

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

February 28, 1996

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 96-071
SPS/BAG/GDM R4
Docket No. 50-280
50-281
License No. DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION REPORT NOS. 50-280/95-23 AND 50-281/95-23

We have reviewed your Inspection Report Nos. 50-280/95-23 and 50-281/95-23, dated February 5, 1996, and the enclosed Notice of Violation. The report identified one cited violation for failure to adhere to radiation protection procedures. As described in our attached reply to the Notice of Violation, we have evaluated the circumstances that led to the violation and have initiated corrective actions.

The Inspection Report cover letter noted that this violation is of concern as it indicates that our corrective actions to address previous radiological work practice violations during the recent Unit 1 refueling outage were ineffective. The corrective actions associated with the previous violations were designed to correct issues associated with contractor compliance with the dosimetry requirements of Radiation Work Permits (RWP). While the present violation did not involve dosimetry, it did indicate a broader issue with RWP compliance by station personnel. Based on the violation cited in this inspection report, we have initiated corrective actions that are broader in nature, as well as specific actions to reinforce individual responsibility and accountability for following RP procedural requirements, to preclude similar violations in the future.

Please contact us if you have any questions or require additional information.

Very truly yours,


James P. O'Hanlon
Senior Vice President - Nuclear

Attachment

9603110260 960228
PDR ADOCK 05000280
Q PDR

070034

JEON

cc: U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N.W.
Atlanta, Georgia 30323

Mr. M. W. Branch
NRC Senior Resident Inspector
Surry Power Station

REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION CONDUCTED DECEMBER 3, 1995 - JANUARY 6, 1996
SURRY POWER STATION UNITS 1 AND 2
INSPECTION REPORTS NOS. 50-280/95-23 AND 50-281/95-23

NRC COMMENT:

"During an NRC inspection conducted for the period of December 3, 1995 through January 6, 1996, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG 1600, the violation is listed below:

Technical Specification (TS) 6.4.B requires procedures for personnel radiation protection to be prepared consistent with 10 CFR Part 20. Further, workers must adhere to these procedures for all operations involving personnel radiation exposure.

VPAP-2101, Radiation Protection Program, revision 7-PS1, implements the procedural requirements of TS 6.4.B and contains instructions for using station Radiation Work Permits (RWP).

HP-1081.20, Radiation Work Permits: RWP Briefing and Controlling Work, revision 3, provides instructions for developing RWP briefing checklists and conducting RWP briefs.

RWP S-95-1140 established the radiological requirements for activities associated with performing a leak repair to Unit 2 Reactor Coolant System (RCS) letdown system. The RWP specified continuous radiological protection (RP) coverage while workers were inside containment and required two sets of protective clothing (PC) for welding and grinding activities.

Contrary to the above, on December 14, 1995, workers failed to properly implement VPAP-2101, HP-1081.20, and several radiological requirements specified in RWP S-95-1140 as evidenced by the following examples:

- 1) Workers did not read or understand the RWP prior to entering the RCA as required by VPAP-2101, section 6.8.7.
- 2) The RWP brief was incomplete in that PC requirements were not discussed as required by HP-1081.20, sections 6.1.6 and 6.2.3.
- 3) Two workers who performed welding and grinding activities failed to wear a second set of PCs as required by RWP S-95-1140. Upon exiting containment, one worker was determined to be contaminated.

- 4) Two workers failed to comply with RWP S-95-1140 in that they continued to perform welding and grinding activities at the job site for approximately 15 minutes without continuous HP coverage.

This is a Severity Level IV violation (Supplement IV)."

REPLY TO A NOTICE OF VIOLATION
NRC INSPECTION CONDUCTED DECEMBER 3, 1995 - JANUARY 6, 1996
SURRY POWER STATION UNITS 1 AND 2
INSPECTION REPORTS NOS. 50-280/95-23 AND 50-281/95-23

Reason for the Violation, or if Contested, the Basis for Disputing the Violation

The cited examples of activities not accomplished in accordance with station procedures are correct as stated.

Radiation Protection (RP) Program barriers that ensure safe radiological work practices include accurate and clearly written Radiation Work Permits (RWP), and trained workers who read, understand and comply with the RWP requirements. RWP briefs are conducted to give the worker the opportunity to question RWP requirements and to confirm worker understanding of the RWP. These barriers are reinforced in Nuclear Employee Training.

Despite these barriers, workers failed to comply with RP procedures and RWP requirements during the December 14, 1995, containment entry to repair a weld leak on the Reactor Coolant System letdown piping inside Unit 2 containment. The work team assigned to repair the weld leak and the Health Physics Shift Supervisor (HPSS) supporting the team's containment entry did not adequately adhere to Radiation Protection procedures or to Radiation Work Permit (RWP) requirements. The reason for the failure to follow procedures was personnel error by the HPSS and the work team. A discussion of the specific concerns is provided as follows:

1. VPAP 2101, Radiation Protection Program, requires that workers read the applicable RWP and ask questions about any part of the RWP that they do not understand. The workers did not read the RWP prior to entry into the RCA and assumed that the RWP brief and instructions from RP personnel could be used in lieu of reading and following the RWP.
2. Prior to the weld leak repair entry into containment, the HPSS accompanied a containment entry team that wore a single set of protective clothing (PC) to purge the letdown line. He assumed that the requirements were the same for the weld repair team and did not thoroughly read the RWP. Therefore, the RWP brief was incomplete in that the HPSS failed to brief the team on the PC requirements as specified on RWP S-95-1140.
3. During the RWP brief and prior to entry into the Radiological Control Area (RCA), one of the workers questioned the use of single PCs. He was told that only single PCs were required for the entry. The two workers who performed the welding and grinding activities failed to wear a second set of PCs as required by the RWP because they assumed that the RWP briefing and instructions from RP personnel could be used in lieu of reading and complying with the RWP.

4. Continuous RP coverage was required during the job. Approximately 25 minutes into the job, the engineer on the work team began feeling sick and notified the RP technician. The technician signaled the other workers to follow him, and then escorted the engineer to the personnel hatch. The workers misunderstood the RP technician's signal and continued with their work activities contrary to RWP requirements. Inappropriate actions were taken by the RP technician in that he left the job site without the other team members, and by the work team in that they continued to work without continuous RP coverage for approximately 15 minutes.

Corrective Steps Which Have Been Taken and the Results Achieved

The RWP used for the December 14, 1995 event was reviewed and determined to be accurate in accordance with the requirements of Health Physics procedure HP-1081.010, Radiation Work Permits: Preparing and Approving.

Corrective actions have been taken since the event to simplify RWP format and to human factor the most significant information for the worker. In addition, on-line access of RWPs has been made available to workers through the station's computer network.

A station Deviation Report (DR) and a Category 2 Root Cause Evaluation (RCE) were subsequently initiated to address the concerns raised during this event. The following corrective steps have been taken to reinforce expectations for worker compliance with RP procedures and RWPs:

- Personnel involved with the December 14, 1995 event were either disciplined or counseled as appropriate.
- The station management team was briefed on RWP expectations by the Station Manager.
- Station management issued a memo to station personnel to reinforce expectations that each individual is responsible for reading, understanding and complying with RWP requirements.
- A case study of the event was developed and used during a human performance standdown day. This case study included a discussion of the events, stressing the individual worker's responsibility for ensuring procedures and RWPs are not violated. In addition, RP personnel discussed RWP brief expectations during the human performance standdown day.

RP also increased plant observations of worker understanding and compliance with RWP requirements. These observations indicated that most workers were knowledgeable of their RWPs, and that they were in compliance with their RWP requirements. In the few cases where workers were not readily familiar with their RWP

requirements, work was stopped until the workers reviewed their RWP and demonstrated adequate knowledge.

Corrective Steps That Will Be Taken to Avoid Recurrence

The corrective actions noted above are adequate to prevent recurrence of the violation. However, the following additional enhancements are being implemented to strengthen personnel performance:

- Contractor training will include a discussion of the events, stressing the individual worker's responsibility for ensuring that procedures and RWPs are not violated.
- RP will assess human performance related to compliance with RWPs by conducting working level meetings with work groups to identify RP barriers. Work groups with RWP compliance problems will be identified and corrective actions will be implemented.
- Maintenance supervision will observe worker performance during the 1996 Unit 2 Refueling Outage to verify worker knowledge of RWP requirements.
- Monitoring worker knowledge of and compliance with RWP requirements will be incorporated into the RP self-assessment procedure to periodically verify worker performance.

The Date When Full Compliance Will Be Achieved

Compliance was accomplished when management reinforced expectations regarding adherence to RP procedures and Radiation Work Permits.