COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
FIELD OPERATIONS - AIR QUALITY CONTROL

OPERATING PERMIT

In accordance with provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and after due consideration of an application received under Chapter 127 of the rules and regulations of the Department of Environmental Resources, the Department hereby issues this permit for the operation of the air contamination source(s) described below.

Permit No. OP-23-0017

Owner PECO Energy Company

Address 2301 Market Street
P.O. Box 8699, Phila., PA 19101

Attention Mr. G. M. Morley, Jr.
Director, Environmental Affairs

Source(s) Facility NOx & VOC RACT

Air

Cleaning

Device

Location Eddystone Generating Station
No. 1 Industrial Highway
Eddystone Borough, Delaware Co.

This permit is subject to the following conditions:

1. That the source(s) and any associated air cleaning devices are to be:

   a. operated in such a manner as not to cause air pollution;
   b. in compliance with the specifications and conditions of the plan approval issued under the same number;
   c. operated and maintained in a manner consistent with good operating and maintenance practices.

2. This permit is valid only for the specific equipment, location and owner named above.

(SEE THE ATTACHED ADDITIONAL CONDITIONS)

Failure to comply with the conditions placed on this permit is a violation of Section 127.25. Violation of this or any other provision of Article III of the rules and regulations of the Department of Environmental Resources will result in suspension or revocation of this permit and/or prosecution under Section 9 of the Air Pollution Control Act.

Issued 12/28/94

Expires ~~01-15-99~~

Joseph A. Feola

JOSEPH A. FEOLA
Air Pollution Control Manager

Central Office
Southeast Regional Office

Conditions (continued):

3. The Operating Permit No. OP-23-0017 is issued to PECO Energy Company (PECO) for the operation of Nitrogen Oxides (NO_x)/Volatile Organic Compound (VOC) emission sources regulated under 25 Pa. Code §§129.91-95 at the Eddystone Generating Station. This permit specifies PECO's Reasonably Available Control Technology (RACT) requirements for Sources of Volatile Organic Compounds and Oxides of Nitrogen. Pre-existing Operating Permit Conditions for the sources listed below are also made part of this operating permit.

4. Facility Inventory

The purpose of the Operating Permit is to establish NO_x/VOC RACT for PECO's Eddystone Generating Station to reduce emissions of ozone precursors. This permit covers the following sources, located at No. 1 Industrial Highway, Eddystone Borough, Delaware County.

Emission Sources	Rated Capacity
- Coal Fired Boiler No.1	2704 MM BTU/HR
- Coal Fired Boiler No. 2	2808 MM BTU/HR
- Oil Fired Boiler No. 3	4116 MM BTU/HR
- Oil Fired Boiler No. 4	4116 MM BTU/HR
- Three (3) Auxiliary Boilers A, B and C	124 MM BTU/HR each
- Four (4) Combustion Turbines (CT)	
No. 10, No. 20	233 MM BTU/HR each
No. 30, No. 40	284 MM BTU/HR each

5. Consolidation of Operating Permits

This Operating Permit (OP) supersedes all Operating Permits previously issued under the following numbers: No. 23-306-014A, No. 23-306-015A, No. 23-302-047, No. 23-306-020 and No. 23-306-021.

6. Eddystone Units No. 1 and No. 2

A. Source Description

Each unit is a Tangentially fired (T-fired) Combustion Engineering (CE) coal burning boiler consisting of two(2) similar dry bottom type furnaces.

Conditions (continued):

B. Control Equipment

(1) NO_x emissions from units No. 1 and No. 2 shall be controlled by the Low-NO_x burner system and Separated Overfire Air (SOFA) to comply with presumptive RACT requirements of 25 PA Code §129.93(b)(1), constructed in conformance with the schedule included in Condition 6E, and plan approval PA-23-0017. This NO_x control system has the potential to maintain NO_x emissions equal to or less than 0.45 lb/MM BTU gross and to improve coal burner stability.

(a) International Combustion Limited (ICL) Low-NOx Concentric Firing System III consists of thirty two (32) Low NOx burners.

(b) Overfire Air Supply System utilizes Close Coupled Overfire Air (CCOFA) and Separated Overfire Air (SOFA). The system includes a total of eight (8) CCOFA injection assemblies and eight (8) SOFA ports.

(2) Air contaminant emissions from each unit are controlled by two(2) mechanical collectors and two(2) electrostatic precipitators (ESP) for flyash removal, three (3) particulate matter scrubbers, and three(3) sulfur dioxide (SO_2) scrubbers.

C. Operating Requirements

(1) ~~Fuel Requirements~~

~~Bituminous coal shall not contain any more than:~~

~~(a) 2.4% (by weight) of sulfur~~

~~(b) 10.0% (by weight) of ash~~

(2) ~~The company shall, upon Department request, provide fuel analyses, or fuel samples, of the fuel used in the aforementioned boilers.~~

(3) ~~The storage and handling of the ash generated by the operation of the aforementioned boiler(s) shall not at any time result in the emission of fugitive air contaminants in excess of the limitations specified in Section 123.1 of Chapter 123 of the Rules and Regulations of the Department.~~

(4) ~~The ash collection equipment (mechanical collectors and ESPS) shall not be bypassed.~~

(5) ~~Transport air shall be vented from the ash storage silo through a vent filter.~~

Conditions (continued):

(6) ~~Ash shall be conditioned (wetted) prior to discharging and handled in covered containers.~~

(7) ~~Waste derived liquid fuel requirements.~~

~~This permit allows the company to fire a mixture of virgin residual fuel oil and specific waste derived liquid fuel identified in Plan Approval Applications No. 23-306-014A and No. 23-306-015A and as supplied by PECO from sources identified in the application in the three (3) scrubber reheaters and the two (2) scrubber dryers only.~~

(a) ~~The waste derived liquid fuel and virgin residual fuel oil mixture shall not exceed the following limitations:~~

Constituent/Property	Limitation Level	Analytical Technique
I. Arsenic	5 ppm	Inductively Coupled Plasma Spectrophotometry
II. Cadmium	2 ppm	Inductively Coupled Plasma Spectrophotometry
III. Chromium	10 ppm	Inductively Coupled Plasma Spectrophotometry
IV. Lead	100 ppm	Inductively Coupled Plasma Spectrophotometry
V. PCB	10 ppm	H2SO4 Extraction/GC with Electron Capture
VI. TX	1000 ppm	ASTM D-808-512
VII. Ash	2 %	ASTM D-93
VIII. Sulfur	0.5 % (WT.)	X-Ray Diffraction

(b) The fuel may not contain detectable levels of pesticides and/or herbicides.

(c) No waste derived liquid fuels shall be mixed with the virgin residual fuel oil without first being screened for the constituents or properties listed in condition 6.C.(7)(d) and a copy of the analysis is available demonstrating that none of the levels are exceeded. The company shall maintain records of the analysis and consumption of waste fuel by the source for a period of not less than two (2) years. These records shall be made available to the Department on request.

(d) The waste derived liquid fuel to be mixed with virgin residual fuel oil shall not exceed the following limitations:

Constituent/Property	Limitation Level	Analytical Technique
I. Arsenic	10 ppm	Inductively Coupled Plasma Spectrophotometry
II. Cadmium	10 ppm	Inductively Coupled Plasma Spectrophotometry

Conditions (continued):

III.	Chromium	20 ppm	Inductively Coupled Plasma Spectrophotometry
IV.	Lead	300 ppm	Inductively Coupled Plasma Spectrophotometry
V.	PCB	49 ppm	H_2SO_4 Extraction/GC with Electron Capture
VI.	TX	1000 ppm	ASTM D-808-512

(e) An annual report is to be submitted to the Regional Air Pollution Control Engineer containing quarterly consumption data and copies of analyses required in condition 6.C.(7)(f). The report for the previous calendar year is due no later than March 15 each year.

(f) The company shall take samples of the fuel as being supplied to the burners on a quarterly basis. These samples shall be analyzed for the constituents and properties as listed in condition 6.C.(7)(a). The company shall maintain records of the analysis and consumption of fuel by the auxiliary burners for a period of not less than two (2) years. These records shall be made available to the Department on request.

(g) PECO shall make provisions for personnel of the Department to take samples of the waste derived liquid fuel and/or fuel mixture at any time.

(h) No waste derived liquid fuel shall be added to the storage tank when it is less than 1/4 full (2.1 million gal.)

(i) Consumption of waste derived liquid fuel shall not exceed 5,000 gallons per month or 20,000 gallons per year at the Eddystone Generating Station.

(j) The analytical techniques in Conditions 6.C. (7)(a) and 6.C.(7)(d) can be substituted for with the Department's approval.

D. Stack Emission Limitations

(1) Maximum air contaminant emissions from each source controlled by the equipment above shall be limited to:

(a) Nitrogen oxides (NO_x): 0.45 pounds or less per million BTU of heat input on a 30 day rolling average. The standard of 0.45 lb/MM BTU is the EPA Title I Guidance Limit for T-fired coal unit, based on a 30-day rolling average.

Conditions (continued):

(b) Volatile Organic Compounds (VOCs):

Unit No. 1: 0.003 lb/MM BTU, 32 tons/year whichever is more stringent.

Unit No. 2: 0.003 lb/MM BTU, 42 tons/year whichever is more stringent.

Final VOC emission limits shall be established for each unit based on the results of the emission tests to be conducted in accordance with condition 6F.

(c) ~~Particulate Matter (PM): 0.1 pounds or less per million BTU of heat input.~~

(2) The Department may establish more restrictive RACT emission limits including daily average after installation of NO_x control based on the following:

(a) Final NO_x emission limits shall be established for Eddystone Units No. 1 and No. 2 through the use of Department approved Continuous Emission Monitoring System (CEMS).

(b) A load weighting factor

(c) An averaging period established by the Department for emission limit calculations.

E. RACT Implementation Schedule

Implementation of the approved NO_x control technology for unit No. 2 shall be completed no later than May 31, 1995 and for Unit No. 1 no later than July 25, 1995. The implementation schedule contained herein is contingent upon execution and approval of a Consent Decree between PECO and the Department.

F. Testing Requirements

(1) PECO must perform VOC Emission Tests on the sources covered in this Operating Permit Condition in accordance with the provisions of Chapter 139 to demonstrate compliance with RACT Emission Limit Requirements. The tests shall be performed within 60 days of the unit restart while the aforementioned sources are operating at a load of not less than 95% of the maximum rated gross electrical capacity.

(2) At least sixty (60) days prior to the test, the company shall submit to the Department for approval the procedures for the test

Conditions (continued):

and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.

(3) At least thirty (30) days prior to the test, the Regional Air Pollution Control Engineer shall be informed of the date and time of the test.

(4) Within (30) days after the source test(s), two copies of the complete test report, including all operating conditions, shall be submitted to the Regional Air Pollution Control Engineer for approval.

(5) The PECO shall, upon Department request, provide fuel analyses, or fuel samples, of the fuel used in the aforementioned boiler(s).

G. Continuous Monitoring Requirements

(1) Department Certified Continuous Emission Monitoring System (CEMS) shall be installed on Eddystone unit No. 1 and No. 2 to provide Monitoring for SO_2, CO_2, NO_x and opacity.

(2) Each CEMS shall be installed, operated and maintained in accordance with the Department's "Continuous Source Monitoring Manual", Revision No. 5.

(3) Each Unit's CEMS shall contain a NO_x analyzer. The analyzer in conjunction with Department-approved KVB Data Acquisition System shall quantify emissions in pounds NO_x per million BTU of heat input and to demonstrate compliance with conditions 6.D.(1)(a).

(4) CEMS shall be performance tested to demonstrate acceptability in accordance with Department's "Continuous Source Monitoring Manual".

(5) The Department requires submission of the Phase I application to the Southeast Regional Office as specified in the Department's "Continuous Source Monitoring Manual" at least 180 days prior to the restart of the boiler.

(6) Phase II performance testing must be completed within 180 days of the Department's approval of the phase I application.

(7) Phase III Department approval must be obtained within sixty (60) days of achieving 95% of the maximum rated gross electrical capacity.

(8) The new CEMS shall be certified and operational by January 1, 1995.

Conditions (continued):

(9) The continuous emission monitoring system shall be maintained and operated to achieve the following data availability requirements of 25 PA Code §139.101(12).

	Monitored Pollutant or Parameter	
Requirement	Carbon Dioxide & Opacity	SO_2 and NO_x
Data Availability:	>=95% valid hours/calendar quarter or >=90% valid hours/calendar month	
Valid Hour:	>=75% valid readings/hr	

H. Recordkeeping and Reporting Requirements

(1) The permittee shall maintain a file containing all the records and other data that are required to be collected to demonstrate compliance with NO_x/VOC RACT requirements of 25 PA Code §§129.91-129.94.

(2) The records shall provide sufficient data and calculations to clearly demonstrate that the requirements of §§129.91-129.94 are met.

(3) Data required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

(4) Records shall be retained for at least two years and shall be made available to the Department on request.

7. Eddystone Unit No. 3 and Unit No. 4

A. Source Description

Each unit is a T-fired combustion engineering oil burning boiler designed to fire either residual fuel oil or crude oil. The units are also capable of firing natural gas separately or in combination with residual oil.

B. Control Equipment

NOx emission from each unit shall be controlled by Combustion Engineering SOFA system to reduce NOx emissions.

C. Operating Requirements

(1) ~~The boilers covered under this Operating Permit shall not burn crude oil~~.

Conditions (continued):

(2) Fuel Requirements

All fuel oils shall meet the requirements of 25 Pa. Code §123.22(e)

Residual fuel oil shall not contain any more than

(a) 0.5% (by weight) of sulfur

(b) 0.1% (by weight) of ash

(3) The company shall, upon the Department's request, provide fuel analyses, or samples, of the fuel used in the aforementioned boilers.

(4) The storage and handling of the ash generated by the operation of the aforementioned boilers shall not at any time result in the emission of fugitive air contaminants in excess of the limitations specified in Section 123.1 of Chapter 123 of the Rules and Regulations of the Department.

(5) Waste Derived Liquid Fuel Requirements

This permit allows the company to fire a mixture of virgin residual fuel oil and specific waste derived liquid fuel identified in Plan Approval applications No. 23-306-020 and No. 23-306-021 and as supplied by the PECO from sources identified in the applications.

(a) The waste derived liquid fuel and virgin residual fuel oil mixture shall not exceed the following limitations:

Constituent/Property	Limitation Level	Analytical Technique
I. Arsenic	5 ppm	Inductively Coupled Plasma Spectrophotometry
II. Cadmium	2 ppm	Inductively Coupled Plasma Spectrophotometry
III. Chromium	10 ppm	Inductively Coupled Plasma Spectrophotometry
IV. Lead	100 ppm	Inductively Coupled Plasma Spectrophotometry
V. PCB	10 ppm	H2SO4 Extraction/GC with Electron Capture
VI. TX	1000 ppm	ASTM D-808-512
VII. Ash	2 %	ASTM D-93
VIII. Sulfur	0.5 % (WT.)	X-Ray Diffraction

(b) The fuel may not contain detectable levels of pesticides and/or herbicides.

(c) No waste derived liquid fuels shall be mixed with the virgin residual fuel oil without first being screened for the

Conditions (continued):

constituents or properties listed in condition 7.C.(5)(d) and a copy of the analysis is available demonstrating that none of the levels are exceeded. The company shall maintain records of the analysis and consumption of waste fuel by the source for a period of not less than two (2) years. These records shall be made available to the Department on request.

(d) The waste derived liquid fuel to be mixed with virgin residual fuel oil shall not exceed the following limitations:

Constituent/Property	Limitation Level	Analytical Technique
I. Arsenic	10 ppm	Inductively Coupled Plasma Spectrophotometry
II. Cadmium	10 ppm	Inductively Coupled Plasma Spectrophotometry
III. Chromium	20 ppm	Inductively Coupled Plasma Spectrophotometry
IV. Lead	300 ppm	Inductively Coupled Plasma Spectrophotometry
V. PCB	49 ppm	H_2SO_4 Extraction/GC with Electron Capture
VI. TX	1000 ppm	ASTM D-808-512
VII. Flash Point	140°F	ASTM D-93-80

(e) An annual report is to be submitted to the Regional Air Pollution Control Engineer containing quarterly consumption data and copies of analyses required in condition 7.C(5)(f). The report for the previous calendar year is due no later than March 15 each year.

(f) The company shall take samples of the fuel as being supplied to the burners on a quarterly basis. These samples shall be analyzed for the constituents and properties as listed in condition 7.C.(5)(a). The company shall maintain records of the analysis and consumption of fuel by the auxiliary burners for a period of not less than two (2) years. These records shall be made available to the Department on request.

(g) PECO shall make provisions for personnel of the Department to take samples of the waste derived liquid fuel and/or fuel mixture at any time.

(h) No waste derived liquid fuel shall be added to the storage tank when it is less than 1/4 full (2.1 million gal.)

(i) Consumption of waste derived liquid fuel shall not exceed 5,000 gallons per month or 20,000 gallons per year at the Eddystone Generating Station.

(j) The analytical techniques in Conditions 7.C.(5)(a) and 7.C.(5)(d) can be substituted for with the Department's approval.

Conditions (continued):

D. Stack Emission Limitations

(1) Maximum air contaminant emissions from the sources shall be limited to:

(a) ~~PM: 0.1 pounds per million BTU of heat input as required by 25 Pa. Code §123.11~~.

(b) Volatile Organic Compounds (VOCs):

Unit No. 3: 0.001 lb/MM BTU and 8.0 tons/year whichever is more stringent

Unit No. 4: 0.002 lb/MM BTU and 27.9 tons/year whichever is more stringent

(c) NOx emissions from the sources shall be limited to the maximum of:

Unit No. 3: 0.26 lb/MM BTU as a 24 hour average, 0.23 lb/MM BTU of heat input on a 30 day rolling average and 2492 tons per year on a 12 month aggregate for calendar year whichever is more stringent.

Unit No. 4: 0.32 lb/MM BTU as a 24 hour average, 0.23 lb/MM BTU of heat input on a 30 day rolling average and 3076 tons per year on a 12 month aggregate for calendar year whichever is more stringent.

(2) The Department may establish lower RACT emission limits after installation of NOx control based on the following:

(a) Final NO_x emission limits shall be established for Eddystone Unit No. 3 and No. 4 through the use of Department-approved Continuous Emission Monitoring System (CEMS).

(b) Final NOx emission limits shall not exceed limits of 7.D.(1)(c).

E. RACT Implementation Schedule

Implementation of the approved NO_x controll technology for each unit shall be completed no later than May 31, 1995 to comply with RACT requirements of 25 PA Code §129.91(f).

Conditions (continued):

F. Testing Requirements

(1) PECO must perform VOC Emission Tests on the sources covered in this Operating Permit Condition in accordance with the provisions of Chapter 139 to demonstrate compliance with RACT Emission Limit Requirements. The tests shall be performed within 60 days of the unit restart while the aforementioned sources are operating at a load of not less than 95% of the maximum rated gross electrical capacity.

(2) At least sixty (60) days prior to the test, the company shall submit to the Department for approval the procedures for the test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.

(3) At least thirty (30) days prior to the test, the Regional Air Pollution Control Engineer shall be informed of the date and time of the test.

(4) Within (30) days after the source test(s), two copies of the complete test report, including all operating conditions, shall be submitted to the Regional Air Pollution Control Engineer for approval.

(5) The PECO shall, upon Department request, provide fuel analyses, or fuel samples, of the fuel used in the aforementioned boiler(s).

G. Continuous Monitoring Requirements

(1) Department Certified CEMS shall be installed on common stack of the Eddystone Unit No. 3 and No. 4 to provide monitoring for SO_2, CO_2, NOx emissions, flue gas flow and opacity.

(2) CEMS shall be installed, operated and maintained in accordance with the Department's "Continuous Source Monitoring Manual", Revision No. 5.

(3) The NOx monitor and flue gas flow monitor on the common stack shall be certified by the Department. The resulting total output shall be reported in pounds NOx/hour.

(4) The methods to quantify NOx emissions from the common stack and each individual unit shall be approved by the Department. The NOx emissions shall be reported in lbs/MM BTU to demonstrate compliance with Condition 7.D.(1)(c).

(5) CEMS shall be performance tested to demonstrate acceptability in accordance with Department's "Continuous Source Monitoring Manual".

Conditions (continued):

(6) The Department requires submission of the Phase I application to the Southeast Regional Office as specified in the Department's" Continuous Source Monitoring Manual" at least 180 days prior to the restart of the boiler.

(7) Phase II performance testing must be completed within 180 days of the Department's approval of the phase I application.

(8) Phase III Department approval must be obtained within sixty (60) days of achieving 95% of the maximum rated gross electrical capacity.

(9) The new CEMS shall be certified and operational by January 1, 1995.

(10) The continuous emission monitoring system shall be maintained and operated to achieve the following data availability requirements of 25 PA Code §139.101(12):

Monitored Pollutant or Parameter

Requirement Carbon Dioxide & Opacity, Flow, SO_2 and NO_x

Data Availability: >=95% valid hours/calendar quarter or >=90% valid hours/calender month

Valid Hour: >=75% valid readings/hr

(11) PECO shall use the method provided in 40 CFR §§75.31-33 for volumetric flow and NOx emissions to supplement any data not captured by the CEMS required for Eddystone Units 3 and 4. The CEMS along with any missing data determined under this condition will be used to determine compliance with 7.D.(1)(c).

H. Recordkeeping and Reporting Requirements

(1) Boiler No. 3 flue gas and boiler No. 4 flue gas exhaust to a common stack. Therefore the Company shall utilize a method to apportion NO_x emissions to Unit No. 3 and No. 4 to demonstrate compliance with conditions 7.D.(1)(c). The method shall be approved by the Department.

(2) The owner shall record the fuel throughput on daily basis.

(3) PECO shall verify and record the following fuel characteristics on a monthly and as delivered basis:

Conditions (continued):

(a) Sulfur content by weight

(b) Heat content in MM BTU/gal

(4) PECO shall establish NO_x Emissions Tracking system to document compliance with condition 7.D.(1)(c) above. The tracking system must be approved by the Department and shall include, but not be limited to the following information:

(a) Heat input in MMBTU/HR on a 24 hour average and on a 30 day rolling average

(b) Hours of operation

(c) Flue gas flow and contaminants concentration

(d) Fuel usage on hourly basis

(5) The company shall generate a summary of daily NO_x emission rates in lbs NO_x/MM BTU on a 24 hrs average and on a 30 day rolling average and 12 month aggregate for calendar year NO_x emissions in Tons/year for each unit to demonstrate compliance with condition 7.D(1)(c).

(6) The permittee shall maintain a file containing all the records and other data that are required to be collected to demonstrate compliance with NO_x/VOC RACT requirements of 25 PA Code §§129.91-129.94.

(7) The records shall provide sufficient data and calculations to clearly demonstrate that the requirements of §§129.91-129.94 are met.

(8) Data required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

(9) Records shall be retained for at least two years and shall be made available to the Department on request.

8. Auxiliary Boilers A, B and C

A. Source Description

Each package type Combustion Engineering auxiliary boiler rated at 124 MMBTU/HR contains a single burner and burns natural gas and No. 2 fuel oil. The boilers were originally designed to fire either fuel oil or crude oil and were converted to natural gas firing with No. 2 oil back-up.

Conditions (continued):

B. Control Equipment

NO_x emission from each boiler shall be controlled by low NO_x burner.

C. Operating Requirements

(1) PECO shall limit each unit to a maximum annual heat input of 657000 MMBTU or annual capacity factor of 60%. Annual heat input shall be calculated on a 12 month rolling average basis. Heat input shall be determined by the Department aproved method.

(2) The boilers covered under this Operating Permit Condition shall only burn natural gas as a primary fuel. Back up fuels shall be limited to fuel oil designated as No. 2 distillate (viscosity of 5.82 cSt or less/or lighter). Fuel oil shall not exceed 0.2% Sulfur Content by weight as required by 25 PA Code §123.22(e)(2).

(3) The company shall, upon the Department's request, provide fuel analyses, or samples of the fuel used in the aforementioned boilers.

D. Emission Limitations

(1) The maximum air contaminant emissions from each source shall be limited to:

(a) ~~PM: 0.24 pounds per million BTU of heat input as required by 25 PA Code §123.11~~

(b) NOx: 0.14 pounds per million BTU of heat input while burning a primary fuel.

(2) The Department will establish more restrictive RACT emission limits after installation of NO_x control based on the following:

(a) Final NO_x emission limits shall be established for auxiliary boilers through the Source Test Results.

(b) The test results shall be based on the average of three consecutive test runs.

E. RACT Implementation Schedule

PECO shall on or before May 31, 1995 install LNB Technology required in 8.B. for the auxiliary boilers to comply with RACT requirements of 25 PA Code §129.91(f).

Conditions (continued):

F. Testing Requirements

(1) As required by 25 PA Code §129.91(i) PECO shall perform periodic NO_x Emission Testing on auxiliary boilers covered in this Operating Permit Condition in accordance with the provisions of Chapter 139 to demonstrate compliance with RACT Emission Limit Requirements. The tests shall be started to perform within 60 days of the unit restart while the aforementioned sources are operating at a load of not less than 95% of the maximum rated steaming capacity. Tests shall occur at least annually and may be modified by the Department if the initial and next two periodic test results show consistency in emission rates.

(2) At least sixty (60) days prior to the test, the company shall submit to the Department for approval the procedures for the test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.

(3) At least thirty (30) days prior to the test, the Regional Air Pollution Control Engineer shall be informed of the date and time of the test.

(4) Within (30) days after the source test(s), two copies of the complete test report, including all operating conditions, shall be submitted to the Regional Air Pollution Control Engineer for approval.

G. Recordkeeping and Reporting Requirements

(1) The Company shall upon Department request, provide fuel analysis or fuel samples of the fuel used in the boilers.

(2) PECO shall keep records on a daily basis of the following:

Total fuel oil consumed
Total natural gas consumed
Steam output from each unit
Hours of operation

(3) The permittee shall maintain a file containing all the records and other data that are required to be collected to demonstrate compliance with NOx/VOC RACT requirements of 25 PA Code §129.91-129.94.

(4) The records shall provide sufficient data and calculations to clearly demonstrate that the requirements of §§129.91-129.94 are met.

Conditions (continued):

(5) PECO shall verify and record the following fuel characteristics on a monthly and as delivered basis.

(a) Sulfur content by weight

(b) Heat content in MM BTU/gal

(6) Data required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

(7) Records shall be retained for at least two years and shall be made available to the Department on request.

9. Combustion Turbines

A. Source Description

Units No. 10 and No. 20 are Pratt and Whitney Model FT4A8 combustion turbines rated at 233 MM BTU each. Units No. 30 and No. 40 are Pratt and Whitney Model FT4A9 combustion turbines rated at 284 MMBTU/HR each. Each unit burns No. 2 fuel oil.

B. Capacity Factor Limitation*

The capacity factor as defined for PECO is the ratio of net electrical power generation for the last twelve (12) months to the maximum electric power generation capability for the same last twelve (12) months for the source.

A rolling 12 month capacity factor is expressed as:

$$\frac{\text{Last 12 months net generation (MWH)}}{\text{Maximum net capacity of the unit (MW) x 24 hours/day x No. of days in last 12 months.}}$$

The 12 month rolling capacity factor of each of the 4 combusting turbines shall be less than 5%.

C. Presumptive RACT

The 4 combustion turbines shall conform with the presumptive RACT requirements of 25 PA Code §129.93(c). The presumptive RACT requirements of §129.93(c) are that the sources will be installed, maintained, and operated in accordance with manufacturer's specification.

Conditions (continued):

D. Recordkeeping Requirements

The company shall record the following information for the sources covered under this operating permit.

(1) Certification from the fuel supplier of the type of fuel.

(2) A certification that the fuel complies with ASTM D396-78 "Standard Specifications for Fuel Oils".

(3) Monthly electrical power (MWH) generated for each unit so that compliance with Conditions 9C can be determined.

(4) Annual reports of fuel consumption of the combustion turbines and hours of operation of the combustion turbines and generators shall be available to the Department.

(5) Records required under this Operating Permit shall be kept for a period of two(2) years and shall be made available to the Department upon its request.

10. General Requirements

A. Malfunctions

The company, within one hour of occurrence, shall notify the Department, at (610) 832-6242, of any malfunction of the source(s) or associated air emission of air contaminants in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in Article III of the Rules and Regulations of the Department of Environmental Resources. A written report shall be submitted to the Department within two working days following the incident describing the malfunctions and corrective actions taken. For those air contaminants monitored by a Department certified CEMS for which the Department's Enforcement Policy - Continuous Emission Monitoring System (CEMS) and Coal Sampling/Analysis Systems (CSAS) established penalties for excess emissions the aforementioned notification and Reporting Requirements will be waived.

B. The operation of the aforementioned boiler(s) shall not at any time result in the emission of visible air contaminants in excess of the limitations specified in Section 123.41, particulate matter in excess of the limitations specified in Section 123.11 or sulfur oxides in excess of the limitations specified in Section 123.22, all Sections of Chapter 123 of Article III of the Rules and Regulations of the Department of Environmental Resources, or in the emission of any of these or any other type of air contaminant in excess of the limitations specified in, or established pursuant to, any other applicable rule or regulation contained in Article III.

Conditions (continued):

C. The company shall not impose conditions upon or otherwise restrict the Department's access to the aforementioned source(s) and/or any associated air cleaning device(s) and shall allow the Department to have access at any time to said source(s) and associated air cleaning device(s) with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act.

D. The Plan Approval and Operating Permit shall become enforceable by the Environmental Protection Agency upon its approval of the above as a revision to the PA State Implementation Plan.

E. The expiration date shown on the Operating Permit is for state purposes. For Federal Enforcement purposes the Plan Approval shall remain in effect as part of the State Implementation Plan until replaced pursuant to 40 CFR 51 and approved by the US Environmental Protection Agency.

F. Revisions to any emission limitations incorporated in this operating permit will require resubmission as a revision to the PA State Implementation Plan. The applicant shall bear the costs of public hearings and notifications required for EPA approval as stipulated in 25 PA Code §129.91(h).

(23-RN)10/18