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Docket Nos. 50-280
and 50-281

Virginia Electric & Power Company
ATTN: Mr. W. L. Proffitt
Senior Vice President - Power
P. O. Box 26666
Richmond, Virginia 23261

Gentlemen:

Enclosed is a signed original of an Order for Modification of License dated June , 1978, issued by the Commission for the Surry Power Station Units Nos. 1 and 2. This Order supplements our Orders issued August 24, 1977, October 17, 1977 and January 10, 1978, and amends Facility Operating Licenses DPR-32 and DPR-37. This Order removes the limits on the minimum service water temperature.

A copy of the Order is being filed with the Office of the Federal Register for publication.

Sincerely,

Original Signed By

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosure:
Order for Modification
of License

cc w/enclosure:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 29, 1978

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and 50-281

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A. Schwencer

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

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cc w/enclosure:
See next page

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Richmond, Virginia 23213

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College of William & Mary
Williamsburg, Virginia 23185

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U.S. Environmental Protection Agency
Region III Office
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Curtis Building - 6th Floor
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

UNITED STATES OF AMERICA
NUCLEAR REGULATION COMMISSION

In the Matter of	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	Docket Nos. 50-280
	)	and 50-281
Surry Power Station, Unit Nos. 1 & 2)		

ORDER FOR MODIFICATION OF LICENSE

I.

Virginia Electric and Power Company (the Licensee), is the holder of Facility Operating License Nos. DPR-32 and DPR-37 which authorizes the operation of two nuclear power reactors known as Surry Power Station, Unit Nos. 1 and 2 (the facility) at steady state reactor power levels not in excess of 2441 thermal megawatts (rated power). The Reactors are pressurized water reactors (PWR) located at the Licensee's site in Surry County, Virginia.

II.

On August 24, 1977, the Commission authorized the installation of flow-limiting orifices in the discharge of the outside recirculation spray pumps for the facility and imposed limitations by order on certain operating parameters for the facility. These limitations were designed to assure adequate flow and net positive suction head (NPSH) for the containment recirculation spray pumps during design basis loss of coolant accident (LOCA) conditions. One of these limitations was a maximum service water temperature of 85°F.

By letter dated September 12, 1977, the licensee submitted the results of more complete analyses regarding the available NPSH for the low head safety injection pumps for interim operation of the plants. The methods used to calculate the containment pressure, containment sump temperature, and available NPSH were reviewed for the North Anna plant and found to be acceptable. The same methods were used in the calculations for Surry. Also in its letter of September 12, 1977, the licensee requested that the current limitation on the service water temperature and the outside recirculation spray (ORS) pump flowrate be changed from 85°F and 2000 gpm to 87°F and 2250 gpm, respectively. In addition, an associated increase in the minimum allowed refueling water storage tank (RWST) volume from the current Technical Specification value of 350,000 gallons to 385,200 gallons and a decrease in the maximum containment air partial pressure from 9.3 to 9.2 psia were proposed. The licensee provided additional information in November 1977, to supplement its analyses. These analyses show the effect of the proposed changes on the available NPSH for the low head safety injection and containment recirculation spray pumps (outside and inside) and on the containment pressure. We have reviewed the licensee's analyses and have performed our own analyses using the data provided.

The results of our analyses indicate that the peak containment pressure will not exceed the design pressure and that there will be adequate available NPSH for all pumps referred to above, without significant reduction in margin, at the proposed limiting conditions of 87°F and 2250 gpm. The increased volume in the RWST will remove additional containment heat and will therefore tend to decrease containment pressure under LOCA conditions.

For the foregoing reasons, it is concluded that (1) increasing the maximum service water temperature limit to 87°F, (2) increasing the ORS pump flowrate to 2250 gpm, (3) increasing the RWST minimum allowed volume to 385,200 gallons, and (4) decreasing the maximum allowed containment partial pressure from 9.3 to 9.2 psia, will still provide adequate containment cooling following a postulated loss of coolant accident to assure that continued operation will not impose an undue risk to public health and safety.

Copies of the following documents are available for public inspection in the Commission's Public Document Room, 1717 H Street,NW, Washington, DC 20555, and at the Swem Library, College of William and Mary, Williamsburg, Virginia: (1) letter from Licensee dated September 12 1977, and (2) this Order for Modification of License, In the Matter of Virginia Electric and Power Company, Surry Power Station Unit Nos. 1 and 2, Docket Nos. 50-280 and 50-281.

III.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's Rules and Regulations in 10 CFR Parts 2 and 50, IT IS ORDERED THAT Facility Operating Licenses Nos. DPR-32 and DPR-37 are hereby amended by revising our August 24, 1977 Order for Modification of License to include the following limits on operation, effective immediately:

Maximum Service Water Temperature	87°F
Containment Temperature	100°F - 125°
Containment Air Partial Maximum Pressure	9.2 PSIA at 87°F service water temperature and 45°F RWST temperature. This value will vary in a manner similar to existing Technical Specification 3.8.
Minimum Refueling Water Storage Tank Volume	385,200 gallons
Outside Recirculation Spray Pump Flowrate	2250 gpm

FOR THE NUCLEAR REGULATORY COMMISSION

Victor Stello, Jr., Director
Division of Operating Reactors
Office of Nuclear Reactor Regulation

Dated in Bethesda, Maryland
this 29th day of June. 1978