

ORIGINAL

NMED LER INPUT

DBS 9/7/05

LER: 50-133/2005-001

Event Report #	41430	NMED (if issued)	050105
PN # (if issued)	IV-05-005	Date NRC Notified	February 23, 2005
Licensee	Pacific Gas and Electric, Co.	Abnormal occurrence?	No
License #	DPR-7	Docket #	50-133
Address	1000 King Salmon Ave.	City, State	Eureka, CA 95503
Nuclides	Mixed Fission Products	Personnel Exposures?	No
Dose Rates	Not Available	Associated Equipment	N/A
Leak Test Info	N/A	Transportation Event?	No

Narrative:

During a review and cataloging of the contents of the Humboldt Bay Power Plant (HBPP) spent fuel pool (SFP), PG&E personnel determined that incore detectors were missing and notified the NRC on February 4, 2005. Incore detectors contain non-fuel special nuclear material (SNM), varying from 0.04 to 0.005 grams of uranium-235 each. HBPP records showed that 54 incore detectors should be in the SFP. However, following an investigation, PG&E determined that one complete and three partial incore detectors were missing. PG&E submitted Licensee Event Report (LER) 2005-001-00 on February 22, 2005 in accordance with 10 CFR 20.2201(b)(1), stating a supplemental LER would be issued to provide more details.

The physical search for the incore detectors is complete, and relevant historical documents have been reviewed. PG&E believes the missing incore detectors were erroneously included with irradiated hardware shipped to a low level radioactive waste facility at Hanford or Barnwell. If so, the addition of these detectors would be within the design and licensing basis of these facilities and would not increase the risk to the health and safety of the public, workers, or environment.

Event Cause:

- Lack of attention to detail regarding identification, movement, storage, location, and documentation of the incore detectors following cutting of the incore strings in 1973 and/or 1985.

Contributing factors:

- An inadequate procedure was used to determine the location of incore detectors in incore strings during cutting operations.
- The SNM Custodians were not adequately trained on control and accountability of SNM.
- A personnel error – cognitive, for failure to follow the SNM control and accountability

procedure for incore detectors.

Licensee corrective actions:

Immediate Corrective Actions:

- HBPP programs, procedures, and personnel training have been revised to require specific detail(s) regarding the documentation of location of fuel components (e.g., fuel fragments, fuel rod segments, fuel pellets, etc.) as they are identified in the SFP. A full cataloging and characterization of the contents of the SFP was performed to ensure a complete and accurate accounting of all SNM in PG&E's possession at HBPP, down to the fragment level.

Corrective Actions to Prevent Recurrence

- Revise procedure HBAP D-7 "Control and Accountability of Special Nuclear Material and Waste Shipments" and STP 3.6.6 "SNM Inventory" to address the issue of the physical inventory of non-fuel SNM in the pool.
- Revise procedures EDO I B-3, "Movement of Non-Fuel Material in Spent Fuel Pool," EDO I B-5, "Fuel Handling Procedure for Moving Fuel Within the Spent Fuel Storage Pool," and HBAP D-7 to ensure that procedures used for future work in the SFP and other areas where SNM may be located shall include provisions for control and accountability of fuel fragments and non-fuel SNM.
- Create a "qualification" for the SNM Custodian and persons designated to be SNM Custodian.

Licensee Notifications: patients, physician, other agencies, etc.

The licensee notified applicable stake holders such as local, state and Federal Officials and other interested parties. The licensee has issued several press releases.

NRC Inspection(s):

NRC included the missing incore detectors in a Special Inspection that was ongoing related to three missing 18-inch irradiated fuel rod segments. An interim Inspection Report 05000133/2005001 was issued on April 6, 2005, ML050900069. The final Inspection Report 05000133/2005002 was issued on August 19, 2005, ML052310593.

NRC Notifications:

The NRC has notified applicable stake holders such as State and Federal Officials and prepared and issued a communications plan.

Enforcement:

Three apparent violations were identified. Escalated enforcement action pending.

Event Status for lost, stolen or abandoned material:

The incore detectors have not been located. The licensee believes that the incore detectors were shipped to a low level radioactive waste facility.