

Initial



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
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WALNUT CREEK, CALIFORNIA 94596

September 23, 1981

MEMORANDUM FOR: N. M. Moseley, Chairman, SALP Review Group
FROM: R. H. Engelken, Director, Region V, OIE
SUBJECT: CYCLE 2 REGIONAL SALP EVALUATION OF SOUTHERN CALIFORNIA
EDISON COMPANY (SAN ONOFRE NUCLEAR GENERATING STATION,
UNITS 1, 2 AND 3)

Transmitted herewith are the Cycle 2 Regional SALP Evaluation Reports for San Onofre Nuclear Generating Station, Unit 1 (Enclosure 1) and Units 2/3 (Enclosure 2). Separate reports are submitted in accordance with Part I, paragraph F of NRC Manual Chapter 0516. The overall utility evaluation for Southern California Edison Company is presented in Part I of Enclosure 1.

The findings contained in these reports were discussed with the management of Southern California Edison Company (SCE) at the corporate offices on September 1, 1981. The SCE management did not disagree with general findings of the reports.

R. H. Engelken, Director
Region V, OIE

Enclosures:

- (1) Regional Performance Evaluation Report:
San Onofre Unit 1 and Southern California Edison Company
- (2) Regional Performance Evaluation Report: San Onofre Unit 2

cc w/encl:

- Darrell G. Eisenhut, Director, Division of Licensing, NRR
- Carlyle Michelson, Director, AEOD
- James H. Sniezek, Director, Division of Resident and Regional
Reactor Inspection, IE
- Steven H. Hanauer, Director, Division of Human Factors Safety, NRR

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

H. Radiation Protection

1. Analysis

In early April 1980, the licensee was in the process of planning for a routine refueling and minor maintenance outage which they expected to involve about 200 contractors, when a rapid increase in steam generator tube leakage forced premature shutdown. The radiation protection program was overwhelmed. Two reactive inspections were performed in April to review personnel contamination incidents and allegations of poor radiation safety practices. The first inspection of this SALP review period was the Health Physics Appraisal.

The Health Physics Appraisal inspection conducted May 19-30, 1980, identified several significant weaknesses in the licensee's radiation protection program including: insufficient health physics personnel at the plant and corporate level, inadequate radiation protection training and retraining program, shortages of portable survey instruments, ineffective management of solid radioactive wastes, failure to implement a formal ALARA program, and deficiencies in health physics related facilities and equipment. This inspection, although not focusing on compliance, identified an instance of failure to properly label a container of licensed material. These findings were presented orally to high level licensee representatives at the conclusion of the inspection and transmitted formally on August 15, 1980. In the interim, continual deterioration in the radiation protection program occurred as a function of the increasing unplanned workload. In mid-June 1980, the Resident Inspector advised Region V of an apparent whole-body exposure in excess of regulatory limits. A special inspection resulted in identification of three items of noncompliance: (1) exposure of an individual in excess of three rem per calendar quarter; (2) failure to make an adequate evaluation of an individual's exposure; and (3) failure to adhere to a radiation protection procedure. During July 1980, the Resident Inspector observed three instances of failure to adhere to radiation protection procedures which were cited as one infraction and two additional instances which were cited as a deficiency. In August 1980, it became apparent that a major steam generator repair effort was about to be initiated by the licensee. Region V conducted a special inspection to review the licensee's capability to provide adequate radiation safety for such a repair effort. This inspection found that the licensee's planning did not appear adequate to accomplish the work, as scheduled, in a manner consistent with ALARA criteria, and in compliance with regulatory requirements. A Management Meeting was scheduled

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for September 5, 1980. While senior representatives of the licensee were attending the Management Meeting, activities at the site were not being adequately controlled with regard to handling a highly contaminated spent fuel shipping cask. As a result of the Management Meeting, an Immediate Action Letter (IAL) was issued on September 5, 1980, detailing those actions NRC considered necessary to provide adequate radiation safety for workers involved in the steam generator repair effort. In addition, the IAL required the licensee to resolve dosimetry questions brought to their attention during the August inspection.

Region V Radiation Specialists conducted another special inspection later in September to verify conditions of the IAL and review circumstances surrounding handling of the spent fuel shipping cask. This visit resulted in issuance of the October 2, 1980 IAL confirming four specific actions to be taken by the licensee. In mid-October another special inspection was performed to confirm that the licensee's actions had been effective in providing adequate radiological safety for initiation of the steam generator repair project. This inspection found significant improvements had been made such that NRC was reasonably assured that the task could begin. The inspection also documented those items of noncompliance resulting from inadequate evaluation of the steam generator radiation fields which lead to inappropriate personnel dosimetry resulting in 66 individuals exceeding the three rem per quarter limit between April and August 1980. The inspection also found that failure to implement appropriate controls when handling the spent fuel shipping cask resulted in several items of noncompliance. In addition, other items of noncompliance relative to the steam generator repair project were identified. The findings of this inspection were transmitted to the Director, Office of Inspection and Enforcement, for action.

While the escalated enforcement package was being processed, another special inspection was conducted in mid-December to followup on the IALs and previous inspection findings. No items of noncompliance were identified; however, several observed weaknesses were brought to the licensee's attention. A routine radiation protection inspection was conducted in mid-January 1980 to followup on routine matters and previously identified problem areas. No items of noncompliance were identified. The inspector informed licensee management of apparent deterioration in the relationship between licensee and contractor radiation protection organizations.

On January 23, 1981, the Director, Office of Inspection and Enforcement, issued a civil penalty in the amount of \$150,000 as a result of the personnel exposures of steam generator -

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entrants and the manner in which the licensee handled the spent fuel shipping cask. In the licensee's February 17, 1981 response to the Imposition of Civil Penalties, they admitted each item of noncompliance, described their immediate and long term corrective action, and protested the imposition of civil penalty based on extenuating circumstances and their timely and effective corrective action to improve the radiation protection program. On April 15, 1981, after careful consideration by NRC staff, an Order Imposing Civil Monetary Penalties was issued for \$150,000. The licensee subsequently paid the civil penalty.

Routine inspection of transportation activities performed in early April 1981, noted significant improvement in the management of solid radioactive waste. Weaknesses in control of radioactive materials inadvertently released from the restricted area were discussed. In late April 1981, another special inspection was necessary to review allegations of unauthorized removal of contaminated tools and equipment from the restricted area. The allegation was not substantiated; however, weaknesses in the control of materials leaving the restricted area were again brought to the licensee's attention. In mid-May 1981, the licensee advised NRC that they had discovered low-level contamination of beach sand adjacent to the seawall. A special inspection was conducted in early June 1981 to review the licensee's actions. Insufficient information was available to determine compliance with respect to the cause of the contamination; however, the licensee's followup actions were considered consistent with ALARA criteria and regulatory requirements.

Nine inspections have been performed during the evaluation period: Health Physics Appraisal (350 hours onsite); six special radiation protection inspections (339 hours onsite); and three routine module inspections (116 hours onsite). Fifteen items of noncompliance have been identified, a Management Meeting held, two IALs issued, and a substantial Civil Penalty imposed during this review period.

In the same period, the licensee conducted a major steam generator repair effort involving about 1,500 temporary maintenance personnel and 900 project support individuals at an exposure cost of 3,496 person-rem.

In response to identified weaknesses in the radiation protection program, the licensee has made numerous substantial commitments. Several, such as increased health physics staff, improved radiation protection training, additional portable survey instruments, and improved solid radioactive waste management, have been accomplished.

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Throughout this arduous period, the licensee has relied heavily on contractor-supplied radiation protection support.

With the return to power, most of the contractor-supplied health physics expertise has left the site. Chemistry and Health Physics have been separated, and a new site-wide Health Physics organization is being developed by a new Health Physics Manager. The corporate health physics position has not yet been filled by a licensee employee.

2. Conclusion

Performance is rated as being "below average" during the evaluation period. Significant improvements are being made. However, NRC Region V remains concerned with the fragile nature of this situation.

3. Board Comments

The board recommends increased inspection effort in this area to confirm the effectiveness of corrective actions taken and planned.

I. Environmental Protection

1. Analysis

During the evaluation period, there has been no direct inspection of this area. The licensee submitted three LERs associated with loss of ocean thermal data, and one involving loss of benthic sample data. License Amendment 53, issued March 26, 1981, deleted the "Nonradiological Surveillance" requirements noted above. One instance of failure to collect and analyze a local crop sample during 1980 was also reported.

2. Conclusion

Due to the lack of inspection activity in this area, no conclusions are drawn.

3. Board Comments

The board recommends implementation of the routine inspection program in this area.

J. Emergency Preparedness

1. Analysis

During the evaluation period, the Health Physics Appraisal found the licensee's capability to respond to an emergency