

**VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261**

September 22, 2000

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 00-447
SPS-Lic/CGL R1
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
PROPOSED OPERATING LICENSES AND TECHNICAL SPECIFICATIONS CHANGES
DELETION OF OBSOLETE LICENSE CONDITIONS

Pursuant to 10CFR50.90, Virginia Electric and Power Company requests amendments in the form of revisions to Facility Operating License Numbers DPR-32 and DPR-37 for Surry Power Station Units 1 and 2, respectively, and to the Surry Technical Specifications. The proposed administrative changes will remove obsolete license conditions from the Operating Licenses and implement associated changes to the Technical Specifications and Bases. These changes will facilitate our planned conversion to Improved Technical Specifications and submittal of a license renewal application. The proposed changes can be categorized as follows:

- Removal of license conditions associated with completed facility modifications (including the Steam Generator Repair Program, as well as support modifications related to Leak-Before-Break Technology)
- Removal of superceded license conditions (addressing security)
- Relocation of secondary water chemistry monitoring program requirements into the Technical Specifications
- Removal of expired license conditions and Technical Specifications (addressing service water piping restoration)
- Editorial changes

A discussion of the proposed changes to the Operating Licenses and Technical Specifications and Bases is provided in Attachment 1. The proposed changes have been reviewed and approved by the Station Nuclear Safety and Operating Committee and the Management Safety Review Committee. It has been determined that the proposed changes to the Operating Licenses and the Technical Specifications and Bases do not

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involve an unreviewed safety question, as defined in 10CFR50.59. Marked-up Operating Licenses and Technical Specifications and Bases pages that reflect the proposed changes are provided in Attachment 2. Revised Operating Licenses and Technical Specifications and Bases pages that incorporate the proposed changes are provided in Attachment 3. The basis for our determination that the proposed changes to the Operating Licenses and Technical Specifications do not involve a significant hazards consideration, as defined in 10CFR50.92, is provided in Attachment 4.

Should you have any questions or require additional information, please contact us.

Very truly yours,



W. R. Matthews
Vice President – Nuclear Operations

Attachments:

1. Discussion of Change
2. Mark-up of Operating Licenses and Technical Specifications Pages
3. Proposed Operating Licenses and Technical Specifications Pages
4. Significant Hazards Consideration Determination

Commitments made in this letter: None.

cc: U.S. Nuclear Regulatory Commission
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Mr. R. A. Musser
NRC Senior Resident Inspector
Surry Power Station

Commissioner
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ATTACHMENT 1

DISCUSSION OF CHANGE

**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2**

DISCUSSION OF CHANGE

Introduction

Since the original issuance of the Surry Operating Licenses, DPR-32 and DPR-37, several additional requirements (license conditions) have been incorporated into the licenses by the license amendment process pursuant to 10 CFR 50.90. In some cases, subsequent license amendments have removed certain license conditions when they were no longer applicable. In other cases, license conditions have been left intact even though they are no longer required.

Virginia Electric and Power Company (Virginia Power) is proposing an administrative change to the Surry Units 1 and 2 Operating Licenses (DPR-32 and DPR-37, respectively) to remove those license conditions and associated Technical Specifications (TS) that no longer apply or that could be relocated to Appendix A (Technical Specifications) due to their programmatic nature. This proposed Operating License “clean up” activity also includes minor editorial changes for consistency.

Revision of the Surry Unit 1 and 2 Operating Licenses is being proposed to retain only those license conditions that remain pertinent to current station operations. The intent is to provide a license document for license renewal and conversion to Improved Technical Specifications (ITS) that does not contain unnecessary or obsolete requirements and that is directly applicable to the current plant design and licensing bases.

Discussion

The proposed changes to the Operating Licenses for Surry Units 1 and 2 can be divided into five groups based on a commonality. Subsequent discussions presented herein are based on this categorization. Additionally, the applicable change group is specifically identified on each of the mark-ups associated with these proposed changes. The five groups are as follows:

1. Purely editorial changes to the licenses,
2. Removal of license conditions associated with completed facility modifications,
3. Removal of superceded license conditions,
4. Relocation of monitoring program requirements,
5. Removal of expired license conditions.

Groups 4 and 5 have Technical Specifications changes associated with the changes to the license conditions.

1. Editorial Changes: (License Conditions 1, 2.B, 2.C, 2.E, 3.E, 3.F, 3.I, 3.J, and 3.N)

The Final Safety Analysis Report (FSAR) originally served as the principal reference document in support of the Surry Part 50 license applications. The original FSAR described methods for conforming with applicable NRC regulations and contains the technical information required by 10 CFR 50.34(b), including "information that describes the facility, presents the design bases and the limits on its operation, and presents the safety analyses of the structures, systems and components and of the facility as a whole." In 1980, the NRC issued the FSAR update rule, 10 CFR 50.71(e), which required all licensees to update their FSARs periodically to assure that the information provided is the latest material developed. Therefore, the Updated FSAR (UFSAR) represents the most current document available to describe the Surry site and facility. The proposed changes to Sections 1 and 2.B of the Operating Licenses utilizes the UFSAR as the reference document for the Surry site description and for the limitations on storage and amounts of special nuclear material used as reactor fuel.

No other specific background is provided for the rest of the editorial changes proposed. Cause and basis for change associated with typographical errors and grammatical inconsistencies are self evident. The identification of the individual amendments associated with the previous deletion of license conditions (Amendments 65, 66, 71, and 203) are not retained with the proposed change to re-number the remaining license conditions. The content of a deleted licensing condition and the basis for its deletion is historical information available in station records and is not necessary nor appropriate in the text of the operating licenses.

2. Completed Facility Modifications: (License Conditions 3.G and 3.M)

License Condition 3.G - Surry License Amendment 47 (Unit 1) and 46 (Unit 2) dated January 22, 1979 approved the Steam Generator (SG) Repair Program for each unit and incorporated License Condition 3.G into DPR-32 and DPR-37. License Condition 3.G identifies various requirements that were applicable during the implementation of the SG Repair Program. These included the requirement to remove all fuel during the repair, maintain temporary ventilation systems for contamination control, implement health physics program and procedures specified in the repair program documents, provide status/progress reports, and provide a startup test program for NRC review. Documentation of the core offload, ventilation systems, and health physics program effectiveness was provided for Unit 2 in the program status reports which began on May 8, 1979 with the first progress report and were provided at 60-day intervals until the sixth and final status report was provided on March 3, 1980. Likewise, documentation of the core offload, ventilation systems, and health physics program effectiveness for Unit 1 was provided in the program status reports which began on December 1, 1980

with the first progress report and were provided at 60-day intervals until the fifth and final status report was provided on August 31, 1981. Startup Testing Programs following the SG repair were submitted on August 13, 1979 for Unit 2 and on February 26, 1981 for Unit 1.

The requirements of License Conditions 3.G (2) and 3.G (3) were only applicable during the repair program activity. Since the repair program is completed, these license conditions no longer apply. License Condition 3.G (1) stated the actual approval of the program. Although this approval is essentially still valid, it is unnecessary since the repair program on both Surry units is complete and the design information of the replacement steam generators has been incorporated into the UFSAR. Since the last SG repair was completed in mid-1981, the replacement SG information was included in the initial (Revision 0) of the UFSAR issued for Surry in July, 1982. Therefore, License Condition 3.G is no longer necessary and is deleted by this proposed change to the Surry Operating Licenses.

License Condition 3.M - License Amendment 108 dated June 16, 1986 incorporated License Condition 3.M into both Surry Operating Licenses, DPR-32 and DPR-37. License Condition 3.M authorizes the modification of the design of the reactor coolant pump (RCP) and steam generator supports in accordance with Virginia Power submittals dated November 5, 1985, December 3, 1985, and January 14, 1986. These three submittals provided the basis and supporting evaluation for the re-design of the primary coolant loop piping to remove eighteen large bore and six small bore snubbers associated with the RCPs and SGs. The re-design was implemented to take advantage of the then recently approved advanced fracture mechanics methods associated with Leak-Before-Break Technology. Originally, these submittals were made to request an exemption to 10 CFR 50, Appendix A, General Design Criteria 4 (GDC 4). However, as a result of changes to the Code of Federal Regulations regarding GDC 4 (effective May 12, 1986), an exemption was no longer required. Removal of the snubbers did, however, constitute a change in the support load path design and, as such, was considered by the NRC to be a potential Unreviewed Safety Question (USQ) per the examples provided with the GDC 4 rulemaking Federal Register Notice (51 FR 12502). Therefore, by letter dated April 30, 1986, Virginia Power requested the review of the re-designed RCP and SG support systems as a USQ and requested a license amendment based on the information provided in the above mentioned submittals which had been provided to support the exemption to GDC 4.

Following the issuance of Amendment 108, the eighteen large bore and six small bore snubbers were removed during the refueling outages in 1986. Revision 7 to the UFSAR dated August 26, 1988 reflected the change in the design of the RCP and SG supports and the basis for the use of Leak-Before-Break in the re-design. Since the snubber modifications are complete, documented in the UFSAR, and are based on approved methods that are in compliance with the requirements of 10 CFR 50,

Appendix A, GDC 4, License Condition 3.M is no longer necessary and is deleted by this proposed change to the Surry Operating Licenses.

3. Superseded Requirements: (License Conditions 3.H and 3.L)

Various amendments to the Surry Operating Licenses have been issued in response to the requirements set forth in 10 CFR Part 73, "Physical Protection of Plants and Material." Amendment No. 48 (Unit 1) and No. 47 (Unit 2) dated February 27, 1979 added License Condition 3.H which required Virginia Power to maintain in effect and fully implement a "Physical Security Plan." Amendment No. 61 dated September 5, 1980 added License Condition 3.J for both Surry licenses which required Virginia Power to maintain in effect and fully implement a "Safeguards Contingency Plan" within 60 days of issuance of the amendment. Amendment No. 63 dated December 18, 1980 added License Condition 3.L for both Surry licenses which required Virginia Power to maintain in effect and fully implement a "Nuclear Security Personnel Training and Qualifications Program" within 60 days of issuance of the amendment and that all security personnel would be fully qualified within 2 years of the amendment. Following the issuance of Amendment No. 63, License Conditions 3.H, 3.J, and 3.L were all applicable and appropriate. Each dealt with a separate aspect of the requirements of 10 CFR Part 73.

On June 20, 1988, the NRC issued License Amendment No. 121 for both Surry licenses. This amendment implemented various changes to the physical security programs at Surry by revising License Condition 3.J in its entirety. The new License Condition 3.J required Virginia Power to maintain and fully implement the various NRC-approved elements of the "Physical Security Plan," the "Safeguard Contingency Plan," and "Guard Training and Qualification Plan." In each case, the most recent approved revisions were also specified. Issuance of the revised License Condition 3.J effectively superseded the requirements of License Conditions 3.H and 3.L by combining all aspects of the 10 CFR Part 73 requirements into License Condition 3.J. Accordingly, License Conditions 3.H and 3.L have been superseded and, as such, are no longer necessary and are deleted by this proposed change to the Surry Operating Licenses.

4. Relocation of Monitoring Program Requirements: (License Condition 3.K)

Surry License Amendment No. 62, dated December 18, 1980, added License Condition 3.K which required Surry to implement a secondary water chemistry monitoring program to inhibit SG tube degradation. This license condition was the result of a process that began in August 1976 when the NRC requested that utilities provide Technical Specifications to control the secondary water chemistry in Pressurized Water Reactors (PWRs). The NRC's request was intended to help maintain the primary system pressure boundary in PWRs by controlling SG tube degradation mechanisms. By letter dated August 23, 1976, the NRC sent out model Technical Specifications for this purpose to licensees who operate PWRs. By letter dated August 1, 1979, the NRC acknowledged that most utilities objected to the restrictions of Technical Specifications

to control secondary water chemistry because of the loss of operational flexibility that might occur. The NRC concurred with this concern and instead requested that licensees propose a license condition (based on a model provided in the August 1, 1979 letter) to require a secondary water chemistry monitoring program. In response to this, Virginia Power submitted the requested license amendment on October 3, 1979.

The NRC's Safety Evaluation for License Amendment No. 62 was provided in a letter dated August 1, 1979. The NRC stated that their objective was to "...provide added assurance that licensees would properly monitor and control secondary water chemistry to limit corrosion of steam generator tubes." They acknowledge that Technical Specifications limits would not be the most effective way to reach this objective and, therefore, proposed the monitoring program approach in the form of a license condition. As an alternative to a license condition, this proposed change would relocate the secondary water chemistry monitoring program requirements to Technical Specifications Section 6.4.P which includes other required monitoring programs. Section 6 of the Technical Specifications does not impose limits but does require the implementation of various programs which is consistent with the stated intent of the NRC. The current license condition requirements for monitoring secondary water chemistry would be unchanged and, as part of Section 6.4 of the Technical Specifications, would still be part of the Surry operating licenses.

5. Expired Requirements: (License Condition 3.O)

Surry began a service water (SW) restoration project in the fall of 1990 which included inspection, repair, and refurbishment of the SW piping. To include the SW supply piping to the component cooling heat exchangers (CCHXs) as part of this restoration project, a temporary SW supply to the CCHXs was required. Virginia Power submitted a request for a license amendment and a change to the Surry Technical Specifications by letter dated June 19, 1998 and supplemented on July 14, 1998. Surry License Amendment No. 216 was issued on August 26, 1998 and added License Condition 3.O to allow this temporary supply line jumper to provide SW to the CCHXs to facilitate maintenance on the existing, permanent supply line. License Amendment No. 216 also revised TS Table 3.7-2, TS 3.14.A.2.b, and the Basis Section of 3.14 to facilitate the use of the temporary SW supply line jumper to the CCHXs.

As part of the approval of this license amendment, the use of the temporary jumper was restricted to Unit 1 refueling outages S1-R-15 and S1-R-16, scheduled for Fall of 1998 and Spring of 2000, respectively. Both of the refueling outages and the work associated with the permanent SW supply to the CCHXs have been completed. Consequently, License Condition 3.O is no longer applicable. Therefore, License Condition 3.O and the modifications to the above stated Technical Specifications sections to facilitate the use of the temporary SW jumper are no longer necessary and are deleted by the proposed change to the Surry Operating Licenses.

Specific Changes

As previously specified, the proposed administrative changes to the Surry Units 1 and 2 Operating Licenses (OLs) would remove license conditions that no longer apply or that could be relocated to Appendix A (Technical Specifications). Various sections of the Technical Specifications that are explicitly associated with license conditions that are to be removed or relocated are revised accordingly. Additionally, various editorial changes to the OLs are proposed for consistency.

All changes proposed are applicable to the Unit 1 and Unit 2 OLs (DPR-32 and DPR-37, respectively). The specific changes proposed are as follows:

- The word “licensee’s” replaces the word “applicant’s” in OL Section 1 for consistency with the rest of the license.
- The references to the Final Safety Analysis Report in OL Sections 1 and 2.B are changed to the Updated Final Safety Analysis Report. This also removes the reference to FSAR Amendment Nos. 12-33 in OL Section 1 and the reference to supplements and amendments in OL Section 2.B.
- The word “sealed” replaces the word “scaled” in the reference to neutron sources in OL Section 2.C to correct a typographical error.
- The word “and” is added to OL Section 2.E following the phrase “Pursuant to the Act” for consistency within OL Section 2.
- OL Section 3.E was previously deleted and is removed in this change to facilitate OL Section 3 renumbering.
- OL Section 3.F was previously deleted and is removed in this change to facilitate OL Section 3 renumbering.
- OL Section 3.G is removed since the referenced program and its requirements have been completed and documented in the UFSAR.
- OL Sections 3.H and 3.L are removed since they have been superseded by the amended requirements of the current OL Section 3.J. OL Section 3.J is changed to Section 3.F as part of the OL Section 3 renumbering. For consistency in format, this license condition is titled as “Physical Protection.”
- OL Section 3.I is renumbered to OL Section 3.E to facilitate OL Section 3 renumbering. For consistency in format, this license condition is titled as “Fire Protection.”

- OL Section 3.K is relocated to Appendix A of the OL as TS 6.4.P where it is located with other required monitoring programs.
- OL Section 3.M is removed since the RCP and SG support modifications have been completed and documented in the UFSAR.
- OL Section 3.N was previously deleted and is removed in this change to facilitate OL Section 3 renumbering.
- OL Section 3.O is removed since the portion of the service water pipe repair project requiring the temporary use of an alternate service water supply to the component cooling water heat exchangers has been completed and the applicable time frame of this license condition has expired.
- The notes in TS Table 3.7-2 are modified such that the current "Note A" is removed and the current "Note B" becomes "Note A". The reference to Note A in TS Table 3.7-2, Item 5.a is deleted, and the reference to Note B in TS Table 3.7-2, Item 6 is changed to Note A. Also, the correct spelling of "Safeguards" is provided in Item 6. These changes are associated with the removal of License Condition 3.O.
- The footnote in TS 3.14 is removed as well as the footnote reference in TS 3.14.A.2.b. This change is also associated with the removal of License Condition 3.O.
- The last two paragraphs of the Basis Section of TS 3.14 are removed. This change is also associated with the removal of License Condition 3.O.
- Technical Specifications section 6.4.P is added to incorporate the requirements being relocated from License Condition 3.K. The requirements being added are transferred verbatim from License Condition 3.K and are as follows:

"P. Secondary Water Chemistry Monitoring Program

A secondary water chemistry monitoring program shall be provided to inhibit steam generator tube degradation. This program shall include the following:

- 1) Identification of a sampling schedule for the critical parameters and control points for these parameters;
- 2) Identification of the procedures used to quantify parameters that are critical to control points;
- 3) Identification of process sampling points;
- 4) Procedure for the recording and management of data;

- 5) Procedures defining corrective actions for off control point chemistry conditions; and
- 6) A procedure for identifying the authority responsible for the interpretation of the data, and the sequence and timing of administrative events required to initiate corrective action.”

Safety Significance

The proposed administrative change to the Surry Operating Licenses and associated Technical Specifications makes minor editorial corrections, relocates one license condition to Appendix A of the license, and removes outdated, superceded, or otherwise non-applicable license conditions and related Technical Specifications requirements. This proposed change results in a license document that does not contain unnecessary or obsolete requirements and that is directly applicable in all aspects to the current plant design and licensing bases. There is no safety significance associated with this proposed change since the change does not alter any currently applicable Operating License requirements. Accordingly, the current Surry licensing and design bases are unchanged, and an unreviewed safety question does not exist.

ATTACHMENT 2

**MARK-UP OF OPERATING LICENSES AND
TECHNICAL SPECIFICATIONS PAGES**

**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2**

Facility Operating License No. DPR-32 is hereby issued to the Virginia Electric and Power Company as follows:

1. This license applies to the Surry Power Station, Unit No. 1, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the ~~applicant's~~ ^{licensee's} 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Final Safety Analysis Report, ~~as amended (Amendments Nos. 12-33)~~. ^{Updated}
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;
 - B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, ~~as supplemented and amended~~. ^{Updated}
 - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as ~~sealed~~ ^{sealed} neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, ^{and} as fission detectors in amounts as required;
 - D. Pursuant to the Act and 10 CFR Parts, 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; ^{and}
 - E. Pursuant to the Act, 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70, and is subject to all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~222~~, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

~~E. Deleted by Amendment 65 e~~

~~F. Deleted by Amendment 66 and again by Amendment 71 e~~

G. Steam Generator Repair Program e

(1) The Surry Power Steam Generator Repair Program for Unit No. 1 is approved.

(2) During the steam generator repair program the following conditions shall be met:

(a) All fuel shall be removed from the reactor pressure vessel and stored in the spent fuel pool. **DELETE**

(b) Temporary containment and ventilation systems shall be installed and operated for all cutting and grinding operations involving components with removable radioactive contamination greater than 2200 DPM per 100 cm² except

when the Health Physics Coordinator for the Steam Generator Repair Program determines, based on an evaluation involving ALARA considerations, that their use will increase overall occupational radiation exposure to workers involved in the repair activities.

(c) The health physics program and procedures which have been established for the steam generator repair program shall be implemented.

(d) Progress reports shall be provided at 60 day intervals from the start of the repair program and due 30 days after close of the interval with a final report provided within 60 days after completion of the repair. These reports will include:

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(i) A summary of the occupational exposure expended to date using the format and detail of Table 5.3-1 of the report entitled "Steam Generator Repair Program."

(ii) An evaluation of the effectiveness of dose reduction techniques as specified in Chapter 6 of the report entitled "Steam Generator Repair Programs" in reducing occupational exposures.

(iii) An estimate of radioactivity released in both liquid and gaseous effluents.

(iv) An estimate of the solid radioactive waste generated during the repair effort including volume and radioactive content.

(3) Sixty days prior to fuel loading, the program for preoperational testing and startup shall be submitted for NRC review.

H. The licensee shall maintain in effect and fully implement all provisions of the Commission-approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR 50.54(p). The approved security plan consists of documents withheld from public disclosure pursuant to 10 CFR 2.790(d), referred to as Surry Power Station Unit Nos. 1 and 2 Physical Security Plan, dated November 30, 1977, as revised September 25, 1978, supplemented (Chapter 10) October 25, 1978, revised January 12, 1979, and supplemented February 16, 1979.

DELETE

E. Fire Protection

X. The licensee shall implement and maintain in effect the provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report and as approved in the SER dated September 19, 1979, (and Supplements dated May 29, 1980, October 9, 1980, December 18, 1980, February 13, 1981, December 4, 1981,

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April 27, 1982, November 18, 1982, January 17, 1984, February 25, 1988, and July 23, 1992), and the Safety Evaluation issued December 16, 1998, for Technical Specification Amendment No. 217 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire

F. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Surry Power Station Physical Security Plan," with revisions submitted through February 24, 1988; "Surry Power Station Guard Training and Qualification Plan," with revisions submitted through May 29, 1987; and "Surry Power Station Safeguards Contingency Plan," with revisions submitted through January 9, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

K. Secondary Water Chemistry Monitoring Program

P. The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to quantify parameters that are critical to control points;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry conditions; and
6. A procedure for identifying the authority responsible for the interpretation of the data, and the sequence and timing of administrative events required to initiate corrective action.

Relocate to TS page TS 6.4-10

L. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved Nuclear Security Personnel Training and Qualifications Program, including amendments and changes made pursuant to 10 CFR 50.54(p). The approved Nuclear Security Personnel Training and Qualifications Program consists of a document withheld from public disclosure pursuant to 10 CFR 2.790(d) identified as "Surry Power Station Nuclear Security Personnel Training and Qualifications Program" dated September 15, 1980. The Nuclear Security Personnel Training and Qualifications Program shall be fully implemented in accordance with 10 CFR 73.55(b)(4), within 60 days of this approval by the Commission. All security personnel shall be qualified within two years of this approval.

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M. The design of the reactor coolant pump and steam generator supports may be revised in accordance with the licensee's submittals dated November 5, 1985 (Serial No. 85-136), December 3, 1985 (Serial No. 85-136A), and January 14, 1986 (Serial No. 85-136C).

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~~N. Deleted by Amendment 203~~

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O. The use of a temporary, seismic, non-missile protected supply line to provide service water to the component cooling heat exchangers required by TS 3.13, to facilitate maintenance activities on the existing SW supply line, shall be in accordance with the bases and compensatory measures (including a Contingency Action Plan) provided in the licensee's submittal dated June 19, 1998 (Serial No. 98-327).

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4. This license is effective as of the date of issuance, and shall expire at midnight May 25, 2012.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed By

A. Giambusso

A. Giambusso, Deputy Director
for Reactor Projects

Directorate of Licensing

Enclosure Appendix A -
Technical Specifications

Date of Issuance: May 25, 1972

Facility Operating License No. DPR-37 is hereby issued to the Virginia Electric and Power Company as follows:

1. This license applies to the ^{licensee's} Surry Power Station, Unit No. 2, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the ~~applicant's~~ 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Final Safety Analysis Report, ~~as amended (Amendments Nos. 12-33).~~ ^{Updated}
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;
 - B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, ~~as supplemented and amended;~~ ^{Updated}
 - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as ~~sealed~~ ^{sealed} neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - D. Pursuant to the Act and 10 CFR Parts, 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
 - E. Pursuant to the Act, ^{and} 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70, and is subject to all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~222~~, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

~~E. Deleted by Amendment 54 d~~

~~F. Deleted by Amendment 59 and again by Amendment 65 a~~

G. Steam Generator Repair Program

- (1) The Surry Power Steam Generator Repair Program for Unit No. 2 is approved.
- (2) During the steam generator repair program the following conditions shall be met:
 - (a) All fuel shall be removed from the reactor pressure vessel and stored in the spent fuel pool.
 - (b) Temporary containment and ventilation systems shall be installed and operated for all cutting and grinding operations involving components with removable radioactive contamination greater than 2200 DPM per 100 cm² except

DELETE

when the Health Physics Coordinator for the Steam Generator Repair Program determines, based on an evaluation involving ALARA considerations, that their use will increase overall occupational radiation exposure to workers involved in the repair activities.

(c) The health physics program and procedures which have been established for the steam generator repair program shall be implemented.

(d) Progress reports shall be provided at 60 day intervals from the start of the repair program and due 30 days after close of the interval with a final report provided within 60 days after completion of the repair. These reports will include:

(i) A summary of the occupational exposure expended to date using the format and detail of Table 5.3-1 of the report entitled "Steam Generator Repair Program."

(ii) An evaluation of the effectiveness of dose reduction techniques as specified in Chapter 6 of the report entitled "Steam Generator Repair Programs" in reducing occupational exposures.

(iii) An estimate of radioactivity released in both liquid and gaseous effluents.

(iv) An estimate of the solid radioactive waste generated during the repair effort including volume and radioactive content.

(3) Sixty days prior to fuel loading, the program for preoperational testing and startup shall be submitted for NRC review.

H. The licensee shall maintain in effect and fully implement all provisions of the Commission-approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR 50.54(p). The approved security plan consists of documents withheld from public disclosure pursuant to 10 CFR 2.790(d), referred to as Surry Power Station Unit Nos. 1 and 2 Physical Security Plan, dated November 30, 1977, as revised September 25, 1978, supplemented (Chapter 10) October 25, 1978, revised January 12, 1979, and supplemented February 16, 1979.

E. Fire Protection

X The licensee shall implement and maintain in effect the provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report and as approved in the SER dated September 19, 1979, (and Supplements dated May 29, 1980, October 9, 1980, December 18, 1980, February 13, 1981, December 4, 1981,

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April 27, 1982, November 18, 1982, January 17, 1984, February 25, 1988, and July 23, 1992), and the Safety Evaluation issued December 16, 1998, for Technical Specification Amendment No. 217 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

F. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Surry Power Station Physical Security Plan," with revisions submitted through February 24, 1988; "Surry Power Station Guard Training and Qualification Plan," with revisions submitted through May 29, 1987; and "Surry Power Station Safeguards Contingency Plan," with revisions submitted through January 9, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

K. Secondary Water Chemistry Monitoring Program

The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to quantify parameters that are critical to control points;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry conditions, and
6. A procedure for identifying the authority responsible for the interpretation of the data, and the sequence and timing of administrative events required to initiate corrective action.

Relocated to
PS TS 6.4-10

L. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved Nuclear Security Personnel Training and Qualifications Program, including amendments and changes made pursuant to 10 CFR 50.54(p). The approved Nuclear Security Personnel Training and Qualifications Program consists of a document withheld from public disclosure pursuant to 10 CFR 2.790(d) identified as "Surry Power Station Nuclear Security Personnel Training and Qualifications Program" dated September 15, 1980. The Nuclear Security Personnel Training and Qualifications Program shall be fully implemented in accordance with 10 CFR 73.55(b)(4), within 60 days of this approval by the Commission. All security personnel shall be qualified within two years of this approval.

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M. The design of the reactor coolant pump and steam generator supports may be revised in accordance with the licensee's submittals dated November 5, 1985 (Serial No. 85-136), December 3, 1985 (Serial No. 85-136A), and January 14, 1986 (Serial No. 85-136C).

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~~N. Deleted by Amendment 203.~~

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O. The use of a temporary, seismic, non-missile protected supply line to provide service water to the component cooling heat exchangers required by TS 3.13, to facilitate maintenance activities on the existing SW supply line, shall be in accordance with the bases and compensatory measures (including a Contingency Action Plan) provided in the licensee's submittal dated June 19, 1998 (Serial No. 98-327).

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4. This license is effective as of the date of issuance, and shall expire at midnight on January 29, 2013.

FOR THE ATOMIC ENERGY COMMISSION

Original signed by Roger Boyd/for

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosure Appendix A -
Technical Specifications

Date of Issuance: January 29, 1973

TABLE 3.7-2 (Continued)
ENGINEERED SAFEGUARDS ACTION
INSTRUMENT OPERATING CONDITIONS

<u>Functional Unit</u>	<u>Total Number Of Channels</u>	<u>Minimum OPERABLE Channels</u>	<u>Channels To Trip</u>	<u>Permissible Bypass Conditions</u>	<u>Operator Actions</u>
3. AUXILIARY FEEDWATER (continued)					
e. Trip of main feedwater pumps - start motor driven pumps	2/MFW pump	1/MFW pump	2-1 each MFW pump		21
f. Automatic actuation logic	2	2	1		22
4. LOSS OF POWER					
a. 4.16 kv emergency bus undervoltage (loss of voltage)	3/bus	2/bus	2/bus		20
b. 4.16 kv emergency bus undervoltage (degraded voltage)	3/bus	2/bus	2/bus		20
5. NON-ESSENTIAL SERVICE WATER ISOLATION					
a. Low intake canal level Note A a	4	3	3		20
b. Automatic actuation logic	2	2	1		14
6. ENGINEERED SAFEGUARDS ACTUATION INTERLOCKS - Note BA					
a. Pressurizer pressure, P-11	3	2	2		23
b. Low-low T _{avg} , P-12	3	2	2		23
c. Reactor trip, P-4	2	2	1		24
7. RECIRCULATION MODE TRANSFER					
a. RWST Level - Low	4	3	2		25
b. Automatic Actuation Logic and Actuation Relays	2	2	1		14

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Amendment Nos. 216 and 216

Note A - When the temporary Service Water supply jumper to the CCHXs is in service in accordance with the footnote to TS 3.14.A.2.b, two low intake canal level probes will be permitted to be in the tripped condition. In this condition, two operable channels are required with one channel to trip. If one of the two operable channels becomes inoperable, the operating Unit must be in HOT SHUTDOWN within the following 6 hours and in COLD SHUTDOWN within the following 30 hours.

Note B - Engineered Safeguards Actuation Interlocks are described in Table 4.1-A

TS 3.7-20
08-26-98
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3.14 CIRCULATING AND SERVICE WATER SYSTEMS

Applicability

Applies to the operational status of the Circulating and Service Water Systems.

Objective

To define those limiting conditions of the Circulating and Service Water Systems necessary to assure safe station operation.

Specification

- A. The Reactor Coolant System temperature or pressure of a reactor unit shall not exceed 350° F or 450 psig, respectively, or the reactor shall not be critical unless:
1. The high level intake canal is filled to at least elevation +23.0 feet at the high level intake structure.
 2. Unit subsystems, including piping and valves, shall be operable to the extent of being able to establish the following:
 - a. Flow to and from one bearing cooling water heat exchanger.
 - b. Flow to and from the component cooling heat exchangers required by Specification 3.13. *Re*
 3. At least two circulating water pumps are operating or are operable.
 4. Three emergency service water pumps are operable; these pumps will service both units simultaneously.

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* For the purpose of performing inspections, cleaning and repairs associated with the SW supply piping to the component cooling water heat exchangers (CCHXs), a temporary 30" seismic, non-missile protected pipe jumper will be provided to supply SW flow to the CCHXs required by TS 3.13. The basis for using the temporary jumper is provided in the licensee's submittal dated June 19, 1998 (Serial No. 98-327). The use of the temporary jumper as the sole SW supply to the CCHXs is permitted two times only for a duration of up to 35 days during each of two Unit 1 refueling outages (Surry Unit 1 refueling outages S1-R-15 and S1-R-16). If non-essential SW isolation is required during the pipe repair activities, it will be accomplished consistent with design basis requirements by using operator (manual) action to close the SW isolation valve in the temporary jumper within the time constraints established by the Station Abnormal Procedures. If the temporary jumper becomes inoperable as the sole SW supply to the CCHXs during either 35-day period, the requirements of Specification 3.0.1 shall apply. Upon completion of the work associated with the second 35-day period, this footnote will no longer be applicable.

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including replacement of an Emergency Service Water pump without forcing dual unit outages, yet limits the amount of operating time without the specified number of pumps.

When one Unit is in Cold Shutdown and the heat load from the shutdown unit and spent fuel pool drops to less than 25 million BTU/HR, then one Emergency Service Water pump may be removed from service for the subsequent time that the unit remains in Cold Shutdown due to the reduced residual heat removal and hence component cooling requirements.

A minimum level of +17.2 feet in the High Level Intake canal is required to provide design flow of Service Water through the Recirculation Spray heat exchangers during a loss-of-coolant accident for the first 24 hours. If the water level falls below +23' 6", signals are generated to trip both unit's turbines and to close the nonessential Circulating and Service Water valves. A High Level Intake canal level of +23' 6" ensures actuation prior to canal level falling to elevation +23'. The Circulating Water and Service Water isolation valves which are required to close to conserve Intake Canal inventory are periodically verified to limit total leakage flow out of the Intake Canal. In addition, passive vacuum breakers are installed on the Circulating Water pump discharge lines to assure that a reverse siphon is not continued for canal levels less than +23 feet when Circulating Water pumps are de-energized. The remaining six feet of canal level is provided coincident with ESW pump operation as the required source of Service Water for heat loads following the Design Basis Accident.

To facilitate inspection, cleaning and repair of the SW supply line to the CCHXs, a temporary, seismic, non-missile protected SW supply line (jumper) will be used as discussed in the temporary footnote to TS 3.14.A.2.b. The temporary jumper is required since service water is supplied to the CCHXs by a single concrete-encased line. To remove the SW supply line from service for extended maintenance, an alternate temporary SW supply path is required to support the operation of the CCHXs during the maintenance activities. The basis for using the temporary SW supply jumper to the CCHXs is provided in the licensee's submittal dated June 19, 1998 (Serial No. 98-327). The use of the

temporary jumper as the sole SW supply to the CCHXs is only permitted for a duration of up to 35 days during each of two Unit 1 refueling outages (Surry Unit 1 refueling outages S1-R-15 and S1-R-16) and shall be operated in accordance with the compensatory measures (including a Contingency Action Plan) provided in the letter referenced above and in the Operating License. The only automatic function in the normal supply line when Unit 1 is in COLD SHUTDOWN or REFUELING SHUTDOWN is provided by the SW supply MOVs which close on low Intake Canal level. If non-essential SW isolation is required during the time the jumper is in service, it will be accomplished consistent with design and licensing bases requirements by using operator (manual) action to close the SW isolation valve in the temporary jumper within the time constraints established by the Station Abnormal Procedures.

References:

UFSAR Section 9.9	Service Water System
UFSAR Section 10.3.4	Circulating Water System
UFSAR Section 14.5	Loss-of-Coolant Accidents, Including the Design Basis Accident

O. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

P. Insert TS 6.4-10 here
(relocated license condition 3K)

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TS Change Request No. 352

Insert TS 6.4-10:

P. Secondary Water Chemistry Monitoring Program

A secondary water chemistry monitoring program shall be provided to inhibit steam generator tube degradation. This program shall include the following:

- 1) Identification of a sampling schedule for the critical parameters and control points for these parameters;
- 2) Identification of the procedures used to quantify parameters that are critical to control points;
- 3) Identification of process sampling points;
- 4) Procedure for the recording and management of data;
- 5) Procedures defining corrective actions for off control point chemistry conditions;
and
- 6) A procedure for identifying the authority responsible for the interpretation of the data, and the sequence and timing of administrative events required to initiate corrective action.

ATTACHMENT 3

**PROPOSED OPERATING LICENSES AND
TECHNICAL SPECIFICATIONS PAGES**

**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2**

TABULATION OF CHANGES

License No. DPR 32 / Docket Nos. 50-338

License No. DPR 37 / Docket Nos. 50-339

Summary of changes:

The proposed changes to the Operating Licenses and Technical Specifications and Bases are being made to delete obsolete license conditions and implement associated changes to the Technical Specifications.

<u>DELETE</u>	<u>DATED</u>	<u>SUBSTITUTE</u>
<u>Unit 1 Operating License</u>		
OL page 2	-----	OL page 2
OL page 3	11-01-99	OL page 3
OL page 4	12-16-98	OL page 4
OL page 5	12-16-98	-----
OL page 6	08-26-98	-----
<u>Unit 2 Operating License</u>		
OL page 2	-----	OL page 2
OL page 3	11-01-99	OL page 3
OL page 4	12-16-98	OL page 4
OL page 5	12-16-98	-----
OL page 6	08-26-98	-----
<u>Units 1 and 2 Technical Specifications and Bases</u>		
TS 3.7-20	08-26-98	TS 3.7-20
TS 3.14-1	08-26-98	TS 3.14-1
TS 3.14-4	08-26-98	TS 3.14-4
TS 3.14-5	08-26-98	-----
TS 6.4-10	04-17-91	TS 6.4-10

Facility Operating License No. DPR-32 is hereby issued to the Virginia Electric and Power Company as follows:

1. This license applies to the Surry Power Station, Unit No. 1, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the licensee's 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Updated Final Safety Analysis Report.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;
 - B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report;
 - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - D. Pursuant to the Act and 10 CFR Parts, 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
 - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70, and is subject to all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

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

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Fire Protection

The licensee shall implement and maintain in effect the provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report and as approved in the SER dated September 19, 1979, (and Supplements dated May 29, 1980, October 9, 1980, December 18, 1980, February 13, 1981, December 4, 1981, April 27, 1982, November 18, 1982, January 17, 1984, February 25, 1988, and July 23, 1992), and the Safety Evaluation issued December 16, 1998, for Technical Specification Amendment No. 217 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

F. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Surry Power Station Physical Security Plan," with revisions submitted through February 24, 1988; "Surry Power Station Guard Training and Qualification Plan," with revisions submitted through May 29, 1987; and "Surry Power Station Safeguards Contingency Plan," with revisions submitted through January 9, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

4. This license is effective as of the date of issuance, and shall expire at midnight May 25, 2012.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed By

A. Giambusso

A. Giambusso, Deputy Director
for Reactor Projects

Directorate of Licensing

Enclosure Appendix A -
Technical Specifications

Date of Issuance: May 25, 1972

Facility Operating License No. DPR-37 is hereby issued to the Virginia Electric and Power Company as follows:

1. This license applies to the Surry Power Station, Unit No. 2, a pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the licensee's 840 acre site on a point of land called Gravel Neck on the James River, approximately fourteen miles northwest of Newport News and twenty-five miles northwest of Norfolk, Virginia, and is described in the Updated Final Safety Analysis Report.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the licensee:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Surry County, Virginia, in accordance with the procedures and limitations set forth in this license;
 - B. Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time, source and special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report;
 - C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - D. Pursuant to the Act and 10 CFR Parts, 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
 - E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70, and is subject to all applicable provisions of the Act and the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2546 megawatts (thermal).

B. Technical Specifications

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

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Fire Protection

The licensee shall implement and maintain in effect the provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report and as approved in the SER dated September 19, 1979, (and Supplements dated May 29, 1980, October 9, 1980, December 18, 1980, February 13, 1981, December 4, 1981, April 27, 1982, November 18, 1982, January 17, 1984, February 25, 1988, and July 23, 1992), and the Safety Evaluation issued December 16, 1998, for Technical Specification Amendment No. 217 subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

F. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Surry Power Station Physical Security Plan," with revisions submitted through February 24, 1988; "Surry Power Station Guard Training and Qualification Plan," with revisions submitted through May 29, 1987; and "Surry Power Station Safeguards Contingency Plan," with revisions submitted through January 9, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

4. This license is effective as of the date of issuance, and shall expire at midnight on January 29, 2013.

FOR THE ATOMIC ENERGY COMMISSION

Original signed by Roger Boyd/for

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosure Appendix A -
Technical Specifications

Date of Issuance: January 29, 1973

TABLE 3.7-2 (Continued)
ENGINEERED SAFEGUARDS ACTION
INSTRUMENT OPERATING CONDITIONS

<u>Functional Unit</u>	<u>Total Number Of Channels</u>	<u>Minimum OPERABLE Channels</u>	<u>Channels To Trip</u>	<u>Permissible Bypass Conditions</u>	<u>Operator Actions</u>
3. AUXILIARY FEEDWATER (continued)					
e. Trip of main feedwater pumps - start motor driven pumps	2/MFW pump	1/MFW pump	2-1 each MFW pump		21
f. Automatic actuation logic	2	2	1		22
4. LOSS OF POWER					
a. 4.16 kv emergency bus undervoltage (loss of voltage)	3/bus	2/bus	2/bus		20
b. 4.16 kv emergency bus undervoltage (degraded voltage)	3/bus	2/bus	2/bus		20
5. NON-ESSENTIAL SERVICE WATER ISOLATION					
a. Low intake canal level	4	3	3		20
b. Automatic actuation logic	2	2	1		14
6. ENGINEERED SAFEGUARDS ACTUATION INTERLOCKS - Note A					
a. Pressurizer pressure, P-11	3	2	2		23
b. Low-low T _{avg} , P-12	3	2	2		23
c. Reactor trip, P-4	2	2	1		24
7. RECIRCULATION MODE TRANSFER					
a. RWST Level - Low	4	3	2		25
b. Automatic Actuation Logic and Actuation Relays	2	2	1		14

Amendment Nos.

Note A - Engineered Safeguards Actuation Interlocks are described in Table 4.1-A

3.14 CIRCULATING AND SERVICE WATER SYSTEMS

Applicability

Applies to the operational status of the Circulating and Service Water Systems.

Objective

To define those limiting conditions of the Circulating and Service Water Systems necessary to assure safe station operation.

Specification

- A. The Reactor Coolant System temperature or pressure of a reactor unit shall not exceed 350° F or 450 psig, respectively, or the reactor shall not be critical unless:
1. The high level intake canal is filled to at least elevation +23.0 feet at the high level intake structure.
 2. Unit subsystems, including piping and valves, shall be operable to the extent of being able to establish the following:
 - a. Flow to and from one bearing cooling water heat exchanger.
 - b. Flow to and from the component cooling heat exchangers required by Specification 3.13.
 3. At least two circulating water pumps are operating or are operable.
 4. Three emergency service water pumps are operable; these pumps will service both units simultaneously.

including replacement of an Emergency Service Water pump without forcing dual unit outages, yet limits the amount of operating time without the specified number of pumps.

When one Unit is in Cold Shutdown and the heat load from the shutdown unit and spent fuel pool drops to less than 25 million BTU/HR, then one Emergency Service Water pump may be removed from service for the subsequent time that the unit remains in Cold Shutdown due to the reduced residual heat removal and hence component cooling requirements.

A minimum level of +17.2 feet in the High Level Intake canal is required to provide design flow of Service Water through the Recirculation Spray heat exchangers during a loss-of-coolant accident for the first 24 hours. If the water level falls below +23' 6", signals are generated to trip both unit's turbines and to close the nonessential Circulating and Service Water valves. A High Level Intake canal level of +23' 6" ensures actuation prior to canal level falling to elevation +23'. The Circulating Water and Service Water isolation valves which are required to close to conserve Intake Canal inventory are periodically verified to limit total leakage flow out of the Intake Canal. In addition, passive vacuum breakers are installed on the Circulating Water pump discharge lines to assure that a reverse siphon is not continued for canal levels less than +23 feet when Circulating Water pumps are de-energized. The remaining six feet of canal level is provided coincident with ESW pump operation as the required source of Service Water for heat loads following the Design Basis Accident.

References:

UFSAR Section 9.9	Service Water System
UFSAR Section 10.3.4	Circulating Water System
UFSAR Section 14.5	Loss-of-Coolant Accidents, Including the Design Basis Accident

Amendment Nos.

O. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

P. Secondary Water Chemistry Monitoring Program

A secondary water chemistry monitoring program shall be provided to inhibit steam generator tube degradation. This program shall include the following:

- 1) Identification of a sampling schedule for the critical parameters and control points for these parameters;
- 2) Identification of the procedures used to quantify parameters that are critical to control points;
- 3) Identification of process sampling points;
- 4) Procedure for the recording and management of data;
- 5) Procedures defining corrective actions for off control point chemistry conditions; and
- 6) A procedure for identifying the authority responsible for the interpretation of the data, and the sequence and timing of administrative events required to initiate corrective action.

ATTACHMENT 4

SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

**VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2**

SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Virginia Electric and Power Company has reviewed the requirements of 10 CFR 50.92 as they relate to the proposed administrative change to the Operating Licenses, DPR-32 and DPR-37, and the associated Technical Specifications for Surry Units 1 and 2 and determined that a significant hazards consideration is not involved. The proposed administrative change to the Surry Operating Licenses and associated Technical Specifications makes minor editorial corrections, relocates one license condition to Appendix A of the license, and removes outdated, superceded or otherwise non-applicable license conditions and Technical Specifications requirements and provides a license document that is directly applicable to the current plant licensing and design bases. There is no safety significance associated with this proposed change since the change does not alter any currently applicable Operating License requirements. Accordingly, the current Surry licensing and design bases are unchanged. In support of this conclusion, the following evaluation is provided.

Criterion 1 - The proposed license amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change is administrative (and in part editorial) in nature and neither station operations nor design are affected by the change. The removal of license conditions and associated Technical Specifications regarding superceded (OL Sections 3.H and 3.L) or expired (OL Section 3.O, TS Table 3.7-2, and TS 3.14) requirements has no impact on plant operations since the requirements no longer have a legitimate means of being applied. The relocation within the Operating License of the requirement to have a secondary water chemistry monitoring program (OL Section 3.K) to new Section 6.4.P of the Technical Specifications does not alter the program or its implementation. The impact of the replacement SGs at Surry and the re-design of the SG and RCP supports on the previously evaluated accidents was performed, approved and documented by the issuance of the license amendments for OL Sections 3.G and 3.M. Removal of these license conditions which refer to completed work and a design and licensing bases that is documented in the UFSAR also does not alter station operation or the design of the affected components. The proposed change is within the current design and licensing bases of the facility. This change does not affect the initiators of analyzed events nor the assumed mitigation of accident or transient events. Analyzed events are initiated by the failure of plant structures, systems, or components. This change does not impact the condition or performance of these structures, systems or components. Consequences of analyzed events are the result of the plant being operated within assumed parameters at the onset of any event, and the successful functioning of at least one train or division of the equipment credited with mitigating the event. These changes do not impact the capability of the credited equipment to perform, nor is there any change in the likelihood that credited equipment will fail to perform. As a result, the proposed change to the Surry Operating Licenses and Technical Specifications does not involve any increase in the probability or the

consequences of any accident or malfunction of equipment important to safety previously evaluated.

Criterion 2 - The proposed license amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change is administrative (and in part editorial) in nature. The license conditions and Technical Specifications that are being removed or relocated by this proposed change do not impact station operations or station equipment in any manner. The proposed change does not involve a physical alteration of the plant, nor a change in the methods used to respond to plant transients that has not been previously analyzed. No new or different equipment is being installed and no installed equipment is being removed or operated in a different manner. There is no alteration to the parameters within which the plant is normally operated or in the setpoints, which initiate protective or mitigative actions. Consequently, no new failure modes are introduced and the proposed change to the Surry Operating Licenses and Technical Specifications does not create the possibility of a new or different kind of accident or malfunction of equipment important to safety from any previously evaluated.

Criterion 3 - The proposed license amendment does not involve a significant reduction in a margin of safety.

The proposed change is administrative (and in part editorial) in nature and neither station operations nor design are affected by the change. Margin of safety is established through the design of the plant structures, systems and components, the parameters within which the plant is operated, and the establishment of the setpoints for the actuation of equipment relied upon to respond to an event. Since station operations are not affected by the proposed change, the change does not impact the condition or performance of structures, systems or components relied upon for accident mitigation or any safety analysis assumptions. Therefore, the proposed change to the Surry Operating Licenses and Technical Specifications does not involve a reduction in any margin of safety described in the bases of the Technical Specifications.