PDR

JUN 1 4 1989

Docket Nos. 50-206, 50-361, 50-362

Southern California Edison Company
P. O. Box 800
2244 Walnut Grove Avenue
Rosemead, California 91770

Attention: Mr. Kenneth P. Baskin, Vice President
Nuclear Engineering, Safety and Licensing Department

Gentlemen:

Thank you for your letter dated June 1, 1989, in response to our Notice of Violation and Inspection Report No. 50-206/89-09, dated May 5, 1989, informing us of the steps you have taken to correct the item which we brought to your attention. Your corrective actions will be verified during a future inspection.

Your cooperation with us is appreciated.

Sincerely,

Original Signed

G. P. Yuhas, Chief
Emergency Preparedness and
Radiological Protection Branch

bcc w/copy of ltr dated 6/1/89:
Docket File
Project Inspector
Resident Inspector
G. Cook
B. Faulkenberry
J. Martin
A. Johnson
LFMB
State of California

bcc w/o copy of ltr dated 6/1/89:
M. Smith

REGION V		
JRussell	EGarcia	GPYuhas
6/14/89	6/14/89	6/14/89
REQUEST COPY] YES / NO]	REQUEST COPY] YES / NO]	REQUEST COPY] YES / NO]
		SEND TO PDR] YES / NO]

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Southern California Edison Company
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KENNETH P. BASKIN
VICE PRESIDENT

TELEPHONE
818-302-1401

June 1, 1989

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206
Reply to a Notice of Violation
San Onofre Nuclear Generating Station, Unit 1

Reference: Letter, Mr. G. P. Yuhas (NRC) to Mr. Kenneth P. Baskin (SCE), dated May 2, 1989

The Reference forwarded NRC Inspection Report No. 50-206/89-08 and a Notice of Violation resulting from the inspection conducted by Mr. J. E. Russell during the period of March 13 through March 23, 1989. In accordance with 10 CFR 2.201, the enclosure to this letter provides the Southern California Edison (SCE) reply to the subject Notice of Violation.

If you require any additional information, please so advise.

Very truly yours,

Kenneth P Baskin

Enclosure

cc: J. B. Martin, Regional Administrator, NRC Region V
F. R. Huey, NRC Senior Resident Inspector, San Onofre Units 1, 2 and 3

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ENCLOSURE

REPLY TO A NOTICE OF VIOLATION

Appendix A to Mr. Yuhas's letter, dated May 2, 1989, states in part:

> "10 CFR 19.12, Instructions to workers, reads in part:
>
> > 'All individuals working in or frequenting any portion of a restricted area shall be kept informed of the storage, transfer, or use of radioactive materials or of radiation in such portions of the restricted area..., in precautions or procedures to minimize exposure... The extent of these instructions shall be commensurate with potential radiological health problems in the restricted area.'
>
> "Contrary to the above, on December 22, 1988, a worker was not informed of the storage of the radioactive material and the radiation levels in a portion of the Steam Generator "A" platform and was not instructed in the precautions and procedures necessary to minimize his exposure. As a result, the worker received an unplanned exposure to his left arm of approximately 1600 mrem.
>
> "This is a Severity Level IV violation (Supplement IV)."

RESPONSE

1. Reasons for the violation, if admitted.

   SCE admits that on December 22, 1988, a worker was not informed of the storage of the radioactive material and the radiation levels in a portion of the Steam Generator "A" platform and was not instructed in the precautions and procedures necessary to minimize his exposure. SCE admits that he received an unplanned exposure of approximately 1600 mrem to his left arm.

SCE relies upon as many as five principal methods to adequately communicate to workers the information necessary to minimize their exposure: (a) direct information provided by the Health Physics (HP) technician(s) covering the job; (b) information provided during the "tailboard" (pre-job plan/scope briefings); (c) information provided in the Radiation Exposure Permit (REP) prepared for each job; (d) information provided at the job site through applicable postings and labels; and, (e) information provided in Radiation Protection training programs. Of these five methods, only the Radiation Protection training program did not contribute toward the December 22 event.

A. Direct information provided by the Health Physics (HP) technician(s) covering the job

It is the duty and responsibility of each HP technician to assess the radiological conditions present at the job site, to inform workers of the presence of radioactive materials, and to instruct workers of the actions necessary for them to minimize their exposure. For the steam generator tube marking job, continuous HP coverage was directed by the REP. The HP technician covering the job was ANSI-qualified and fully trained and certified. The HP technician had the necessary radiation instrumentation to detect and quantify the radiological conditions.

Contrary to his training and instructions, the HP technician failed to exercise due diligence in performing his duties. The HP technician failed to identify the partially shielded diaphragms or to adequately assess the radiation levels on the steam generator platform. As a result, he was not able to provide adequate instructions to the worker. In addition, he permitted the worker to stay on the steam generator platform for a prolonged period rather than direct the worker to the established and properly posted "cool zone".

SCE believes that the failures of this contract HP technician are an isolated instance of dereliction of duty. The HP technician resigned rather than risk dismissal.

B. Information provided during the "tailboard" (pre-job plan/scope briefings)

Information is also provided to workers during the pre-job tailboard sessions. Typically, tailboards

include a review of radiological conditions and controls for the job. SCE's investigation determined that the worker, contrary to the requirements of the REP, did not attend the tailboard for the steam generator tube marking job.

Instead, the worker had previously attended a different steam generator repair tailboard. Records do not indicate that the repair tailboard discussed the presence of the partially shielded diaphragms or the use of the cool zone. The worker apparently assumed that the repair tailboard satisfied the "tailboard required" statement in the REP for the tube marking job.

In summary, SCE has concluded that in this case there was a lack of: identification of the applicable tailboard to attend; and, consistency in the tailboard content, such that the quality of the information provided during a tailboard is too reliant upon the individual conducting the tailboard.

C. <u>Information provided in the Radiation Exposure Permit (REP) prepared for each job</u>

An REP is prepared and periodically updated to inform workers of radiological conditions, to specify appropriate protective measures, and to require their use. The REP gathers and records appropriate known information in a readily available and easy-to-read format.

REP No. 70409 was prepared for steam generator tube rolling/plugging (half jumps). Section IV, Special Instructions, stated in part, "Other requirements - pre-job meeting" and "Special Hazards - dose rate on tube sheet". As previously stated, the REP Section II listed "tailboard required". The REP did not list the presence of the partially-shielded, unmarked diaphragms.

The REP did refer to Survey #30, which noted the location of the radiation level (2 R/hr) caused by the diaphragms. The REP procedure does not require individual surveys to be reviewed. In general, most workers rely on the information in the REP and instructions provided at the jobsite by the HP technician. Although the radiation levels specified in the REP (i.e., maximum up to 20 R/hr) bounded the levels caused by the diaphragms, the REP listed pre-

job gamma radiation levels as 100-420 mrem/hr.

SCE has concluded that the REP was not fully effective in informing the worker(s) of the presence of the diaphragms in their partially-shielded and unmarked condition, and of the potential for exposure from the diaphragms.

D. Information provided at the job site through applicable postings and labels

Information is provided to workers at the job site through appropriate posting and labeling of the storage of radioactive materials and radiation levels in the area. The steam generator platform was appropriately posted as a high radiation area, and a cool zone had been established and posted.

After the diaphragms were covered with lead blankets, the lead blankets were subsequently covered with equipment and debris and were not readily identifiable. HP, Maintenance and general housekeeping programs are designed to ensure material conditions do not degrade to the point where workers can not readily identify the storage of radioactive materials.

In summary, although the main cause of the failure to properly inform the worker rests with the HP technician, SCE recognizes that there were several lessons learned from the event.

2. Corrective steps that have been taken and the results achieved.

SCE has taken the following corrective actions:

A. The location of the diaphragms was immediately posted as a hot spot.

B. The worker was removed from the Radiation Area and prevented from making further entries into the Radiation area.

C. The contract HP technician covering the job was counselled, assigned duties outside the Radiation area, and subsequently resigned rather than risk dismissal.

3. Corrective steps that will be taken to avoid further violations.

The following corrective actions will be taken:

A. A multi-disciplinary group will be formed to address work problems on the steam generator platforms. The review will include the measures to be taken during steam generator maintenance which will promote work efficiency and minimize personnel radiation exposure. Lessons learned will be applied, as appropriate, to other work areas besides the steam generator platform. Recommendations of the group will be provided to Station Management prior to the next scheduled outage (scheduled to begin in the Fall 1989).

B. By the next refueling outage, a review of the incident will be conducted in HP retraining. This review will emphasize the need to identify all significant radiation sources while making surveys.

C. The tailboard process will be reviewed and enhanced to ensure, when invoked by the REP process, that the applicable tailboard is identified (if multiple tailboards are performed) and that essential radiological information is provided to workers.

D. The REP program will be reviewed with regard to enhancing the clarity and detail of information (such as significant special hazards) in REPs.

4. <u>Date when full compliance will be achieved.</u>

Full compliance was achieved on December 22, 1988, when the worker was removed from the Radiation Area and his access authorization was suspended to prevent further exposure.