

# SIEMENS

May 18, 1995

## Order 95-05 of the Benton County Clean Air Authority Board of Directors

At the Request of Siemens Power Corporation

**Reason for Order:** To limit emissions of Nitrogen Oxides ( $\text{NO}_x$ ), to be less than 100 tons per year, so that this registered source will not be required to apply for an Air Operating Permit. Major stationary sources of over 100 tons per year of regulated pollutants are required to apply for an Air Operating Permit by the Federal Clean Air Act Amendments of 1990, Title V and WAC 173-401.

**Background:** Siemens' facility located at 2101 Horn Rapids Road, Richland, Washington, may be a major stationary source because it may have the potential to emit more than 100 tons per year of Nitrogen Oxides. Since the facility's actual emissions of  $\text{NO}_x$  are substantially less than 100 tons per year and it does not otherwise qualify as a Chapter 401 source required to obtain an Air Operating Permit, after advice from Peter B. Bosserman, Air Quality Engineer with the BCCAA, Siemens has submitted a letter requesting federally enforceable limits on  $\text{NO}_x$  below 100 tons per year.

**Federal and State guidance:** The U.S. Environmental Protection Agency (EPA) and the Washington State Dept. of Ecology, recognized that there are many plants with actual emissions under the 100 ton per year size. In Benton County there are only 3 major sources, each permitted to emit more than 100 tons per year. In Benton County there are 11 medium sized sources, several of which desire the Board's action, to legally classify them as minor sources. (To round out the picture, Benton County has 150 small sources, like gas stations, dry cleaners, and spray painters.) In a guidance memo dated 1/25/95 EPA has given "Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Act)", consisting of 11 pages, with one amendment, and five attachments totaling 40 pages. For sources in Benton County requesting the Board's action to confirm their status as minor sources, the EPA guidance will be complied with as the Board proceeds to adopt this and the other orders. Washington State has addressed this classification action with a rule, which is complied with in this order. This rule is WAC 173-400-091, Voluntary Limits on Emissions. It requires notice in the local daily paper, per WAC 173-400-171, with a 30 day public comment period. So this "Regulatory Order" is being published as approved by the BCCAA staff and conditionally approved by the BCCAA Board, and if amended by the Board subsequent to public comment, will be republished, to be acted on by the Board at a future Board meeting for final adoption.

## Siemens Power Corporation

Nuclear Division - Engineering and Manufacturing Facility

2101 Horn Rapids Road, PO Box 130    Richland, WA 99352-0130    Tel: (509) 375-8100    Fax: (509) 375-8402

**Order 95-05 of the Board:**

1. Siemens Power Corporation, whose actual emissions are, and plan to be, less than 100 tons per year of any pollutant, has requested the Board to set legally enforceable emission limitations to classify its Richland facility as a minor source with a potential to emit of less than 100 tpy by a regulatory order. Siemens' emissions of Hazardous Air Pollutants (HAPS) are all insignificant and below the applicable major source threshold.
2. The units affected by this order are the UO<sub>2</sub> Building Uranium Dissolver Systems, the Gadolinium Scrap Uranium Recovery (GSUR) System, and the Solid Waste Uranium Recovery (SWUR) System.
3. Siemens agrees to annually certify that its Nitrogen Oxides emissions have not exceeded 100 tons per year (tpy) by meeting the following limitations:
  - a. Limiting the quantity of uranium dioxide (or equivalent) dissolved in the UO<sub>2</sub> Building Uranium Dissolver Systems to no more than 400,000 kilograms per year.
  - b. Maintaining 12 month rolling sum records of the quantity of uranium dioxide (or equivalent) dissolved in the UO<sub>2</sub> Building Uranium Dissolver Systems. The records will be kept on site and available for inspection by the Authority.
  - c. Limiting the quantity of uranium dioxide (or equivalent) dissolved in the Gadolinium Scrap Uranium Recovery (GSUR) System to no more than 90,000 kilograms per year.
  - d. Maintaining 12 month rolling sum records of the quantity of uranium dioxide (or equivalent) dissolved in the GSUR System. The records will be kept on site and available for inspection by the Authority.
  - e. Maintaining the weighted annual average off-gas NO<sub>x</sub> emissions from the UO<sub>2</sub> Building Uranium Dissolver Systems and the GSUR System to 0.36 lb of NO<sub>x</sub> (as NO<sub>2</sub>) per kg of UO<sub>2</sub>, (or equivalent) dissolved.
  - f. Performing a test to confirm the weighted annual average emission rate of pounds of NO<sub>x</sub> (as NO<sub>2</sub>) per kg of UO<sub>2</sub>, (or equivalent) on the K-10 and K-32 stacks of the UO<sub>2</sub> Building Uranium Dissolver Systems and the K-56 stack of the GSUR System using EPA or BCCAA approved methods. The test will be performed within 6 months after approval of this Order. Annually thereafter, Siemens proposes a similar test to be performed on the same emission points to certify the weighted annual average emission rate. Siemens may also evaluate the possibility of a parametric monitoring system in lieu of an annual certification test. A proposed parametric monitoring system may be submitted to the Authority at a later date as an amendment to this order.

- g. Limiting the solid waste burned in the Solid Waste Uranium Recovery (SWUR) System to no more than an average of 200 lb/hr.
  - h. Maintaining records of the quantity of waste fed to the SWUR System. The records will be kept on site and available for inspection by the Authority.
  - i. Providing annual reports to the Authority detailing: the quantity of uranium dioxide (or equivalent) dissolved in the UO<sub>2</sub> Building Uranium Dissolver Systems and the GSUR System; the test results or parametric monitoring records of item "f" above; and the quantity of solid waste fed to the SWUR system.
- 4. Air pollution control equipment and the present exhaust stacks will be maintained in good working order.
  - 5. This order may be enforced by EPA, Ecology, BCCAA, or any citizen in accordance with applicable laws.
  - 6. Unaffected by this order are the NO<sub>x</sub> emissions from insignificant processes which include: Machine Shop component etch, UO<sub>2</sub> Lab operations, Specialty Fuels Lab operations, and fuel combustion.

**Schedule of Adoption:**

- a. BCCAA Board of Directors conditionally approves this Order, May 18, 1995, subject to revisions based on public comment.
- b. Proposed conditional Order to be published in the Tri-City Herald as soon as practicable after the May 18 Board meeting.
- c. BCCAA Board of Directors adopts the Order after comment period, if no significant adverse comment comes in from the public.

Letters, NOC #950216, and information on other registered sources from Siemens, Rules cited and Guidance memo are available in the BCCAA office for review.

*Peter B. Bosserman*

Prepared by: Peter B. Bosserman, P.E.

*David A. Lauer*

Approved by: David A. Lauer, Director

Approved by:

*Cliff Groff*

Cliff Groff, Chairman of Board

*5-18-95*

Date.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*195*

CC:  
Elizabeth A. Waddell  
U.S. EPA Region 10  
Air Operating Permit Program, AT-084  
1200 Sixth Avenue  
Seattle, WA 98101

CC: with Notification of Permit Register Entry form  
Pat Norman, fax 360-407-6802  
Washington State Dept. of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

**NOx EMISSIONS**  
**SIEMENS POWER CORPORATION**  
**Richland, Washington**

<b>Emission Sources</b>	<b>1994 Actual Emissions (212,000 kg UO<sub>2</sub> or equivalent dissolved) [With NOx Controls] (ton/yr)</b>	<b>Potential Emissions (490,000 kg UO<sub>2</sub> or equivalent dissolved per year) [NOx Controls not Considered] (ton/yr)</b>	<b>Potential To Emit with Proposed Limits (490,000 kg UO<sub>2</sub> or equivalent dissolved per year) [With NOx Controls] (ton/yr)</b>
UO <sub>2</sub> Building Uranium Dissolver Systems	23.7	150	72
Gadolinium Scrap Uranium Recovery (GSUR) System	3.8	33.6	16
Solid Waste Uranium Recovery (SWUR) System (Note 1)	0	2.2	2.2 (Note 2)
Component Etch System (Note 3)	0.05	0.2	0.05
UO <sub>2</sub> Laboratory (Note 4)	0.1	0.1	0.1
Fuel Combustion (Note 5)	0.32	1	1
<b>TOTAL</b>	<b>27.97</b>	<b>187.1</b>	<b>91.35</b>

**NOTES:**

- 1) Limit of an average of 200 pounds per hour of waste fed to the SWUR; SWUR not operated in 1994.
- 2) Existing NOx Controls not Considered.
- 3) The actual emissions and potential to emit with controls are based on the annual potential to emit as estimated on the NOC #940926 application.
- 4) Order #93-04 limits NOx emissions to 0.1 tons per year.
- 5) No NOx control equipment is used with fuel combustion at the site. Besides SWUR, propane fuel is used for a steam cleaner, a hot water heater, process furnaces and ovens, and mobile sources. Diesel fuel is used for backup electrical power generators that are tested monthly, some mobile sources, and fire extinguishing training purposes.