



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NO. DPR-80
AND AMENDMENT NO. 63 TO FACILITY OPERATING LICENSE NO. DPR-82
PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

Condition 2.C.(9) of Amendment 12 to Facility Operating License No. DPR-82, (the Diablo Canyon Unit 2 operating license) required that the Pacific Gas and Electric Company (PG&E, or the licensee) demonstrate that the steam generator tube rupture (SGTR) analysis presented in the Diablo Canyon Final Safety Analysis Report (FSAR) is the most severe case with respect to the release of fission products and calculated doses. The NRC staff recently approved the SGTR analysis submitted by PG&E in response to the license condition. The staff review and approval of the Diablo Canyon SGTR analysis is documented in a letter dated April 3, 1991, from H. Rood (NRC) to J.D. Shiffer (PG&E), "Closeout of Steam Generator Tube Rupture Analysis Issue for Diablo Canyon Power Plant, and Finding of Compliance with Condition 2.C.(9) of Unit 2 Operating License DPR-82 (TAC Nos. 68346 and 68347)."

In addition to the SGTR analysis, License Condition 2.C.(9) of DPR-82 also required that PG&E propose changes to the Diablo Canyon Combined Technical Specifications (TS) consistent with the SGTR analysis assumptions. In the Diablo Canyon SGTR analysis, the atmospheric dump valves (ADV) are relied upon, following an SGTR accident concurrent with a loss of offsite power, to cool down the primary coolant system to allow equalization of pressure between the primary coolant system and the steam generator with tube rupture(s). Equalization of pressure will terminate primary-to-secondary coolant leakage, and thereby prevent subsequent overfill of the faulted steam generator. Before issuance of these amendments, ADV operability was assured by other administrative controls (plant operating procedures), but ADV operability was not covered by the TS.

In response to Condition 2.C.(9) of DPR-82, by letter dated February 28, 1990, PG&E proposed TS to assure ADV operability. Specifically, PG&E requested that the TS be modified adding TS 3/4.7.1.6 and the associated Bases to assure operability of the steam generator (SG) 10 percent ADVs for mitigation of an SGTR accident. The new limiting condition for operation will require all four SG ADVs to be operable in Modes 1, 2, and 3. New action statements will limit plant operation to 7 days with one ADV inoperable and 72 hours with two ADVs inoperable. New surveillance requirements will verify that backup air supply for the valves is available, that the SG ADV block valves are open, and that the

SG ADVs are capable of being opened and closed using remote manual controls and backup air bottles. Design changes associated with these TS changes include addition of an independent vital control power source for the backup air bottle controls for each valve, and the addition of manual selection capability for the backup air supplies. The design changes were implemented during the recently-completed fourth refueling outage at Unit 1, and will be implemented during the fourth refueling outage for Unit 2 (scheduled to begin in September 1991).

2.0 EVALUATION

In its letter of February 28, 1990, the licensee proposed to add TS 3/4.7.1.6 to the Diablo Canyon Combined Technical Specifications to assure operability of the SG ADVs. The licensee states that the DCCP design includes four SG ADVs, one for each SG. The ADV design includes remote manual controls and seismically qualified backup air bottles. The air bottles provide a backup air supply sufficient to operate the valves in the event that the normal air supply is unavailable due to a loss of offsite power. Having all four SG ADVs operable assures that, following an SGTR accident concurrent with loss of offsite power, subcooling can be achieved, consistent with the assumptions used in the SGTR analysis, to facilitate equalizing the pressures in the reactor coolant system and the faulted SG. Equalizing pressure will terminate primary-to-secondary coolant leakage, and will thereby prevent subsequent overflow of the faulted SG. The Diablo Canyon SGTR analysis assumes that the ADV for the faulted SG is unavailable, and that the other three ADVs are used for heat removal. Based on this, the new TS requires that all four ADVs be operable, including the associated remote manual controls and the backup air bottles, in Operating Modes 1, 2, and 3. Operability in Modes 4, 5, and 6 is not required because the ADVs are not necessary to achieve pressure equalization in these Modes.

Each ADV is equipped with a locally operated, manual block valve. To assure that all ADVs are operable, the new TS also requires the ADV block valves be open during operation in Modes 1, 2, and 3. The new TS also includes appropriate surveillance requirements for the ADVs and actions to be taken by the plant operators in the event that one or more ADVs are inoperable.

The licensee notes that similar ADV technical specifications have been implemented for several other Westinghouse plants.

The NRC staff has reviewed the licensee's bases for the requirements included in the new Diablo Canyon ADV TS, and finds them acceptable. In summary, the staff finds that TS 3/4.7.1.6 is consistent with the Diablo Canyon SGTR analysis, constitutes an additional restriction on plant operation that will enhance plant safety, and is therefore acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendment. The State official has no comments.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change a surveillance requirement. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

5.0 CONCLUSION

The NRC staff has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: H. Rood

Dated: June 27, 1991