NRR-PMDAPEm Resource

From: Singal, Balwant
Sent: Thursday, August 18, 2016 8:29 AM
To: Richardson, Michael
Subject: Request for Additional Information - License Amendment Request to Revise Technical Specification 3.4.12 (CAC Nos. MF7501 and MF7502)
Attachments: MF7501-RAI-SRXB.docx

Mike,

By letter dated March 23, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16084A588), Pacific Gas and Electric Company (PG&E) submitted License Amendment Request to revise Technical Specification 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," for Diablo Canyon Power Plant (DCPP), Units 1 and 2. The U.S. Nuclear Regulatory Commission (NRC) staff request PG&E to provide additional information to complete its review of the PG&E request. The request for additional information (RAI) is attached.

Draft RAI was transmitted to PG&E on August 9, 2016. You confirmed by e-mail dated August 17, 2016 that a clarification is not needed. Please treat this e-mail as formal transmittal of RAIs. You are requested to respond within 30 days from the date of this e-mail.

Thanks.

Balwant K. Singal
Senior Project Manager (Diablo Canyon)
Nuclear Regulatory Commission
Division of Operating Reactor Licensing
Balwant.Singal@nrc.gov
Tel: (301) 415-3016
Fax: (301) 415-1222

Hearing Identifier: NRR_PMDA
Email Number: 3000

Mail Envelope Properties (Balwant.Singal@nrc.gov20160818082800)

Subject: Request for Additional Information - License Amendment Request to Revise Technical Specification 3.4.12 (CAC Nos. MF7501 and MF7502)
Sent Date: 8/18/2016 8:28:36 AM
Received Date: 8/18/2016 8:28:00 AM
From: Singal, Balwant

Created By: Balwant.Singal@nrc.gov

Recipients:
"Richardson, Michael" <MJRm@pge.com>
Tracking Status: None

Post Office:

Files	**Size**	**Date & Time**
MESSAGE	1057	8/18/2016 8:28:00 AM
MF7501-RAI-SRXB.docx	22282	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received: ZZZ

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATION 3.4.12

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-275 AND 50-323

By letter dated March 23, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16084A588), Pacific Gas and Electric Company (PG&E) submitted License Amendment Request (LAR) to revise Technical Specification (TS) 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," for Diablo Canyon Power Plant (DCPP), Units 1 and 2. The U.S. Nuclear Regulatory Commission (NRC) staff need the following additional information to complete its review of the PG&E request:

Request for Additional Information

RAI-1

Attachment 4, "LTOP Orifice – Key Design Features," to the Enclosure of letter dated March 23, 2016, states that the positive displacement pump (PDP) had a flowrate that was fairly constant near 100 gpm for all the reactor coolant system (RCS) operating pressure conditions. The replacement centrifugal pump (referred to as the normal charging pump or NCP) is stated to have a maximum flow of 120 gpm through the LTOP orifice. Table 1, "LTOP Maximum Injection Flows," and Figure 1, "LTOP Maximum Flows (gpm) vs. RCS Pressure (psia)," of Enclosure to letter dated March 23, 2016 show that the maximum flow is reduced (on the order of 40 gpm) when changing from the PDP to the NCP, however, the flowrate can be larger with the NCP. Please provide additional details on how the injection curves were determined and explain how the original maximum injection flow curve is still bounding now that there is the possibility of larger flowrates with the NCP.

RAI-2

Attachment 4 to the Enclosure of letter dated March 23, 2016 states, in part,

> From the results presented in Figure 3, ["LTOP Orifice – Pressure Drop – vs – Flow Rate,"] it can be observed that LTOP orifice limits the flow to less than 120 gpm.

While the data points for flowrate do not exceed 120 gpm on Figure 3 of Attachment 4, it is not clear that the LTOP orifice limits the flow to 120 gpm or if the testing just stopped at this point.

Please provide additional information to demonstrate the pump is not capable of supplying more than 120 gpm through the LTOP orifice.

RAI-3

Figure 4, “NCP aligned to LTOP Orifice – Acceptance Criteria,” of Attachment 4 to the Enclosure of letter dated March 23, 2016 shows the pressure drop acceptance criteria for the LTOP orifice. This figure shows flowrates from 50 to 80 gpm, however, the maximum flowrate of the normal charging pump (NCP) through the LTOP orifice is stated to be 120 gpm. Please justify the use of 50 to 80 gpm (scaling on the X-axis) when the maximum flowrate is 120 gpm.

RAI-4

Figure 1, “DCPP LTOP Mass Input Typical RCS Pressure Transient,” of Attachment 5, Additional Information,” to the Enclosure of letter dated March 23, 2016 shows a typical RCS pressure transient. In this figure, the Power Operated Relief Valve setpoint is given as 435 psig (gage), however, the curve (dotted line) is plotted as 435 psia (absolute). Given that the overshoot and undershoot values are based off of this value, please confirm that this is just an error on the example figure, rather than an error in any actual calculations.