



**Pacific Gas and
Electric Company**

January 18, 2006

PG&E Letter HBL-06-001

U.S. Nuclear Regulatory Commission
ATTN: Michael Johnson, Director, Office of Enforcement
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Docket No. 50-133, OP-DPR-7
Humboldt Bay Power Plant, Unit 3
Reply to a Notice of Violation; EA-05-166

Dear Commissioners and Staff:

On August 19, 2005, the NRC issued Special Inspection Final Report 050-00133/05-002 regarding the special nuclear material (SNM) control and accountability program at Humboldt Bay Power Plant (HBPP) Unit 3. In this report, the NRC identified three apparent violations of NRC requirements. The NRC provided PG&E the opportunity to either request a predecisional enforcement conference or respond to the apparent violations within 30 days. In response to the apparent violations, PG&E submitted PG&E Letter HBL-05-016, "Response to Apparent Violations in Inspection Report No. 050-00133/05-002; EA-05-166," dated September 19, 2005.

Based on information developed during the inspection and information contained in the PG&E September 19, 2005, response letter, the NRC determined that three violations of NRC requirements occurred. As a result, on December 20, 2005, the NRC issued a Notice of Violation (NOV) and Proposed Imposition of Civil Penalty - \$96,000. The NRC required PG&E to submit a written reply to the NOV within 30 days and to submit payment of the civil penalty.

PG&E's reply to the NOV is contained in the enclosure to this letter. Payment of the proposed civil penalty was wire transferred to the NRC on January 17, 2006. Despite the violations, the NRC and PG&E have concluded that the overall risk from the events causing the violations was minimal to the health and safety of the public, workers and the environment. If you have any questions about the enclosed information, please contact me at (415) 973-4684, or David Sokolsky at (707) 444-0801.

Sincerely,

John S. Keenan
Senior Vice President - Generation and Chief Nuclear Officer

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Enclosure

cc/enc: Emilio Garcia
John B. Hickman
Bruce S. Mallett
NRC Document Control Desk
PG Fossil Gen HBPP Humboldt Distribution

PACIFIC GAS AND ELECTRIC COMPANY
REPLY TO NRC NOTICE OF VIOLATION

NRC Notice of Violation (NOV), dated December 20, 2005, contains three violations of NRC requirements. The NRC required PG&E to reply to the NOV and include for each alleged violation: (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, and if denied, the reasons why, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further violations, and (5) the date when full compliance will be achieved. The violations and PG&E's reply to the violations appear below.

Statement of Violation:

During an NRC special inspection, which concluded on August 16, 2005, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the NRC proposes to impose a civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282 and 10 CFR 2.205. The particular violation and associated civil penalty are set forth below:

1. Federal Regulation 10 CFR 74.19(a)(1), formerly in 10 CFR 70.51, requires, in part, that the licensee shall keep records showing the receipt, inventory (including location and unique identity), acquisition, transfer, and disposal of all special nuclear material (SNM) in its possession regardless of its origin or method of acquisition.

Contrary to the above, from October 1968 (the approximate date when the fuel pin was known to have been segmented into three 18-inch pieces) to July 16, 2004 (date when PG&E determined that the segments were missing), PG&E failed to keep records showing the inventory, transfer or disposal of three segments of irradiated fuel, each approximately 18-inches in length, containing approximately 22.5 grams of SNM. In addition, from June 25, 1973, to February 4, 2005, PG&E failed to keep records including location and unique identity showing the inventory, transfer or disposal of one complete and three partial incore detectors containing a total of approximately 0.035 grams of SNM.

2. Federal Regulation 10 CFR 74.19(b), formerly in 10 CFR 70.51, requires that each licensee that is authorized to possess SNM in a quantity exceeding one effective kilogram at any one time shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for the SNM in its possession under license. The licensee shall retain these procedures until the Commission terminates the license that authorizes possession of the material and retain any superceded portion of the procedures for 3 years after the portion is superceded.

Contrary to the above, from October 1968 (the approximate date when the fuel pin was known to have been segmented into three 18-inch pieces) to July 16, 2004 (date

when PG&E determined that the segments were missing), PG&E, authorized by NRC License DPR-7 to possess SNM in a quantity exceeding one effective kilogram, failed to establish, maintain, and follow written material control and accounting procedures sufficient to account for the SNM in its possession under license DPR-7. Specifically, PG&E failed to account for SNM located in the HBPP spent fuel pool (SFP) consisting of a quantity of 111 grams of uranium-235, 27 grams of plutonium contained in the remnants from Type 1 damaged fuel assemblies (fuel fragments and SNM waste), and incore detectors.

3. Federal Regulation 10 CFR 74.19(c), formerly in 10 CFR 70.51, requires each licensee who is authorized to possess SNM, at any one time and site location, in a quantity greater than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall conduct a physical inventory of all SNM in its possession under license at intervals not to exceed 12 months.

Contrary to the above, PG&E, a licensee authorized to possess SNM at the HBPP in quantities greater than 350 grams of contained uranium-235, uranium-233, or plutonium failed to conduct a physical inventory of all SNM in its possession at intervals not to exceed 12 months. Specifically, inventories performed by PG&E from October 1968 (the approximate date when the fuel pin was known to have been segmented into three 18-inch pieces), to February 4, 2005, with the exception of periods when the sealed SFP cover was in place, did not include fuel fragments and other SNM remnants from Type 1 damaged fuel assemblies and all incore detectors.

These violations are a Severity Level II problem (Supplement VI). Civil Penalty - \$96,000

PG&E's Reply:

- (1) Admission or denial of the alleged violations.

PG&E admits that the violations occurred as stated.

- (2) The reasons for the violations if admitted.

PG&E performed a cause analysis to determine the reasons for the violations. Based on the causes, PG&E took comprehensive corrective actions to prevent recurrence. The cause analysis and corrective actions are described in the following three documents:

- PG&E Letter HBL-05-017, "Special Nuclear Material Control and Accountability Project Final Report," dated May 27, 2005 (Refer to Sections 6.5 and 6.6).
- PG&E Letter HBL-05-019, "Licensee Event Report 2005-001-01, Missing Incore Detectors," dated June 10, 2005 (Refer to Sections III and V).
- PG&E Letter HBL-05-020, "Licensee Event Report 2004-001-02, Three Missing Fuel Rod Segments," dated June 10, 2005 (Refer to Sections III and V).

The causes are summarized below:

- Plant management did not require procedures for control and accountability of fuel fragments.
- Plant personnel failed to follow the SNM control and accountability procedure for incore detectors.
- SNM Custodians were not adequately trained on control and accountability of SNM.
- Lack of attention to detail by plant personnel regarding documentation of incore detectors.

(3) The corrective steps that have been taken and the results achieved.

- PG&E revised HBPP procedures to ensure accurate measuring, handling, controlling and accounting of SNM as SNM items are identified in the SFP.
- PG&E revised HBPP procedures to address the issue of the physical inventory of SNM in the SFP. Accounting and inventories now include incore detectors and fuel fragments in the SFP. Inventory is now accomplished by comparing physical inventory to book inventory, and vice versa.
- PG&E performed a full cataloging and characterization of the SFP contents to ensure a complete and accurate accounting of all SNM in PG&E's possession at HBPP, down to the fuel fragment level.
- At the earliest opportunity, PG&E reported the quantity of SNM contained in all known fuel fragments in the Annual Material Status Report for the Period Ending September 30, 2004, that was submitted to the NRC on November 30, 2004. (Reference: PG&E Letter HBL-04-027, "Annual Material Status Reports for the Period Ending September 30, 2004," dated November 30, 2004). The Annual Material Status Report for the Period Ending September 30, 2004, was further revised upon completion of the SFP search for fuel fragments. (Reference: PG&E Letter HBL-05-007, "Revised Annual Material Status Reports for the Period Ending September 30, 2004," dated March 17, 2005)
- PG&E created a HBPP SNM Custodian qualification to ensure the above corrective actions to prevent recurrence continue to be implemented.

(4) The corrective steps that will be taken to avoid further violations.

The corrective steps already taken and their results discussed above are sufficient to avoid further violations. Therefore, no further corrective steps are planned.

(5) The date when full compliance will be achieved.

PG&E is currently in full compliance with the regulations that were violated. Full compliance with 10 CFR 74.19(a)(1) was achieved on March 17, 2005, with the submittal of the revised Annual Material Status Report for the Period Ending September 30, 2004 (PG&E Letter HBL-05-007). Full compliance with 10 CFR 74.19(b) was achieved on June 10, 2005, when revisions to appropriate plant procedures were completed. Full compliance with 10 CFR 74.19(c) was achieved on May 19, 2005, when PG&E conducted a physical inventory at HBPP that accounted for all SNM in its possession.