Pacific Gas and Electric Company®

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PG&E Letter DCL-06-011

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

Docket No. 50-275, OL-DPR-80
Diablo Canyon Unit 1

60-Day Response to Revision 1 of NRC Order EA-03-009, "Issuance of First Revised NRC Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors"

Dear Commissioners and Staff:

On February 11, 2003, the NRC issued Order EA-03-009 for interim inspection requirements for reactor pressure vessel heads at pressurized water reactor facilities. On February 20, 2004, the NRC issued the First Revised Order EA-03-009, which superseded Order EA-03-009. Revision 1 of the Order modified the requirements regarding nondestructive examination of the penetration nozzles and requires that, within 60 days after returning a unit to operation, licensees provide a description of the inspections performed in accordance with the Order and describe any leaks or boron deposits found during the inspection.

During the Diablo Canyon Power Plant (DCPP) Unit 1 thirteenth refueling outage (1R13), completed on December 3, 2005, PG&E performed a bare metal visual inspection of 100 percent of the reactor pressure vessel (RPV) head penetrations, including 360 degrees around each of the vessel head penetration nozzles and the head vent penetration. Visual inspection of greater than 95 percent of the RPV head surface was also performed to identify any degradation. No evidence of vessel head penetration nozzle leakage or cracking, or degradation of the RPV head was identified. PG&E also performed nonvisual nondestructive volumetric examination (NDE) on all 79 reactor head penetration tubes, including the head vent penetration. The examination detected no discontinuities or indications of boric acid leak paths, and no flaws needing disposition or corrective action were identified. In addition, PG&E performed a visual inspection to identify potential boric acid leaks from the pressure-retaining components above the RPV head and no evidence of leakage was identified. Enclosure 1 contains the 60-day response for DCPP Unit 1 (1R13) required by the first revision of NRC Order EA-03-009.

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

Sincerely,

Donna Jacobs
Vice President – Nuclear Services

Why1/4279
Enclosures
cc: Diablo Distribution
cc/enc: Edgar Bailey, DHS
Terry W. Jackson, Senior Resident Inspector
Bruce S. Mallett, Region IV
Alan B. Wang, NRR

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of PACIFIC GAS AND ELECTRIC COMPANY Diablo Canyon Power Plant Unit 1	Docket No. 50-275 Facility Operating License No. DPR-80

AFFIDAVIT

Donna Jacobs, being of lawful age, first being duly sworn upon oath states that she is Vice President – Nuclear Services of Pacific Gas and Electric Company; that she has executed this response to the first revision of NRC Order EA-03-009 on behalf of said company with full power and authority to do so; that she is familiar with the content thereof; and that the facts stated therein are true and correct to the best of her knowledge, information, and belief.

Donna Jacobs
Vice President – Nuclear Services

Subscribed and sworn to before me this 31st day of January, 2006.

Notary Public
County of San Luis Obispo
State of California

SANDRA EATHERLY
Commission # 1425568
Notary Public - California
San Luis Obispo County
My Comm. Expires Jul 18, 2007

60-Day Response to NRC order EA-03-009, "Issuance of First Revised NRC Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel heads at Pressurized Water Reactors"

NRC Required Information:

The first revision of NRC Order EA-03-009, dated February 20, 2004, required that, for each inspection required in Paragraph C of the Order, the Licensee shall submit a report detailing the inspection results within 60 days after returning the plant to operation. For each inspection required in Paragraph D of the Order, the Licensee shall submit a report detailing the inspection results within 60 days after returning the plant to operation if a leak or boron deposit was found during the inspection.

PG&E Response:

Diablo Canyon Power Plant (DCPP) Unit 1 has accumulated approximately 11.15 total effective degradation years prior to the Unit 1 thirteenth refueling outage (1R13). Therefore, PG&E was required to perform an inspection in accordance with NRC Order EA-03-009, Sections IV.C.(5) and IV.D.

During 1R13, which was completed on December 3, 2005, PG&E complied with Section IV.C.(5)(a) of Revision 1 of the Order by performing a bare metal visual examination of the reactor pressure vessel (RPV) head penetrations, including 360 degrees around each of the vessel head penetration (VHP) nozzles and the head vent penetration. The bare metal visual inspection to identify degradation covered greater than 95 percent of the RPV head surface. The only area not covered by the bare metal visual inspection was that area inaccessible due to support structure interference. However, the inspection included those areas of the RPV head upslope and downslope from the support structure interference. No evidence of boron or corrosive product was found and no evidence of VHP nozzle leakage or cracking, or degradation of the RPV head was identified.

During 1R13, PG&E also complied with Section IV.C.(5)(b)(i) of Revision 1 of the Order by performing a nonvisual nondestructive volumetric examination (NDE) on all 79 reactor head penetration tubes (RHPT), including the head vent penetration. A combination of ultrasonic and eddy current testing methods was used with probes delivered to the tubes by a remote positioning device (or manually in the case of the head vent tube). The inspection encountered limitations to the Order's specified examination areas in a few of the RHPTs due to the large as-built configuration of the J-welds, the chamfer at the end of the tubes, and the geometry of the transducers on the examination probes. The inspection coverage above the J-groove satisfies the order requirements for all penetrations. The inspection coverage below the J-groove weld on the downhill side of the penetrations was achieved for most of the penetration tubes;

however, the coverage specified in the Order could not be achieved on 7 of the penetrations. They were penetrations 38, 54, 69, 71, 72, 73, and 79. PG&E requested relaxation from the requirement of Section IV.C.(5)(b) of Revision 1 of the Order where inspection coverage is limited by inaccessible areas of the vessel head penetration nozzles for DCPP Unit 1. This request for relaxation was made to the NRC in PG&E Letter DCL-05-067, "Relaxation Request for NRC Issuance of First Revised Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors," dated May 27, 2005. The NRC approved relaxation from this requirement of the Order for DCPP Unit 1 by letter, "Diablo Canyon Power Plant, Unit No. 1 – Relaxation of Requirements Associated with First Revised Order (EA-03-009) dated February 20, 2004, Regarding Alternate Examination Coverage for Reactor Pressure Vessel Head Penetration Nozzles (TAC No. MC7071)," dated October 26, 2005. The examinations detected no discontinuities or indications of boric acid leak paths, no flaws needing disposition, and no corrective actions were identified.

Finally, during 1R13, PG&E complied with Section IV.D of Revision 1 of the Order by performing a visual inspection to identify potential boric acid leaks from pressure-retaining components above the RPV head. No evidence of leakage from the pressure-retaining components above the RPV head was identified.