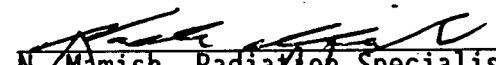
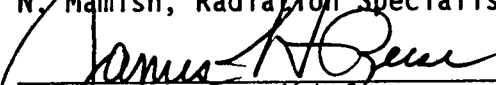


U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos.: 50-206/92-33, 50-361/92-33, 50-362/92-33
License Nos.: DPR-13, NPF-10, NPF-15
Licensee: Southern California Edison Company (SCE)
Irvine, California 92718
Facility: San Onofre Nuclear Generating Station (SONGS) Units
1, 2 and 3
Inspection location: San Diego County, California
Inspection duration: December 7 - 11, 1992
Prepared by: 
N. Mamish, Radiation Specialist 12/18/92
Date Signed
Approved by: 
James H. Reese, Chief 12/21/92
Date Signed
Facilities Radiological Protection Branch

Summary:

Areas Inspected: Routine, announced inspection of occupational exposure. Selected areas of the licensee's Radiation Protection Program were examined, involving: audits, changes, external radiation exposure, internal radiation exposure, and radioactive materials and contamination controls. Inspection procedure 83750 was used.

Results: The licensee's programs for controlling occupational exposure appeared to be good in the areas observed. Some deficiencies were identified pertaining to poor housekeeping and posting practices. No violations or deviations were identified.

DETAILS

1. Persons Contacted

Licensee

- *T. Adler, Unit 2/3 Health Physics Supervisor
- D. Axline, On-Site Nuclear Licensing
- *E. Baldwin, Health Physics Engineer
- J. Barrow, Unit 2/3 General Foreman
- *E. Bennett, Quality Assurance Engineer
- *C. Bostrom, Technical Training Manager
- S. Enright, Radioactive Materials Control Supervisor
- *R. Erickson, San Diego Gas & Electric Site Representative
- *J. Fee, Assistant Health Physics Manager
- *J. Jamerson, On-site Nuclear Licensing Lead Engineer
- *J. Hammond, On-site Nuclear Licensing Supervisor
- *R. Jervey, Health Physics Engineer
- *B. Katz, Nuclear Oversight Division Manager
- *P. Knapp, Health Physics Manager
- *M. Lewis, Waste Minimization Supervisor
- J. Madigan, Health Physics Supervisor
- *H. Morgan, Vice President and Site Manager
- *S. Paranandi, Quality Assurance Supervisor
- *J. Pope, Health Physics Dosimetry Supervisor
- *J. Scott, Health Physics Special Projects Supervisor
- *A. Tally, Unit 1 Health Physics Supervisor
- *T. Ushino, Health Physics Engineer
- *D. Warnock, Assistant HP Manager
- *R. Wallo, Operations Manager
- *W. Zintl, Site Emergency Planning Manager

NRC

- *J. Reese, Chief, Facilities Radiological Protection Branch

(* Denotes those individuals who attended the exit meeting on December 11, 1992. The inspector met and held discussions with additional members of the licensee's staff during the inspection.

2. Occupational Exposure (83750)

The inspector evaluated this program area by interviewing cognizant personnel, reviewing procedures and records, observing work in progress, and conducting facility tours. Observations were made involving spent resin transfer, housekeeping, and posting practices.

a. Audits and Problem Review Reports

The inspector reviewed Audit Report SCES-508-92, "Miscellaneous Radioactive Materials Sources/Sealed Sources Contamination," completed on August 24, 1992. In addition, Problem Review Reports (PRRs) performed since the last inspection were evaluated. The inspector noted the following items:

- No reportable events were identified as a result of the QA audit findings.
- Some of the problems identified in the QA audit seemed to indicate the need to improve the communication and interface between site departments.
- Audit and PRRs were thorough and comprehensive. Audit findings were technically sound, and corrective actions were being appropriately addressed.

No violations of NRC requirements were observed.

b. Changes

The inspector reviewed several changes in the Health Physics Division since the last inspection.

(1) Personnel

The Radioactive Materials Control Supervisor (RMC) had been temporarily reassigned to work on a radioactive waste minimization project. The interim RMC supervisor, formerly a health physics general foreman, has a graduate degree in health physics and had successfully completed his Health Physics Certification (CHP) this year.

(2) Equipment

The inspector held discussions with licensee representatives and conducted a cursory inspection of the licensee's implementation of alarming dosimeters, dry active waste sorting table, and model 3100 micro vax based spectroscopy system.

(3) Process Control Program

The transfer and process of spent resin is administratively controlled under the Process Control Program (PCP) per Technical Specification 6.13 and described in Section 11.5 of the Unit 1 Updated Safety Analysis Report (USAR) and Section 11.4 of the Units 2/3 USAR.

In August 1986, the licensee transferred a batch of highly radioactive resin slurry into a 210 cubic foot liner. That liner was later found to have dose rates that exceeded the radiation limits allowed by Department Of Transportation (DOT) regulations for shipment and transportation to a disposal facility.

In order to reduce the dose rates of the liner, the licensee performed an evolution, during the first week of December 1992, to separate the contents of the 210 cubic foot liner into two liners. This would allow the licensee to transport the liner to a disposal site.

The inspector noted that this evolution is not described in the PCP and required a safety evaluation per 10 CFR 50.59. The inspector reviewed the associated Radiation Exposure Permits (REPs), radiation and contamination surveys, job coverage plan, waste transfer procedures, and the safety evaluation. No concerns were identified as a result of the resin transfer documentation review.

The inspector concluded that personnel changes and equipment upgrades appeared to be a positive addition to the Radiation Protection Program.

c. External Exposure Control

The inspector evaluated aspects of the licensee's external exposure controls by reviewing selected survey and personnel exposure records, observing access control practices, and conducting independent radiation surveys. The following areas were reviewed:

(1) Thermoluminescent Dosimetry (TLD) System

The inspector discussed with the licensee the (TLD) laboratory's recent National Voluntary Laboratory Accreditation Program (NVLAP) reaccreditation, Quality Assurance (QA), and Quality Control (QC) of the TLD laboratory. In addition, a few technical details regarding dose algorithms of the TLD system were discussed.

Based on the discussion and the records review, the QA and QC of dosimetry laboratory appeared to be adequate. The inspector noted that the NVLAP reaccreditation proficiency testing results were well within the passing criteria.

(2) Exposure Records

The inspector reviewed a selection of personnel exposure records for compliance with 10 CFR 20 Sections 101, 102, 104 and 408. In all cases reviewed, forms NRC-4 and NRC-5, or equivalent, and records of whole body, skin, and extremity exposures had been properly maintained. For terminated employees, letters documenting exposures had been sent in accordance with 10 CFR 20.408.

(3) Work in Progress

At the time of the inspection, the licensee was performing a resin transfer to complete filling a liner. The inspector examined the adequacy of surveys, HP job coverage, Radiation Work Permit (REP) requirements, and the work evolution during the resin transfer.

The inspector noted that the licensee was effectively using temporary shielding to maintain exposures as low as reasonably achievable. The evolution proceeded smoothly and appeared to be well planned. No deficiencies were identified.

(4) Facility Tours

The inspector performed independent beta/gamma and gamma radiation measurements of areas inside and outside of Units 1, 2, and 3. The inspector noted that posting and labeling appeared to be good; however, three items appeared to require additional attention:

- (a) In touring the 50' elevation of the Radioactive Waste Building (RWB), the inspector found two hot spots that were not posted in room 403L-3 as recommended in Procedure S0123-VII-7.4 "Posting." Furthermore, two additional posted hot spots had several dose rate measurements that had been crossed out. After notifying the licensee, the identified posting discrepancies were corrected.
- (b) When touring the 24' elevation of the RWB, the inspector observed that an entrance into the radioactive pipechase area, Gate No. 20, was posted as a High Radiation Area (HRA). A second entrance, Gate No. 16, into the same area was posted as a Radiation Area. The licensee indicated that the pipechase area had been posted as a HRA inside Gate No. 16. The licensee further indicated that the gate was locked and entry is only made under a health physics technician escort.

Upon entry, the inspector found that the HRA posting had fallen. It had been held by a plastic clip attached to the wall. The inspector discussed with licensee representative the need to maintain areas properly posted to prevent unnecessary exposures and unauthorized entries. The licensee immediately corrected the posting deficiency by relocating the HRA posting to the front of Gate No. 16, and securing it by anchored metal hooks to the wall.

- (c) The inspector observed some housekeeping deficiencies in various areas of the RWB. A notable housekeeping problem was observed on the -15' elevation of the Safety Equipment Building in the Train B Low Pressure Safety Injection Pump

Cavity. The following items were present in the cavity:

- Water in the pit.
- Unidentified items inside an open zone 3 labeled bag.
- Sleeving and a T-valve in the water.

The inspector notified the licensee of the housekeeping deficiencies emphasizing the importance of good housekeeping around safety equipment.

No violations or deviations were identified in this area.

d. Internal Exposure Control

The inspector inspected this area by observation of work in progress (see Section 2.c (3)), review of procedure S0123-VII-7.1 " Airborne Radioactivity Surveys," and review of air sampling results.

The inspector noted that air samples of work in progress were taken in accordance with S0123-VII-7.1 and were a representative of air in zones occupied by workers. No violations of NRC requirements were identified.

e. Control of RAM & Contamination

The inspector evaluated aspects of the licensee's Radioactive Materials and Contamination Control by review of selected survey records, conducting independent contamination measurements, and review of the licensee trending program for reduction of contaminated waste. The inspector noted that:

- Contaminated areas or rooms were appropriately posted.
- The continuing aggressive efforts to reduce the volume of contaminated waste were good.

Overall the radiation protection program, in the areas inspected, appeared to be effective in accomplishing the licensee's safety objectives.

No violations or deviations were identified.

3. Exit Interview

The inspector met with members of licensee management at the conclusion of the inspection on December 13, 1992. The scope and findings of the inspection were summarized. The licensee acknowledged the inspector's observations.