U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 50-206/78-16

Docket No. 50-206 License No. DPR-13 Safeguards Group

Licensee: Southern California Edison Company

P. O. Box 800, 2244 Walnut Grove Avenue

Rosemead, California 91770

Facility Name: San Onofre Unit 1

Inspection at: Camp Pendleton, California

Inspection conducted: October 16-19, 1978

Inspectors: J. R. Curtis, Radiation Specialist — 11/3/78 Date Signed

Date Signed

Date Signed

Approved By: H. E. Book, Chief, Fuel Facility and Materials Safety Branch — 11/3/78 Date Signed

Summary:

Inspection on October 16-19, 1978 (Report No. 50-206/78-16)
Areas Inspected: Routine, unannounced inspection of the Radiation Protection Program during the refueling outage, and some followup activity related to the status of confirmatory measurement sample analysis, and emergency plan tests and drills. The inspection involved 38 man-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

*J. Curran, Plant Manager
*R. Brunet, Superintendent Unit 1
*M. Sullivan, Chemical Rad-Protection Supervisor
J. Mortensen, Chemical Rad-Protection Engineer
G. Peckham, Chemical Rad-Protection Engineer
D. Bihl, Chemical Rad-Protection Engineer
*G. McDonald, QA/QC Supervisor
*D. Dunn, QA Supervisor
*H. Key, Chemical Rad-Protection Foreman

The inspector also interviewed other members of the SONGS-1 staff.

*Denotes attendance at exit interview.

2. Radiation Protection Procedures

Samples of radiation protection procedures related to operations conducted during the refueling outage were reviewed. Changes in procedures related to access control, tabulation and maintenance of airborne radioactivity and external personnel radiation exposure had been made and were put into effect. They were beneficial to the access control and radiation protection effort.

The licensee has a program for periodic review of procedures that is in use and the Chemical/Radiation Protection Supervisor has initiated additional radiation protection procedure review effort by a staff radiation protection engineer.

No items of noncompliance or deviations were identified.

3. Advance Planning and Preparation

Licensee representatives of the radiation protection staff were interviewed regarding plans and preparations for the refueling outage. The inspector observed that these plans and procedures were being utilized in the radiation protection program during the outage.

No items of noncompliance or deviations were identified.

4. Training

Radiation protection training for the refueling met the requirements of licensee procedures and 10 CFR 19.12. In some cases involving the requirements for authorized access to the containment sphere, formalized walk-thru indoctrination tours and documentation had not been accomplished. This was discussed at the exit interview and licensee representatives indicated that the qualification procedure would be formalized to assure that the formal indoctrination tours would be accomplished and documented in the future.

No items of noncompliance or deviations were identified.

5. External Exposure Control

The licensee utilizes a sophisticated system for documentation and updating of records of personnel exposure. Self-reading dosimeters are used to indicate short term exposure. These are supplementary devices to the SCE TLD and Landaur film dosimeters used. The accumulated exposure for all persons entering the controlled area is updated at least daily. Quarterly exposure limits for individuals is controlled by limiting access to radiation areas. Whenever the individual's reported dose exceeds 1800 mRem, written management approval is required to authorize further access to the controlled area. The individual's monthly personal dosimeter is processed and his official exposure updated before access is allowed.

There was no evidence of personnel exposure exceeding regulatory limits.

No items of noncompliance or deviations were identified.

6. Respiratory Protection Program

The licensee has an established program for evaluating airborne radioactivity based on air sample analysis and the determination of average airborne radioactivity concentration. The routine air sampling program has been expanded to cover more area during the refueling outage. Special air samples, special precautions and engineering controls are utilized on projects when unusual airborne activity is anticipated.

Respiratory protection has been formally prescribed for steam generator tube plugging operations. Approved filtered air hoods are utilized in this operation and a protection factor of 1000 is applied to air sample data.

Assignments of MPC hour exposure are made and tabulated for all persons who enter areas when airborne activity is anticipated and air samples are taken.

SCE radiation protection staff members were interviewed regarding training for use, fitting, maintenance and storage of the self-contained, filtered air hoods used in the respiratory protection program. Licensee action in this area was adequate; to date the use was of limited scope. The maintenance program had not been formalized and documentation of various aspects of the program was being established. This was discussed at the exit interview and licensee management representatives indicated that action to improve documentation and formalization of the program would be taken.

No items of noncompliance or deviations were identified.

7. Posting and Access Control

The licensee's program for refueling outage surveillance includes special and routine surveys in the containment sphere and other portions of the controlled area. Appropriate signs are posted at the access control points. The containment sphere is posted as a "High Radiation Area." Locations at which significant radiation levels are measured are posted with signs and, in some cases, by barriers and signs. Radiation levels indicated are related to levels found during routine or special surveys.

One area at the -10 foot level of the containment sphere was posted with a sign indicating significantly higher radiation levels. A radiation level of 200 R/hr was detectable in a generally inaccessible area when measured with an extended probe, teletector survey instrument. Sheet lead and bags of lead shot shielding had been placed in and around the location and barriers with signs had been erected around the general area. General access to the containment sphere is controlled and a system utilizing colored arm bands and work permits was utilized to further control access within the sphere.

No items of noncompliance or deviations were identified.

8. Surveys

See Item 7, Posting ... above. Interviews with licensee staff were conducted regarding the survey program for refueling operations. Sample records of routine swipe and radiation levels were examined.

No items of noncompliance or deviations were identified.

9. Confirmatory Measurements

The inspector discussed the status of results of the analysis of confirmatory measurement samples. Mock charcoal cartridge and particulate filter samples have been provided. They have been

analyzed on the licensee's GeLi detector/multi-channel analyzer system. Isotopes were identified and activities as of July 1, 1978 were being calculated and would be submitted to Region V.

No items of noncompliance or deviations were identified.

10. Emergency Plan Tests and Drills

Continued licensee activity regarding emergency response review and planning for tests and drills was reviewed by the inspector. The June 13, 1978 drill was principally involved with offsite mobilization and communication, and did not involve onsite personnel to a great extent. Licensee management was asked for clarification regarding their understanding of the requirement for an annual exercise involving onsite personnel and coordination with offsite response groups, at least at the level of communication link checks. The next exercise is projected to involve onsite personnel and licensee representatives indicated that offsite communication links would be incorporated in the drill to meet the annual drill requirement.

No items of noncompliance or deviations were identified.

11. Exit Interview

An exit conference was held with SONGS-1 staff and management personnel (denoted in Paragraph 1) to review the scope and findings of the inspection including those items referred to in Paragraph 4, 6 and 10 of this report. The inspector advised licensee representatives that no items of noncompliance were identified.