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PG&E Letter DCL-10-116

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20852

Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
Response to NRC Letter dated August 9, 2010, Request for Additional Information
(Set 18) for the Diablo Canyon License Renewal Application

Dear Commissioners and Staff:

By letter dated November 23, 2009, Pacific Gas and Electric Company (PG&E) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for the renewal of Facility Operating Licenses DPR-80 and DPR-82, for Diablo Canyon Power Plant (DCPP) Units 1 and 2, respectively. The application included the license renewal application (LRA) and Applicant's Environmental Report – Operating License Renewal Stage.

By letter dated August 9, 2010, the NRC staff requested additional information needed to continue their review of the DCPP LRA.

PG&E's response to the request for additional information is included in Enclosure 1.

PG&E makes no regulatory commitments in this letter.

If you have any questions regarding this response, please contact Mr. Terence L. Grebel, License Renewal Project Manager, at (805) 545-4160.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 7, 2010.

Sincerely,

James R. Becker

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NRR



pns/50333882

Enclosure

cc: Diablo Distribution

cc/enc: Elmo E. Collins, NRC Region IV Regional Administrator

Nathaniel Ferrer, NRC Project Manager, License Renewal

Kimberly J. Green, NRC Project Manager, License Renewal

Michael S. Peck, NRC Senior Resident Inspector

Alan B. Wang, NRC Project Manager, Office of Nuclear Reactor Regulation

**PG&E Response to NRC Letter dated August 9, 2010,
Request for Additional Information (Set 18) for the
Diablo Canyon License Renewal Application**

RAI 2.3.3.6-02

On LRA drawing LR-DCPP-11-107711-05 at location 59-B, the applicant depicts piping from the isolation valve that leads to the gaseous radwaste vent header as not within the scope of license renewal (i.e., not highlighted). However, on the continuation LRA drawing LR-DCPP-24 106724-03 at location 31-B, the piping is shown as in scope for 10 CFR 54.4(a)(2). The staff requests that the applicant clarify its exclusion of the non-highlighted piping section at the above location on LRA drawing LR-DCPP-11-107711-05.

PG&E Response to RAI 2.3.3.6-02

License Renewal Application (LRA) drawing LR-DCPP-11-107711-05 (location 59-B) has been revised to show the continuation of the piping to the gaseous radwaste vent header highlighted red. This boundary drawing was also revised to add a seismic (F.4.a) flag to the containment air sample panel to indicate that it is seismically mounted and can serve as an anchor point for sample piping attached to it. There were no changes made to the license renewal application.

RAI 2.3.3.7-02

In license renewal application (LRA) Section 2,3.3.7 the applicant states, "The safety-related components which are served by the backup air/nitrogen system include valves for charging/spray capability, steam dump capability, RCS boration sample capability, the RCS power-operated relief valves for overpressure protection, the letdown isolation valves, and fire water containment isolation valves." The applicant continues with, "The backup air/nitrogen supply system provides compressed gas to safety-related air operated components that are required to perform an active safety-related function after the loss of the compressed air system."

Letdown isolation valves LCV-459 and LCV-460 are shown in scope of license renewal under 10 CFR 54.4(a)(1) on LRA drawing LR-DCPP-08-106708-03 (at location 32-A). However, the backup nitrogen supply to the valves' air operators is depicted as not in scope of license renewal on LRA drawing LR-DCPP-25-106725-31 (at location 311-C). Since the DCPD LRA description for the compressed gas system specifically includes the letdown isolation valves as one of the safety-related components served by backup gas, then the gas components should be included in the scope of the license renewal under 10 CFR 54.4 (a)(1). The staff requests that the applicant justify excluding the backup air to the letdown isolation valves from scope of license renewal.

PG&E Response to RAI 2.3.3.7-02

Although Letdown Isolation Valves LCV-459 and LCV-460 are safety-related and are served by the backup air/nitrogen supply system, the function of the backup air/nitrogen system in this application is not safety-related. The letdown isolation valves fail closed on a loss of instrument air. The backup air/nitrogen supply system allows these valves to be opened on a loss of instrument air to facilitate taking the plant from hot standby to cold shutdown utilizing normal letdown. However, normal letdown is not required to be in service.

RAI 2.3.3.7-03

The applicant depicts water traps and oil filters in the compressed gas system on LRA drawings as not in the scope of license renewal. By the nature of these components, the water traps and oil filters would contain fluid under system pressure. In accordance with the applicant's methodology as stated in DCP LRA Section 2.1.2.2, fluid-filled components in the vicinity of SSCs in scope of license renewal under 10 CFR 54.4(a)(1) should be included in the scope of license renewal. The staff requests that the applicant justify the exclusion of these components from the scope of license renewal.

PG&E Response to RAI 2.3.3.7-03

The compressed air system does not contain oil, and therefore there is no configuration that would have oil under system pressure in the vicinity of structures, systems, and components (SSCs) in scope of license renewal under 10 CFR 54.4(a)(1). Based on a review of the license renewal boundary drawings, no oil filters were identified. The only filters that were identified were air particulate filters.

The water traps discussed in the request for additional information (RAI) are located in the auxiliary building, intake structure, turbine building, and outside. The pressure and temperature in the traps and filters are less than the high energy criteria.

The traps located in the auxiliary building and intake structure are small, and activate when only a small amount of liquid has accumulated. When the trap activates, it opens and sprays the small quantity of accumulated liquid directly to the environment. Since the normal operation of these traps includes discharging the accumulated liquid to their surroundings, it is not necessary to put them in the scope of license renewal to manage their aging.

The traps located in the turbine building are located in areas where the only SSCs, in scope of license renewal under 10 CFR 54.4(a)(1), in their vicinity are safety-related cables in conduits. As stated in response to RAI 2.3-4, the mitigative option was applied to exclude certain SSCs from the 10 CFR 54.4(a)(2) scope where the only potential interaction with a safety-related SSC was fluid spray onto conduit containing safety-related electrical cables. These cables are protected by solid pipe conduit that is within the scope of license renewal as a structural component. The mitigative design feature is conduit that protects safety-related cable within the scope of license renewal in accordance with 10 CFR 54.4(a)(1). The conduit is credited with protecting the cable from the effects of spray from moderate energy piping. SSCs, in scope of license renewal under 10 CFR 54.4(a)(1),

in the vicinity of these traps and oil filters are protected from the effects of spray from moderate energy piping, and the traps and oil filters are not high energy and therefore are not in scope of license renewal.

The SSCs, in scope of license renewal under 10 CFR 54.4(a)(1), that are located outside are designed to be in a wetted environment, precluding the need to include the traps in scope for a leakage boundary function under 10 CFR 54.4(a)(2).

RAI 3.1.2.2.14-1

SRP-LR Section 3.1.2.2.14 states that wall thinning due to flow accelerated corrosion (FAC) could occur in steel feedwater inlet rings and supports. GALL Report, item IV.D1-26, references NRC IN 91-19, "Steam Generator Feedwater Distribution Piping Damage," for evidence of wall thinning due to flow accelerated corrosion in these steam generator components and recommends that a plant-specific AMP is to be evaluated because existing programs may not be capable of mitigating or detecting wall thinning due to flow-accelerated corrosion. LRA Section 3.1.2.2.14 addresses wall thinning of steam generator steel feedwater inlet rings and supports due to the aging mechanism of FAC.

The applicant states that since NRC IN 91-19 is specific to Combustion Engineering steam generators and because it does not have this design of steam generator, no action is required. The applicant also states in plant-specific note 2 of LRA Table 3.1.2-4 that this form of degradation has been detected only in certain Combustion Engineering pre-System 80 steam generators and that its replacement steam generators are Westinghouse Model 54. The applicant further states that no operating experience at DCPP or other units with Westinghouse Model 54 steam generators suggests that wall thinning of the feedrings is occurring; therefore it has determined that this condition is not applicable and no further evaluation is required. The staff does not consider IN 91-19 to be limited to Combustion Engineering steam generators; therefore, the applicant should clarify why no action is required for addressing FAC of the feedwater ring. The staff notes that the applicant's description of the new steam generator design in the LRA Sections 2.3.1.4 and B2.1.8 does not provide sufficient details about the feedwater inlet ring and supports to judge whether FAC could potentially occur in the new steam generator design.

The applicant states that it will conservatively credit its Water Chemistry Program (B2.1.2) and Steam Generator Tubing Integrity Program (B2.1.8) to manage wall thinning due to flow-accelerated corrosion of the feedwater inlet ring and supports. Moreover, in LRA Table 3.1.2-4, the staff notes that the applicant manages the carbon steel steam generator separators in the same way as the feedwater ring, without providing sufficient explanation. With respect to secondary side steam generator internals, it is not clear to the staff whether all of them are included within the scope of the Steam generator Tube Integrity Program.

1. Please justify why FAC will not be a concern for these steam generator parts during the period of extended operation.

- 2. Please confirm that all secondary side steam generator internals, especially the feedwater ring and separators, are included within the scope of your Steam Generator Tube Integrity Program.*

PG&E Response to RAI 3.1.2.2.14-1

1. The design materials selections of the Delta 54 replacement steam generators (SGs) have been upgraded over those used for the original Model 51 Series SGs. The feeding pipe and fitting are chrome-moly alloy and contain 1.25 percent chromium to limit erosion. The feeding spray nozzles are fabricated from Alloy 690. As such, these components are not susceptible to flow-accelerated corrosion.
2. All secondary side SG internals (including the feedwater ring and separators) are included within the scope of the SG Integrity Program.