



CITY OF PHILADELPHIA  
DEPARTMENT OF PUBLIC HEALTH  
AIR MANAGEMENT SERVICES

RACT PLAN APPROVAL

Effective Date: July 11, 2001

Expiration Date: None

PA Permit Number: 51-4901

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 a Reasonably Available Control Technology (RACT) proposal received under the Pennsylvania Code, Title 25, Chapter 129.91 thru 129.95, of the rules and regulations of the Pennsylvania Department of Environmental Protection (PADEP), Air Management Services (AMS) approved the RACT proposal of the Facility below for the source(s) listed in section 1.A. Emission Sources of the attached RACT Plan Approval.

Facility: Exelon Generation Company - Delaware Generating Station  
Owner: Exelon Generation Company  
Location: 1325 North Beach Street, Philadelphia , PA 19125  
Mailing Address: 200 Exelon Way, Kennett Square, PA 19348  
SIC Code(s): 4911  
Plant ID: 4901  
Facility Contact: Claude J. Reifsnyder  
Phone: (215) 427-8537  
Permit Contact: Kimberly A. Peck  
Phone: (610) 765-5883  
Responsible Official: Robert W. Sauer  
Title: Manager

Edward Braun, Chief of Source Registration

7/11/01

Date

In accordance with provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and with Chapter 127 & 129 of the rules and regulations of the Department of Environmental Protection, Air Management Services has approved this Plan Approval to establish Nitrogen Oxides (NO<sub>x</sub>) Reasonably Available Control Technology (RACT) for implementation of the operating limitations on the emission source(s) in 2.A. below.

This RACT plan approval is subject to the following conditions:

1. The Plan Approval No. 51-4901 is issued to Exelon Company (Exelon) for the implementation of the operating limitations on the nitrogen oxides (NO<sub>x</sub>) emission sources at Delaware Generating Station, located at 1325 North Beach Street, Philadelphia.
2. The purpose of this Plan Approval is to establish Nitrogen Oxides (NO<sub>x</sub>) Reasonably Available Control Technology (RACT) for Exelon's Delaware Generating Station. This includes the following emission sources and control equipment:
  - A. Emission Sources
    - (1) Boiler No. 71 and Boiler No. 81 (with associated turbines Unit Nos. 7 & 8) are each front fired Babcock & Wilcox #6 oil burning boilers with rated net electrical outputs of 126 MW and 124 MW respectively, based on summer peak output level (128 MW for both Units, based on winter peak output levels). Each boiler consists of three horizontal rows of four burners each. Each unit originally had coal burning capability which has since been removed.
    - (2) One Babcock & Wilcox auxiliary boiler which burns No. 2 oil and is capable of burning No. 6 oil and has a maximum heat input of 42 MMBTU/hr. The boiler contains one burner.
    - (3) Three Pratt & Whitney model FT4A8 combustion turbines and one Pratt & Whitney model FT4A9 combustion turbine, each of aircraft derivative design and burns #2 oil. Their nominal outputs are 15.5 MW and 17.5 MW respectively.
    - (4) Emergency Diesel Generator.
3. This Plan Approval authorizes:
  - A. The implementation of the following operating conditions on Delaware Unit #71 to comply with the case-by-case determination in the RACT proposal submitted by PECO Energy Co.:
    - (1) The performance of an annual adjustment or tuneup on the combustion process as per 25 PA Code Section 129.93(b)(2) - (5).
  - B. The implementation of the following operating conditions on Delaware Unit #81 to comply with the case-by-case determination in the RACT proposal submitted by PECO Energy Co.:
    - (1) The performance of an annual adjustment or tuneup on the combustion process as per 25 PA Code Section 129.93(b)(2) - (5).
  - C. The implementation of the following operational limitations on the Delaware auxiliary boiler to comply with the presumptive RACT requirements of 25 PA Code Section 129.93(b)(2) - (5):
    - (1) The performance of an annual adjustment or tuneup on the combustion process as per 25 PA Code Section 129.93(b)(2) - (5).
  - D. The implementation of the following operational limitations on the four Delaware combustion turbines to comply with the presumptive RACT requirements of 25 PA Code Section 129.93(c)(5):

- (1) Maximum 12-month rolling capacity factor less than 5% for each combustion turbine. The rolling 12-month capacity factor is expressed as:

Last 12 months net generation (MWH)

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 Maximum capacity of unit (MW) x 24 hrs/day x No. of days in last 12 months

- (2) The installation, maintenance and operation of the combustion turbines in accordance with manufacturers specifications.

E. The implementation of the following operational limitations on the Delaware emergency diesel generator to comply with the presumptive RACT requirements of PA Code Section 129.93(c)(5):

- (1) Maximum operation of less than 500 hours in a consecutive 12-month period.
- (2) The installation, maintenance and operation of the combustion turbines in accordance with manufacturers specifications.

4. This Plan Approval supersedes all Plan Approvals previously issued.

5. Stack Emission Limitations

A. The maximum air contaminant emissions from these sources shall be limited at stack outlet to:

- (1) Nitrogen Oxides (NOx):

Unit No. 71: 0.43 pounds or less per million BTU of heat input on a 30-day rolling average.  
 Maximum NOx emissions of 645 tons per rolling 12-month period.

Unit No. 81: 0.42 pounds or less per million BTU of heat input on a 30-day rolling average.  
 Maximum NOx emissions of 595 tons per rolling 12-month period.

- (2) NOx emissions shall be determined from AMS-approved NOx continuous monitoring system which includes heat input and fuel flow rate. During periods of operation when the NOx continuous monitoring system records invalid data, NOx emissions shall be determined using representative default data in accordance with the provisions of 40 CFR, Part 75 and "Guidance for Implementation of Emission Monitoring Requirements for the NOx Budget Program".

6. RACT Implementation Schedule

A. Upon issuance of this Plan Approval, Exelon shall begin implementation of the measures necessary to comply with the approved RACT proposal by May 31, 1995.

7. Continuous Monitoring Requirements

A. Unit Numbers 71 & 81 meet the requirements of a "peaking" unit as defined in 40 CFR Part 75. Unit Numbers 71 & 81 shall comply with the parametric emissions monitoring systems (PEMS) requirements in accordance with 40 CFR Part 75, Appendix E to quantify emissions in pounds of NOx per million BTU of heat input and the NOx emissions mass flow rate to demonstrate compliance with Condition 5.A.(1).

8. Recordkeeping and Reporting Requirements

A. The permittee shall maintain a file containing all the records and other data that are required to be collected to demonstrate compliance with NOx RACT requirements of 25 PA Code §§129.91-129.94. These records shall include fuel consumption, fuel sulfur content, operating hours, operating conditions, power generation and NOx emissions.

- B. The records shall provide sufficient data and calculations to clearly demonstrate that the requirements of §§129.91-129.94 are met.
- C. Data of information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.
- D. Records shall be retained for at least two years and shall be made available to AMS on request.

9. Malfunctions

The company, within one hour of occurrence, shall notify Air Management Services (AMS), at (215) 685-7572, 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 AMS within two working days following the incident describing the malfunctions and corrective actions taken. For those air contaminants monitored by an AMS certified CEMS for which AMS's Enforcement Policy - Continuous Emission Monitoring System (CEMS) established penalties for excess emissions the aforementioned notification and reporting requirements will be waived.

- 10. The operation of the aforementioned boilers, combustion turbines and emergency diesel engine 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.
- 11. The company shall not impose conditions upon or otherwise restrict AMSs access to the aforementioned source(s) and/or any associated air cleaning device(s) and shall allow AMS 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 AMS deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act.
- 12. The expiration date shown on the Plan Approval is for city purposes. For Federal enforcement purposes the Plan Approval shall remain in effect as part of the State Implementation Plan until repealed pursuant to 40 CFR 51.4 and approved by the U.S. Environmental Protection Agency.
- 13. Revisions to any emission limitations incorporated in this Plan Approval will require resubmission as revision to the PA State Implementation Plan. The applicant shall bear the cost of public hearing and notification required for EPA approval as stipulated in 25 PA Code §§129.9(h).