Arizona Nuclear Power Project
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ANPP-38117-EEVB/TDS-96.03
September 5, 1986

Mr. John B. Martin, Regional Administrator
U.S. Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, CA 94596-5368

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528 (License NPF-41)
STN 50-529 (License NPF-51)
STN 50-530 (CPPR-143)

Notice of Violation: 50/528/86-23-01

File: 86-001-493

Reference: Letter from D.F. Kirsch (NRC) to E. E. Van Brunt, Jr. (ANPP), dated August 8, 1986, NRC Inspection Reports 50-528/86-23, 50-529/86-23 and 50-530/86-17.

Dear Mr. Martin:

This letter is provided in response to the inspection conducted by R. C. Sorensen of the NRC staff on July 7 through July 25, 1986. Based on the results of the inspection, one (1) violation of NRC requirements was identified. The violation is discussed in Appendix A of the referenced letter. The violation and ANPP's response is provided in Attachment A.

It should be noted that the inspection report identifies the violations in Appendix A as Docket No. 50-529; however, in the body of the inspection report, the violation is identified as (50-528/86-23-01) which refers to Unit 1. ANPP's response is being addressed to all three Units.

Very truly yours,

E. E. Van Brunt

E. E. Van Brunt, Jr.
Executive Vice President
Project Director

EEVB/TDS/dh

Attachments

IE-01

cc: J. G. Haynes (w/attachment)
L. F. Miller (w/attachment)
R. P. Zimmerman (w/attachment)
E. A. Licitra (w/attachment)
A. C. Gehr (w/o attachment)

ATTACHMENT A

NOTICE OF VIOLATION

Arizona Nuclear Power Project
P. O. Box 21666
Phoenix, Arizona 85036

Docket Nos. 50-528
50-529
50-530

License Nos. NPF-41
NPF-51
CPPR-143

As a result of the inspection conducted on July 7-25, 1986, and in accordance with NRC Enforcement Policy, 10 CFR 2, Appendix C, the following violation was identified:

10 CFR 50, Appendix B, Criterion XVI states, in part, "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Contrary to the above, on July 11, 1986, foreign materials were located in and on Class 1E relays in Auxiliary Relay Cabinets. A similar condition had been previously identified, corrected and reported by the licensee to NRC as a reportable significant safety condition per the criteria of 10 CFR 50.55(e) (DER 85-22).

I. THE CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

On July 11, 1986, ANPP Management was informed that a deficiency existed in class 1E relays in the auxiliary relay cabinets. The deficiency was the presence of debris in the cabinets. A previous similar incident had been described to the NRC in Deficiency Evaluation in Report (DER) number 85-22. Upon notification, work documents were initiated to examine the relays and correct any identified deficiencies. As described in the inspection report, the corrective actions taken in Unit 2 were subsequently verified and accepted by the NRC inspector. Unit 1 relays were examined and cleaned, and actions were completed in all three Units by July 18, 1986. The immediate corrective actions described above consisted of a 100 percent examination and cleaning as necessary of approximately fifteen hundred (1500) ARD relays in the auxiliary relay cabinets in Units 1, 2 and 3.

Of the approximately five hundred (500) relays examined in Unit 1, only sixteen (16) relays were identified as having debris similar to that

identified by DER 85-22. Of the sixteen relays identified only four (4) relays were found with debris in the relay contact area. A similar number of relays having the same conditions, were identified in Unit 2. However, to ensure that the operability of the relays in Units 1 and 2 was not compromised during the time from the completion of the original corrective action, described in DER 85-22, until July 11, 1986, a records review was conducted. The records review verified that preoperational, post maintenance functional and surveillance tests conducted on the relays and associated equipment did not indicate any failures attributed to debris restricting the movement of the armature/crossbar assembly, thus rendering the relays operable at all times as specified in PVNGS Technical Specifications for Units 1 and 2.

II. THE CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER ITEMS OF NON-COMPLIANCE

An evaluation was conducted to determine the root cause of the identified deficiency. The results of the evaluation indicated that the corrective actions, as discussed in DER 85-22, were adequate to correct the existing deficiencies but was not of sufficient scope to prevent recurrence. The initial preventative actions of DER 85-22 were specifically designed to protect the relays during construction phase activities; however, the action lacked the detail necessary to ensure continued compliance during construction completion. Additionally, it was recognized that debris could fall into the relays during testing; however, no actions were defined to preclude this situation from occurring during startup testing or operational phase activities. Therefore, based upon the evaluation, the root cause has been determined as "personnel error" in that the responsible individuals did not consider all potential contributory causes

that could introduce debris into the cabinets. As a result, the corrective actions taken were not effective in preventing recurrence.

An evaluation was performed to determine if similar conditions could exist in other safety related cabinets within PVNGS. Based upon the results of the evaluation it was determined that because of the unique arrangement (horizontal mount) relays in the Auxiliary Relay Cabinets, the condition described in the inspection report does not apply to other safety related cabinets at PVNGS.

As discussed above, the root cause identified for the initial deficiency reported in DER 85-22 is considered valid; however, the corrective actions

taken to address the cause were not sufficiently comprehensive to prevent recurrence. Based upon this conclusion, the following corrective actions will be implemented;

- The preventative maintenance program for all Units will be revised to specifically address the concerns identified in DER 85-22.
- Responsible maintenance personnel will be instructed on the proper methods of examining the relays for debris that could inhibit proper operation.
- Mandatory QC inspection hold points will be required to verify relay cleanliness after completion of work activities in the relay cabinets.
- Due to the unique configuration of the relays, ANPP QC personnel will be instructed on the proper techniques for inspecting the relays for debris that could inhibit proper operation.
- Preoperational test procedures which require lifting and landing of leads within the cabinets will be revised to contain a precautionary step addressing the concerns identified in DER 85-22.

- Preventative maintenance tasks to verify relay cleanliness in all three Units will be conducted monthly until sufficient confidence is established that other corrective actions taken have been successful.
- QC inspections will be conducted monthly in all three Units to verify relay cleanliness until sufficient confidence is established that other corrective actions taken have been successful.
- Associated technical manuals will be revised to include precautionary steps similar to those contained in installation specification 13-EM-306 concerning the applicable cleanliness requirements.
- Construction work plans (WPP/QCIs) will be revised to specifically address the concerns identified in DER 85-22. Bechtel will also revise their ANPP approved procedures, used to support operational phase activities, to reflect the same criteria.

° Bechtel electricians, electrical engineers and QC engineers will be trained in the applicable requirements.

The corrective actions described above adequately address all contributory causes that may introduce debris into the relays and are considered sufficient to prevent recurrence.

III. THE DATE WHEN FULL COMPLIANCE

Full compliance was achieved on July 18, 1986, when the examination and required cleaning was completed in Units 1, 2, and 3. Other corrective actions described in Section II are scheduled for completion by October 15, 1986.