 2 fuel oil shall be determined by multiplying the weighted average SO₂ emission rate determined in A.III.4. (lb/mmBtu) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The monthly SO₂ emissions shall be added to the total SO₂ emissions from the previous eleven months to determine the rolling, 12-month summation of SO₂ emissions.

i. Emission Limitation -

0.01 lb/hour arsenic

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Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when firing No. 2 fuel oil. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 108.

j. Emission Limitation -

0.01 ton arsenic, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6 and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when burning No. 2 fuel oil by the actual heat input of this emissions unit for the month when the emissions unit is burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly arsenic emissions shall be added to the total arsenic emissions from the previous eleven months to determine the rolling, 12-month summation of arsenic emissions.

k. Emission Limitation -

0.013 lb/hour benzene

Applicable Compliance Method -

When firing natural gas, compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu. When firing No. 2 fuel oil, compliance shall be determined by multiplying the maximum hourly heat input capacity of the emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 25.

l. Emission Limitation -

0.02 ton benzene, as a rolling, 12-month summation

Applicable Compliance Method -

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Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the benzene emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly benzene emissions from the burning of natural gas shall be determined by multiplying the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly benzene emissions from the burning of No. 2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the benzene emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

m. Emission Limitation -

0.0003 lb/hour beryllium

Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb beryllium/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 104.

n. Emission Limitation -

0.0002 ton beryllium, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb/mmBtu when burning No. 2 fuel oil by the actual heat input of this emissions unit for the month when the emissions unit was burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly beryllium emissions shall be added to the total beryllium emissions from the previous eleven months to determine the rolling, 12-month summation of beryllium emissions.

o. Emission Limitation -

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0.0054 lb sulfuric acid mist/mmBtu actual heat input

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Method 8, as specified in A.V.2.

p. Emission Limitation -

3.16 tons sulfuric acid mist, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions shall be added to the total sulfuric acid mist emissions from the previous eleven months to determine the rolling, 12-month summation of sulfuric acid mist emissions.

q. Emission Limitation -

4 lbs/hour VOC, while burning natural gas
5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25, and/or 25A, as specified in A.V.2.

r. Emission Limitation -

7.91 tons VOC, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

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- i. The monthly VOC emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb VOC/hour while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.
 - ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
 - iii. The rolling, 12-month summation of the VOC emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.
- s. Emission Limitation -
- 0.000713 lb formaldehyde/mmBtu actual heat input
- Applicable Compliance Method -
- When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.
- t. Emission Limitation -
- 1.48 tons formaldehyde, as a rolling, 12-month summation
- Applicable Compliance Method -
- Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:
- i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
 - ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
 - iii. The rolling, 12-month summation of the formaldehyde emissions shall be the sum

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of (i) and (ii) above for the rolling, 12-month period.

u. Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

v. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

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Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3., A.III.4., and A.III.5.

w. Emission Limitation -

2,504 hours of operation, as a rolling, 12-month summation while burning natural gas
1,054 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil
1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not burned, with total natural gas operation not to exceed 3,755 hours as a rolling, 12-month summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 60 days after start-up of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NO_x, CO, VOC, formaldehyde (while burning natural gas), and sulfuric acid mist (while burning No. 2 fuel oil) emission rates.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for particulates/PM10, Method 201 or 201A and Method 202 for condensibles of 40 CFR Part 51, Appendix M; for NO_x, Method 7 of 40 CFR Part 60, Appendix A; for CO, Method 10 of 40 CFR Part 60, Appendix A; for VOC, Method 18, 25, and/or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Method 8 of 40 CFR Part 60, Appendix A - if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions unit is operating at its maximum capacity while combusting natural gas and No. 2 fuel oil, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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** the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - natural gas and No. 2 fuel oil fired simple cycle combustion turbine No. 5 - Tait CT5, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P002) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case"

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pollutant(s):

Pollutant: formaldehyde

TLV (mg/m³): 0.37

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1.6971MAGLC (ug/m³): 8.81

Pollutant: beryllium

TLV (mg/m³): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.0008MAGLC (ug/m³): 0.05

Pollutant: arsenic

TLV (mg/m³): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.0123MAGLC (ug/m³): 0.24

Pollutant: benzene

TLV (mg/m³): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.2142

MAGLC (ug/m3): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m3): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 13.56

MAGLC (ug/m3): 23.81

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

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- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P003 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 6 - Tait CT6, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20

	Emissions Unit ID: P003
	<u>Applicable Emissions Limitations/Control Measures</u>
40 CFR Part 75	Particulate/PM10 emissions: 0.013 lb/mmBtu actual heat input when firing natural gas;
OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) OAC rule 3745-23-06 NSPS 40 CFR Part 60 Subpart GG	0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil;
OAC rule 3745-31-05(D) Synthetic minor to avoid PSD rule requirements	11.53 tons as a rolling, 12-month summation.
OAC rule 3745-31-05(D) Synthetic minor to avoid MACT rule requirements	Nitrogen Oxide emissions: 15 ppmv at 15% oxygen on a dry basis, as a daily average, when firing natural gas, excluding start-up and shutdown; 178 lbs/hour when firing natural gas;
OAC rule 3745-17-07(A)(1)	42 ppmv at 15% oxygen on a dry basis, as a daily average, when firing No.2 fuel oil, excluding start-up and shutdown; 269 lbs/hour when firing No. 2 fuel oil;
OAC rule 3745-31-05(A)(3)	343.68 tons as a rolling, 12-month summation.
	Carbon monoxide emissions: 301 lbs/hour when firing natural gas;
	800 lbs/hour when firing No. 2 fuel oil;
	246 tons as a rolling, 12-month summation.
	Sulfur dioxide emissions: 0.0026 lb/mmBtu actual heat input, when firing natural gas
	0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil
	34.65 tons, as a rolling, 12-month summation

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<p>Arsenic emissions, occurs during oil-firing only: 0.01 lb/hour and 0.01 ton, as a rolling, 12-month summation</p>	<p>Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.</p> <p>0.000713 lb formaldehyde/mmBtu actual heat input</p>
<p>Beryllium emissions, occurs during oil-firing only: 0.0003 lb/hour and 0.0002 ton, as a rolling, 12-month summation</p>	<p>0.06 lb/hour and 0.05 ton Benzene, as a rolling, 12-month summation</p>
<p>Sulfuric acid mist emissions, occurs during oil-firing only: 0.0054 lb/mmBtu, actual heat input; 3.16 tons, as a rolling, 12-month summation</p>	<p>The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05(D); and OAC rule 3745-17-07(A)(1).</p> <p>See Part I, term A.4.</p>
<p>Volatile organic compound emissions: 4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil; 7.91 tons, as a rolling, 12-month summation.</p>	<p>The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.</p>
<p>Formaldehyde emissions: 1.48 tons, as a rolling, 12-month summation.</p>	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.d** The listed carbon monoxide emission limitations are equivalent to the requirements of OAC rule 3745-21-08(B) which states that all new stationary sources of carbon monoxide shall minimize carbon monoxide emissions by use of the best available control techniques and operating practices in accordance with the best current technology. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

PM10 Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NOx burners (DNLB) when firing natural gas and water injection when firing fuel oil and the ppmv NOx levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines.

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Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Arsenic emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Benzene emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Beryllium emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

- 2.f** The permittee shall install and operate systems to monitor and record and report emissions of NOx in accordance with this permit, in lieu of the following Subpart GG requirements:

Section 60.334(a) continuous monitoring system to monitor and record fuel consumption and the ratio of water to fuel being fired in each turbine.

Section 60.334(c) excess emissions reporting.

- 2.g** The hourly arsenic, benzene, and beryllium emission limitations are being established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and/or reporting requirements to ensure compliance with these limits.

- 2.h** Start-up shall be defined as the time necessary to bring a turbine on line from a no load condition to synchronization and shall not exceed a maximum of 15 minutes. Shutdown periods shall not exceed 15 minutes.

II. Operational Restrictions

- The maximum annual operating hours for this emissions unit shall not exceed 2504** while burning natural gas and 1054** when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of this emissions unit, the permittee shall not exceed the cumulative operating hours specified in the following table:

Month	Maximum allowable cumulative operating hours while burning natural gas	Maximum allowable cumulative operating hours while burning No. 2 fuel oil

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1	626	264
1 - 2	1252	527
1 - 3	1878	791
1 - 4	2504	1054
1 - 5	2504	1054
1 - 6	2504	1054
1 - 7	2504	1054
1 - 8	2504	1054
1 - 9	2504	1054
1 - 10	2504	1054
1 - 11	2504	1054
1 - 12	2504	1054

**The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 3,755 hours annually of natural gas combustion.

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

2. The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05% sulfur, by weight.

III. Monitoring and/or Recordkeeping Requirements

1. Statement of Certification - NO_x Monitoring

- a. Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.
- b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous NO_x monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and 40 CFR Part 75. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office. Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and 40 CFR Part 75.
- c. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions units in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75.
- d. The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
- e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

2. Statement of Certification - CO Monitoring

- a. Prior to the installation of the continuous CO monitoring system, the permittee shall

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- submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.
- b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.
 - c. The permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions units in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
 - d. The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one-minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
 - e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
3. In accordance with Subpart GG, Section 60.334(b), the permittee shall monitor the sulfur content of the fuel being fired in the turbine. The frequency of determination of this value shall be as follows:
 - a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined

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on each occasion that fuel is transferred to the storage tank from any other source.

- b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. The permittee may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used to comply with paragraph (b) of Section 60.334.
4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.
5. The permittee shall determine fuel sulfur content in accordance with the requirements of Subpart GG, Section 60.335(d) and (e).
6. The permittee shall maintain monthly records of the following information:
 - a. The summation of the operating hours for this emissions unit, in hours/month when burning natural gas and/or when burning No. 2 fuel oil.
 - b. During the first twelve calendar months of operation following startup, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil. Following the first twelve calendar months of operation following startup, the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil.
 - c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil
 - d. The rolling, 12-month summation of the particulates/PM10, NO_x, CO, SO₂, arsenic, benzene, beryllium, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for this emissions unit.

IV. Reporting Requirements

1. Continuous NO_x Emissions Monitoring
 - a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in the terms and conditions of this permit (178 lbs/hour and 15 ppmvd at 15% oxygen when burning natural gas and 269 lbs/hour and 42 ppmvd at 15% oxygen when burning No. 2 fuel oil). These reports shall also contain the total NO_x emissions for the calendar quarter (in tons).

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- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NOx emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

2. Continuous CO Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable limits specified in the terms and conditions of this permit (301 lbs/hour when burning natural gas and 800 lbs/hour when burning No. 2 fuel oil). These reports shall also contain the total CO emissions for the calendar quarter (in tons).
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess CO emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the

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emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

3. The permittee shall notify the Regional Air Pollution Control Agency if the sulfur content of the fuel oil burned in this emissions unit exceeds the 0.05% by weight limitation. Such reports shall be submitted within 30 days of the exceedance.
 4. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of number two fuel oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
 - a. The total quantity of oil received in each shipment (gallons).
 - b. The weighted* average sulfur content (percent by weight) of the oil received during each calendar month.
 - c. The weighted* average heat content (Btu/gallon) of the oil received during each calendar month
 - d. The weighted* average SO₂ emission rate (lb/mmBtu of actual heat input) of the oil combusted during each calendar month (the SO₂ emission rate shall be calculated as specified in OAC rule 3745-18-04(F)).
- *In proportion to the quantity of oil received in each shipment during each calendar month.
5. The permittee shall submit quarterly deviation reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:
 - a. For the first twelve calendar months of operation following startup of this emissions unit, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil.
 - b. Beginning after the first twelve calendar months of operation following startup of this emissions unit, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil.
 - c. Any exceedances of the rolling, 12-month summation of particulates/PM₁₀, NO_x, CO, SO₂, arsenic, benzene, beryllium, sulfuric acid mist, VOC, or formaldehyde emission limitations.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

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6. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and shall cover the previous calendar quarter.

V. Testing Requirements

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

- a. Emission Limitation -

0.013 lb particulate emissions/mmBtu actual heat input, when firing natural gas
 0.026 lb particulate emissions/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 51, Appendix M, Methods 201 or 201A and 202, as specified in A.V.2.

- b. Emission Limitation -

11.53 tons particulate emissions, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly particulate emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly particulate emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the particulate emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

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c. Emission Limitation -

15 ppmvd NOx at 15% oxygen, based on a daily average, while burning natural gas, excluding start-up and shutdown

42 ppmvd NOx at 15% oxygen, based on a daily average, while burning No. 2 fuel oil, excluding start-up and shutdown

178 lbs/hour nitrogen oxides, while burning natural gas

269 lbs/hour nitrogen oxides, while burning No. 2 fuel oil

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Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO_x emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. based upon a daily averaging period and CFR Part 60 requirements.

d. Emission Limitation -

343.68 tons NO_x, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6 and shall be determined through the use of CEMs as specified in A.III.1. The monthly NO_x emissions shall be added to the total NO_x emissions from the previous eleven months to determine the rolling, 12-month summation of NO_x emissions.

e. Emission Limitation -

301 lbs CO/hour, while burning natural gas
800 lbs CO/hour, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon the continuous emissions monitoring requirement and the monitoring/record keeping as specified in A.III.2. Compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, as specified in A.V.2.

f. Emission Limitation -

246 tons CO, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through the use of CEMs as specified in A.III.2. The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

g. Emission Limitation -

0.0026 lb SO₂/mmBtu actual heat input, while burning natural gas
0.055 lb SO₂/mmBtu actual heat input, while burning No. 2 fuel oil

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Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method (such as, ASTM method D3031), or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.3. and the use of the equations specified in OAC rule 3745-18-04(F).

h. Emission Limitation -

34.65 tons SO₂, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the SO₂ emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly SO₂ emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO₂/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly SO₂ emissions from the burning of No. 2 fuel oil shall be determined by multiplying the weighted average SO₂ emission rate determined in A.III.4. (lb/mmBtu) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the SO₂ emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

i. Emission Limitation -

0.01 lb/hour arsenic

Applicable Compliance Method -

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Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when firing No. 2 fuel oil. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 108.

j. Emission Limitation -

0.01 ton arsenic, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while the emissions unit is burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly arsenic emissions shall be added to the total arsenic emissions from the previous eleven months to determine the rolling, 12-month summation of arsenic emissions.

k. Emission Limitation -

0.013 lb/hour benzene

Applicable Compliance Method -

When firing natural gas, compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu. When firing No. 2 fuel oil, compliance shall be determined by multiplying the maximum hourly heat input capacity of the emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 25.

l. Emission Limitation -

0.02 ton benzene, as a rolling, 12-month summation

Applicable Compliance Method -

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Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the benzene emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly benzene emissions from the burning of natural gas shall be determined by multiplying the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly benzene emissions from the burning of No. 2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the benzene emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

m. Emission Limitation -

0.0003 lb/hour beryllium

Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb beryllium/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 104.

n. Emission Limitation -

0.0002 ton beryllium, as a rolling, 12-month period

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb/mmBtu when burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly beryllium emissions shall be added to the total beryllium emissions from the previous eleven months to determine the rolling, 12-month summation of beryllium emissions.

o. Emission Limitation -

0.0054 lb sulfuric acid mist/mmBtu actual heat input

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Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Method 8 as specified in A.V.2.

p. Emission Limitation -

3.16 tons sulfuric acid mist, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions shall be added to the total sulfuric acid mist emissions from the previous eleven months to determine the rolling, 12-month summation of sulfuric acid mist emissions.

q. Emission Limitation -

4 lbs/hour VOC, while burning natural gas
5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25 and/or 25A, as specified in A.V.2.

r. Emission Limitation -

7.91 tons VOC, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly VOC emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb VOC/hour while burning natural gas

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derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.

- ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the VOC emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

s. Emission Limitation -

0.000713 lb formaldehyde/mmBtu actual heat input

Applicable Compliance Method -

When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.

t. Emission Limitation -

1.48 tons formaldehyde, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
- ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the formaldehyde emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

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- u. Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.
 - v. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3., A.III.4., and A.III.5.
 - w. Emission Limitation -

2,504 hours of operation, as a rolling, 12-month summation while burning natural gas
1,054 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil
1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not burned, with total natural gas operation not to exceed 3,755 hours as a rolling, 12-month summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 60 days after start-up of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NO_x, CO, VOC, formaldehyde (while burning natural gas), and sulfuric acid mist (while burning No. 2 fuel oil) emission rates.

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- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for particulates/PM10, Method 201 or 201A and Method 202 for condensibles of 40 CFR Part 51, Appendix M; for NOx, Method 7 of 40 CFR Part 60, Appendix A; for CO, Method 10 of 40 CFR Part 60, Appendix A; for VOC, Method 18, 25, and/or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Method 8 of 40 CFR Part 60, Appendix A - if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The tests shall be conducted while the emissions unit is operating at its maximum capacity while combusting natural gas and No. 2 fuel oil, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

** the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 6 - Tait CT6, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P003) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration

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(MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: formaldehyde

TLV (mg/m³): 0.37

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1.6971

MAGLC (ug/m³): 8.81

Pollutant: beryllium

TLV (mg/m³): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.0008

MAGLC (ug/m³): 0.05

Pollutant: arsenic

TLV (mg/m³): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.0123

MAGLC (ug/m³): 0.24

Pollutant: benzene

TLV (mg/m³): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.2142

MAGLC (ug/m3): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m3): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 13.56

MAGLC (ug/m3): 23.81

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

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- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P004 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 7 - Tait CT7, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	40 CFR Part 52, Section 52.21 and OAC rule 3745-31-10 through OAC rule 3745-31-20

	40 CFR Part 75	Emissions Unit ID: P004 Applicable Emissions <u>Limitations/Control Measures</u>
	OAC rule 3745-17-11(B)(4) OAC rule 3745-18-06(F) OAC rule 3745-23-06 NSPS 40 CFR Part 60 Subpart GG	Particulate/PM10 emissions: 0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil;
OAC rule 3745-31-05(D) Synthetic minor to avoid PSD rule requirements		11.53 tons as a rolling, 12-month summation. Nitrogen Oxide emissions: 15 ppmv at 15% oxygen on a dry basis, as a daily average, when firing natural gas, excluding start-up and shutdown; 178 lbs/hour when firing natural gas;
OAC rule 3745-31-05(D) Synthetic minor to avoid MACT rule requirements		42 ppmv at 15% oxygen on a dry basis, as a daily average, when firing No.2 fuel oil, excluding start-up and shutdown; 269 lbs/hour when firing No. 2 fuel oil;
OAC rule 3745-17-07(A)(1)		343.68 tons as a rolling, 12-month summation.
OAC rule 3745-31-05(A)(3)		Carbon monoxide emissions: 301 lbs/hour when firing natural gas; 800 lbs/hour when firing No. 2 fuel oil; 246 tons as a rolling, 12-month summation.
		Sulfur dioxide emissions: 0.0026 lb/mmBtu actual heat input, when firing natural gas 0.055 lb/mmBtu actual heat input, when firing No. 2 fuel oil 34.65 tons, as a rolling, 12-month summation

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Arsenic emissions, occurs during oil-firing only: 0.01 lb/hour and 0.01 ton, as a rolling, 12-month summation

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

0.000713 lb formaldehyde/mmBtu actual heat input

Beryllium emissions, occurs during oil-firing only: 0.0003 lb/hour and 0.0002 ton, as a rolling, 12-month summation

0.06 lb/hour and 0.05 ton Benzene, as a rolling, 12-month summation

Sulfuric acid mist emissions, occurs during oil-firing only: 0.0054 lb/mmBtu, actual heat input;

The requirements of this rule also include compliance with the requirements of 40 CFR Part 52, Section 52.21 and OAC rules 3745-31-10 through 3745-31-20; OAC rule 3745-31-05(D); and OAC rule 3745-17-07(A)(1).

3.16 tons, as a rolling, 12-month summation

See Part I, term A.4.

Volatile organic compound emissions:

4 lbs/hour when firing natural gas;

The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to 40 CFR Part 52, Sections 52.21 and OAC rules 3745-31-10 through 3745-31-20.

5.5 lbs/hour when firing No. 2 fuel oil;

7.91 tons, as a rolling, 12-month summation.

Formaldehyde emissions: 1.48 tons, as a rolling, 12-month summation.

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The listed particulate/PM10 emission limitations are more stringent than the requirements of OAC rule 3745-17-11(B)(4). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.b** The listed nitrogen oxides emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-23-06. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.c** The listed sulfur dioxide emission limitations are more stringent than the requirements of 40 CFR Part 60, Subpart GG and OAC rule 3745-18-06(F). They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.d** The listed carbon monoxide emission limitations are equivalent to the requirements of OAC rule 3745-21-08(B) which states that all new stationary sources of carbon monoxide shall minimize carbon monoxide emissions by use of the best available control techniques and operating practices in accordance with the best current technology. They were chosen by the applicant to ensure compliance with the requirements of OAC rules 3745-31-10 through 3745-31-20 and 40 CFR Part 52, Section 52.21 "Prevention of significant deterioration of air quality".
- 2.e** The following Best Available Control Technology (BACT) determinations have been made in accordance with the PSD regulations:

PM10 Emissions - The BACT determination is the use of only clean burning fuels, natural gas and No. 2 fuel oil in these combustion turbines, capable of meeting the emission limitations listed in Part III A.I.1.

Nitrogen oxide emissions - The BACT determination is the use of dry low-NO_x burners (DNLB) when firing natural gas and water injection when firing fuel oil and the ppmv NO_x levels listed in Part III A.I.1.

Carbon monoxide emissions - The BACT determination is the use of efficient combustion technology inherent to the design of the combustion turbines.

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Sulfur dioxide emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as back-up fuel in these combustion turbines and a maximum sulfur content of 0.05 percent by weight of the fuel oil.

Arsenic emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Benzene emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Beryllium emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

Sulfuric acid mist emissions - The BACT determination is the use of natural gas as the primary fuel and No. 2 fuel oil as the back-up fuel in these combustion turbines.

2.f The permittee shall install and operate systems to monitor and record and report emissions of NOx in accordance with this permit, in lieu of the following Subpart GG requirements:

Section 60.334(a) continuous monitoring system to monitor and record fuel consumption and the ratio of water to fuel being fired in each turbine.

Section 60.334(c) excess emissions reporting.

2.g The hourly arsenic, benzene, and beryllium emission limitations are being established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to establish record keeping and/or reporting requirements to ensure compliance with these limits.

2.h Start-up shall be defined as the time necessary to bring a turbine on line from a no load condition to synchronization and shall not exceed a maximum of 15 minutes. Shutdown periods shall not exceed 15 minutes.

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 2504** while burning natural gas and 1054** when burning No. 2 fuel oil, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first twelve calendar months of operation following startup of this emissions unit, the permittee shall not exceed the cumulative operating hours specified in the following table:

	Maximum allowable cumulative operating hours while burning natural gas	Maximum allowable cumulative operating hours while burning No. 2 fuel oil
Month		

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1	626	264
1 - 2	1252	527
1 - 3	1878	791
1 - 4	2504	1054
1 - 5	2504	1054
1 - 6	2504	1054
1 - 7	2504	1054
1 - 8	2504	1054
1 - 9	2504	1054
1 - 10	2504	1054
1 - 11	2504	1054
1 - 12	2504	1054

**The permittee may combust 1.2 additional hours of natural gas for every hour fuel oil is not combusted, up to 3,755 hours annually of natural gas combustion.

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

2. The sulfur content of the No. 2 fuel oil fired in this emissions unit shall not exceed 0.05% sulfur, by weight.

III. Monitoring and/or Recordkeeping Requirements

1. Statement of Certification - NOx Monitoring
 - a. Prior to the installation of the continuous NOx monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office.
 - b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous NOx monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6, and 40 CFR Part 75. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office.

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Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6 and 40 CFR Part 75.

- c. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions units in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 75.
- d. The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
- e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

2. Statement of Certification - CO Monitoring

- a. Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 and 6 for approval by the Ohio EPA, Central Office.
- b. Within 60 days of the startup of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 and 6. Personnel from the Ohio EPA District Office or local air agency shall be notified 30 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Regional Air Pollution Control Agency within 30 days after the test is completed. Copies of the test results shall be sent to the Regional Air Pollution Control Agency and the Ohio EPA Central Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4 and 6.
- c. The permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions units in units of the applicable standard. Such continuous

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monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

- d. The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one-minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.
 - e. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.
3. In accordance with Subpart GG, Section 60.334(b), the permittee shall monitor the sulfur content of the fuel being fired in the turbine. The frequency of determination of this value shall be as follows:
- a. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
 - b. If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. The permittee may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Ohio EPA, Central Office before they can be used to comply with paragraph (b) of Section 60.334.
4. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content.
5. The permittee shall determine fuel sulfur content in accordance with the requirements of Subpart GG, Section 60.335(d) and (e).
6. The permittee shall maintain monthly records of the following information:
- a. The summation of the operating hours for this emissions unit, in hours/month when burning natural gas and/or when burning No. 2 fuel oil.
 - b. During the first twelve calendar months of operation following startup, the cumulative operating hours for each calendar month when burning natural gas and/or when burning No. 2 fuel oil. Following the first twelve calendar months of operation following startup,

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the rolling, 12-month summation of the operating hours for this emissions unit, in hours per rolling, 12-month period when burning natural gas and/or when burning No. 2 fuel oil.

- c. The actual heat input of this emissions unit, in mmBtu/month, when burning natural gas and/or when burning No. 2 fuel oil
- d. The rolling, 12-month summation of the particulates/PM10, NOx, CO, SO2, arsenic, benzene, beryllium, sulfuric acid mist, VOC, and formaldehyde emissions, in tons, for this emissions unit.

IV. Reporting Requirements

1. Continuous NOx Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NOx values in excess of the applicable limits specified in the terms and conditions of this permit (178 lbs/hour and 15 ppmvd at 15% oxygen when burning natural gas and 269 lbs/hour and 42 ppmvd at 15% oxygen when burning No. 2 fuel oil). These reports shall also contain the total NOx emissions for the calendar quarter (in tons).
- b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
- c. If there are no excess NOx emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar

quarter.

2. Continuous CO Emissions Monitoring

- a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting the date, commencement and completion time, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of CO values in excess of the applicable limits specified in the terms and conditions of this permit (301 lbs/hour when burning natural gas and 800 lbs/hour when burning No. 2 fuel oil). These reports shall also contain the total CO emissions for the calendar quarter (in tons).
 - b. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Regional Air Pollution Control Agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.
 - c. If there are no excess CO emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.
3. The permittee shall notify the Regional Air Pollution Control Agency if the sulfur content of the fuel oil burned in this emissions unit exceeds the 0.05% by weight limitation. Such reports shall be submitted within 30 days of the exceedance.
4. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of number two fuel oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
- a. The total quantity of oil received in each shipment (gallons).
 - b. The weighted* average sulfur content (percent by weight) of the oil received during each calendar month.

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- c. The weighted* average heat content (Btu/gallon) of the oil received during each calendar month
- d. The weighted* average SO₂ emission rate (lb/mmBtu of actual heat input) of the oil combusted during each calendar month (the SO₂ emission rate shall be calculated as specified in OAC rule 3745-18-04(F)).

*In proportion to the quantity of oil received in each shipment during each calendar month.

- 5. The permittee shall submit quarterly deviation reports to the Regional Air Pollution Control Agency that identify any exceedances of the following:
 - a. For the first twelve calendar months of operation following startup of this emissions unit, all exceedances of the maximum allowable cumulative operating hours limits while burning natural gas and/or No. 2 fuel oil.
 - b. Beginning after the first twelve calendar months of operation following startup of this emissions unit, the rolling, 12-month operating hours limitations while burning natural gas and/or No. 2 fuel oil.
 - c. Any exceedances of the rolling, 12-month summation of particulates/PM₁₀, NO_x, CO, SO₂, arsenic, benzene, beryllium, sulfuric acid mist, VOC, or formaldehyde emission limitations.

These reports shall be submitted in accordance with Section A.1. of the General Terms and Conditions of this permit.

- 6. The permittee shall submit quarterly reports which identify each period during which an exemption for ice-fog provided in 40 CFR 60.332(f) is in effect. The report shall include the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time when the air pollution control system was reactivated. These reports shall be postmarked by April 30, July 30, October 30, and January 30 and shall cover the previous calendar quarter.

V. Testing Requirements

- 1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation -
 - 0.013 lb particulate emissions/mmBtu actual heat input, when firing natural gas
 - 0.026 lb particulate emissions/mmBtu actual heat input, when firing No. 2 fuel oil

Applicable Compliance Method -

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Compliance shall be based upon stack testing in accordance with 40 CFR Part 51, Appendix M, Methods 201 or 201A and 202, as specified in A.V.2.

b. Emission Limitation -

11.53 tons particulate emissions, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the particulate emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly particulate emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly particulate emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb particulate emissions/mmBtu while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the particulate emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

c. Emission Limitation -

15 ppmvd NOx at 15% oxygen, based on a daily average, while burning natural gas, excluding start-up and shutdown

42 ppmvd NOx at 15% oxygen, based on a daily average, while burning No. 2 fuel oil, excluding start-up and shutdown

178 lbs/hour nitrogen oxides, while burning natural gas

269 lbs/hour nitrogen oxides, while burning No. 2 fuel oil

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Applicable Compliance Method -

Initial compliance with the allowable outlet concentration, and the lbs/hour NO_x emission limitations shall be demonstrated by the performance testing as specified in A.V.2. and continual compliance shall be demonstrated by the use of the CEM specified in A.III.1. based upon a daily averaging period and CFR Part 60 requirements.

d. Emission Limitation -

343.68 tons NO_x, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6 and shall be determined through the use of CEMs as specified in A.III.1. The monthly NO_x emissions shall be added to the total NO_x emissions from the previous eleven months to determine the rolling, 12-month summation of NO_x emissions.

e. Emission Limitation -

301 lbs CO/hour, while burning natural gas
800 lbs CO/hour, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon the continuous emissions monitoring requirement and the monitoring/record keeping as specified in A.III.2. Compliance shall also be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 10, as specified in A.V.2.

f. Emission Limitation -

246 tons CO, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through the use of CEMs as specified in A.III.2. The monthly CO emissions shall be added to the total CO emissions from the previous eleven months to determine the rolling, 12-month summation of CO emissions.

g. Emission Limitation -

0.0026 lb SO₂/mmBtu actual heat input, while burning natural gas
0.055 lb SO₂/mmBtu actual heat input, while burning No. 2 fuel oil

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Applicable Compliance Method -

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content, in accordance with the appropriate ASTM method (such as, ASTM method D3031), or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in AP-42 Table 3.1-2a (4/00). When firing number two fuel oil, compliance shall be based upon the fuel analysis and record keeping requirements specified in A.II.2. and A.III.3. and the use of the equations specified in OAC rule 3745-18-04(F).

h. Emission Limitation -

34.65 tons SO₂, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the SO₂ emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly SO₂ emissions from the burning of natural gas shall be determined by multiplying the USEPA default value for pipeline quality natural gas (0.0006 lb SO₂/mmBtu) by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly SO₂ emissions from the burning of No. 2 fuel oil shall be determined by multiplying the weighted average SO₂ emission rate determined in A.III.4. (lb/mmBtu) by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the SO₂ emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

i. Emission Limitation -

0.01 lb/hour arsenic

Applicable Compliance Method -

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Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when firing No. 2 fuel oil. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 108.

j. Emission Limitation -

0.01 ton arsenic, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.000011 lb/mmBtu when firing No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly arsenic emissions shall be added to the total arsenic emissions from the previous eleven months to determine the rolling, 12-month summation of arsenic emissions.

k. Emission Limitation -

0.013 lb/hour benzene

Applicable Compliance Method -

When firing natural gas, compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu. When firing No. 2 fuel oil, compliance shall be determined by multiplying the maximum hourly heat input capacity of the emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 25.

l. Emission Limitation -

0.02 ton benzene, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be

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determined through a summation of the benzene emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly benzene emissions from the burning of natural gas shall be determined by multiplying the AP-42 Table 3.1-3 (4/00) emission factor of 0.000012 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning natural gas, and dividing by 2,000 lbs/ton.
- ii. The monthly benzene emissions from the burning of No. 2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) emission factor of 0.000055 lb benzene/mmBtu by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the benzene emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

m. Emission Limitation -

0.0003 lb/hour beryllium

Applicable Compliance Method -

Compliance shall be determined by multiplying the maximum hourly heat input capacity of this emissions unit (1115.2 mmBtu/hour) by the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb beryllium/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 61, Appendix B, Method 104.

n. Emission Limitation -

0.0002 ton beryllium, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the AP-42 Table 3.1-5 (4/00) emission factor of 0.00000031 lb/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly beryllium emissions shall be added to the total beryllium emissions from the previous eleven months to determine the rolling, 12-month summation of beryllium emissions.

o. Emission Limitation -

0.0054 lb sulfuric acid mist/mmBtu actual heat input

Applicable Compliance Method -

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Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Method 8 as specified in A.V.2.

p. Emission Limitation -

3.16 tons sulfuric acid mist, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined by multiplying the average emissions in lb sulfuric acid mist/mmBtu derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton. The monthly sulfuric acid mist emissions shall be added to the total sulfuric acid mist emissions from the previous eleven months to determine the rolling, 12-month summation of sulfuric acid mist emissions.

q. Emission Limitation -

4 lbs/hour VOC, while burning natural gas
5.5 lbs/hour VOC, while burning No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon stack testing in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25, and/or 25A as specified in A.V.2.

r. Emission Limitation -

7.91 tons VOC, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the VOC emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly VOC emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb VOC/hour while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the operating

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hours for the month while burning natural gas, and dividing by 2,000 lbs/ton.

- ii. The monthly VOC emissions from the burning of No. 2 fuel oil shall be determined by multiplying the average emissions in lb VOC/hour while burning No. 2 fuel oil derived from the stack test conducted in accordance with A.V.2. by the operating hours for the month while burning No. 2 fuel oil, and dividing by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the VOC emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

s. Emission Limitation -

0.000713 lb formaldehyde/mmBtu actual heat input

Applicable Compliance Method -

When firing natural gas, compliance shall be based upon stack testing in accordance with USEPA Method SW846, as specified in A.V.2. When firing No. 2 fuel oil, compliance shall be based upon the AP-42 Table 3.1-4 (4/00) emission factor of 0.00028 lb formaldehyde/mmBtu.

t. Emission Limitation -

1.48 tons formaldehyde, as a rolling, 12-month summation

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6. and shall be determined through a summation of the formaldehyde emissions from the burning of natural gas and No. 2 fuel oil as follows:

- i. The monthly formaldehyde emissions from the burning of natural gas shall be determined by multiplying the average emissions in lb formaldehyde/mmBtu while burning natural gas derived from the stack test conducted in accordance with A.V.2. by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
- ii. The monthly formaldehyde emissions from the burning of No.2 fuel oil shall be determined by multiplying the AP-42 Table 3.1-4 (4/00) of 0.00028 lb formaldehyde/mmBtu while burning No. 2 fuel oil by the actual heat input of this emissions unit for the month while burning natural gas, divided by 2,000 lbs/ton.
- iii. The rolling, 12-month summation of the formaldehyde emissions shall be the sum of (i) and (ii) above for the rolling, 12-month period.

u. Emission Limitation -

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20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined through visible emission observations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

v. Emission Limitation -

0.05% sulfur, by weight, of the No. 2 fuel oil

Applicable Compliance Method -

Compliance shall be based upon fuel oil sampling as specified in A.III.3., A.III.4., and A.III.5.

w. Emission Limitation -

2,504 hours of operation, as a rolling, 12-month summation while burning natural gas
1,054 hours of operation, as a rolling, 12-month summation while burning No. 2 fuel oil
1.2 hours of operation of natural gas may be added for every hour No. 2 fuel oil is not burned, with total natural gas operation not to exceed 3,755 hours as a rolling, 12-month summation.

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.6.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 60 days after start-up of this emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the particulates/PM10, NO_x, CO, VOC, formaldehyde (while burning natural gas), and sulfuric acid mist (while burning No. 2 fuel oil) emission rates.
 - c. The following test methods shall be employed to demonstrate compliance with the

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allowable mass emission rates: for particulates/PM10, Method 201 or 201A and Method 202 for condensibles of 40 CFR Part 51, Appendix M; for NO_x, Method 7 of 40 CFR Part 60, Appendix A; for CO, Method 10 of 40 CFR Part 60, Appendix A; for VOC, Method 18, 25, and/or 25A of 40 CFR Part 60, Appendix A; for formaldehyde, Method SW846; for sulfuric acid mist, Method 8 of 40 CFR Part 60, Appendix A - if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The tests shall be conducted while the emissions unit is operating at its maximum capacity while combusting natural gas and No. 2 fuel oil, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

** the permittee has requested that if the average emission rate (lbs/hour) derived from the stack test conducted in accordance with this terms is less than the permit VOC allowable listed in term A.I.1., it may apply for an air permit to install modification to increase the hours of operation. The permittee realizes that this modification might trigger the requirement to secure either an administrative or a new air permit to install.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004 - natural gas and No. 2 fuel oil fired simple cycle stationary combustion turbine No. 7 - Tait CT7, with a nominal production rating of 80 MW and a nominal heat input of 1115.2 mmBtu/hour, with dry low NOx combustion and water injection controls	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit (P004) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Acceptable Ground-Level Concentration

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(MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: formaldehyde

TLV (mg/m³): 0.37

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1.6971

MAGLC (ug/m³): 8.81

Pollutant: beryllium

TLV (mg/m³): 0.002

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.0008

MAGLC (ug/m³): 0.05

Pollutant: arsenic

TLV (mg/m³): 0.01

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.0123

MAGLC (ug/m³): 0.24

Pollutant: benzene

TLV (mg/m³): 1.60

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.2142

MAGLC (ug/m3): 38.10

Pollutant: sulfuric acid mist

TLV (mg/m3): 1.00

Maximum Hourly Emission Rate (lbs/hr):1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 13.56

MAGLC (ug/m3): 23.81

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

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- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
T002 - 864,000 gallon No. 2 fuel oil internal floating roof with submerged filling storage tank No. 5	OAC rule 3745-31-05(A)(3)	0.02 TPY volatile organic compounds (VOC)
	OAC rule 3745-21-09(L)(1)	See Section A.I.2.
	NSPS 40 CFR Part 60 Subpart Kb	See Section A.III.2.

2. Additional Terms and Conditions

- 2.a The fixed roof storage tank shall be equipped with an internal floating roof.
- 2.b The automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports, and the rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or is at the manufacturer’s recommended setting.
- 2.c All openings, except stub drains, shall be equipped with a cover, seal or lid which is to be in a closed position at all times except when in actual use for tank gauging or sampling.

II. Operational Restrictions

1. The tank shall be loaded by means of a submerged fill pipe, defined as any fill pipe with the discharge opening entirely submerged when the liquid level is six inches above the bottom of the tank or when loaded from the side, any fill pipe with the discharge opening entirely submerged when the liquid level is eighteen inches above the bottom of the tank, OAC rule 3745-21-01(C)(6).

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain records of the following information.
 - a. The types of petroleum liquids stored in the tank.
 - b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 1.0 pound per square inch absolute.
2. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source.
3. The permittee shall perform annual inspections of the gray paint finish of the storage tank and make repairs when necessary, to maintain the gray tank finish in good condition.
4. The permittee shall maintain monthly records of the No. 2 fuel oil throughput, in gallons.

IV. Reporting Requirements

1. If the permittee places, stores, or holds in the fixed roof tank any petroleum liquid with a true vapor pressure which is greater than 1.52 pounds per square inch absolute, and such tank does not comply with the requirements of paragraph (L)(1) of OAC rule 3745-21-09, the permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days of becoming aware of the occurrence.

V. Testing Requirements

1. Compliance with the emission limitations specified in A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation -

0.02 TPY VOC

Applicable Compliance Method -

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.4 and the formulas provided in AP-42 Chapter 7, Organic Liquid Storage Tanks, section 7.1.3.1, Total Losses from Fixed Roof Tanks (9/1997) or the "TANKS 4.0" software program.

VI. Miscellaneous Requirements

None

DPL E

PTI A

Emissions Unit ID: T002

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
T002 - 864,000 gallon No. 2 fuel oil internal floating roof with submerged filling storage tank No. 5	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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DPL Energy Inc
PTI Application: 08 04153
Issued

Facility ID: 0857042072

Emissions Unit ID: T002

NEW SOURCE REVIEW FORM B

PTI Number: 08-04153

Facility ID: 0857042072

FACILITY NAME DPL Energy Inc

FACILITY DESCRIPTION electrical services

CITY/TWP Dayton

SIC CODE 4911

SCC CODE 2-01-002-01

EMISSIONS UNIT ID P001

EMISSIONS UNIT DESCRIPTION 1115.2 mmBtu/hour natural gas and No. 2 fuel oil fired simple cycle combustion turbine No. 4 - Tait CT4, with dry low NOx combustion and water injection controls

DATE INSTALLED

upon PTI issuance

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
PM ₁₀	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
Sulfur Dioxide	attainment	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65
Organic Compounds	attainment	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55
Volatile Organic Compounds	attainment	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91
Nitrogen Oxides	attainment	15 ppm at 15% oxygen on a dry basis, as a daily average and 178 lbs/hour, when firing natural gas; 42 ppmv at 15% oxygen on a dry basis and 269 lbs/hour, when firing No. 2 fuel oil	343.68	15 ppm at 15% oxygen on a dry basis, as a daily average and 178 lbs/hour, when firing natural gas; 42 ppmv at 15% oxygen on a dry basis and 269 lbs/hour, when firing No. 2 fuel oil	343.68

NEW SOURCE REVIEW FORM B

PTI Number: 08-04153 Facility ID: 0857042072

FACILITY NAME DPL Energy Inc

FACILITY DESCRIPTION electrical services CITY/TWP Dayton

Carbon Monoxide	attainment	301 lbs/hour when firing natural gas; 800 lbs/hour when firing No. 2 fuel oil	246	301 lbs/hour when firing natural gas; 800 lbs/hour when firing No. 2 fuel oil	246
Lead					
Other: Arsenic		0.01 lb/hour	0.01	0.01 lb/hour	0.01
Benzene		0.06 lb/hour	0.05	0.06 lb/hour	0.05
Beryllium		0.0003 lb/hour	0.0002	0.0003 lb/hour	0.0002
Sulfuric acid mist		0.0054 lb/mmBtu actual heat input	3.16	0.0054 lb/mmBtu actual heat input	3.16
Formaldehyde		0.000713 lb/mmBtu actual heat input	1.48	0.000713 lb/mmBtu actual heat input	1.48

APPLICABLE FEDERAL RULES:

NSPS? Subpart GG NESHAP? PSD? **Y** OFFSET POLICY?

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

BAT is determined to be compliance with all applicable rules and specified allowable emission rates; application of low NOx burners and water injection controls; continuous emission monitoring for NOx and CO; operating hours limitation; fuel oil analysis; record keeping; and reporting.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 08-04153

Facility ID: 0857042072

FACILITY NAME DPL Energy Inc

FACILITY DESCRIPTION electrical services

CITY/TWP Davton

Emissions Unit ID: T002

SIC CODE 4911

SCC CODE 2-01-002-01

EMISSIONS UNIT ID P002

EMISSIONS UNIT DESCRIPTION 1115.2 mmBtu/hour natural gas and No. 2 fuel oil fired simple cycle combustion turbine No. 5 - Tait CT5, with dry low NOx combustion and water injection controls

DATE INSTALLED upon PTI issuance

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
PM ₁₀	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
Sulfur Dioxide	attainment	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65
Organic Compounds	attainment	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55
Volatile Organic Compounds	attainment	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91
Nitrogen Oxides	attainment	15 ppm at 15% oxygen on a dry basis, as a daily average and 178 lbs/hour, when firing natural gas; 42 ppmv at 15% oxygen on a dry basis and 269 lbs/hour, when firing No. 2 fuel oil	343.68	15 ppm at 15% oxygen on a dry basis, as a daily average and 178 lbs/hour, when firing natural gas; 42 ppmv at 15% oxygen on a dry basis and 269 lbs/hour, when firing No. 2 fuel oil	343.68

NEW SOURCE REVIEW FORM B

PTI Number: 08-04153

Facility ID: 0857042072

FACILITY NAME DPL Energy Inc

FACILITY DESCRIPTION electrical services

CITY/TWP Davton

Emissions Unit ID: T002

Carbon Monoxide	attainment	301 lbs/hour when firing natural gas; 800 lbs/hour when firing No. 2 fuel oil	246	301 lbs/hour when firing natural gas; 800 lbs/hour when firing No. 2 fuel oil	246
Lead					
Other: Arsenic		0.01 lb/hour	0.01	0.01 lb/hour	0.01
Benzene		0.06 lb/hour	0.05	0.06 lb/hour	0.05
Beryllium		0.0003 lb/hour	0.0002	0.0003 lb/hour	0.0002
Sulfuric acid mist		0.0054 lb/mmBtu actual heat input	3.16	0.0054 lb/mmBtu actual heat input	3.16
Formaldehyde		0.000713 lb/mmBtu actual heat input	1.48	0.000713 lb/mmBtu actual heat input	1.48

APPLICABLE FEDERAL RULES:

NSPS? Subpart GG

NESHAP?

PSD? **Y**

OFFSET POLICY?

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

BAT is determined to be compliance with all applicable rules and specified allowable emission rates; application of low NOx burners and water injection controls; continuous emission monitoring for NOx and CO; operating hours limitation; fuel oil analysis; record keeping; and reporting.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$ _____

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*?

YES

X NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SC

PTI Num

FACILITY

Emissions Unit ID: T002

FACILITY DESCRIPTION electrical services

CITY/TWP Dayton

SIC CODE 4911

SCC CODE 2-01-002-01

EMISSIONS UNIT ID P003

EMISSIONS UNIT DESCRIPTION 1115.2 mmBtu/hour natural gas and No. 2 fuel oil fired simple cycle combustion turbine No. 6 - Tait CT6, with dry low NOx combustion and water injection controls

DATE INSTALLED upon PTI issuance

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
PM ₁₀	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
Sulfur Dioxide	attainment	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65
Organic Compounds	attainment	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55
Volatile Organic Compounds	attainment	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91

NEW SOURCE REVIEW FORM B

PTI Number: 08-04153

Facility ID: 0857042072

FACILITY NAME DPL Energy Inc

FACILITY DESCRIPTION electrical services

CITY/TWP Davton

Emissions Unit ID: T002

SIC CODE 4911

SCC CODE 2-01-002-01

EMISSIONS UNIT ID P004

EMISSIONS UNIT DESCRIPTION 1115.2 mmBtu/hour natural gas and No. 2 fuel oil fired simple cycle combustion turbine No. 7 - Tait CT7, with dry low NOx combustion and water injection controls

DATE INSTALLED upon PTI issuance

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
PM ₁₀	attainment	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53	0.013 lb/mmBtu actual heat input when firing natural gas; 0.026 lb/mmBtu actual heat input when firing No. 2 fuel oil	11.53
Sulfur Dioxide	attainment	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65	0.0026 lb/mmBtu actual heat input when firing natural gas; 0.055 lb/mmBtu actual heat input when firing No. 2 fuel oil	34.65
Organic Compounds	attainment	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55	20 lbs/hour when firing natural gas; 11 lbs/hour when firing No. 2 fuel oil	37.55
Volatile Organic Compounds	attainment	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91	4 lbs/hour when firing natural gas; 5.5 lbs/hour when firing No. 2 fuel oil	7.91
Nitrogen Oxides	attainment	15 ppm at 15% oxygen on a dry basis, as a daily average and 178 lbs/hour, when firing natural gas; 42 ppmv at 15% oxygen on a dry basis and 269 lbs/hour, when firing No. 2 fuel oil	343.68	15 ppm at 15% oxygen on a dry basis, as a daily average and 178 lbs/hour, when firing natural gas; 42 ppmv at 15% oxygen on a dry basis and 269 lbs/hour, when firing No. 2 fuel oil	343.68

NEW SOURCE REVIEW FORM B

PTI Number: 08-04153 Facility ID: 0857042072

FACILITY NAME DPL Energy Inc

FACILITY DESCRIPTION electrical services

CITY/TWP Davton

Emissions Unit ID: T002

SIC CODE 4911 SCC CODE 4-03-010-21 EMISSIONS UNIT ID T002

EMISSIONS UNIT DESCRIPTION 864,000 gallon No. 2 fuel oil internal floating roof with submerged filling storage tank No. 5

DATE INSTALLED upon PTI issuance

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	attainment		0.02		0.02
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? Subpart Kb

NESHAP?

PSD? **N**

OFFSET POLICY?

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

BAT for the storage tank is compliance with the applicable rules and specified allowable emission rates; submerged filling, record keeping; and reporting.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: _____