

November 21, 2000

Mr. David A Christian  
Senior Vice President - Nuclear  
Virginia Electric and Power Company  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060-6711

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2, AND SURRY POWER STATION, UNITS 1 AND 2 - APPROVAL OF PROPOSED REVISION TO THE QUALITY ASSURANCE PROGRAM DESCRIPTION REGARDING ELECTRONIC RECORDS RETENTION IN ACCORDANCE WITH 10 CFR 50.54(a) REQUIREMENTS (TAC NOS. MA9271, MA9272, MA9282, AND MA9283)

Dear Mr. Christian:

The purpose of this letter is to approve your proposed changes to your Operational Quality Assurance Program relating to records retention in electronic media.

By letter dated June 15, 2000, as supplemented by letter dated October 2, 2000, Virginia Electric and Power Company (VEPCO) submitted a proposed revision to the quality assurance (QA) program described in the Operational Quality Assurance Program, Topical Report VEP-1-5A. You proposed to reduce the commitment for the retention of QA records in electronic media, in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(a)(4). VEPCO's current program reflects the guidance of Generic Letter (GL) 88-18, "Plant Record Storage on Optical Disks." VEPCO proposed to alternatively follow the set of guidelines prepared by the Nuclear Information and Records Management Association, which are endorsed by Regulatory Issue Summary 2000-18. These guidelines provide an acceptable method for storing QA records in electronic media by using information management technologies that have become available since the issuance of GL 88-18.

Our review is contained in the enclosed Safety Evaluation. The staff has concluded that VEPCO's proposed revision to the Operational Quality Assurance Program is acceptable since it meets the criteria of Appendix B to 10 CFR Part 50.

The staff has completed its evaluation of this revision; therefore, we are closing out TAC Nos. MA9271, MA9272, MA9282, and MA9283.

*/RA/*

Stephen R. Monarque, Project Manager  
Project Directorate II-1  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Sincerely,  
*/RA/*

Gordon E. Edison, Sr Project Manager  
Project Directorate II-1  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-280, 50-281, 50-338, and 50-339

Enclosure: As stated

cc w/encl: See next page

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Mr. David A Christian  
Senior Vice President - Nuclear  
Virginia Electric and Power Company  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060-6711

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Stephen R. Monarque, Project Manager  
Project Directorate II-1  
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Office of Nuclear Reactor Regulation

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Division of Licensing Project Management  
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OFFICE	PDII-1/PM	PDII-1/PM	PDII-1/LA	PDII-1/SC
NAME	SMonarque:cn	GEdison	EDunnington	REmch
DATE	11/16/00	11/16/00	11/16/00	11/21/00

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Mr. David A. Christian  
Virginia Electric and Power Company

cc:

Mr. Donald P. Irwin, Esq.  
Hunton and Williams  
Riverfront Plaza, East Tower  
951 E. Byrd Street  
Richmond, Virginia 23219

Mr. E. S. Grecheck  
Site Vice President  
Surry Power Station  
Virginia Electric and Power Company  
5570 Hog Island Road  
Surry, Virginia 23883

Senior Resident Inspector  
Surry Power Station  
U. S. Nuclear Regulatory Commission  
5850 Hog Island Road  
Surry, Virginia 23883

Chairman  
Board of Supervisors of Surry County  
Surry County Courthouse  
Surry, Virginia 23683

Dr. W. T. Lough  
Virginia State Corporation  
Commission  
Division of Energy Regulation  
P. O. Box 1197  
Richmond, Virginia 23209

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

Office of the Attorney General  
Commonwealth of Virginia  
900 East Main Street  
Richmond, Virginia 23219

Mr. J. H. McCarthy, Manager  
Nuclear Licensing & Operations  
Support  
Innsbrook Technical Center  
Virginia Electric and Power Company  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060

Mr. W. R. Matthews  
Site Vice President  
North Anna Power Station  
Virginia Electric and Power Company  
P. O. Box 402  
Mineral, Virginia 23117

Mr. C. Lee Lintecum  
County Administrator  
Louisa County  
P.O. Box 160  
Louisa, Virginia 23093

Old Dominion Electric Cooperative  
4201 Dominion Blvd.  
Glen Allen, Virginia 23060

Senior Resident Manager  
North Anna Power Station  
U.S. Nuclear Regulatory Commission  
1024 Haley Drive  
Mineral, Virginia 23117

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

PROPOSED REVISION TO THE QUALITY ASSURANCE PROGRAM

ELECTRONIC RECORDS MANAGEMENT

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY AND NORTH ANNA POWER STATIONS

DOCKET NOS. 50-280/281, AND 50-338/339

1.0 INTRODUCTION

By letter dated June 15, 2000 (Reference 1), Virginia Electric and Power Company (VEPCO, the licensee) submitted a proposed change to the quality assurance (QA) program described in its Operational Quality Assurance Program Topical Report VEP-1-5A (Reference 2), applicable to the Surry and North Anna Power Stations. The change, submitted in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(a)(4), proposed to reduce the licensee's commitment for retention of QA records in electronic media. This change to the licensee's QA topical was subsequently revised by letter dated October 2, 2000 (Reference 3), to incorporate additional guidelines on electronic recordkeeping provided by NRC Regulatory Issue Summary (RIS) 2000-18 (Reference 4).

2.0 BACKGROUND

Regulatory requirements for maintenance of records pursuant to 10 CFR Part 50 are established in 10 CFR 50.71. Section 50.71(d)(1) establishes provisions for storage of QA records "in electronic media with the capability of producing legible, accurate, and complete records during the required retention period." Criterion XVII, *Quality Assurance Records*, of Appendix B to 10 CFR Part 50 establishes requirements for record retention, such as duration, location, and assigned responsibility.

The licensee's program for transmittal, retention, and maintenance of QA records is described in Section 17.2.17 of the QA Topical Report. This program follows the guidelines of American National Standard Institute (ANSI) N45.2.9-1974 (Reference 5), as endorsed by Regulatory Guide (RG) 1.88 (Reference 6). Clarifications and alternatives to the regulatory position of RG 1.88 are described in Table 17.2-0 of the QA Topical Report.

Currently, the licensee's program for QA records follows the guidance provided by Generic Letter (GL) 88-18 (Reference 7), which describes quality controls for an optical disk document imaging system. The licensee states that the number of QA records that are created electronically continues to increase, and to effectively maintain these records, it is necessary to

support the generation and long-term storage of QA records in their original electronic form. Accordingly, the licensee proposes to use information management technologies that have become available since the issuance of GL 88-18 for storing and maintaining QA records.

The staff has recently issued RIS 2000-18, which addresses the acceptability of new information management technologies. RIS 2000-18 endorses the following set of four guidelines prepared by the Nuclear Information and Records Management Association (NIRMA) for collection, storage, and maintenance of electronic QA records for nuclear power plants and other facilities subject to Appendix B to 10 CFR Part 50.

1. NIRMA Technical Guide (TG) 11-1993, "Authentication of Records and Media"
2. NIRMA TG 15-1998, "Management of Electronic Records"
3. NIRMA TG 16-1998, "Software Configuration Management and Quality Assurance"
4. NIRMA TG 21-1998, "Electronic Records Protection and Restoration"

This set of guidance documents provides an acceptable method for satisfying the Appendix B provisions with regard to the storage of QA records. These guidelines expand and do not supersede or revise the guidance of RG 1.88.

### 3.0 EVALUATION

The licensee proposes to follow the guidance of these four NIRMA guidelines to take advantage of the information management technologies that are now available. The QA records will be stored on electronic storage media in accordance with the NIRMA guidelines. These media may include optical disk, magnetic tape, network drive array, etc. Determination of appropriate electronic media will be made by the licensee's Information Technology Group based upon data format and level of access required. QA records originally created in hard-copy form will be retained in hard-copy until such time as electronic versions of these QA records are created, copied, and verified as legible on two independent copies of an appropriate electronic storage medium. File legibility verifications will be completed on all QA records stored on electronic storage media by either visually verifying the file's legibility or by electronically verifying the exact binary file transfer. Periodic media inspections to monitor image degradation will be conducted in accordance with the NIRMA guidelines or the media manufacturer's recommendations, with these inspections being documented. QA records stored on electronic media will be refreshed or copied onto new media and subsequently verified if the projected lifetime of the media does not exceed the retention period of the records stored on the media. QA records originally created in electronic form may be retained in electronic form. Backup copies of associated electronic QA records will be maintained in multiple physically independent electronic locations until such time as images of these QA records are created, copied, and verified on two copies of an appropriate electronic storage medium. The two copies of electronic storage media will then be stored in separate physical locations.

The licensee's QA program for managing QA records in electronic media conforms to the guidelines of RIS 2000-18. Adoption of these guidelines is consistent with the licensee's continuing commitment to the guidelines provided by RG 1.88, Revision 2. Therefore, the staff finds that the proposed change to the licensee's QA program is acceptable in that it will continue to satisfy the criteria of Appendix B to 10 CFR Part 50.

#### 4.0 REFERENCES

1. Letter, Virginia Electric and Power Company to U.S. NRC, "Operational Quality Assurance Program, Electronic Records Storage," June 15, 2000.
2. Operational Quality Assurance Topical Report, VEP-1-5A, Amendment Five, June 1986 (updated March 1998).
3. Letter, Virginia Electric and Power Company to U.S. NRC, "Operational Quality Assurance Program, Response to Request for Additional Information, Electronic Records Storage," October 2, 2000.
4. Regulatory Issue Summary 2000-18, "Guidance on Managing Quality Assurance Records in Electronic Media," October 23, 2000.
5. ANSI N45.2.9 - 1974, "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants," Revision 2, June 6, 1974.
6. Regulatory Guide 1.88, "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records," Revision 2, October 1976.
7. Generic Letter 88-18, "Plant Record Storage on Optical Disks," October 20, 1988.

Principal Contributor: K. C. Heck

Date: November 21, 2000