

Mr. W. L. Stewart  
Senior Vice President - Nuclear  
Virginia Electric and Power Company  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060

Dear Mr. Stewart:

SUBJECT: SURRY UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: IMPLEMENTATION  
OF THE REVISED 10 CFR PART 20, STANDARDS FOR PROTECTION  
AGAINST RADIATION (TAC NOS. M87061 AND M87062)

The Commission has issued the enclosed Amendment No. 185 to Facility  
Operating License No. DPR-32 and Amendment No. 185 to Facility Operating  
License No. DPR-37 for the Surry Power Station, Unit Nos. 1 and 2,  
respectively. The amendments consist of changes to the Technical  
Specifications (TS) in response to your application transmitted by letter  
dated July 16, 1993, as supplemented by letter dated November 15, 1993.

These amendments will implement the revised 10 CFR Part 20, revise the  
frequency of the radiological effluent release reports from semi-annual to  
annual, and clarify the site maps.

We are continuing the evaluation of the proposed revision to the definition of  
"UNRESTRICTED AREA" and, therefore, will not address this change at this time.  
We will notify you when this matter is resolved.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will  
be included in the Commission's biweekly Federal Register notice.

Sincerely,

(Original Signed By)

Bart C. Buckley, Senior Project Manager  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 185 to DPR-32
2. Amendment No. 185 to DPR-37
3. Safety Evaluation

**NRC FILE CENTER COPY**

cc w/enclosures: See next page  
\*Previously Concurred

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NAME	ETana <i>ET</i>	BBuckley	HBerkow <i>[Signature]</i>	SHorn
DATE	12/30/93	1/24/94	1/24/93	12/22/93

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Mr. W. L. Stewart  
Virginia Electric and Power Company

Surry Power Station

cc:

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Robert B. Strobe, M.D., M.P.H.  
State Health Commissioner  
Office of the Commissioner  
Virginia Department of Health  
P.O. Box 2448  
Richmond, Virginia 23218

DATED: January 25, 1994

AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-32 - SURRY UNIT 1  
AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-37 - SURRY UNIT 2

**Docket File**

NRC & Local PDRs

PDII-2 Reading

S. Varga, 14/E/4

G. Lainas, 14/H/3

H. Berkow

E. Tana

B. Buckley

OGC

D. Hagan, 3302 MNBB

G. Hill (4), P-137

C. Grimes, 11/F/23

ACRS (10)

OPA

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M. Sinkule, R-II

080079



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-280

SURRY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 185  
License No. DPR-32

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company (the licensee) dated July 16, 1993, as supplemented November 15, 1993, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;  
and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

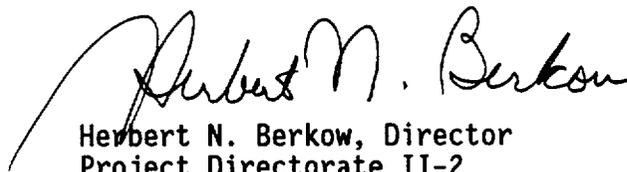
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-32 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 185, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented by January 1, 1994.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 25, 1994



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-281

SURRY POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 185  
License No. DPR-37

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Virginia Electric and Power Company (the licensee) dated July 16, 1993, as supplemented November 15, 1993, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;  
and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-37 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 185, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented by January 1, 1994.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 25, 1994

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

Remove Pages

1.0-5  
4.16-1  
4.16-2  
TS Figure 5.1-1  
6.4-2  
6.4-3  
6.4-8  
6.4-9  
6.6-2  
6.6-10  
6.6-12  
6.8-2

Insert Pages

1.0-5  
4.16-1  
4.16-2  
TS Figure 5.1-1  
6.4-2  
6.4-3  
6.4-8  
6.4-9  
6.6-2  
6.6-10  
6.6-12  
6.8-2

**K. FIRE SUPPRESSION WATER SYSTEM**

A fire suppression water system shall consist of: a water source(s), gravity tank(s) or pump(s), and distribution piping with associated sectionalizing control or isolation valves. Such valves shall include yard hydrant curb valves, and the first valve ahead of the water flow alarm device on each sprinkler, hose standpipe, or spray system riser.

**L. OFFSITE DOSE CALCULATION MANUAL (ODCM)**

The Offsite Dose Calculation Manual (ODCM) shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Radiological Environmental Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by Section 6.4 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by Specifications 6.6.B.2 and 6.6.B.3.

**M. DOSE EQUIVALENT I-131**

The dose equivalent I-131 shall be that concentration of I-131 (microcurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites" or in NRC Regulatory Guide 1.109, Revision 1, October 1977.

**N. GASEOUS RADWASTE TREATMENT SYSTEM**

A gaseous radwaste treatment system is any system designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system offgases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.

## 4.16 LEAKAGE TESTING OF MISCELLANEOUS RADIOACTIVE MATERIALS SOURCES

### Applicability

Applies to miscellaneous radioactive materials sealed sources not subject to core flux and that are not stored and out of use.

### Objective

To maintain doses due to ingestion or inhalation within the limits of 10 CFR 20.

### Specifications

#### A. Source Leakage Test

Radioactive sources shall be leak tested for contamination. The leakage test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, it shall immediately be withdrawn from use, decontaminated, and repaired or be disposed of in accordance with Commission regulations.

Those quantities of byproduct material that exceed that quantities listed in 10 CFR 30.71 Schedule B are to be leak tested in accordance with the schedule shown in Surveillance Requirements. All other sources (including alpha emitters) containing greater than 0.1 microcurie are also to be leak tested in accordance with the Surveillance Requirements.

Commission or an agreement State as follows:

- a. Each sealed source, except startup sources subject to core flux, containing radioactive material other than Hydrogen 3 with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months.
  - b. The periodic leak test required does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another user unless they have been leak tested within six months prior to the date of use or transfer. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, sealed sources shall not be put into use until tested.
  - c. Startup sources shall be leak tested prior to and following any repair or maintenance and before being subjected to core flux.
2. A complete inventory of radioactive materials in possession shall be maintained current at all times.

#### Basis

Ingestion or inhalation of source material may give rise to total body or organ irradiation. This specification assures that leakage from radioactive materials sources does not exceed allowable limits. The limits for all other sources (including alpha emitters) are based upon 10 CFR 70.39(c) limits for plutonium.

1 Inch = Approximately 1,000 Feet

JAMES RIVER

**STATION**

- A. Gaseous Release
  1. Process Vent - 131 Ft. - Mixed Mode
  2. Vent-Vent Stacks  
Ground Level

B. Liquid Leaves Site

**RADWASTE FACILITY**

- C. Gaseous Release  
Ground Level

--- Site Boundary - Area At or Beyond is Unrestricted for Gaseous Effluents

\*\*\* Security Fence

Land Maximum Individual Occupancy Within Site Boundary:

- 1. Canal Bank Fishing = 160 Hr/Yr

Liquid Maximum Individual Occupancy Within Site Boundary:

- 1. Boat Fishing Discharge Canal = 800 Hr/Yr

B

Site Boundary

Rt. 650

Switchyard Area

Site Boundary

JAMES RIVER

FIGURE 5.1-1  
MAP DEFINING UNRESTRICTED AREAS FOR RADIOACTIVE  
GASEOUS AND LIQUID EFFLUENTS

1. In lieu of the "control device" or "alarm signal" required by paragraph 20.1601 of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:
  - a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
  - b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them.
  - c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by Health Physics in the RWP.

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\* Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved plant radiation protection procedures for entry into high radiation areas.

2. The requirements of 6.4.B.1 above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr, but less than 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the senior station individual assigned the responsibility for health physics and radiation protection.
  3. Written procedures shall be established, implemented, and maintained covering the activities referenced below:
    - a. Process Control Program implementation.
    - b. Offsite Dose Calculation Manual implementation.
- C. All procedures described in 6.4.A and 6.4.B, and changes thereto, shall be reviewed and approved by the Station Nuclear Safety and Operating Committee prior to implementation.

**N. Radioactive Effluent Controls Program**

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to ten times 10 CFR 20, Appendix B, Table 2, Column 2,
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,

- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas at or beyond the SITE BOUNDARY shall be limited to the following:
  - a) For noble gases: Less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and
  - b) For Iodine-131, Iodine-133, Tritium, and all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to a dose rate of 1500 mrem/yr to any organ.
- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, Tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operations), supplementary reports shall be submitted at least every 3 months until all three events have been completed.

2. Annual Reports<sup>1</sup>

- a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man-rem exposure according to work and job functions<sup>2</sup>, e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources shall be assigned to specific major work functions.

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Note: Footnotes 1 and 2 are located on page TS 6.6-12.

**B. Unique Reporting Requirements****1. Inservice Inspection Evaluation**

Special summary technical report shall be submitted to the Director of Reactor Licensing, Office of Nuclear Reactor Regulation, NRC, Washington, D.C. 20555, after 5 years of operation. This report shall include an evaluation of the results of the inservice inspection program and will be reviewed in light of the technology available at that time.

**2. Annual Radiological Environment Operating Report<sup>1</sup>**

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted before May 1 of each year. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

**3. Annual Radioactive Effluent Release Report<sup>3</sup>**

The Annual Radioactive Effluent Release Report covering the operation of the unit during the previous calendar year shall be submitted by May 1 of each year. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

analysis and interpretation of the test data, the least squares fit analysis of the test data, the instrument error analysis, and the structural conditions of the containment or components, if any, which contributed to the failure in meeting the acceptance criteria. Results and analyses of the supplemental verification test employed to demonstrate the validity of the leakage rate test measurements shall also be included."

C. Special Reports

In the event that the Reactor Vessel Overpressure Mitigating System is used to mitigate a RCS pressure transient, submit a Special Report to the Commission within 30 days. The report shall describe the circumstances initiating the transient, the effect of the PORVs or the administrative controls on the transient and any corrective action necessary to prevent recurrence.

FOOTNOTES

1. A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.
2. This tabulation supplements the requirements of Section 20.2206 of 10 CFR Part 20.
3. A single submittal may be made for a multi-unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

- b. A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
2. Shall require review and acceptance by the SNSOC and the approval of the Station Manager prior to implementation.
3. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-32  
AND AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-280 AND 50-281

1.0 INTRODUCTION

By letter dated July 16, 1993, as supplemented on November 15, 1993, Virginia Electric and Power Company (the licensee), submitted proposed changes to the Surry Power Station, Units 1 and 2 Technical Specifications (TS) in support of its plan to implement the revised 10 CFR Part 20 and which reflect the revised 10 CFR 50.36a. The November 15, 1993 submittal did not expand the scope of the original application and did not change the proposed no significant hazards consideration determination.

2.0 EVALUATION

The licensee has revised the TS to include wording that is consistent with the revised 10 CFR Part 20, Standards for Protection Against Radiation, and will retain the same overall level of effluent control required to meet the design objectives of Appendix I to 10 CFR Part 50. An evaluation was not performed on item 2. regarding the definition of "UNRESTRICTED AREA" because this item is still being evaluated.

The proposed TS changes and evaluations follow:

1. Technical Specification 1.M

The licensee has proposed to change definition 1.M, OFFSITE DOSE CALCULATION MANUAL (ODCM). The ODCM refers to the Semiannual Radioactive Effluent Release Report. The word "Semiannual" is being changed to "Annual."

The change is administrative in nature to implement the revised reporting requirement in 10 CFR 50.36a and is acceptable.

2. Technical Specification 1.U

The licensee has proposed to change the definition of UNRESTRICTED AREA to conform to the definition used in 10 CFR 20.1003.

The staff is continuing the evaluation of this item and therefore will not address it at this time.

3. Technical Specification 4.16

The licensee has proposed to change the objective for leakage testing of miscellaneous radioactive materials sources to delete the term "maximum permissible body burden" and replace it with "to maintain doses due to ingestion or inhalation within the limits of 10 CFR 20."

The change is administrative in nature and does not conflict with the revised 10 CFR Part 20. The change is acceptable.

4. Technical Specification BASES 4.16

The licensee has proposed to delete the third sentence in the paragraph description of the bases for sealed source contamination. The information contained in the sentence includes internal dose terminology, i.e., "maximum permissible body burden" (MPBB) from International Commission on Radiological Protection 2. The revised 10 CFR Part 20 has eliminated the term "MPBB" from the regulation. Sealed source contamination is governed by 10 CFR 70.39(c).

The change to the BASES is administrative in nature and does not conflict with the revised 10 CFR Part 20. The change is acceptable.

5. Figure 5.1-1 Map Defining Unrestricted Areas for Radioactive Gaseous and Liquid Effluents

The licensee has proposed to revise this figure to show that the unrestricted area for gaseous effluents is at or beyond the site boundary rather than at the security fence.

The change is administrative in nature and is acceptable.

6. Technical Specification 6.4.B

The licensee has proposed to replace the reference "20.203(c)(2)" with "20.1601" and to add an upper limit on the TS of "but less than 500 rads/hr. at one meter from a radiation source or any surface through which radiation penetrates."

The changes are consistent with the requirements of the revised 10 CFR Part 20 and are acceptable.

7. Technical Specification 6.4.N.2

The licensee has proposed to revise this TS to change the liquid effluent release rate from maximum permissible concentration values in 10 CFR Part 20 to "ten times 10 CFR Part 20, Appendix B, Table 2, Column 2."

The licensee has proposed this change in order to retain operational flexibility consistent with Appendix I to 10 CFR Part 50, concurrent with the implementation of the revised 10 CFR Part 20.

The current requirements for the content of the licensee's TS concerning radioactive effluents are contained in 10 CFR 50.36a. 10 CFR 50.36a requires licensees to maintain control over radioactive material in gaseous and liquid effluents to unrestricted areas, produced during normal reactor operations, to levels that are as low as reasonably achievable (ALARA). For power reactors, Appendix I to 10 CFR Part 50 contains the numerical guidance to meet the ALARA requirement. The dose values specified in Appendix I of 10 CFR Part 50 are small percentages of the implicit limits in 10 CFR 20.106 and the explicit limits in 10 CFR 20.1301. As secondary controls, the instantaneous dose rates required by this TS were chosen by the staff to help maintain annual average releases of radioactive material in gaseous and liquid effluents to within the dose values specified in Appendix I of 10 CFR Part 50. For the purposes of this TS, 10 CFR Part 20 is used as a source of reference values only. These TS requirements allow operational flexibility, compatible with considerations of health and safety, which may temporarily result in release rates which, if continued for the calendar quarter, would result in radiation doses higher than specified in Appendix I of 10 CFR Part 50. However, these releases are within the implicit limits in 10 CFR 20.106 and the explicit limits in 10 CFR 20.1302 which references Appendix B, Table II concentrations. These referenced concentrations in the old 10 CFR Part 20 are specific values which relate to an annual dose of 500 mrem. The liquid effluent radioactive effluent concentration limits given in Appendix B, Table 2, Column 2 to 10 CFR 20.1001 - 20.2401 are based on an annual dose of 50 mrem total effective dose equivalent. Since an instantaneous release concentration corresponding to a dose rate of 500 mrem/year has been acceptable as a TS limit for liquid effluents, which applies at all times to assure that the values in Appendix I of 10 CFR Part 50 are not likely to be exceeded, it is not necessary to reduce this limit by a factor of ten.

The licensee states that operational history at the Surry Power Station has demonstrated that the use of the concentration values associated with 10 CFR 20.106 as TS limits has resulted in calculated maximum

individual doses to a member of the public that are small percentages of the values given in Appendix I to 10 CFR Part 50. Therefore, the use of effluent concentration values that are ten times those listed in Appendix B, Table 2, Column 2 to 10 CFR 20.1001 - 20.2401 will not have a negative impact on the ability to continue to operate within the design objectives in Appendix I to 10 CFR Part 50 and 40 CFR Part 190 which are a fraction of the 10 CFR 20.1301 limits.

Based on the above, it is acceptable that the instantaneous limits associated with the liquid release rate TS are based on ten times the effluent concentration values given in Appendix B, Table 2, Column 2 to 10 CFR 20.1001 - 20.2401.

8. Technical Specification 6.4.N.3

The licensee has proposed to revise this TS to replace the reference to "10 CFR 20.106" with "10 CFR 20.1302."

The change is administrative in nature to incorporate the corresponding revised 10 CFR Part 20 section number and is acceptable.

9. Technical Specification 6.4.N.7

The licensee has proposed to revise this TS which specifies the limitations on the concentrations of radioactive material released in gaseous effluents. The licensee has proposed that the TS be revised to read as follows:

"Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas at or beyond the SITE BOUNDARY shall be limited to the following:

- a) For noble gases: Less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and
- b) For Iodine-131, Iodine-133, Tritium, and all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to a dose rate of 1500 mrem/yr to any organ."

The licensee has proposed this change in order to retain operational flexibility consistent with 10 CFR Part 50, Appendix I, concurrent with the implementation of the revised 10 CFR Part 20.

The current requirements for the content of the licensee's TS concerning radioactive effluents are contained in 10 CFR 50.36a. 10 CFR 50.36a requires licensees to maintain control over radioactive material in

gaseous and liquid effluents to unrestricted areas, produced during normal reactor operations, to levels that are as low as reasonably achievable (ALARA). For power reactors, Appendix I to 10 CFR Part 50 contains the numerical guidance to meet the ALARA requirement. The dose values specified in Appendix I of 10 CFR Part 50 are small percentages of the implicit limits in 10 CFR 20.106 and the explicit limits in 10 CFR 20.1301. As secondary controls, the instantaneous dose rates required by this specification were chosen by the staff to help maintain annual average releases of radioactive material in gaseous and liquid effluents to within the dose values specified in Appendix I of 10 CFR Part 50. For purpose of the bases of this TS, 10 CFR Part 20 is used as a source of reference values only. These TS requirements allow operational flexibility, compatible with considerations of health and safety, which may temporarily result in release rates which, if continued for the calendar quarter, would result in radiation doses higher than specified in Appendix I of 10 CFR Part 50. However, these releases are within the limits specified in 10 CFR 20.106 (10 CFR 20.1302).

This specification, which is based on guidance contained in NUREG-0133, is acceptable as a TS limit for gaseous effluents, which applies at all times as an assurance that the values in Appendix I of 10 CFR Part 50 are not likely to be exceeded.

The licensee states that operational history at Surry power station has demonstrated that the use of the dose rate limits of 500 mrem/year, 3000 mrem/year, and 1500 mrem/year as TS limits has resulted in calculated maximum individual doses to members of the public that are small percentages of the limits of 10 CFR Part 50, Appendix I and 40 CFR Part 190.

Based on the above, it is acceptable that the gaseous release rate TS for radioactive material be based on the stated dose rates.

10. Technical Specification 6.6-2

The licensee has proposed that page number TS 6.6-17 reported in the note on page TS 6.6-2 be changed to read page number TS 6.6-12.

The change is administrative in nature and is acceptable.

11. Technical Specification 6.6.A.2.a

The licensee has proposed to revise this TS to replace the reference to 10 CFR 20.407 with "Section 20.2206 of 10 CFR Part 20."

This change is administrative in nature to incorporate the corresponding revised 10 CFR Part 20 section number and is acceptable.

12. Technical Specification 6.6.B.3

The licensee has proposed to revise the title of the "Semiannual Radioactive Effluent Release Report" to "Annual Radioactive Effluent Release Report." Also, the report submittal date is being changed to May 1.

The changes are administrative in nature and are consistent with the revised 10 CFR 50.36a. The changes are acceptable.

13. Technical Specification 6.8.B.1.b

The licensee has proposed to revise the reference "10 CFR 20.106" to "10 CFR 20.1302."

This change is administrative in nature to incorporate the corresponding revised 10 CFR Part 20 section number and is acceptable.

14. Technical Specification 6.8.B.3

The licensee has proposed to revise the title of the "Semiannual Radioactive Effluent Release Report" to "Annual Radioactive Effluent Release Report."

The change is administrative in nature to implement the revised reporting requirement in 10 CFR 50.36a and is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Virginia State official was notified of the proposed issuance of the amendments. The State official had no comment.

4.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact was published in the Federal Register on January 11, 1994 (59 FR 1570).

Accordingly, based upon the environmental assessment, the Commission has determined that issuance of the amendments will not have a significant effect on the quality of the human environment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such

activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: January 25, 1994