SMUD
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AN ELECTRIC SYSTEM SERVING THE HEART OF CALIFORNIA

MPC&D 97-167

November 10, 1997

U.S. Nuclear Regulatory Commission
Attn.: Document Control Desk
Washington, DC 20555

Docket No. 50-312
Rancho Seco Nuclear Generating Station
License No. DPR-54

RESPONSE TO NOTICE OF VIOLATION 97-01

Attn.: Document Control Desk

In NRC Inspection Report 50-312/97-04, dated October 21, 1997, the Sacramento Municipal Utility District received a Notice of Violation regarding activities at Rancho Seco Nuclear Generating Station. In accordance with 10 CFR 2.201, we are providing the attached response.

This letter acknowledges the violation cited, and describes the corrective actions taken. If you, or members of your staff, have questions requiring clarification or additional information, please contact Bob Jones at (916)452-3211, extension 4676.

Sincerely, FOR STEVE REDEKER

Steve Redeker
Manager, Plant Closure and Decommissioning

cc: Seymour Weiss, NRC, Rockville
E.R. Merschoff, NRC, Arlington, Texas

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NRC Statement of Violation

10 CFR Part 50, Appendix B, Criterion V, states that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Rancho Seco Procedure I.090, Revision 5, entitled "Instrument Calibration Instruction," Section 2.4.1, states out-of-tolerance as found values require submittal of an out-of-tolerance report per Procedure MAP-0023. Rancho Seco Procedure MAP-0023, Revision 6, entitled "Maintenance Calibration Program," Section 6.4.2, states, in part, that the maintenance technician shall fill out Attachment 2, "Installed Instrument Out-of-Tolerance Report," for each equipment/instrument with out-of-tolerance as found conditions.

Contrary to the above, on August 6, 1997, the thermocouple for the spent fuel pool temperature indicator was found to be out-of-tolerance during annual calibration. No out-of-tolerance report was completed.

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

District Response

Admission or denial of violation

The District acknowledges that the violation occurred as stated.

Reason for the Violation

The reason for the incident is that, when evaluating the need to submit an Out-of-Tolerance Report (OTR), an I&C technician relied on his understanding of an administrative procedure rather than actually referring to the procedure. The technician concluded, erroneously, that he did not require an OTR.

Discussion of the Violation

In accordance with Surveillance Procedure SP.2 "Daily Instrument Checks and Systems Verification," Operations documents the spent fuel pool bulk coolant temperature on a daily basis. On August 5, 1997, Operations recorded the spent fuel pool water temperature at 73° F. The following day, Operations recorded the spent fuel pool water

temperature at 87° F, an increase of 14° F. Engineering analysis of the heat load in the spent fuel pool had previously concluded that if the spent fuel pool loses cooling, the water temperature would increase by approximately 2° F per day.

When the shift supervisor noticed the unusual increase in temperature, he immediately verified the water level in the spent fuel pool. After confirming that the water level remained at an acceptable level, the shift supervisor contacted Maintenance. Maintenance informed the shift supervisor that they had just completed the annual calibration of spent fuel pool temperature indicator TISH-27205. During the calibration, a Maintenance I&C Technician noticed that an electrical connection on the thermocouple had been loose. The I&C technician tightened the connection during the instrument calibration.

The shift supervisor also notified the Operations Superintendent of the increased indication in the spent fuel pool water temperature. The Operations Superintendent, in turn, notified the plant manager. On August 7, 1997, the Operations Superintendent raised the issue at the Plant Review Committee (PRC) meeting, while discussing general plant operational issues. The PRC assigned Technical Services to evaluate the abnormal rise in the spent fuel pool water temperature indication.

Technical Services reviewed spent fuel pool water temperature and instrument calibration records. Based on their review, Technical Services concluded that, accounting for the instrument error and previous calibration results, there had been no time when the spent fuel pool coolant temperature would have exceeded any Technical Specification action levels.

Review of the work request used to calibrate the instrument showed one "As Found" value out-of-tolerance. Plant Maintenance Manual procedure I.090 "Instrument Calibration Instruction," requires that out-of-tolerance As Found values require the submittal of an Out-of-Tolerance Report (OTR) per Maintenance Administrative Procedure MAP-0023 "Maintenance Calibration Program."

MAP-0023, Section 6.4.2 requires that if plant equipment used to verify the acceptance criteria in plant surveillance procedures is out-of-tolerance, then Maintenance must write an OTR. The intent of an OTR is to identify out-of-tolerance instruments and initiate corrective actions, as appropriate.

In addition, MAP-0023, Section 6.3.2.2 requires that Maintenance write a Potential Deviation from Quality (PDQ) for any As Found data that is out of tolerance on any operable system, as listed in Plant Operations Manual procedure B.10 "Defueled Condition." A PDQ is the baseline document for the Rancho Seco Corrective Action Program. Rancho Seco staff use PDQs to identify, document, evaluate, and correct actual or potential deficiencies.

Because TISH-27205 is used by surveillance procedure SP.2 to verify that the spent fuel pool water temperature meets Technical Specification requirements. Maintenance should have generated an OTR in accordance with MAP-0023, Section 6.4.2. In addition, since TISH-27205 is part of the Spent Fuel Cooling (SFC) system, and SFC is defined as Operable in Plant Operations Manual procedure B.10, Maintenance should have generated a PDQ in accordance with MAP-0023, Section 6.3.2.2.

Contrary to procedural requirements, no one in Maintenance generated an OTR or PDQ. MAP-0023 provides the criteria for the instruments that require an OTR or PDQ; however, MAP-0023 does not list specific pieces of equipment or instrumentation. Accordingly, I&C Technicians must evaluate all out-of-tolerance equipment against the criteria in MAP-0023. The I&C Technician performing the instrument calibration did not refer to MAP-0023 to evaluate the instrument against the criteria. Rather, he relied on his understanding of the criteria, and concluded, erroneously, that the instrument did not meet the criteria for generating a PDQ and OTR.

Corrective Steps Taken and Results Achieved

On August 7, 1997, the PRC assigned Technical Services to evaluate the abnormal rise in the spent fuel pool water temperature indication. The actions initiated by the PRC resulted in Technical Services taking the same actions they would have had Maintenance initiated an OTR. Technical Services reviewed spent fuel pool water temperature and instrument calibration records. Based on their review, Technical Services concluded that, accounting for the instrument error and previous calibration results, there had been no time when the spent fuel pool coolant temperature would have exceeded any Technical Specification action levels.

After becoming aware of the procedure violation, on September 25, 1997, Maintenance generated OTR 97-001 to document the out-of-tolerance instrument. Maintenance also generated PDQ 97-0064 to document that they had not generated either a PDQ or OTR initially, as required by MAP-0023.

Plant management determined that the incident constituted a Deviation from Quality. Plant management assigned Maintenance to determine the cause and extent of the problem, and determine appropriate remedial and corrective actions to prevent recurrence.

Corrective Steps to Avoid Further Violations

Maintenance conducted training for Maintenance personnel on the PDQ 97-0064 issues, including the reporting requirements in MAP-0023. The training emphasized the requirements for evaluating out-of-tolerance conditions, and OTR/PDQ requirements. In addition, the training stressed the need to comply with all procedural requirements, and to obtain and use procedures that are referenced rather than relying on one's memory of the procedure.

Although the current procedures are adequate, Maintenance is reviewing these procedures to determine if they can make enhancements to simplify the process for a technician to determine whether an OTR or PDQ is required.

Date When Full Compliance will be Achieved

Maintenance conducted procedure training on November 6, 1997, and achieved full compliance on that date.