



State of Ohio Environmental Protection Agency

Street Address:

Mailing Address:

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

Lazarus Gov.
Center

RE: **FINAL PERMIT TO INSTALL MODIFICATION** CERTIFIED MAIL
MONTGOMERY COUNTY
Application No: 08-02507

DATE: 6/4/2002

Dayton Power and Light Company
Andrew Kistler
9200 Chautauqua Rd
Miamisburg, OH 45342-4103

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

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

CC: USEPA

RAPCA



Permit To Install
Terms and Conditions

Issue Date: 6/4/2002
Effective Date: 6/4/2002

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 08-02507

Application Number: **08-02507**
APS Premise Number: **0857042072**
Permit Fee: **\$1000**
Name of Facility: Dayton Power and Light Company Kistler
Person to Contact: Andrew
Address: 9200 Chautauqua Rd
 Miamisburg, OH 45342-4103

Location of proposed air contaminant source(s) [emissions unit(s)]:
2101 Arbor Blvd
Dayton, OHIO

Description of modification:
3-Natural Gas 1115 mmBtu/hr simple cycle turbines with fuel oil backup; Modification to PTI 08-2507 issued on July 15, 1994 and subsequently modified on December 20, 1995 and January 15, 1998.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

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.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

SOURCE OPERATION AND OPERATING PERMIT REQUIREMENTS AFTER COMPLETION OF CONSTRUCTION

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).

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.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
-------------------------------	-------------------------------------	--------------------------	---	--

AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Dayton Power and Light Company** located in **MONTGOMERY** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

B003 cont'd

Ohio EPA Source Number

B001

B001 cont'd

B003

B002 cont'd

T001

B002

T002

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
	<u>Source Identification Description</u>			
T003	CT-1 natural gas 1115 MMBTU/hr simple cycle turbine with fuel oil backup			
F001		CT-2 natural gas 1115 MMBTU/hr simple cycle turbine with fuel oil backup		
			CT-3 natural gas 1115 MMBTU/hr simple cycle turbine with fuel oil backup	600,000 gallon fuel oil storage tank #1 (internal floating roof)

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

Ohio EPA Source <u>Number</u>	Source Identification <u>Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	Permit Allowable Mass Emissions and/or Control/Usage <u>Requirements</u>
600,000 gallon fuel oil storage tank #1 (internal floating roof)	<u>BAT Determination</u>	* & t		
600,000 gallon fuel oil storage tank #3 (internal floating roof)		* & t		
Paved roadway s and unpaved parking areas			*** & t	

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
				3745-23-06 (B) 40 CFR part 60 Subpart GG 40 CFR part 75
****	Applicable Federal & <u>OAC Rules</u>			
	3745-31-05			
	3745-17-07			
	3745-17-11 (B)(4)			
	3745-18-06 (E)			
	3745-21-08 (B)			
****	3745-23-06 (B)			
	40 CFR part 60 Subpart GG 40 CFR part 75	3745-31-05 3745-17-07 3745-17-11 (B)(4) 3745-18-06 (E) 3745-21-08 (B)		
*****	3745-23-06 (B)			
	40 CFR part 60 Subpart GG 40 CFR part 75	3745-31-05 3745-17-07 3745-17-11 (B)(4) 3745-18-06 (E) 3745-21-08 (B)		
			3745-31-05 3745-17-07 3745-17-11 (B)(4) 3745-18-06 (E) 3745-21-08 (B)	3745-31-05 3745-21-07 (D)(1)(a) &

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
(D)(2) 40 CFR Part 60 Subpart Kb	05 3745-17-08	Permit Allowable Mass Emissions and/or Control/Usage Requirements	tion or 350 lbs/hr during fuel oil combustion, based on a 30 day average); 160.8 TPY maximum, as a rolling 365-day limit, with the total combined CO emissions for B001, B002, and B003 not to exceed 160.8 TPY, as a rolling 365-day limit**	natural gas combustion, 195 lbs/hr and 42 ppmvd ^{tt} at 15% oxygen during fuel oil combustion; 132 TPY ** CO: 2000 lbs/hr maximum 1 hour limit (1700 lbs/hr during natural gas combustion or 350 lbs/hr during fuel oil combustion, based on a 30 day average); 160.8 TPY maximum, as a rolling 365-day limit, with the total combined CO emissions for B001, B002, and B003 not to exceed 160.8 TPY, as a rolling 365-day limit**
3745-31-05 3745-21-07 (D)(1)(a)) & (D)(2) 40 CFR Part 60 Subpart Kb		VOC: 10.0 lbs/hr 15.0 TPY PM/PM ₁₀ : 8 lbs/hr and 0.0072 lb/MMBTU during natural gas combustion; 15.0 lbs/hr and 0.013 lb/MMBTU during fuel oil combustion; 15.5 TPY SO ₂ : during fuel oil combustion, 12.4 TPY, and 0.022 lb/MMBTU** NO _x : 113 lbs/hr and 25 ppmvd ^{tt} at 15% oxygen during natural gas combustion, 195 lbs/hr and 42 ppmvd ^{tt} at 15% oxygen during fuel oil combustion; 132 TPY ** CO: 2000 lbs/hr maximum 1 hour limit (1700 lbs/hr during natural gas combus-	VOC: 10.0 lbs/hr 15.0 TPY PM/PM ₁₀ : 8 lbs/hr and 0.0072 lb/MMBTU during natural gas combustion; 15.0 lbs/hr and 0.013 lb/MMBTU during fuel oil combustion; 15.5 TPY SO ₂ : during fuel oil combustion, 12.4 TPY, and 0.022 lb/MMBTU** NO _x : 113 lbs/hr and 25 ppmvd ^{tt} at 15% oxygen during	
3745-31-05 3745-21-07 (D)(1)(a)) & (D)(2) 40 CFR Part 60 Subpart Kb				VOC: 10.0 lbs/hr 15.0 TPY PM/PM ₁₀ : 8lbs/hr and 0.0072 lb/MMBTU during natural gas combustion; 15.0 lbs/hr and 0.013 lb/MMBTU during fuel oil

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
-------------------------------	-------------------------------------	--------------------------	---	--

* BAT for B001 AND B002 is determined to be in compliance with applicable rules and specified allowable emission rates through the use of natural gas as a fuel or fuel oil with a sulfur content $\leq 0.02\%$ by weight; the use of water injection to reduce NO_x emissions to 25 ppmvd^{tt} at 15% oxygen when burning natural gas and 42 ppmvd^{tt} at 15% oxygen when burning fuel oil; recordkeeping and reporting.

**See Special Terms and Conditions.

***BAT for B003 is determined to be compliance with applicable rules and specified allowable emission rates through the use of natural gas as a fuel or fuel oil with a sulfur content $\leq 0.02\%$ by weight; the use of a dry low NO_x (DLN) combustor and water injection to reduce NO_x emissions to 15 ppmvd^{tt} at 15% oxygen when burning natural gas and 42 ppmvd^{tt} at 15% oxygen when burning fuel oil;

****BAT for T001 through T003 is determined to be compliance with applicable state and federal regulations, and specified allowable emission rates through the use of submerged fill; recordkeeping.

*****BAT for F001 is determined to be compliance with applicable O.A.C. rules and specified allowable emission rates.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

- t Best Available control Technology (BACT) for NO_x for this facility has been determined to be the use of water injection to reduce NO_x emissions to 25 ppmvd^{tt} at 15% oxygen when burning natural gas and 42 ppmvd^{tt} at 15% oxygen when burning fuel oil for the first two turbines B001 and B002 only; the use of dry-low NO_x (DLN) combustor and water injection to reduce NO_x emissions to 15 ppmvd^{tt} at 15% oxygen when burning natural gas and 42 ppmvd^{tt} at 15% oxygen when burning fuel oil for the third turbine B003.
- tt NO_x ppmvd concentration limitations for each of the turbines only apply at full load conditions; Compliance with the ppm and lbs/hr emission limitations shall be based on NO_x CEMs data. If stack testing is required, to determine compliance with the NO_x lb/hr allowable emission rate, then the test method to be used shall be 40 CFR Part 60, Appendix A, Reference Method 7 or 7E, using an arithmetic average of three (3) one-hour test runs.

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
PM/PM ₁₀	46.5
CO	160.8
OC	47.4
SO ₂	37.2
NO _x	374.0

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>	
B001, B002	B003

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

<u>Source</u>	<u>NSPS Regulation (Subpart)</u>
1115 MMBTU/hr	GG natural gas turbines with fuel oil backup

The application and enforcement of these standards are delegated to the Ohio EPA. 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 - Air Quality Modeling and Planning
 P.O. Box 1049
 Columbus, OH 43216-1049

and Regional Air Pollution Control
 117 S. Main Street
 Dayton, Ohio 45422

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.

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 Administrator 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.

RECORD(S) RETENTION AND AVAILABILITY

Dayton Power and Light Company

PTI Application: 08-02507

Modification Issued: 6/4/2002

Facility ID: **0857042072**

All records required by this Permit to Install shall be retained on file for a period of not less than three years unless otherwise indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business hours.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to Regional Air Pollution Control, 117 S. Main Street, Dayton, Ohio 45422.

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the Regional Air Pollution Control, 117 S. Main Street, Dayton, Ohio 45422.

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

NEW SOURCE PERFORMANCE STANDARD SUBPART Kb

The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio

Dayton Power and Light CompanyFacility ID: **0857042072****PTI Application: 08-02507****Modification Issued: 6/4/2002**

Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

In accordance with 40 CFR 60.116b(a) and (b), the owner and operator of the following storage vessel(s) shall keep readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage vessel for the life of each source.

Source Number(s):Tank Size:

T001, T002, T003

600,000 gallons each

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

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.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

1. COMMENCEMENT OF CONSTRUCTION

Construction of sources B001 through B003 shall commence within 18 months after the date of issuance of this permit.

For the purpose of this permit, commencement of construction shall consist of the issuance of construction contracts and/or the ordering of major turbine equipment.

2. FUEL LIMITATIONS

A. Per the BACT determination specified in this permit, the sulfur content of the fuel oil and natural gas supplied to sources B001 through B003 shall not exceed 0.02% by weight.

B. When fuel is delivered to the storage tanks, a daily composite sample (consisting of a sample of each delivery or a composite sample of all deliveries within a single day) shall be analyzed for sulfur content. When fuel is delivered without intermediate bulk storage, the sulfur content shall be analyzed daily or in accordance with an alternative custom fuel schedule approved by the Director pursuant to 40 CFR 60.334(b)(2). The sulfur content shall be determined according to the requirements of 40 CFR Part 60.335(e). This requirement shall not apply when SO₂ emissions are being monitored by a CEMS while burning fuel oil.

C. Dayton Power and Light Tait Peaking Station (DP&L) shall submit quarterly reports to the Regional Air Pollution Control Agency which summarize the information required by this term and condition, and specifically list any and all instances where the sulfur content limitations was exceeded.

3. CONTINUOUS EMISSION MONITORING REQUIREMENTS

A. In lieu of the requirement of 40 CFR Part 60.334(a) (Subpart GG) to install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine, DP&L shall install and operate a NO_x CEMS for

Dayton Power and Light Company

PTI Application: 08-02507

Modification Issued: 6/4/2002

Facility ID: **0857042072**

each source B001 through B003 burning oil and natural gas combustion, in accordance with Additional Special Terms and Condition number 8 of this permit to install. In lieu of the requirements of 40 CFR Part 60.334(b)(Subpart GG) while burning fuel oil, DP&L shall install a SO₂ CEMS for each source B001 through B003, in accordance with Additional Special Term and Condition number 8 of this permit to install.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

- B. Additionally, DP&L shall install and operate a system to continuously monitor and record emissions of carbon monoxide for each turbine in accordance with Additional Special Term and Condition number 8 of this permit to install.
- C. For the purpose of reports required under 60.7(c), periods of excess emissions that shall be reported are defined as follows:
- i. **Nitrogen Oxides.** In lieu of the excess emission reports required under 60.334, DP&L shall submit excess emission reports as specified in Additional Special Term and Condition number 8 of this permit to install.
- ii. **Sulfur Dioxide.** Per the BACT determination specified in this permit, any daily period during which the sulfur content of the fuel being fired in the turbine exceeds 0.02% by weight while burning natural gas. Additionally, DP&L shall submit excess emission reports as specified in Additional Special Term and Condition number 8 of this permit to install.
- In lieu of the excess emission reports required under 60.334. DP&L shall submit excess emission reports (above the daily 0.022 lb/MMBTU heat input emission rate while burning fuel oil) as specified in Additional Special Term and Condition number 8 of this permit to install.
- iii. **Carbon Monoxide.** Pursuant to the authority under sections 3704.03(I) and 3704.031 of the Ohio Revised Code and O.A.C. rules 3745-15-04 and 3745-35-02(C)(3), periods of excess emissions for CO shall be reported in accordance with Additional special Term and Condition number 8 of this permit to install.
- D. All continuous monitoring equipment and recording equipment shall be installed and operated in accordance with procedures approved by the Ohio EPA and the Regional Air Pollution Control Agency.
- E. DP&L shall maintain records in accordance with Additional Special Term and Condition number 8.

4. FIRST YEAR FUEL USAGE LIMITATIONS

- A. Fuel Oil

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

- i. In order to ensure federal enforceability for the first 12 calendar months of operation, each source B001 through B003 shall be limited to 4,290,000 gallons of fuel oil per each 3 month period from October 1 through December 31, and January 1 through March 31.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

- ii. The permittee shall be prohibited from combusting fuel oil in these emission units from April 1 through September 30, except for one-half hour of each month, except under emergency conditions when natural gas supplies are not available, or for the purpose of performance testing conducted pursuant to this permit. This exclusion for emergency condition is permitted contingent upon the submittal to the Regional Air Pollution Control Agency of adequate documentation from DP&L that natural gas was not available. In addition, DP&L shall secure permission from the Regional Air Pollution Control Agency before performing any performance testing based on this term and condition.

B. Natural Gas

- i. In order to ensure federal enforceability for the first 12 calendar months of operation, each source B001 through B003 shall be limited to 322,500,000 cubic feet of natural gas per each 3 month period from October 1 through December 31, and January 1 through March 31. During the two-3 month periods from April 1 through June 30, and July 1 through September 30, each source B001 through B003 may combust up to 967,500,000 cubic feet of natural gas per each 3 month period.
- ii. In lieu of the fuel usage limitations expressed in (A) of this term and condition, for each gallon of fuel oil not consumed by any source B001 through B003, an additional 150 cubic feet of natural gas may be consumed by that source. Under no circumstance shall natural gas consumption exceed 967,500,000 cubic feet in any 3 month period for any source B001 through B003.

C. Recordkeeping

For the first 12 calendar months of operation, DP&L shall maintain records indicating the daily amounts of natural gas and/or fuel oil consumed by each source B001 through B003.

D. Reporting

DP&L shall submit quarterly reports to the Regional Air Pollution Control Agency which summarize the information required by this term and condition, and specifically list any and all instances where the limitations of paragraph (A) or paragraph (B) of this term and condition were exceeded. These quarterly 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.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

5. POST FIRST YEAR FUEL USAGE LIMITATIONS

A. Fuel Oil

- i. DP&L shall be prohibited from combusting fuel oil in each source B001 through B003 from April 1 through September 30 of each year, except for one-half hour of each month or under

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

emergency conditions when natural gas supplies are not available. This exclusion is permitted contingent upon the submittal to the Regional Air Pollution Control Agency of adequate documentation from DP&L that natural gas was not available.

- ii. Sources B001 through B003 shall each be limited to a maximum of 8,580,000 gallons of fuel oil per rolling 365 day period.
- iii. The facility shall maintain records indicating the daily amount of fuel oil consumed by each source B001 through B003, and the calculated rolling 365 day total amount of fuel oil used for each turbine.

B. Natural Gas

- i. Sources B001 through B003 shall each be limited to a maximum of 2,580,000,000 cubic feet of natural gas per rolling 365 day period.
- ii. The facility shall maintain records indicating the daily amount of natural gas consumed by each source B001 through B003, and the calculated rolling 365 day total amount of natural gas used for each turbine.
- iii. In lieu of the fuel usage limitations expressed in (A) of this term and condition, for each gallon of fuel oil not consumed by any source B001 through B003, an additional 150 cubic feet of natural gas may be consumed by that source. Under no circumstance shall natural gas consumption exceed 3,870,000,000 cubic feet in any 365 day period for any source B001 through B003.

C. Reporting

DP&L shall submit quarterly reports to the Regional Air Pollution Control Agency which summarize the information required by this term and condition, and specifically list any and all instances where the limitations of paragraph (A) or paragraph (B) of this term and condition were exceeded. These quarterly 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.

6. NO_x, CO, and SO₂ EMISSION LIMITS

- A. The NO_x emissions from each source B001 and B002 shall not exceed 25 ppmvd when burning natural gas, and 42 ppmvd at 15% oxygen when burning fuel oil, at 15% oxygen and at full load; NO_x lb/hr limitations (as determined in accordance with note tt on page 8

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

of this permit) are never to be exceeded.

- B. The NO_x emissions from source B003 shall not exceed 15 ppmvd when burning natural gas and 42 ppmvd at 15% oxygen when burning fuel oil, at 15% oxygen and at full load; NO_x lb/hr limitations (as determined in accordance with note tt) are never to be exceeded.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

- C. The SO₂ emissions from each source B001 through B003 shall not exceed 0.022 lb/MMBTU heat input.
- D. Until the installation of B003 is complete, the maximum CO emissions from each emissions unit B001 and B002 shall not exceed 107.2 TPY, as a rolling 365-day limit, with the total combined CO emissions from B001 and B002 not to exceed 107.2 TPY, as a rolling 365-day limit. Upon complete installation and start-up of emissions unit B003, the maximum CO emissions from each emissions unit B001, B002 and B003 shall not exceed 160.8 TPY, as a rolling 365-day limit, with the total combined emissions of CO from B001, B002 and B003 not to exceed 160.8 TPY, as a rolling 365-day limit.
- E. Emissions of NO_x from each source B001 and B002 shall not exceed 132 tons per year for the first year of operation, thereafter, based on a rolling 365 day period.
- F. Emissions of NO_x from source B003 shall not exceed 110 tons per rolling 12 month period.

7. OPACITY LIMITATIONS

The visible emissions from each turbine stack(s) shall not exceed 10% opacity as a 6 minute average except for cold start-up and shutdown periods.

8. CONTINUOUS SULFUR DIOXIDE AND FLOW MONITORING, RECORDING AND EXCESS EMISSION REPORTING

As required by title IV of the 1990 Clean Air Act Amendments, this facility shall meet the Phase II requirements of 40 CFR Part 75. Pursuant to 40 CFR Part 75.10(a)(1) as a Phase II affected source, this facility shall install, certify, operate and maintain monitoring equipment to continuously monitor sulfur dioxide (SO₂) emissions and gas stream flow for periods when oil is combusted in accordance with 40 CFR Part 75 requirements or comply with 40 CFR Part 75 Appendix D, Section 2.4, paragraph 1. In addition, the monitor equipment shall record lbs/MMBTU (SO₂) emissions from sources B001, B002 and B003 when combusting fuel oil.

One copy each of the certification test results shall be submitted to the RAPCA and the Ohio EPA, Central Office within 30 days after tests are completed in accordance with 40 CFR 75.60(b)(2) and 75.63.

Whenever a continuous emission monitoring system (CEMS) is replaced or modified in such a way

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

that significantly affects the ability of the system to measure or record the SO₂ emissions of this source, as defined in 40 CFR 75.20(b), the CEMS (SO₂ and/or flow) shall undergo the certification tests as required by 40 CFR Part 75.

The pounds of SO₂/million BTU shall be determined from the data obtained from the CEMS and the procedures given in 40 CFR 75.10, 40 CFR Part 75.11 and 40 CFR part 75, Appendix D, section 2.4, paragraph 1.

Upon completion of certification tests, the quality assurance and quality control requirements of 40 CFR 75.21(a) and (c) and 40 CFR part 75, Appendix B shall apply.

Pursuant to the authority under sections 3704.03(I) and 3704.031 of the Ohio Revised Code and O.A.C. rules 3745-15-04 and 3745-35-02(C)(3), this facility shall submit reports on a quarterly basis to RAPCA documenting all instances of SO₂ emissions in excess of lbs/MMBTU limitation, or when utilizing fuel that exceeds .02% sulfur content by weight specified in the terms and conditions of this permit and the actual tons of SO₂ emissions per quarter.

These quarterly 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.

These quarterly emission reports shall contain the following information:

- a. the date, starting and ending time of each (>.02% sulfur content, pounds of per million BTU);
- b. the magnitude of each exceedance;
- c. the cause of each exceedance;
- d. the corrective action taken for each exceedance;
- e. actual tons per quarter of SO₂ emissions;
- f. the total source operating time;
- g. the total monitor downtime of the CEMS;
- h. the total time that the source and CEMS operated together; and
- i. The corrective action(s) taken for source and/or CEMS malfunctions.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

This facility shall maintain a file of all measurements, data, reports and any maintenance activities involving this CEMS (SO₂ and flow) in a form suitable for inspection for at least three (3) years from the date of occurrence. This file shall be made available to Ohio EPA personnel during future inspections and audits.

CONTINUOUS NITROGEN OXIDES AND DILUENT MONITORING, RECORDING AND EXCESS EMISSION REPORTING

As required by Title IV of the 1990 Clean Air Act Amendments, this facility shall meet the Phase II requirements of 40 CFR part 75. Pursuant to 40 CFR part 75.10(a)(2) as a Phase II affected source, this facility shall install monitoring equipment to continuously monitor nitrogen oxides (NO_x) and either carbon dioxide (CO₂) or oxygen (O₂) emissions. This facility shall install, certify, operate and maintain NO_x and CO₂ and O₂ monitoring equipment to continuously monitor NO_x emissions in accordance with 40 CFR part 75 requirements.

One copy each of the certification test results shall be submitted to the RAPCA and the Ohio EPA, Central Office within 30 days after tests are completed in accordance with 40 CFR 74.60(b)(2) and 75.63.

Whenever a continuous emission monitoring system (CEMS) is replaced or modified in such a way that significantly affects the ability of the system to measure or record the NO_x emissions of this source, as defined in 40 CFR 75.20(b), the CEMS (NO_x and/or CO₂ or O₂) shall undergo the certification tests as required by 40 CFR Part 75.

Upon completion of certification tests, the quality assurance and quality control requirements of 40 CFR 75.21(a) and (c) and 40 CFR Part 75, Appendix B shall apply.

The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions unit in units of the applicable standard in accordance with 40 CFR Part 60 and 75. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

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, emissions of NO_x, in units of the applicable standard in the appropriate averaging period (e.g., hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

Pursuant to the authority under sections 3704.03(I) and 3704.031 of the Ohio Revised Code and O.A.C. rules 3745-15-04 and 3745-35-02(C)(3), this facility shall submit reports on a quarterly basis to RAPCA documenting all instances of NO_x emissions in excess of the applicable standards specified in the terms and conditions of this permit and actual tons of NO_x emissions per quarter. These quarterly reports shall be submitted by January 30, April 30, July 30 and October 30 of each

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

year and shall address the data obtained during the previous calendar quarter.

These quarterly emission reports shall contain the following information:

- a. the date, starting and ending time of each exceedance-pounds per hour and tons per rolling 365 day and 12 month periods;
- b. the magnitude of each exceedance;
- c. the cause of each exceedance;
- d. the corrective action taken for each exceedance;
- e. actual tons per quarter of NO_x emissions;
- f. the total source operating time;

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

- g. the total monitor downtime of the CEMS;
- h. the total time that the source and CEMS operated together; and
- i. The corrective action(s) taken for source and/or CEMS malfunctions.

This facility shall maintain a file of all measurements, data, reports and any maintenance activities involving this CEMS in a form suitable for inspection for at least three (3) years from the date of occurrence. This file shall be made available to Ohio EPA personnel during future inspections and audits.

CONTINUOUS CARBON MONOXIDE MONITORING, RECORDING AND EXCESS EMISSION REPORTING

This facility shall install, certify, operate and maintain monitoring equipment to continuously measure and record the average hourly carbon monoxide (CO) emissions from sources B001, B002 and B003 in units of pounds per hour (lb/hr). Such continuous monitoring and recording equipment shall comply with the requirements in 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification PS 4 and PS 6.

Within 90 days of source startup, this facility shall conduct, or have conducted, a performance specification test of such equipment pursuant to the authority under sections 3704.03(I) and 3704.031 of the Ohio Revised Code, O.A.C. rules 3745-15-04 and 3745-35-02(C)(3) and 40 CFR Part 60, Appendix B, PS 4 and PS 6. No later than thirty (30) days prior to the test, this facility shall submit an intent to test notice to the RAPCA providing a description of the test procedures and notification of the testing date(s) so as to provide the opportunity to witness the tests.

One copy each of the certification test results shall be submitted to the RAPCA and the Ohio EPA, Central Office within thirty (30) days after tests are completed. Content of the certification test report shall be in accordance with 40 CFR Part 60, Appendix B, PS 4, section 1.1.

Whenever a continuous emission monitoring system (CEMS) is replaced or modified in such a way that significantly affects the ability of the system to measure or record the CO emissions of these sources as defined in this permit, the CO CEMS shall undergo the certification tests as required by 40 CFR Part 60.

Upon completion of certification tests, the quality assurance and quality control requirements of 40 CFR Part 60, Appendix F shall apply. A written quality control plan, as required under Section 3 of Appendix F, shall be submitted to the RAPCA and the Ohio EPA Division of Air Pollution control within one hundred and eighty (180) days of source start up.

Pursuant to the authority under sections 3704.03(I) and 3704.031 of the Ohio Revised Code and O.A.C. rules 3745-15-04 and 3745-35-02(C)(3), this facility shall submit reports on a quarterly basis to the RAPCA documenting all instances of CO emissions in excess of the maximum hourly

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

average limit, the 30-day average limits, tons per rolling 365 day period and the actual tons of CO emission per quarter as specified

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

in the terms and conditions of this permit. These quarterly 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.

These quarterly excess emission reports shall contain the following information:

- a. the date, starting and ending time of each exceedance-maximum hourly average, lb/hr 30-day averages, tons per rolling 365 day periods;
- b. the magnitude of each exceedance;
- c. the cause of each exceedance;
- d. the corrective action taken for each exceedance;
- e. actual tons per quarter of SO₂ emissions;
- f. the total source operating time;
- g. the total monitor downtime of the CEMS;
- h. the total time that the source and CEMS operated together; and
- i. The corrective action(s) taken for source and/or CEMS malfunctions.

This facility shall maintain a file of all measurements, data, reports and any maintenance activities involving this CEMS in a form suitable for inspection for at least three (3) years from the date of occurrence. This file shall be made available to Ohio EPA personnel during future inspections and audits.

9. GOOD ENGINEERING PRACTICE STACK HEIGHT

The minimum stack height for each of the turbines shall be at least 88 feet above the ground.

10. PERFORMANCE TEST REQUIREMENTS

DP&L shall conduct, or have conducted, performance testing on the air contaminant source(s) within 90 days of start up in accordance with procedures approved by the Agency. Two copies of the written report describing the test procedures followed and their results of such tests shall be submitted and signed by the person responsible for the test. The Director, or an Ohio EPA

Dayton Power and Light Company

PTI Application: 08-02507

Modification Issued: 6/4/2002

Facility ID: **0857042072**

representative, shall be allowed to witness the test, examine testing equipment, and require the acquisition or submission of data and information necessary to assure that the source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment.

Dayton Power and Light Company
PTI Application: 08-02507
Modification Issued: 6/4/2002

Facility ID: **0857042072**

- A. A completed Intent to Test form shall be submitted to the appropriate Ohio EPA District or Local Air Pollution control Agency where the original permit application was filed. This notice shall be made 30 days in advance and shall specify the source operating parameters, the proposed test procedures, and the time, date, place and person(s) conducting such tests.
- B. Two copies of the test results shall be submitted to RAPCA within 30 days after the completion of the performance tests.
- C. Tests shall be performed for the following source(s) and pollutant(s) under both fuel combustion scenarios:

<u>Source</u>	<u>Pollutants</u>
B001, B002, B003	NO _x , VOC, PM

11. FACILITY NO_x BACT DETERMINATION

Best Available Control Technology (BACT) for NO_x for this facility has been determined to be the use of water injection to reduce NO_x emissions to 25 ppmvd at 15% oxygen, at full load when burning natural gas, and 42 ppmvd at 15% oxygen, at peak load when burning fuel oil for the first two turbines B001 and B002 only; the use of dry-low NO_x (DLN) combustor and water injection to reduce NO_x emissions to 15 ppmvd at 15% oxygen, at peak load when burning natural gas, and 42 ppmvd at 15% oxygen, at peak load when burning fuel oil for the third turbine B003.

- 12. 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 30 minutes. Shutdown periods shall not exceed 30 minutes.