



Southern California Edison Company

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IRVINE, CALIFORNIA 92718

July 7, 1993

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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 from Mr. Ross A. Scarano (USNRC) to
Mr. Harold B. Ray (SCE), dated June 7, 1993

The referenced letter forwarded a Notice of Violation resulting from the NRC inspection conducted March 1 - 5, and April 5 - 9, 1993, at the San Onofre Nuclear Generating Station, Units 1, 2, and 3. Documented in NRC Inspection Report Nos. 50-206/93-06, dated May 24, 1993, this inspection was the subject of a management meeting between NRC Region V and SCE on June 2, 1993.

In accordance with 10 CFR 2.201, the enclosure to this letter provides the Southern California Edison (SCE) reply to the Notice of Violation.

If you have any questions, please call me.

Sincerely,

Richard M. Rosenblum
Vice President
Engineering and Technical Services

Enclosure

cc: B. H. Faulkenberry, Regional Administrator, NRC Region V
S. W. Brown, NRC Project Manager, San Onofre Unit 1
M. B. Fields, NRC Project Manager, San Onofre Units 2 and 3
C. W. Caldwell, NRC Senior Resident Inspector, San Onofre
Units 1, 2 & 3
R. F. Dudley, Section Chief, Non-Power, Decommissioning, and
Environmental Project, Directorate of Reactor
Projects - 3, 4 & 5

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ENCLOSURE

REPLY TO A NOTICE OF VIOLATION

The Enclosure to Mr. Scarano's letter dated June 7, 1993 states in part:

- "A. 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of the radiation hazards that may be present. As defined in 10CFR 20.201(a), 'survey' means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

"Contrary to the above, on February 19, 1993, the licensee did not make surveys that were reasonable under the circumstances to assure compliance with that part of 10 CFR 20.101 that limits radiation exposure to the hands, forearms, feet, and ankles. Specifically, a survey was not performed on a piece of highly radioactive material before a refueling worker picked it up in his hand. The material was subsequently surveyed at 1188 rem per hour.

"This is a Severity Level IV violation (Supplement IV)."

RESPONSE TO ITEM A

1. REASON FOR THE VIOLATION

As discussed in our meeting on June 2, 1993, the reasons for the violation were improper judgement and communication on the part of the HP technician, and improper judgement on the part of the refueling worker.

The HP technician exercised improper judgement and communication when he failed to confirm that the refueling workers had heard or understood the verbal communication to await his return prior to resuming work. Both refueling workers were wearing respiratory protective equipment which inhibited communication.

The refueling worker exercised improper judgment after he had dislodged the object from inside the upender basket, in postulating that the object had initially fallen into the upender basket from overhead and was, therefore, non-activated crane debris. Believing that the object was not activated, he failed to notify HP personnel that an object had been dislodged prior to picking it up - which would have led to a reassessment of the radiological work conditions.

2. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The object was surveyed by HP personnel on February 19 and 20, and removed from the lower cavity on February 20, 1993.

The HP technician and refueling worker were counselled and disciplined.

The details of this incident were reviewed with significant exposure work groups (HP Technicians, Radioactive Material Control personnel, steam generator jumpers, and Refueling personnel) to reiterate the prohibition against picking up objects under these conditions. An article discussing the details of this incident was published in the "HP News" publication and distributed to SONGS and Irvine Operations Center (IOC) personnel.

3. CORRECTIVE STEPS THAT WILL BE TAKEN TO PREVENT RECURRENCE

Procedure SO123-VII-7.18 was developed for planning jobs and controlling substantial potential for personnel radiation exposure. This procedure also includes expanded guidance for providing continuous HP coverage. HP Supervision is in the process of briefing SCE and contract HP technicians on the procedure and will complete the briefings by July 15, 1993. In addition, training on SO123-VII-7.18 will be incorporated into HP Annual Retraining and HP contractor entrance training lesson plans by October 1, 1993.

Communications training will be incorporated into HP annual retraining and HP contractor entrance training lesson plans by December 31, 1993. An article discussing the details of this incident will be included in the "SONGS Update" publication and distributed to site personnel by July 31, 1993.

4. DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved on February 19, 1993, when the object was surveyed by HP personnel.

The enclosure to Mr. Scarano's letter dated June 7, 1993 states in part:

- "B. Technical Specification 6.8.1 requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix 'A' of Regulatory Guide (RG) 1.33, Revision 2, February 1978.

"RG 1.33, Appendix A, Section 7(e)(1), recommends in part procedures for control of radioactivity, including procedures for a Radiation Work Permit System.

"Licensee Procedure SO123-VII-9.9, 'Radiation Exposure Permit Program,' Revision 11, dated September 10, 1992, Section 6.3.2 states that 'All personnel covered by a Radiation Exposure Permit shall follow the requirements specified in the Radiation Exposure Permit.'

"Licensee Radiation Exposure Permit (REP) No. 71494, 'Refueling Activities in Containment/Fuel Handling Building,' Revision 4, dated February 19, 1993, Section VI lists in part the following special instructions:

1. This REP does not allow the following:
 - a. Work on items with contact dose rates greater than 30 R(RAD)/hr [rem/hr].
2. Continuous health physics coverage is required for the following work:
 - a. Whole body Zone III entry with plastics and respirator.

"Contrary to the above:

1. On February 19, 1993, a refueling worker, did not follow the requirements of REP No. 71494, in that he handled an item having contact dose rates in excess of 30 R/Hr (i.e., 1188 R/hr).
2. On February 19, 1993, a refueling worker wearing plastics and a respirator did not follow REP No. 71494, in that he performed work in the lower cavity, a posted Zone III area, without continuous health physics coverage.

"This is a Severity level IV violation (Supplement IV)."

RESPONSE TO ITEM B

1. REASONS FOR THE VIOLATION

As discussed in our June 2, 1993, the reasons for the violation were improper judgement and communication on the part of the HP technician and improper judgement on the part of the refueling worker.

The HP technician exercised improper judgement and communication when he momentarily stepped away from the work area to count contamination samples, without seeking or receiving verification that the refueling worker heard or understood the verbal communication. Because of the HP technician's improper judgment and communication, he was not in a position to stop the refueling worker from handling the object nor to provide the continuous HP coverage required by the REP.

The refueling worker exercised improper judgment in that: (1) the work exceeded the scope discussed in the tailboard (when he dislodged the object, and when he handled the object); and, (2) when he resumed work in the lower cavity, without confirming that the HP technician was still providing continuous coverage. In handling the object, the refueling worker displayed a mindset in believing that the dislodged object was not activated when he initially identified it as crane debris.

2. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The HP technician and refueling worker were counselled and disciplined.

The details of this incident were reviewed with Significant Exposure Work Groups (HP Technicians, Radioactive Material Control personnel, steam generator jumpers, and Refueling personnel) to ensure understanding of adhering to REP requirements. A memo was issued to radiation workers to emphasize the potential for high extremity exposure due to improper handling of potentially radioactive objects.

3. CORRECTIVE STEPS THAT WILL BE TAKEN TO PREVENT RECURRENCE

Procedure SO123-VII-7.18 was developed for planning jobs and controlling substantial potential for personnel radiation exposure. This procedure also includes expanded guidance for providing continuous HP coverage. HP Supervision is in the process of briefing SCE and contract HP technicians on the procedure and will complete the briefings by July 15, 1993. In addition, training on SO123-VII-7.18 will be incorporated into HP Annual Retraining and HP contractor entrance training lesson plans by October 1, 1993.

Communications training will be incorporated into HP annual retraining and HP contractor entrance training lesson plans by December 31, 1993. An article discussing the details of this incident will be included in the "SONGS Update" publication and distributed to site personnel by July 31, 1993.

4. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on February 19, 1993, when the worker returned the object to the floor and when the HP General Foreman reestablished continuous HP coverage.

The Enclosure to Mr. Scarano's letter dated June 7, 1993 states in part:

- "C. 10 CFR 19.12 requires in part that all individuals working in a restricted area shall be kept informed of the radiation in such portions of the restricted area ... and shall be instructed in ... precautions and procedures to minimize exposure to radioactive materials, ... the purpose and functions of protective devices employed, and ... the applicable provisions of the Commission's regulations and licenses.

"Contrary to the above, on February 19, 1993, the licensee failed to instruct an individual prior to working in the lower refueling cavity, a restricted area, on the precautions and procedures to minimize exposure to radioactive materials. Specifically, this individual was not instructed on the purpose and functions of protective devices employed. As a result, the individual improperly placed an alarming dosimeter inside his protective clothing, which prevented him from minimizing his exposure (monitoring the accumulated dose and hearing the dosimeter alarm).

"This is a Severity Level IV violation (Supplement IV)."

RESPONSE TO ITEM C

1. REASON FOR VIOLATION

As discussed in our meeting on June 2, 1993, the reasons for the violation were the HP technician's inattention to detail and improper judgement on the part of the refueling worker.

The HP technician failed to exercise adequate attention to detail in verifying proper placement of the self-reading alarming dosimetry. The HP technician had assisted with placement of additional dosimetry on the refueling worker's head, but failed to note that the self-reading alarming

dosimetry was not located outside the worker's protective clothing.

The refueling worker exercised improper judgement when he assumed the self-reading alarming dosimetry would perform it's function on the inside of his protective clothing and did not obtain HP verification that the self-reading alarming dosimetry was in a proper location.

2. CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The HP Technician and refueling worker have been counselled and disciplined. A Radiological Observation Report (ROR) was issued to the refueling workers supervision, identifying this work practice as unacceptable.

Memos were issued to HP and site personnel to re-emphasize correct placement of self-reading dosimetry. The instructions for placement of dosimetry on personnel have been expanded in REPs to note that the dosimetry must be located outside of protective clothing.

Lessons learned from this incident regarding PD-1 placement have been incorporated into annual radiation worker retraining and practical factors. The PD-1 Alarming Dosimetry Training Video for new employees has been revised to include the proper placement of the PD-1 dosimeter. SCE has modified appropriate procedures to conform to the memo issued to site personnel on the proper placement of self-reading dosimetry. The ROR program has been revised to provide coaching RORs to allow HP to trend minor infractions and implement corrective action as necessary.

Quality Assurance (QA) and HP personnel are performing increased scrutiny on correct usage and placement of self-reading dosimetry during their routine observation activities during the planned ongoing Unit 2 outage.

3. CORRECTIVE STEPS THAT WILL BE TAKEN TO PREVENT RECURRENCE

SCE will initiate a program review of alarming dosimetry and incorporate the lessons learned from this incident. The program review will be completed by July 15, 1993.

4. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on February 19, 1993, when the refueling worker exited the radiologically controlled area and removed the improperly placed self-reading dosimetry.