

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

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NPF-4/7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
NORTH ANNA POWER STATION UNITS 1 AND 2
OPERATIONAL QUALITY ASSURANCE PROGRAM
ELECTRONIC RECORDS STORAGE

In accordance with 10 CFR 50.54(a)(3), Virginia Electric and Power Company (Virginia Power) is submitting a revision to the Operational Quality Assurance Program for your review and approval. The proposed program changes modify our current commitment for record retention for electronic media. The proposed program changes reflect the guidelines of the Nuclear Information and Records Management Association (NIRMA) technical guideline TG-15-1998, "Management of Electronic Records." Although the requirements for the storage of quality assurance records in electronic media are being changed, the proposed changes continue to satisfy Criteria XVII of Appendix B to 10 CFR 50. The proposed changes and the basis for the changes are included in the attachments.

The proposed Operational Quality Assurance program changes establish our new commitment for retention of quality records in electronic media. If you have any questions or require additional information, please contact us.

Very truly yours,


William R. Matthews
Vice President - Nuclear Operations

Commitments made by this letter:
None

Q004

Attachments

- 1. Discussion of Changes**
- 2. Markup of Quality Assurance Program Changes**
- 3. Proposed Quality Assurance Program Changes**

**cc: U. S. Nuclear Regulatory Commission
Regional Administrator
Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23 T85
Atlanta, Georgia 30303-8931**

**Mr. R. A. Musser
NRC Senior Resident Inspector
Surry Power Station**

**Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station**

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by William R. Matthews, who is Vice President - Nuclear Operations, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 15th day of June, 2000.

My Commission Expires: May 31, 2002.

Vicki L. Hull
Notary Public



Attachment 1

**Operational Quality Assurance Program
Topical Report
Electronic Record Storage Changes**

Discussion of Changes

**Virginia Electric and Power Company
Surry Power Station
North Anna Power Station**

Introduction

The number of quality assurance (QA) records that are created electronically continues to increase. To effectively maintain these records, we need to be able to support the generation and long term storage of QA records in their original electronic form. Accordingly, Virginia Electric and Power Company is revising the current Operational QA Program to clarify requirements for electronic record storage.

These proposed changes are administrative in nature and do not affect the operations or design of the plant in any way. As such, an unreviewed safety question is not generated by these changes. However, the proposed changes do reduce our current commitment in the NRC approved Operational QA Program. Therefore, the proposed changes to the electronic record storage requirements in the Operational QA Program are being submitted for NRC review and approval prior to implementation in accordance with 10 CFR 50.54(a)(3).

Background

American National Standards Institute (ANSI) N45.2.9-1974, "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants," Regulatory Guide (RG) 1.88, "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records," Rev 2, dated October 1976 and RG 1.28, "Quality Assurance Program Requirements (Design and Construction)," Rev. 3, dated August 1985 describe NRC accepted practices for the collection, storage, and maintenance of nuclear power plant QA records.

On October 20, 1988, the NRC issued Generic Letter 88-18, "Plant Record Storage of Optical Disks," to provide guidance on appropriate quality controls for an optical disk document imaging system. GL 88-18 expands the previous guidance by providing an acceptable method for storing QA documents in optical media.

However, information management technologies exist which are not addressed by previously issued guidance. The NRC regulations recognize the appropriateness of storing and maintaining licensee records in electronic media. 10 CFR 50.71(d)(1), Maintenance of Records, Making of Reports, states in part that records may be stored in electronic media with the capability of producing legible, accurate and complete records during the required retention period.

In order to clarify requirements for electronic record storage, the proposed program changes reflect the guidelines in the Nuclear Information and Records Management Association (NIRMA) technical guideline TG-15-1998, "Management of Electronic Records."

Discussion of Change

10 CFR 50 Appendix B, XVII, states in part:

“...Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location, and assigned responsibility.”

The proposed changes are consistent with the above requirement. The proposed changes revise the Operational QA Program Section 17.2.17, Quality Assurance Records, to address the electronic storage of QA records. The QA records stored electronically will follow the guidance given in the NIRMA technical guideline TG-15-1998, “Management of Electronic Records.” The NIRMA guidelines acknowledge that there are other storage media besides optical disk that may be used for long-term storage of quality records.

File legibility verifications will be completed on QA records stored on electronic storage media by either visually verifying the file legibility or by electronically verifying exact binary file transfer. Periodic media inspections to monitor image degradation will be conducted in accordance with the media manufacturer’s recommendations. 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 (2) copies of an appropriate electronic storage media. The two (2) copies will then be stored in separate physical locations.

In addition, the proposed changes revise Table 17.2-0 of the Operational QA Program to clarify that the collection, storage and maintenance of electronically stored QA records are addressed in Section 17.2.17.

Markups of the proposed changes are provided in Attachment 2. Typed pages of the proposed changes are provided in Attachment 3.

Attachment 2

**Operational Quality Assurance Program
Topical Report
Electronic Record Storage Changes**

Mark-up of Quality Assurance Program Changes

**Virginia Electric and Power Company
Surry Power Station
North Anna Power Station**

Mark-up of Quality Assurance Program Changes

The proposed changes are highlighted in bold text or strike-out text for clarity.

17.2.17 Quality Assurance Records

The requirements and responsibilities for quality assurance records transmittal, retention, and maintenance subsequent to completion of work at the power station have been established and are documented in administrative procedures.

Quality Assurance records relating to the operating status of the station and documentary evidence of the quality of items and activities affecting quality include plant history; operating logs; principal maintenance and modification activities; Licensee Event Reports; results of reviews, inspections, inservice inspections, tests, audits, and material analyses; monitoring of work performance, qualification of personnel, procedures, and equipment; and other documentation such as drawings, specifications, procurement documents, calibration procedures and reports, deviation reports, and corrective action requests. These records are maintained in accordance with the NRC regulations, commitments to ANSI N45.2.9-1974 (refer to Table 17.2.0, section for NRC Regulatory Guide 1.88), administrative procedures, and specific requirements for those Quality Assurance records stored on optical disks.

Quality Assurance records stored electronically will follow the guidance given in the Nuclear Information and Records Management Association (NIRMA) technical guideline, TG-15-1998, "Management of Electronic Records."

The following requirements apply to all Quality Assurance records which are stored on ~~optical disks~~ **electronic storage media**. Quality Assurance records will only be stored on ~~optical disks~~ **appropriate electronic storage media** meeting the requirements of the NIRMA guidelines. ~~WORM (Write Once—Read Many) technology~~. **Determination of appropriate electronic media will be made by Virginia Power Information Technology based upon data format and level of access required.** Quality Assurance records originally created in hard-copy form will be retained in hard-copy until such time as ~~images~~ **electronic versions** of these Quality Assurance records are created, copied, and verified as legible on two (2) independent copies of ~~WORM-optical disks~~ **of an appropriate electronic storage media**. File legibility verifications will be completed on all Quality Assurance records stored on ~~electronic storage media~~ **optical disks** by either visually verifying the file legibility or by electronically verifying exact ~~binary file transfer~~. **Periodic media inspections to monitor image degradation will be conducted in accordance with the media manufacturer's recommendations. These periodic inspections will be documented.** Quality Assurance records stored on electronic media will be refreshed or copied on to new media and subsequently verified ~~if the projected lifetime of that media does not exceed the retention period of the records stored on that media~~. ~~Biennial visual inspections will be conducted to ensure that there is no degradation of image quality.~~ Quality Assurance records originally created in electronic form ~~will~~ **may be retained in electronic form.** Backup copies of associated electronic Quality Assurance records will be maintained in multiple ~~physically independent~~ **physically independent** electronic locations until such time as images of these Quality Assurance records are created, copied, and verified ~~on two (2) copies of an appropriate electronic storage media, as legible on two (2) WORM-optical disks~~. The

two copies of electronic storage media will then be stored in separate physical locations. The time period between generation of the electronic Quality Assurance record and satisfactory image file creation, administrative and technical review, copying to two optical disks, and certification of file legibility or exact file transfer will not exceed seven (7) days. Authorization to exceed this seven day requirement must be obtained in writing from the Manager - Nuclear Information Technology and the Supervisor - Records Management. These requirements meet the intent of Generic Letter 88-18, Plant Record Storage on Optical Disks, dated October 20, 1988.

Identification and retrievability of Quality Assurance records is facilitated through proper indices and an established basic filing system. Record storage facilities are constructed, located, and secured to prevent the destruction of records by fire, flooding, theft, and deterioration through environmental conditions such as temperature and humidity.

Table 17.2-0 (continued)
STANDARD, REQUIREMENT OR GUIDE

Regulatory Guide 1.88 (continued) — Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records - (Rev. 2, 10/76) - Endorses ANSI N45.2.9-1974

The Company's Position	Conformance Status	Justification
(c) The file room is provided with an early warning fire detection system and automatic fire suppression system. A protective signaling system is provided, with a remote alarm located at a constantly attended station.		
(d) Telephone service is provided to the file room, with the wire penetration constructed and sealed in accordance with NFPA No. 232-1975.		
(e) All records stored in the file room are stored in metal cabinets, which are arranged to provide adequate access and aiseways. Work not directly related to the storage, retrieval or auditing of records is not allowed in the file room. Smoking, eating, and drinking is prohibited in the file room.		
(9) The Innsbrook Technical Center's Vital Records Vault for nuclear records conforms to the requirements of Section 5.6 of ANSI N45.2.9-1974 without exceptions.		
(10) The Surry Training Center training records vault (Main Building) conforms to the requirements of section 5.6 ANSI N45.2.9-1974 without exceptions.		
(11) Quality Assurance records may be stored in an approved offsite facility. The offsite facility must meet or exceed requirements of an onsite facility.		
(12) With regard to Section A.6 of Appendix A to ANSI N45.2.9-1974 entitled, <i>Operation Phase Activity Records</i> , Section A.6.1, "Operation, Maintenance & Testing," is replaced by the information in Tables 17.2-2 and 17.2-3.		

(13) For the Collection, Storage and Maintenance of electronically stored QA Records, see Section 17.2.17 of the QA Topical Report.

Revision 34—09/1/98
Revision 30—09/1/98

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Attachment 3

**Operational Quality Assurance Program
Topical Report
Electronic Record Storage Changes**

Proposed Quality Assurance Program Changes

**Virginia Electric and Power Company
Surry Power Station
North Anna Power Station**

Director Nuclear Oversight or the Quality Inspection Coordinator then notifies the Site Vice President of the decision to stop work because of adverse quality conditions. He shall also notify the Manager Nuclear Oversight.

- B. Site Vice President - The Site Vice President evaluates the determination to stop work.**
 - 1. If he concurs with the decision to stop work, he initiates the necessary corrective action. Only after the discrepancy has been corrected and the corrective action approved by the initiating organization does work resume.
 - 2. In the event the Site Vice President does not concur with the decision to stop work, he may order work to resume by notifying the Director Nuclear Oversight (who shall notify the Manager Nuclear Oversight) and the appropriate station supervisory personnel in his organization of his decision. He shall also refer the issue to the Vice President - Nuclear Operations for review and approval.
- C. Vice President - Nuclear Operations - The Vice President - Nuclear Operations is responsible for approving or disapproving the Site Vice President's decision in those cases where the Site Vice President does not concur with the stop work and orders work to resume.**
- D. Manager Nuclear Oversight - The Manager Nuclear Oversight may refer any concerns he may have concerning the handling of "stop work" to the Vice President - Nuclear Operations. He may direct imposition of "stop work" whenever he deems such action to be appropriate.**
- E. Imposition of offsite "stop work" performed by vendors shall be controlled by appropriate administrative procedures.**

17.2.17 Quality Assurance Records

The requirements and responsibilities for quality assurance records transmittal, retention, and maintenance subsequent to completion of work at the power station have been established and are documented in administrative procedures.

Quality Assurance records relating to the operating status of the station and documentary evidence of the quality of items and activities affecting quality include plant history; operating logs; principal maintenance and modification activities; Licensee Event Reports; results of reviews, inspections, inservice inspections, tests, audits, and material analyses; monitoring of work performance, qualification of personnel, procedures, and equipment; and other documentation such as drawings, specifications, procurement documents, calibration procedures and reports, deviation reports, and corrective action requests. These records are maintained in accordance with the NRC regulations, commitments to ANSI N45.2.9-1974 (refer to Table 17.2.0, section for NRC Regulatory Guide 1.88), administrative procedures, and specific requirements for those Quality Assurance records stored on optical disks.

Quality Assurance records stored electronically will follow the guidance given in the Nuclear Information and Records Management Association (NIRMA) technical guideline, TG-15-1998, *Management of Electronic Records*.

The following requirements apply to all Quality Assurance records which are stored on electronic storage media. Quality Assurance records will only be stored on appropriate electronic storage media meeting the requirements of the NIRMA guidelines. Determination of appropriate electronic media will be made by Virginia Power Information Technology based upon data format and level of access required. Quality Assurance records originally created in hard-copy form will be retained in hard-copy until such time as electronic versions of these Quality Assurance records are created, copied, and verified as legible on two (2) independent copies of an appropriate electronic storage media. File legibility verifications will be completed on all Quality Assurance records stored on electronic storage media by either visually verifying the file legibility or by electronically verifying exact binary file transfer. Periodic media inspections to monitor image degradation will be conducted in accordance with the media manufacturer's recommendations. These periodic inspections will be documented. Quality Assurance records stored on electronic media will be refreshed or copied onto new media and subsequently verified if the projected lifetime of that media does not exceed the retention period of the records stored on that media. Quality Assurance records originally created in electronic form may be retained in electronic form. Backup copies of associated electronic Quality Assurance records will be maintained in multiple physically independent electronic locations until such time as images of these Quality Assurance records are created, copied, and verified on two (2) copies of an appropriate electronic storage media. The two copies of electronic storage media will then be stored in separate physical locations. These requirements meet the intent of Generic Letter 88-18, *Plant Record Storage on Optical Disks*, dated October 20, 1988.

Identification and retrievability of Quality Assurance records is facilitated through proper indices and an established basic filing system. Record storage facilities are constructed, located, and secured to prevent the destruction of records by fire, flooding, theft, and deterioration through environmental conditions such as temperature and humidity.

17.2.18 Audits

The system of audits devised to verify compliance with quality-related aspects of the power station is described in the station Technical Specifications. Internal audits of selected aspects of operational phase activities are performed with a frequency commensurate with safety significance and in a manner which assures that biennial (2 years) audits of safety-related activities are completed. The audits are regularly scheduled on a formal preplanned audit schedule. The audit system is reviewed periodically and revised as necessary to assure coverage commensurate with current and planned activities. Additional audits may be performed as deemed necessary by management. The scope of the audit is determined by the quality status and safety importance of the activities being performed. These audits are conducted by trained

Table 17.2-0 (continued)
STANDARD, REQUIREMENT OR GUIDE

Regulatory Guide 1.88 (continued) — *Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records* - (Rev. 2, 10/76) - Endorses ANSI N45.2.9-1974

The Company's Position	Conformance Status	Justification
(12) With regard to Section A.6 of Appendix A to ANSI N45.2.9-1974 entitled, <i>Operation Phase Activity Records</i> , Section A.6.1, "Operation, Maintenance & Testing," is replaced by the information in Tables 17.2-2 and 17.2-3.		
(13) For the collection, storage and maintenance of electronically stored QA records, see Section 17.2.17 of the QA Topical Report.		