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PG&E Letter DCL-99-162

U.S. Nuclear Regulatory Commission
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Docket No. 50-275, OL-DPR-80

Docket No. 50-323, OL-DPR-82

Diablo Canyon Units 1 and 2

Inservice Inspection Relief Request - PRS-1D, R1, Use of Code Case N-533-1,
"Alternate Requirements for VT-2 Visual Examination of Class 1, 2, and 3
Insulated Pressure-Retaining Bolted Connections Section XI, Division 1"

Dear Commissioners and Staff:

Pursuant to 10 CFR 50.55a(a)(3)(i), PG&E hereby submits a revised Inservice Inspection (ISI) Relief Request PRS-1D, R1, for Units 1 and 2 second 10-year ISI interval. PRS-1D, R1, requests relief from removal of insulation at bolted connections for certain Class 2 systems during pressure testing.

PG&E submitted relief request PRS-1D regarding use of Code Case N-533 for certain Class 2 systems via PG&E Letter DCL-97-212, dated December 24, 1997. The request could not be approved at that time as stated in NRC transmittal dated May 1, 1998, because Code Case N-533 did not address Class 2 systems. On February 26, 1999, N-533-1 was approved by ASME to include Code Class 1, 2, and 3 systems and clarify the VT-2 inspection requirements. This request is similar to Relief Request Number 29 approved for Indian Point 2.

PG&E requests review and approval of Relief Request PRS-1D, R1, to support the Unit 1 tenth refueling outage, currently scheduled to begin October 1, 2000.

Sincerely,

Lawrence F. Womack

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cc: Steven D. Bloom
Ellis W. Merschoff
David L. Proulx
State of California
Diablo Distribution

Enclosure

DDM/469

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-1D, R1

Pressure Test Requirement for Which Relief is Requested

Removal of insulation at bolted connections while the system is pressurized during pressure test in certain Class 2 systems. Inside containment, the following portions of systems are affected, including the component connections listed:

- 1) Charging injection from the regenerative heat exchanger to the Class 1 boundary: Valve 8378C.
- 2) Normal and alternate charging and pressurizer auxiliary spray from the containment penetration to the Class 1 boundary: Valves 8146, 8147, 8482, and 8483.
- 3) Residual heat removal (RHR) discharge to cold legs from the containment penetration to the Class 1 boundary: Restricting orifice RO-50.
- 4) Reactor coolant system (RCS) excess letdown from Valve 8167 to the containment penetration: Valves HCV-123 and 8143.

Outside containment, the following portions of systems are affected, including the component connections listed:

- 1) RHR suction and discharge piping: Valves 8700A & B, 8730A & B, 8728A & B, 8726A & B, 8724A & B, HCV-670, HCV-637, HCV-638, 8716A & B, 8741, 8809A & B, 8804A & B, 8981, 8742A (U-2 only); RHR pump suction flanges (8); drain line flange (2); pump flange (2); heat exchanger flange (2); Line 119 flange; flow elements FE-641A & B, FE-970, and FE-971.
- 2) RCS letdown from the containment penetration to Valve 8152: Valve 8152.

ASME Section XI Code Requirements

1989 Edition, Article IWA-5000, Paragraph IWA-5242, requires that for insulated systems borted for the purpose of controlling reactivity, the insulation shall be removed from pressure retaining bolted connections for visual examination VT-2.

Code Requirement from Which Relief is Requested

Relief is requested from removal of insulation while the system is pressurized at bolted connections in certain Class 2 systems for visual examination VT-2.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-1D, R1

Basis for Relief Request

Certain Class 2 system pressure tests are performed in Mode 3 at full system pressure and temperature up to 550 degrees F. Removal of insulation under these conditions poses a significant thermal hazard to plant personnel.

Inside containment, the additional handling of insulation and support equipment during Mode 3 may also increase the potential for introducing loose material that could be transported to the containment sump during operation.

RHR suction and discharge piping operates at elevated temperatures (approximately 350 degrees F at the highest normal operating pressure) that pose a thermal hazard to personnel who would be required to remove and install insulation during system operation including the pressure test. Also during this operation, the radiation levels associated with the piping are considerably higher than with the system secured. However, this piping remains in operation only for a relatively short duration. Soon after the test at pressure is completed, the system is isolated and cooled down. Insulation could be removed for a VT-2 examination with the system depressurized at that time.

Code Case N-533-1 allows a system pressure test and VT-2 visual examination to be performed each period without removal of insulation. The insulation shall be removed from the bolted connection each period, and a VT-2 visual examination shall be performed. The connection is not required to be pressurized. Any evidence of leakage shall be evaluated in accordance with IWA-5250.

Proposed Alternative

PG&E will implement Code Case N-533-1 for the portions of Class 2 systems identified above. The examination with insulation removed (depressurized) would be performed no later than the outage following the test at pressure.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-1D, R1

Justification for Granting of Relief

Pressure tests are conducted at nominal operating pressure in accordance with Code Cases N-498-1 and N-416-1, approved for use at Diablo Canyon Power Plant in accordance with NRC transmittals dated May 1, 1998, and June 13, 1995, respectively. The mechanical joints in systems are not subjected to excessively high pressures formerly associated with hydrostatic tests, and thus are not susceptible to leakage initiated from stress to the joint caused by the abnormally high hydrostatic test pressures.

Use of Code Case N-533-1 for these portions of the Class 2 systems eliminates the hazard to personnel associated with removing insulation on systems at high temperature during pressurization.

The proposed use of Code Case N-533-1 for the identified portions of Class 2 systems provides an equivalent level of quality and safety in accordance with 10 CFR 50.55a(a)(3)(i).

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals.

This revised request is based on the 1989 Code requirement and Code Case N-533-1.