April 7, 2005

MEMORANDUM TO: Biweekly Notice Coordinator
/RA/

FROM: Girija Shukla, Project Manager, Section 2 /RA/
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: REQUEST FOR PUBLICATION IN BIWEEKLY FR NOTICE - NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING (TAC NOS. MC5559 AND MC5560)

Pacific Gas and Electric Company, Docket Nos. 50-275 and 50-323, Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2, San Luis Obispo County, California

Date of amendment requests: December 31, 2004

Description of amendment requests: The proposed amendments would revise Technical Specification 3.4.10, "Pressurizer Safety Valves" to add a separate Action and associated Completion Times for one or more inoperable pressurizer safety valves for the condition where the valves are inoperable solely due to loop seal temperatures being outside of design limits.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   This proposed change revises Technical Specification (TS) 3. 4.10, "Pressurizer Safety Valves," to add a separate Action and associated Completion Times (CTs) for one or more inoperable pressurizer safety valves (PSV) for the condition where the valves are inoperable solely due to loop seal temperatures being outside of design limits. Currently, when a PSV is in such a condition, it is conservatively declared inoperable and TS 3.4.10 Condition A is entered which has a CT of 15 minutes. A CT of 15 minutes

normally provides insufficient time for restoring a PSV loop seal temperature to within limits. The new Action will provide CTs of 12 hours for exceeding the high temperature limit and 24 hours (MODES 1 and 2) or 72 hours (MODES 3 and 4) for exceeding the low temperature limit. In addition, two new PSV loop seal temperature surveillance requirements are proposed to assist in assuring PSV operability.

Loop seals are provided in the PSV inlet piping to maintain PSV body temperature within vendor recommended limits. This prevents PSV seat leakage that can result from spring relaxation with increased temperature. However, the water in the loop seals must be maintained at or above a minimum temperature to allow it to flash to steam when a PSV lifts. Because of the low density and low mass flow rate, PSV steam relief imposes minimal loading on the discharge piping ensuring acceptable pipe stresses. However, if cooler water is maintained in the loop seals, it may not flash completely, and a water and steam mixture could be discharged when a PSV lifts. Because of the higher density and higher mass flow rate, PSV relief of water and steam could impose increased loading and could result in unacceptably high pipe stresses on the discharge piping which could render the PSVs inoperable and/or damage the discharge piping.
The concern with the PSV opening during liquid relief conditions or with the loop seal temperature outside design limits, is the ability to ensure the valve reseats properly and no leakage occurs after the valve closes. However, even under liquid relief conditions, PSVs are still capable of providing their required relief capacity.

Failure of the PSV to reseat following discharge would result in an unisolable reactor coolant system leak. The consequences of such a leak are bounded by existing Final Safety Analysis Report Update (FSARU) accident analyses. Probabilistic risk assessment methods and a deterministic analysis have been utilized to determine there is no significant increase in core damage frequency or large early release frequency.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Failure of one or more PSVs to reseat following discharge would result in an unisolable reactor coolant system leak. The consequences of such a leak are bounded by existing FSARU accident analyses and no new failure modes are introduced.

Therefore, the proposed change does not create the possibility of a new or different accident from any accident previously evaluated.

3. The proposed change does not involve a significant reduction in a margin of safety.

   The proposed change is based upon both a deterministic evaluation and a risk-informed assessment.

   The deterministic evaluation concluded that even with the loop seal temperature outside of design limits, causing one or more PSVs to be declared inoperable, the PSVs would still lift on demand to perform their safety function. Failure of one or more PSVs to reseat following discharge, resulting in an unisolable reactor coolant system leak, is an event bounded by existing FSARU accident analyses.

   The risk assessment performed to support this license amendment request concluded that the increase in plant risk is small and consistent with the NRC's Safety Goal Policy Statement, "Use of Probabilistic Risk Assessment Methods in Nuclear Activities: Final Policy Statement," Federal Register, Volume 60, p. 42622, August 16, 1995 and guidance contained in of Regulatory Guides (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," dated July 1998 and RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," dated August 1998.

   Together, the deterministic evaluation and the risk-informed assessment provide high assurance that the PSVs will meet their design requirements.

   Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment requests involve no significant hazards consideration.

Attorney for licensee: Richard F. Locke, Esq., Pacific Gas and Electric Company, P.O. Box 7442, San Francisco, California 94120.

NRC Section Chief: Robert A. Gramm

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NRC Section Chief: Robert A. Gramm
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