

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

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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
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
ELECTRONIC RECORDS RETENTION

In a letter dated June 15, 2000 (Serial No. 00-237), Virginia Electric and Power Company (Virginia Power) submitted 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." Subsequently, in a letter dated August 15, 2000, the NRC transmitted a Request for Additional Information (RAI). The RAI questions, our response to the RAI and the revised proposed Operational Quality Assurance (QA) program changes are attached.

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. Request for Additional Information - Response
2. Revised Markup of Quality Assurance Program Changes
3. Revised Proposed Quality Assurance Program Changes

cc: U. S. Nuclear Regulatory Commission
Regional Administrator
Region II
Sam Nunn Atlanta Federal Center
Suite 23T85
61 Forsyth St., SW,
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

Attachment 1

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

Request for Additional Information - Response

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

Request for Additional Information - Response

In a letter dated August 15, 2000, the NRC transmitted the following Request for Additional Information (RAI).

"The staff plans to issue a Regulatory Issue Summary (RIS) in the near future, which provides guidance on managing quality assurance records. The RIS updates and expands on the guidance provided by Generic Letter 88-18, "Plant Records Storage on Optical Disks", issued on October 20, 1988. The June 15, 2000, submittal is inconsistent with the RIS with respect to the issues identified below. Justification should be provided as to why the alternative approach is acceptable or the submittal should be revised to conform to these positions.

- (1) The electronic storage media (optical disk, magnetic tape, etc.) should be specified in the quality assurance program description.
- (2) The following four Technical Guidelines (TG) have been issued by the Nuclear Information and Records Management Association (NIRMA) to address electronic records program issues.
 - a. NIRMA TG 11-1998, "Authentication of Records and Media"
 - b. NIRMA TG 15-1998, "Management of Electronic Records"
 - c. NIRMA TG 16-1998, "Software Configuration Management and Quality Assurance"
 - d. NIRMA TG 21-1998, "Electronic Records Protection and Restoration"

These four TGs implemented together provide an acceptable basis for complying with the recordkeeping requirements of Appendix B to 10 CFR Part 50. The submittal proposes to comply only with TG 15-1998."

The RAI was discussed with the NRC staff during a phone call August 16, 2000. In response to the RAI and the associated phone call, the proposed Operational Quality Assurance Program has been changed to incorporate both RAI comments 1 and 2. The specific changes can be found in Attachment 2, "Revised Markup of Quality Assurance Program Changes" and Attachment 3, "Revised Proposed Quality Assurance Program Changes."

Attachment 2

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

Revised 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 for electronic records management given in the Nuclear Information and Records Management Association (NIRMA) technical guidelines, TG-11-1998, "Authentication of Records and Media;" TG-15-1998, "Management of Electronic Records"; TG-16-1998, "Software Configuration Management and Quality Assurance;" and TG-21-1998, "Electronic Records Protection and Restoration."

The following requirements apply to all Quality Assurance records which are stored on ~~optical disks~~ **electronic storage media (i.e. optical disk, magnetic tape, network drive array, etc.)**. 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 the Information Technology group 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~~ **an appropriate electronic storage media**. File legibility verifications will be completed on all Quality Assurance records stored on ~~optical disks~~ **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 NIRMA guidelines or 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** 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.

Attachment 3

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

Revised 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

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The following requirements apply to all Quality Assurance records which are stored on electronic storage media (i.e., optical disk, magnetic tape, network drive array, etc.). 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 the Information Technology group 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 NIRMA guidelines or 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. 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