

From: Wang, Alan
Sent: Wednesday, October 05, 2011 3:54 PM
To: Baldwin, Thomas (DCPP); Soenen, Philippe R
Cc: Polickoski, James; Lent, Susan; Burkhardt, Janet
Subject: Diablo Canyon Power Plant License Amendment Request Regarding GDC-17 (ME3018 And ME3019)

Philippe and Tom,

By application dated December 29, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100040087), Pacific Gas and Electric company (PG&E, the licensee), requested an amendment to Facility Operating Licenses (Docket Nos. 50-275, and 50-323) for the Diablo Canyon Power Plant, Units 1 and 2 (DCPP). The proposed amendments would revise the DCPD licensing bases that discusses the conformance of the plant's delayed access source to 10 CFR Part 50, General Design Criteria 17. The NRC staff has determined that the following additional information is needed for the NRC staff to complete our review of the license amendment request (LAR). This request was discussed with Mr. Philippe Soenen of your staff on October 5, 2011, and it was agreed that a response would be provided by November 11, 2011. If circumstances result in the need to revise the requested response date, please contact James Polickoski at (301) 415-5430 or via e-mail at James.Polickoski@nrc.gov.

In Section 2.0 of the LAR, the licensee states that the proposed change would revise Final Safety Analysis Report Update (FSARU) Section 8.2.1.2, "500-kV System," to add the following: "Plant procedures contain actions for operators to complete the 500-kV backfeed, isolation of RCP seal cooling, and restoration of RCS makeup flow within approximately 54 minutes upon loss of 230-kV and all onsite ac power.

Appendix A to 10 CFR 50, General Design Criterion 17, "Electric power systems," states, in part, "An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents. -----. Electric power from the transmission network to the onsite electric distribution system shall be supplied by two physically independent circuits.....Each of these circuits shall be designed to be available in sufficient time following a loss of all onsite alternating current power supplies and the other offsite electric power circuit, to assure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. One of these circuits shall be designed to be available within a few seconds following a loss-of-coolant accident to assure that core cooling, containment integrity, and other vital safety functions are maintained.

Regulatory Guide 1.93, "Availability of Electric Power Sources," states, in part, in Section A that the Limiting Condition of Operation with respect to available electric power sources is an electric power system that satisfies GDC 17 consists of the following electric power sources: (1) two physically independent circuits from the offsite transmission network, each of which is either continuously available or can be made available within a few seconds following a loss-of-coolant

accident (LOCA), (2) redundant onsite a.c. power supplies, and (3) redundant onsite d.c. power supplies.

NRC Standard Review Plan Section 8.2, Sub Section III, (e) states “Each of the circuits from the offsite system to the onsite distribution buses should have the capacity and capability to supply the loads assigned to the bus or buses it is connected to during normal or abnormal operating conditions, accident conditions, or plant shutdown conditions. Therefore, the loads to be supplied during these conditions should be determined from information obtained in coordination with other branches. The capacity and electrical characteristics of transformers, breakers, buses, transmission lines, and the preferred power source for each path should be evaluated to assure that there is adequate capability to supply the maximum connected load during all plant conditions. The design should also be examined to assure that during transfer from one power source to another the design limits of equipment are not exceeded.”

The NRC staff notes that the original licensing basis for the second offsite source (delayed) 500 kV power source for DCCP is approximately 30 seconds, as described in NRC Safety Evaluation Report, “Safety Evaluation By The Directorate of Licensing U.S. Atomic Energy Commission In The Matter of Pacific Gas And Electric Company Diablo Canyon Nuclear Power Station, Units 1 And 2 San Luis Obispo County, California Docket Nos. 50-275 And 50-323.”

Provide the technical and regulatory bases for the proposed time delay of approximately 54 minutes for the second offsite source. Explain how this proposed time delay is an acceptable for the delayed offsite circuit (500 kV source) to provide adequate capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents. If the delayed offsite power source cannot meet the above requirement, explain how you plan to meet the above requirement.

Alan Wang

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Nuclear Regulatory Commission

Division of Operating Reactor Licensing