



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

Northern Virginia Regional Office  
13901 Crown Court  
Woodbridge VA 22193  
(703) 583-3800  
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### CONSENT AGREEMENT

#### WITH

Washington Gas Light Company  
6801 Industrial Road  
Springfield, Virginia 22151

Registration No. 70151

#### SECTION A: Purpose

This Agreement establishes a Reasonably Available Control Technology (RACT) standard for Washington Gas Light Company, located in Springfield, Virginia, for the control of nitrogen oxide (NOx) emissions in the Northern Virginia Ozone Nonattainment Area as required by 9 VAC 5-40-310 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. This RACT standard shall be the basis for NOx emissions control for this plant.

#### SECTION B: References

Unless the context indicates otherwise, the following words and terms have the meanings assigned to them below:

"Agreement" means this Consent Agreement.

"Board" or "SAPCB" means the State Air Pollution Control Board, a collegiate body of the Commonwealth of Virginia described in § 10.1-1301 of the Code. Particular powers and duties of the Board are described in Section C of this document.

"Code" means the Code of Virginia.

"DEQ" means the Department of Environmental Quality, an agency of the Commonwealth described in § 10.1-1183 of the

Code.

"Director" means the Director of the Department of Environmental Quality. Particular powers and duties of the Director are described in Section C of this document.

"EPA" means the United States Environmental Protection Agency.

"Major Stationary Source" means any stationary source which emits, or has the potential to emit 100 tons per year or more of any pollutant subject to regulation under the federal clean air act, or 50 tons per year or more of volatile organic compounds or nitrogen oxides in ozone nonattainment areas classified as serious in 9 VAC 5-20-204 of the SAPCB Regulations. The area in which the affected facility is located is a nonattainment area classified as serious in 9 VAC 5-20-204 of the SAPCB Regulations.

"New source review program" means a program for the preconstruction review and permitting of new stationary sources or expansions to existing ones in accordance with regulations promulgated to implement the requirements of §§ 110 (a) (2) (C), 165 (relating to permits in prevention of significant deterioration areas) and 173 (relating to permits in nonattainment areas) of the federal Clean Air Act.

"Non-CTG" means a source type for which the EPA has not issued a Control Technique Guideline (CTG), and thus has not established RACT for that source type.

"NOx" means nitrogen oxides as defined by 9 VAC 5-10-20 of the SAPCB Regulations.

"NSCR" means Nonselective Catalytic Reduction.

"Reasonably Available Control Technology" or "RACT" means the lowest emission limit that a particular source is capable of meeting by the application of control technology that is both reasonably available, as well as technologically and economically feasible.

"Regional Director" means the Director of the Northern Virginia Regional Office of the Department of Environmental Quality, 13901 Crown Court, Woodbridge, Virginia 22193.

"SAPCB Regulations" means the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution.



"SIP" means the State Implementation Plan.

"Theoretical potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. It is based on emissions at design capacity or maximum production and maximum operating hours (8,760 hours per year) before add-on controls, unless the source is subject to state and federally enforceable permit conditions which limit production rates or hours of operation.

"VOC" means volatile organic compounds as defined by 9 VAC 5-10-20 of the SAPCB Regulations.

"Washington Gas", or "affected facility" means Washington Gas Light Company located in Springfield, Virginia which is located in Fairfax County.

**SECTION C: Authority**

1. Chapter 13 of Title 10.1 of the Code creates the Board and vests in it the authority to supervise and control various aspects of air pollution in the Commonwealth. Among the Board's powers is the authority to promulgate regulations "abating, controlling and prohibiting" air pollution, found in § 10.1-1308 of the Code.
2. Pursuant to its authority, the Board has promulgated the SAPCB Regulations, which first took effect March 17, 1972 and have been periodically amended.
3. Pursuant to § 10.1-1307 D of the Code, the Board has the authority to issue orders to diminish or abate the causes of air pollution and to enforce its regulations. Orders of the Board are enforceable pursuant to §§ 10.1-1316 and 10.1-1320 of the Code.
4. The Director is the executive officer of the Board. Under § 10.1-1307.2 A of the Code, the Director is to perform those duties required of him by the Board. Additionally under § 10.1-1307.3 of the Code, the Director has such powers to supervise, administer and enforce the provisions of Chapter 13 of Title 10.1 of the Code, as well as the regulations and orders of the Board, as are conferred upon him by the Board. The powers and duties conferred and imposed upon the Director under §§ 10.1-1307.2 and 10.1-1307.3 of the Code are continued under § 10.1-1185 of the Code.
5. Under § 10.1-1307.2 B of the Code, the Director may be

vested with the authority of the Board when it is not in session, subject to such regulations or delegation as may be prescribed by the Board. 9 VAC 5-20-130 of the SAPCB Regulations contains the Delegation of Authority from the Board to the Director. In subsection C 1 of 9 VAC 5-20-130 the Director is given the authority, with some exceptions, to act for the Board when it is not in session and to issue consent orders and emergency special orders.

SECTION D: Findings

1. Washington Gas operates a natural gas powered cogeneration facility, consisting of six (6) generators and three (3) boilers, in Springfield, Virginia which is located in Fairfax County.
2. 9 VAC 5-40-300 and 9 VAC 5-40-310 of the SAPCB Regulations requires RACT for all non-CTG major stationary sources with potential VOC emissions of 25 tons per year or greater and NOx emissions of 50 tons per year or greater in the Northern Virginia Ozone Nonattainment Area, which includes the Cities of Alexandria, Fairfax, Falls Church, Manassas, Manassas Park, and the counties of Arlington, Fairfax, Loudoun, Prince William and Stafford.
3. Washington Gas was determined to be a potential non-CTG major stationary source of NOx emissions in the Northern Virginia Ozone Nonattainment Area.
4. On May 30, 1995, the Board notified Washington Gas of its requirement to develop a RACT standard for NOx emissions from the affected facility.
5. Washington Gas submitted a proposed RACT determination dated June 28, 1995, to the DEQ on June 30, 1995.
6. The DEQ provided comments to Washington Gas, regarding their proposed RACT determination, on July 10, 1995.
7. Washington Gas submitted a RACT analysis dated October 10, 1995, to the DEQ on October 24, 1995.
8. The DEQ provided comments to Washington Gas, regarding their RACT analysis, on December 20, 1995.
9. A meeting between DEQ and Washington Gas was held January 19, 1996, in order to discuss Washington Gas' RACT analysis.



10. Washington Gas submitted a revised, January 31, 1996, RACT analysis to the DEQ on February 1, 1996.
11. In a March 6, 1996, letter to Washington Gas, the DEQ gave tentative approval of the revised January 31, 1996, RACT analysis provided that a revised Section 12.0 is incorporated into the document. DEQ requested a copy of revised Section 12.0 prior to the final RACT analysis being submitted to DEQ.
12. In a March 26, 1996, letter to Washington Gas, the DEQ gave approval of revised Section 12.0. DEQ requested copies of the final approved RACT analysis be submitted to DEQ.
13. DEQ received Washington Gas' final RACT analysis on April 3, 1996.
14. In a July 11, 1996, newspaper advertisement, the public was notified of DEQ's intent to hold an August 15, 1996, public hearing concerning Washington Gas' proposed RACT determination.
15. DEQ held a public hearing on August 15, 1996, in order to obtain comments concerning Washington Gas' proposed RACT determination. No comments were submitted within the defined comment period.
16. DEQ sent copies of the Consent Agreement to Washington Gas on December 5, 1996, for signature.
17. Upon DEQ's signature of January 13, 1997, the Consent Agreement became affective.
18. In a February 28, 1997, meeting between DEQ and Washington Gas, Washington Gas representatives informed DEQ that the installation of the L-E technology was not working as expected and that different technologies would need to be evaluated.
19. In an April 14, 1997, phone conversation between DEQ and Washington Gas, DEQ requested that Washington Gas provide a time line for the submittal of the revised RACT analysis and the completion of the project.
20. DEQ received Washington Gas' proposed time line on April 21, 1997.
21. DEQ approved Washington Gas' proposed time line in a letter dated April 28, 1997.

22. DEQ received Washington Gas' new RACT analysis on June 5, 1997.
23. The DEQ provided comments to Washington Gas regarding the submitted RACT analysis on June 27, 1997.
24. DEQ received Washington Gas' revised RACT analysis on July 18, 1997.
25. The DEQ provided conditional approval to Washington Gas regarding the revised RACT analysis on July 25, 1997.
26. The following cogeneration facility pre-RACT uncontrolled emissions (theoretical potential to emit) are summarized in the RACT analysis:
  - a. Uncontrolled NOx emissions from the facility's six (6) 930 horsepower Caterpillar G399 engines are estimated to be 807.6 tons per year.
  - b. Uncontrolled NOx emissions from the facility's three (3) gas-fired boilers, each with a maximum heat input capacity of 10.46 million Btu/hr, are estimated to be 19.2 tons per year.
  - c. Total uncontrolled NOx emissions from the affected facility are estimated to be 826.8 tons per year.

**SECTION E: Agreement**

Accordingly, the Board and Washington Gas agree that:

1. This Consent Agreement supersedes your Consent Agreement signed into effect on January 13, 1997, and defined by DEQ document number NVRO-388-96.
2. RACT for the cogeneration facility is the NOx emission rate of 2 grams per horsepower-hour. The proposed emission rate shall be obtained by the installation of Nonselective Catalytic Reduction technology (NSCR) and automatic air/fuel ratio controllers on the six (6) 930 horsepower engines.
3. Initial stack testing shall be conducted for nitrogen oxides emissions from a minimum of one (1) and a maximum of two (2) of the six (6) 930 horsepower Caterpillar G399 engine stacks. The actual unit(s) tested shall be selected by the Regional Director. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations.



During all tests, the engine(s) shall be required to be operated at a minimum of 80% of their maximum rated output capacity. The details of the tests are to be arranged with the Regional Director. Washington Gas shall submit a test protocol at least thirty (30) days prior to testing. Two (2) copies of the test results shall be submitted to the Regional Director within 60 days after test completion.

4. Washington Gas shall determine the surrogate parameters, differential pressure and temperature, required to ensure continuous compliance with the defined RACT standard. The surrogate parameters shall be determined by utilization of both stack test and portable analyzer data. The details of the surrogate parameter development and testing methods are to be arranged with the Regional Director. Two (2) copies of the results shall be submitted to the Regional Director within 60 days after test completion. As a minimum, surrogate parameters shall be re-evaluated, using portable analyzers, at a minimum of once in every 24 month period. Additionally, the surrogate parameter monitoring devices shall be calibrated and certified on an annual basis.
5. Washington Gas shall submit an annual report to the Regional Director detailing all non-compliance conditions. Washington Gas shall, at a minimum, keep a daily log which documents the temperature and pressure differential across the catalyst beds. The daily log shall provide sufficient information to demonstrate compliance with the conditions of this Agreement. Additionally, an annual report demonstrating compliance with all RACT requirements shall be submitted to the Regional Director, Northern Virginia DEQ Office within 30 days after the end of calendar year. Detailed documentation of the daily log shall be maintained at the facility for the most recent five (5) years and made available to the DEQ upon reasonable notice at any time.
6. Washington Gas shall comply with all applicable SAPCB Regulations including the requirements for monitoring, notification, recordkeeping, reporting, maintenance, and malfunction.
7. At any time in the future, should Washington Gas plan any modifications (in the context of the new source review program) of the affected facility covered by this Agreement, Washington Gas shall have the right to

apply to the Board for a new source review permit and the Board may consent to such modifications provided such modifications will meet all of the new source review permit program regulatory requirements in existence at that time.

8. The Board may modify, rewrite, or amend this Agreement with the consent of Washington Gas, for good cause shown by Washington Gas, or on its own motion provided approval of the changes is accomplished in accordance with SAPCB regulations, the Administrative Process Act (§ 9-6.14:1 et. seq.) and 40 CFR Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans).
9. Upon the terms and conditions of this Agreement being incorporated into a federally enforceable operating permit, enforcement shall take place through the operating permit program in lieu of this Agreement. It shall be noted that the preceding statement does not preclude DEQ's right to take enforcement action through this document if it deems necessary.
10. So long as this Agreement remains in effect, Washington Gas waives the right to any hearing pursuant to §§ 9-6.14:11 and 9-6.14:12 of the Code and to judicial review of any issue of fact or law contained herein. Nothing herein, however, shall be construed as a waiver of the right to a hearing or to judicial review of any action taken by the Board to enforce this Agreement.
11. Failure by Washington Gas to comply with any of the terms of this Agreement shall constitute a violation of an Order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
12. Washington Gas declares it has received fair and due process under the Administrative Process Act (§ 9-6.14:1 et. seq.).
13. This Agreement shall become effective upon signature by both parties and shall continue in effect indefinitely or until otherwise terminated by the Board.



The foregoing Consent Agreement has been executed on behalf of the STATE AIR POLLUTION CONTROL BOARD of the COMMONWEALTH OF VIRGINIA and on behalf of Washington Gas Light Company, each by its duly authorized representatives, or self, on the dates indicated below.

DEPARTMENT OF ENVIRONMENTAL QUALITY  
OF THE COMMONWEALTH OF VIRGINIA

4/3/98  
(date)

BY: John M. Dwyer  
Thomas L. Hopkins  
Director

WASHINGTON GAS LIGHT COMPANY

March 26, 1998  
(date)

BY: Richard J. Cook  
Richard J. Cook  
Vice President,  
Operations Technical Support

STATE OF Virginia  
CITY/COUNTY OF Lynchburg

The foregoing instrument was acknowledged before me this 26<sup>th</sup> day of March, 1998, by Richard J. Cook, Vice President, Operations Technical Support, of Washington Gas Light Company, a Virginia Corporation, on behalf of the Corporation.

My commission expires August 31, 2000.

Karen M. Moore  
Notary Public

