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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 25, 2000

Mr. Gregory M. Rueger
Senior Vice President and General Manager
Pacific Gas and Electric Company
Diablo Canyon Nuclear Power Plant
P.O. Box 3
Avila Beach, CA 93424

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 - TECHNICAL SPECIFICATION BASES CHANGE (TAC NOS. M98831 AND M98832)

Dear Mr. Rueger:

The NRC staff has incorporated the revision of the Technical Specification (TS) Bases provided by your letter of May 7, 1997, as supplemented by your letter of January 25, 2000, into the Diablo Canyon Power Plant, Unit Nos. 1 and 2 combined TSs. Based on the information that you provided, it is our understanding that these changes to the TS Bases do not involve an unreviewed safety question.

In response to our question concerning the potential for minor cavitation where the component cooling water (CCW) flow exits the containment fan cooler units, and where the auxiliary saltwater system flow exits the CCW heat exchangers, you indicated that this issue was previously reviewed by the NRC staff in conjunction with the review and approval of License Amendments 134 and 132 for Diablo Canyon Power Plant, Units 1 and 2, respectively. In response to our question concerning the impact of the new CCW post-accident temperature profile on post-accident cooldown rate, you indicated that the CCW system can remove more heat from the reactor coolant system and containment under the revised CCW temperature profile than before. While we are satisfied with your responses to our questions, we have not reviewed the 50.59 evaluation and supporting analyses that you refer to in your submittals, and they may be selected for review during a future NRC inspection.

The staff has reviewed the changes to identify existing requirements for operability of the component cooling water system at the new maximum temperature and find the revisions to the associated TS Bases to be acceptable. The overleaf page is provided to maintain document completeness.

Sincerely,

/RA/

Steven D. Bloom, Project Manager, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-275
and 50-323

Enclosure: Bases Pages

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3/4.7.1.7 MAIN FEEDWATER ISOLATION VALVES (MFIVs), MAIN FEEDWATER REGULATING VALVES (MFRVs), MFRV BYPASS VALVES, AND MAIN FEEDWATER PUMP (MFWP) TURBINE STOP VALVES (continued)

rupture, thereby limiting the Reactor Coolant System cooldown and limiting the total energy release to the containment; or (2) a feedwater system malfunction, thereby limiting Reactor Coolant System cooldown.

The analysis of excessive RCS heat removal due to a feedwater system malfunction assumes that a control system malfunction or operator error causes a MFRV and associated bypass valve to open fully, resulting in a step increase in feedwater flow to one steam generator. The analysis assumes a feedwater isolation signal is generated by a high-high steam generator level. Feedwater isolation is assumed to occur as a result of the MFRV and associated bypass valve closing as a result of the feedwater isolation signal. Closure of the MFIVs and trip of the MFWPs provide feedwater isolation if a MFRV or MFRV bypass valve fails to close.

Rupture of a steam line is analyzed to calculate the response of the reactor core and to determine the resulting mass and energy releases. Two separate analyses are performed since conservative assumptions for the core response analysis are different than the conservative assumptions for the mass and energy release analysis. The core response analysis credits feedwater isolation as a result of the safety injection signal which results in a feedwater isolation signal. Feedwater isolation is assumed to occur as a result of closure of all MFRVs and MFRV bypass valves.

The mass and energy release analysis consists of several cases. The analysis assumes feedwater isolation occurs as a result of the safety injection signal which results in a feedwater isolation signal. Some cases are analyzed that assume a MFRV fails and feedwater isolation occurs as a result of closure of the MFIV. For cases with other single failure assumptions, feedwater isolation is assumed to occur as a result of closure of all MFRVs and MFRV bypass valves.

The core response and mass and energy releases that would result from a rupture of a main feedwater line are bounded by the analyses of the rupture of a main steam line.

The OPERABILITY of the MFIVs, MFRVs, MFRV bypass valves and MFWP turbine stop valves within the closure time of the surveillance requirements is consistent with the assumptions used in the safety analyses. When these valves are closed, they are performing their safety function.

The APPLICABILITY of this specification is MODES 1, 2, and 3, except when a MFIV, MFRV, or MFRV bypass valve is closed and deactivated or isolated by a closed manual valve; or when the MFWP turbine stop valve is closed and the steam supply to the MFWP turbine is isolated, or the MFWP discharge to the steam generators is isolated by a closed manual valve. The basis for this is that in MODES 1 and 2 there is significant energy and in MODE 3 there may be significant energy in the Steam Generators. With significant energy in the Steam Generators the valves are needed for isolation of the Steam Generators in the event of a secondary system pipe rupture.

3/4.7.1.7 MAIN FEEDWATER ISOLATION VALVES (MFIVs), MAIN FEEDWATER REGULATING VALVES (MFRVs), MFRV BYPASS VALVES, AND MAIN FEEDWATER PUMP (MFWP) TURBINE STOP VALVES (continued)

The ACTION statement requires that an inoperable valve either be restored to an OPERABLE condition or closed within 72 hours. Closing the valve fulfills the safety function of feedwater isolation so the ACTION Statement can be exited. If a MFIV, MFRV or a MFRV bypass valve is inoperable, another option available is to isolate the inoperable valve with at least one closed valve within 72 hours. If a MFWP turbine stop valve is inoperable, options available are to close the MFWP turbine stop valve or trip the MFWP or isolate the MFWP discharge to the steam generators within 72 hours, which will perform the safety function of feedwater isolation so the ACTION statement can be exited.

Separate ACTION entry is allowed for each inoperable valve unless there is a loss of feedwater isolation capability for a flow path. Redundant components in the flow path would perform the feedwater isolation function.

With either a MFRV or MFRV bypass valve and MFIV inoperable, or MFWP turbine stop valve (resulting in a loss of MFWP trip function) and MFRV or MFRV bypass valve inoperable, there may be no redundant system to operate automatically and perform the required safety function. Under these conditions, affected valves in each flow path must be restored to OPERABLE status, or the affected flow path isolated within 8 hours. This action returns the system to the condition where at least one valve in each flow path is performing the required safety function. With both a MFWP turbine stop valve and MFIV inoperable, the MFRV and MFRV bypass valve will operate automatically to provide feedwater isolation for the flow path. The 8 hour Completion Time is reasonable, based on operating experience, to complete the actions required to close the MFIV, MFRV, MFRV bypass valve, or MFWP turbine stop valve, or otherwise isolate the affected flow path.

3/4.7.3 VITAL COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the Vital Component Cooling Water (CCW) System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses. The OPERABILITY of the CCW system and the components that it cools is ensured if, following design basis accident initiation, the CCW supply temperature is maintained at less than or equal to 140°F for up to 6 hours and less than or equal to 120°F thereafter.

3/4.7.4 AUXILIARY SALTWATER SYSTEM

The OPERABILITY of the Auxiliary Saltwater System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

Each auxiliary saltwater (ASW) pump room drain check valve is required to be OPERABLE for the associated ASW train to be OPERABLE. Both check valves are required to be OPERABLE to ensure that the ASW system can perform its required function if a design flood event occurred. In the event of a single failure, at least one ASW train will remain OPERABLE so that the plant can be shut down following the design flood event.

3/4.7.5 CONTROL ROOM VENTILATION SYSTEM

The OPERABILITY of the Control Room Ventilation System ensures that: (1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system, and (2) the control room will remain habitable for operations personnel during and following all credible accident conditions. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. ANSI N510-1980 will be used as a procedural guide for surveillance testing, except laboratory testing of charcoal shall be performed in accordance with ASTM D3803-1989.

3/4.7.6 AUXILIARY BUILDING SAFEGUARDS AIR FILTRATION SYSTEM

The OPERABILITY of the Auxiliary Building Safeguards Air Filtration System ensures that radioactive materials leaking from the ECCS equipment within the auxiliary building following a LOCA are filtered prior to reaching the environment. Operation of the system with the heaters operating to maintain low humidity for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The operation of this system and the resultant effect on offsite dosage calculations were assumed in the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing, except laboratory testing of charcoal shall be performed in accordance with ASTM D3803-1989.

3/4.7.12 ULTIMATE HEAT SINK

The OPERABILITY of the Component Cooling Water (CCW) System and the components that it cools is ensured if one CCW heat exchanger is in service when the ocean temperature is 64°F or less. Two CCW heat exchangers are required to be in service when the ocean temperature is greater than 64°F. If the reactor coolant temperature is less than 350°F (MODE 4), one CCW heat exchanger in service is adequate even if the ocean temperature is greater than 64°F.