



**Pacific Gas and
Electric Company**

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

800.545.6000

March 12, 2008

PG&E Letter DCL-08-021

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Docket No. 50-275, OL-DPR-80
Diablo Canyon Unit 1
Revision to the Unit 1 Reactor Vessel Material Surveillance Program Withdrawal
Schedule

Dear Commissioners and Staff:

Pursuant to 10 CFR 50 Appendix H, Section III.B.3, Pacific Gas and Electric Company (PG&E) hereby requests approval for a revision to the Unit 1 reactor vessel material surveillance program withdrawal schedule.

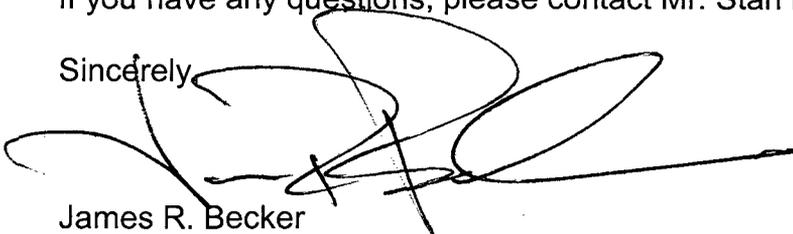
The Unit 1 reactor material surveillance program withdrawal schedule is provided in Diablo Canyon Power Plant (DCPP) Final Safety Analysis Report Update (FSARU) Table 5.2-22. The proposed change would revise that schedule to reflect withdrawal of Capsule B during the Unit 1 Sixteenth Refueling Outage, which is scheduled to begin October 4, 2010. Capsule B is currently scheduled to be withdrawn during the Unit 1 Fifteenth Refueling Outage, which is scheduled to begin January 26, 2009.

Enclosure 1 provides a description and assessment of the proposed change to the reactor vessel material surveillance program withdrawal schedule.
Enclosure 2 provides a mark-up of the affected DCPP FSARU page.

To support implementation of the revised withdrawal schedule, PG&E requests approval of this proposed change by December 31, 2008. DCPP FSARU Table 5.2-22 will be revised to incorporate the change upon NRC approval.

If you have any questions, please contact Mr. Stan Ketelsen at (805) 545-4720.

Sincerely,



James R. Becker
Site Vice President & Station Director

A member of the STARS (Strategic Teaming and Resource Sharing) Alliance
Callaway • Comanche Peak • Diablo Canyon • Palo Verde • South Texas Project • Wolf Creek

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Enclosures

cc/enc:

Elmo E. Collins, NRC Regional Administrator, Region IV

Michael S. Peck, NRC Senior Resident Inspector

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

Diablo Distribution

DESCRIPTION AND ASSESSMENT

1.0 BACKGROUND

Appendix H of 10 CFR 50 (Reference 1) requires a material surveillance program to monitor changes in the fracture toughness properties of ferritic material in the reactor vessel beltline region which result from exposure of these materials to neutron irradiation and the thermal environment. Under this program, fracture toughness test data are obtained and analyzed from material specimens exposed in surveillance capsules which are withdrawn periodically from the reactor vessel. Test results must be reported to the NRC within one year of the data of the capsule withdrawal. Also, Section III.B.3 of Appendix H to 10 CFR 50, requires the capsule withdrawal schedule to be approved by the NRC prior to implementation.

The design of the surveillance program and the withdrawal schedule must meet the requirements of the edition of ASTM E 185 that is current on the issue date of the ASME Code to which the reactor vessel was purchased. The ASTM E 185 version of record for Diablo Canyon Power Plant (DCPP) Unit 1 is ASTM E 185-70. A Unit 1 supplemental reactor vessel surveillance capsule program schedule was requested by DCPP in Pacific Gas and Electric Company (PG&E) Letter DCL-92-072, dated March 31, 1992. This program was approved by the NRC in a Safety Evaluation to PG&E dated September 4, 1992, "Evaluation of Diablo Canyon Unit 1 Supplemental Reactor Vessel Radiation Surveillance Program (TAC No. M83285)."

2.0 DESCRIPTION OF CHANGES TO THE REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM WITHDRAWAL SCHEDULE

The Unit 1 Reactor Material Surveillance Program withdrawal schedule is located in the DCPP Final Safety Analysis Report Update (FSARU). The proposed change revises the schedule to change the removal time for Capsule B from 20.7 effective full power years (EFPY) to 21.9 EFPY.

3.0 ANALYSIS

NUREG-1801 requires that a licensee pursuing license renewal, and not crediting alternative dosimetry, must have a reactor vessel surveillance program consisting of a vessel material coupon that has fluence exposure equivalent to 60 years of operation. PG&E is currently performing a License Renewal Feasibility Study to determine whether to file a License Renewal Application for DCPP Units 1 and 2. The current DCPP withdrawal schedule for Unit 1 does not meet the NUREG-1801 requirements for license renewal. A change is requested in the removal

time for Capsule B to accommodate NUREG-1801 compliance. A removal time of approximately 21.9 EFPY for Capsule B satisfies NUREG-1801.

The DCPP Unit 2 surveillance capsule withdrawal program currently meets the requirements of NUREG-1801, therefore, no changes in the DCPP Unit 2 surveillance capsule withdrawal program are needed.

The request to revise the removal time for DCPP Unit 1 Capsule B fully complies with the requirements of 10 CFR 50 Appendix H and ASTM E 185-70. In addition, this request remains in full compliance with the requirements set forth in DCPP Technical Specifications.

4.0 REFERENCES

1. Code of Federal Regulations, Title 10, Part 50, Appendix H, "Reactor Vessel Material Surveillance Program Requirements," January 1998.
2. American Society of Testing and Materials, "Standard Recommended Practice for Surveillance Tests for Nuclear Reactor Vessels," ASTM E 185-70.
3. Diablo Canyon Final Safety Analysis Report Update (FSARU), Revision 17, 2006.
4. NUREG-1801, "Generic Aging Lessons Learned (GALL)," Revision 1, 2005.

MARK-UP of TABLE 5.2-22

**REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM
 WITHDRAWAL SCHEDULE**

UNIT 1			
<u>Capsule^{(f)(g)}</u>	<u>Location</u>	<u>Lead Factor^(d)</u>	<u>Removal Time (EFPY)^(a)</u>
S	320°	3.46	1.25 (Tested, 1R1)
Y	40°	3.44	5.86 (Tested, 1R5)
T	140°	3.44	5.86 (Removed, 1R5)
Z	220°	3.44	5.86 (Removed, 1R5)
V	320°	2.26	14.3 (Tested 1R11)
C ^(b)	140°	3.46	15.9 (Removed 1R12)
D ^(b)	220°	3.46	15.9 (Removed 1R12)
B ^(b)	40°	3.46	20.7 21.9
A ^(b)	184°	1.31	Standby
U	356°	1.28	Standby
X	176°	1.28	Standby
W	4°	1.28	Standby
UNIT 2			
<u>Capsule</u>	<u>Location</u>	<u>Lead Factor^(d)</u>	<u>Removal Time (EFPY)^(a)</u>
U	56°	5.15	1.02 (Tested, 2R1)
X	236°	5.40	3.16 (Tested, 2R3)
Y	238.5°	4.58	7.08 (Tested, 2R6)
W ^(e)	124°	5.26	11.49 (Removed, 2R9)
V ^(e)	58.5°	4.58	11.49 (Tested, 2R9)
Z ^(e)	304°	5.26	11.49 (Removed, 2R9)

- (a) Approximate full power years from plant startup.
 (b) Four supplemental capsules installed at 5.86 EFPY (EOC5).
 (c) Deleted in Revision 16.
 (d) Approximate lead factors taken from WCAP-15958 (Rev. 0) and WCAP-15423 (Rev. 0) for Units 1 and 2, respectively.
 (e) EFPY for Unit 2 capsules removed in 2R9; W = 60.4, V = 52.6, and Z = 60.4
 (f) Unit 1 capsules T, U, W, X, and Z are Type 1 (base metal only)
 (g) Unit 1 capsules S, V, and Y are Type 2 (base metal and weld)