



James R. Becker
Vice President
Diablo Canyon Operations and
Station Director

Diablo Canyon Power Plant
P. O. Box 56
Avila Beach, CA 93424

805.545.3462
Fax: 805.545.4234

November 2, 2006

PG&E Letter DCL-06-126

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Docket No. 50-275, OL-DPR-80
Diablo Canyon Unit 1
Supplement to Exigent License Amendment Request 06-08
Revision to Technical Specification 3.8.4, "DC Sources – Operating," Condition B

Reference: 1. PG&E Letter DCL-06-120, "Exigent License Amendment Request 06-08, Revision to Technical Specification 3.8.4, 'DC Sources – Operating,' Condition B," dated October 18, 2006

By letter dated October 18, 2006 (Reference 1), Pacific Gas and Electric Company (PG&E) submitted an exigent request for a one-time change to Technical Specification (TS) 3.8.4, Condition B, to extend the completion time (CT) for an inoperable vital battery from 2 hours to 12 hours. The extended CT would allow sufficient time to correct a degraded condition affecting a single cell (Cell 15) that impacts the long-term reliability of Unit 1 Vital Battery 1-1 by either bypassing or replacing the battery cell.

In discussions with the NRC staff, PG&E agreed to limit the proposed CT to 4 hours, which would allow only bypassing of Cell 15 without introducing time pressure as an error precursor. Revised TS and TS Bases pages reflecting this change are included in Enclosures 2 and 3.

In addition, the NRC staff identified additional information required to complete its review. PG&E's response to that request for information is included in Enclosure 1.

In Reference 1, PG&E stated that it would be prepared to either bypass or replace the Cell 15 upon issuance of the license amendment. That statement was based on potential further degradation of the cell. Following discovery of the Cell 15 degraded condition, PG&E implemented compensatory measures to install a single cell charger, and perform daily monitoring of Battery 1-1 and Cell 15 parameters. Daily monitoring since October 15, 2006, has shown that the Battery 1-1 and Cell 15 parameters have remained stable and within specification.



Since there is risk associated with removing a cell from service, and Battery 1-1 is currently operable, PG&E now intends to maintain the compensatory measures in place until the Unit 1 Fourteenth Refueling Outage (1R14) scheduled to start in April 2007, at which time Cell 15 will be replaced. Should circumstances warrant taking corrective actions sooner than 1R14, PG&E will bypass Cell 15 to support continued operability of Vital Battery 1-1.

The response provided in this submittal does not affect the results of the technical evaluation or the no significant hazards consideration determination previously transmitted in Reference 1.

PG&E makes no regulatory commitments (as defined by NEI 99-04) in this letter. This letter includes no revisions to existing regulatory commitments.

If you have any questions or require additional information, please contact Stan Ketelsen at 805-545-4720.

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

Executed on November 2, 2006.

Sincerely,

James R. Becker
Vice President - Diablo Canyon Operations and Station Director

jer1/3664
Enclosures

cc: Edgar Bailey, DHS
Terry W. Jackson
Bruce S. Mallett
Diablo Distribution
cc/enc: Alan B. Wang

Response to Request for Additional Information

NRC Question 1:

Describe the specific compensatory actions that will be taken prior to removing the battery from service (e.g., contact the Grid Operator prior to removing the battery from service; enact the protective train concept, etc.)

Pacific Gas and Electric Company (PG&E) Response:

In accordance with 10 CFR 50.65(a), PG&E will assess and manage the risk associated with taking Battery 1-1 out of service for maintenance by implementing the following compensatory measures:

- Communicate with the Diablo Canyon Power Plant (DCPP) Switching Center and Transmission Operations to ensure no elective maintenance or testing on the offsite power sources will be performed, and to verify offsite power sources are not in danger of being lost due to wild fires, other grid related events, or work activities.
- Provide assurance that storms or ocean swell events are not expected during the maintenance period.
- Assure that Operations, Maintenance, and Engineering are notified in the event of external events that may jeopardize offsite power sources, and that they determine if postponement of the battery maintenance is warranted.
- Avoid scheduling site activities that may cause a plant transient on the affected unit. Exceptions should be authorized in accordance with DCPP Administrative Procedure AD7.DC6, "On-Line Maintenance Risk Management."
- Avoid performing any testing or elective maintenance on the affected unit unless it is identified on the approved work week schedule. Exceptions may be approved by the shift manager or work week manager.
- Verify all parts and equipment necessary for the project have been procured and meet quality related checks.
- Post caution signs on the affected unit's battery room doors; reroute normal traffic during maintenance.
- Perform a walkdown verifying the other two batteries and associated areas are clean and in good material condition with no activities being performed, which could jeopardize operation.

- Verify that redundant safety-related systems, subsystems, trains, components and devices that depend on the other two batteries are operable prior to beginning maintenance.
- Perform no elective maintenance or testing on components required to crosstie the vital 4kV buses between units as required by DCPD emergency operating procedures.
- Perform no elective maintenance or testing on components (other than normally scheduled surveillances) on affected unit's emergency diesel generators (EDGs).

NRC Question 2:

How will the proposed change affect the SBO [Station Blackout] coping capabilities of Diablo Canyon Unit 1?

PG&E Response:

SBO at DCPD is defined as loss of power from the 500kV and 230kV switchyards with the failure of two EDGs to operate in one of the units. The other unit is assumed to experience only a loss of offsite power.

The DCPD SBO analysis was performed using the guidance provided in NUMARC 87-00, Revision 0, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," dated November 1987. During an SBO event, the SBO analysis demonstrated that the plant could be safely shutdown utilizing either Bus G or Bus H and their normally connected EDGs (emergency alternating current [AC] sources) and, thereby, the third EDG and its Bus F were declared the alternate AC (AAC) source. However, during an SBO event, any of the three EDGs may be used as the AAC source.

The turbine driven auxiliary feedwater (TDAFW) pump steam supply valve FCV-95 is powered from Battery 1-2. The level control valves (LCVs) for the TDAFW pump (LCV-106, -107, -108, and -109) are powered from 480V Bus G. Therefore, the proposed change would not affect the SBO coping capabilities of DCPD Unit 1.

- Verify that redundant safety-related systems, subsystems, trains, components and devices that depend on the other two batteries are operable prior to beginning maintenance.
- Perform no elective maintenance or testing on components required to cross-tie the vital 4kV buses between units as required by DCPD emergency operating procedures.
- Perform no elective maintenance or testing on components (other than normally scheduled surveillances) on affected unit's emergency diesel generators (EDGs).

NRC Question 2:

How will the proposed change affect the SBO [Station Blackout] coping capabilities of Diablo Canyon Unit 1?

PG&E Response:

SBO at DCPD is defined as loss of power from the 500kV and 230kV switchyards with the failure of two EDGs to operate in one of the units. The other unit is assumed to experience only a loss of offsite power.

The DCPD SBO analysis was performed using the guidance provided in NUMARC 87-00, Revision 0, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," dated November 1987. During an SBO event, the SBO analysis demonstrated that the plant could be safely shutdown utilizing either Bus G or Bus H and their normally connected EDGs (emergency alternating current [AC] sources) and, thereby, the third EDG and its Bus F were declared the alternate AC (AAC) source. However, during an SBO event, any of the three EDGs may be used as the AAC source.

The turbine driven auxiliary feedwater (TDAFW) pump steam supply valve FCV-95 is powered from Battery 1-2. The level control valves (LCVs) for the TDAFW pump (LCV-106, -107, -108, and -109) are powered from 480V Bus G. Therefore, the proposed change would not affect the SBO coping capabilities of DCPD Unit 1.

Proposed Technical Specification Changes (retyped)

Remove Page

3.8-18

Insert Page

3.8-18
3.8-18a

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources - Operating

LCO 3.8.4 Three Class 1E DC electrical power subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One battery charger inoperable.	A.1 Restore battery terminal voltage to greater than or equal to the minimum established float voltage.	2 hours
	<u>AND</u>	
	A.2 Verify battery float current \leq 2 amps.	12 hours
	<u>AND</u>	
	A.3 Restore battery charger to OPERABLE status.	14 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One battery inoperable.	B.1 Restore battery to OPERABLE status.	2 hours
	<u>OR</u>	
	B.2.1.1 -----Note----- Required Actions B.2.1.1, B.2.1.2, and B.2.2 are applicable, on a one time basis, for Unit 1 cycle 14. ----- Determine OPERABLE batteries are not inoperable due to common cause failure.	2 hours
	B.2.1.2 Perform SR 3.8.4.1 and SR 3.8.6.1 for OPERABLE batteries.	2 hours
	<u>AND</u>	
	B.2.2 Restore battery to OPERABLE status.	4 hours
C. One DC electrical power subsystem inoperable for reasons other than Condition A or B.	C.1 Restore DC electrical power subsystem to OPERABLE status.	2 hours
D. More than one full capacity charger receiving power simultaneously from a single 480 V vital bus.	D.1 Restore the DC electrical power subsystem to a configuration wherein each charger is powered from its associated 480 volt vital bus.	14 days
E. Required Action and Associated Completion Time not met.	E.1 Be in MODE 3.	6 hours
	<u>AND</u> E.2 Be in MODE 5.	36 hours

Changes to Technical Specification Bases Pages
(For information only)

BASES

ACTIONS
(continued)

B.1

Condition B represents one DC electrical power subsystem with one battery inoperable. With one battery inoperable, the DC bus is being supplied by the associated OPERABLE battery charger. Any event that results in a loss of the associated 480 Vac vital bus supporting the normal battery charger will also result in loss of or degraded DC to the associated DC electrical power subsystem. Recovery of the 480 Vac vital bus, especially if it is due to a loss of offsite power, will be hampered by the fact that many of the components necessary for the recovery (e.g., diesel generator control and field flash, AC load shed and diesel generator output circuit breakers, etc.) likely rely upon the battery. In addition, the energization transients of any DC loads that are beyond the capability of the battery charger and normally require the assistance of the battery will not be able to be brought online. The 2 hour limit allows sufficient time to effect restoration of an inoperable battery given that the majority of the conditions that lead to battery inoperability (e.g., loss of battery charger, battery cell voltage less than 2.07 V, etc.) are identified in Specifications 3.8.4, 3.8.5, and 3.8.6 together with additional specific completion times.

B.2.1.1, B.2.1.2, B.2.2

The completion time for restoring the inoperable battery to OPERABLE status can be extended to 4 hours, on a one-time basis for Unit 1 Vital Battery 1-1 for Unit 1 cycle 14, if additional Required Actions are taken. The 4-hour completion time is based upon Probabilistic Risk Assessment (PRA) calculation of risk given one battery is inoperable. This PRA assessment makes the assumptions that actions are taken to either determine that the OPERABLE batteries are not inoperable due to common cause failure or SR 3.8.4.1 and SR 3.8.6.1 are performed for the OPERABLE batteries. Taking steps to determine whether the battery condition is a result of a common cause failure will provide assurance that a similar failure will not occur to other OPERABLE batteries. Performing SR 3.8.4.1 and SR 3.8.6.1 will serve the same purpose of ensuring the OPERABLE batteries remain in OPERABLE condition. The 2-hour completion times for Required Actions B.2.1.1, and B.2.1.2 are consistent with completion time to restore a battery to OPERABLE status in Required Action B.1. When Required Actions B.2.1.1 or B.2.1.2 are met, then the inoperable battery can be restored to OPERABLE status in 4 hours.