

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos.: 50-206/93-25, 50-361/93-25, 50-362/93-25
License Nos.: DPR-13, NPF-10, NPF-15
Licensee: Southern California Edison Company (SCE)
Irvine Operations Center
23 Parker Street
Irvine, California 92718
Facility Name: San Onofre Nuclear Generating Station (SONGS)
Units 1, 2 and 3
Inspection at: SONGS Site, San Diego County, California
Inspection Conducted: August 23-27, 1993

Inspectors: Virgil L. Beaton 2 Sep 93
V.L. Beaton, Reactor Radiation Specialist Date Signed
L.C. Carson II 9/2/93
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Approved by: James H. Reese 9/2/93
James H. Reese, Chief Date Signed
Facilities Radiological Protection Branch

Inspection Summary:

Areas Inspected: Routine announced inspection of the licensee's process and effluent monitoring program, and radioactive waste storage program. Inspection procedure 84750 was used.

Results: In the areas inspected, the licensee's program was adequate. One weakness was identified in the licensee's program for handling temporary facility modifications (See section 6.A.(2)). No violations or deviations were identified.

DETAILS

1. Persons Contacted

SCE Personnel

- *T. Adler, HP Supervisor Units 2/3
- J. Barrow, HP General Foreman
- *E. Bennett, QA Engineer
- *M. Bua, Chemistry Supervisor
- *P. Chang, Effluents Supervisor
- *J. Clark, Chemistry Manager
- D. Dick, Effluents Engineer
- S. Enright, Supervisor HP/Radioactive Material Control (RMC)
- *J. Fee, Assistant HP Manager (Acting Manager Site HP)
- *G. Gibson, On-site Nuclear Licensing
- *R. Giroux, On-site Nuclear Licensing
- *R. Kaplan, On-site Licensing Engineer
- *G. McDonald, Senior Licensing Engineer
- *B. Metz, Environmental Engineer
- *J. Reilly, Engineering Construction and Fuel Services Manager
- *A. Talley, HP Supervisor Unit 1
- *R. Waldo, Operations Manager
- D. Warnock, Assistant HP Manager

Others

- C. Caldwell, NRC Senior Resident Inspector
- *J. Sloan, NRC Senior Resident Inspector (Palo Verde)

(* Denotes those individuals who were at the exit meeting on August 27, 1993. Additional licensee personnel were contacted and present at the exit meeting, but are not reflected in the above listing.

2. Audits and Appraisals

The inspectors reviewed 37 Quality Assurance (QA) surveillance reports and parts of the three audit reports listed below. These reports covered the period October 1991 through June 1993. The inspectors reviewed these reports to identify any programmatic weaknesses and to assess the quality of the reports.

- Audit Report SCES-528-92 Units 2 and 3, "Technical Specification 4.11 Radioactive Effluent Storage"
- Audit Report SCES-537-92 Units 1, 2, and 3, "Radiological Environmental Monitoring Program"
- Audit Report SCES-548-92 Units 1, 2, and 3, "Effluent Monitoring Program"

The inspectors noted that many of the QA surveillance reports were performance-based and identified training and/or procedural deficiencies. The reports documented that timely corrective actions

were taken for the deficiencies identified, and where appropriate, the reports offered good recommendations to improve those deficiencies which could not be corrected immediately.

Based on the audits reviewed, the inspectors concluded that the QA surveillance reports were effective at identifying deficiencies and that timely corrective actions were taken for the deficiencies identified. The inspectors had no concerns in this area.

3. Process and Effluent Radiation Monitors

The inspectors examined several radiation monitors identified in the San Onofre Updated Final Safety Analysis Reports (UFSAR) to assess the licensee's process and effluent monitoring program.

A. Surveillance and Maintenance of Radiation Monitors

The inspectors reviewed calibration and surveillance records for the radiation monitors listed below to determine if the licensee was meeting its functional surveillance and calibration requirements.

- R-1218 Unit 1 Radwaste System Liquid Effluent Monitor
- R-7813 Units 2/3 Radwaste Discharge Line Monitor
- R-78701 Unit 2 Noble Gas Activity Monitor-Condenser Evacuation
- R-78701 Unit 3 Noble Gas Activity Monitor-Condenser Evacuation
- R-7865A1 Unit 2 Wide Range Gas Monitor
- R-7865A1 Unit 3 Wide Range Gas Monitor
- R-78201 Unit 2 High Range in Containment Rad Monitor, Train A
- R-78202 Unit 2 High Range in Containment Rad Monitor, Train B
- R-7804A1 Unit 2 Containment Purge Isolation, Train A
- R-7807A1 Unit 2 Containment Purge Isolation, Train B

Discussions with responsible individuals and review of records revealed that the licensee was tracking radiation monitor maintenance and surveillance requirements on a computer data base system. This data base was then used to schedule maintenance, and the required channel checks and calibrations. This system appeared to be an effective method of ensuring that all the radiation monitors were being properly scheduled for maintenance, and the required channel checks and calibrations.

Based on the review of records, the inspectors concluded that the licensee was adequately maintaining these radiation monitors, and that the licensee was performing the required channel checks and calibrations. The inspectors had no concerns in this area.

B. Radiation Monitor Trip Setpoints

The inspectors accompanied a radiation monitor technician into Units 2 and 3 to verify that the correct trip setpoints were installed on the following monitors:

- R-7870 Unit 2 Condenser Evacuation System Wide Range Monitor
- R-7870 Unit 3 Condenser Evacuation System Wide Range Monitor
- R-7865 Unit 2 Plant Vent Stack Wide Range Monitor
- R-7865 Unit 3 Plant Vent Stack Wide Range Monitor

Based on observations of the actual trip setpoints installed in these monitors and a review of the licensee's ODCM, the inspectors concluded that the trip setpoints for these monitors conformed to the ODCM requirements. The inspectors had no concerns in this area.

Based on their observations in the field, discussions with members of the licensee's staff, and a review of records, the inspectors concluded that the licensee's process and effluent monitoring program was adequate in the areas inspected, and was complying with the surveillance and trip setpoint requirements of its Technical Specifications. No violations or deviations were identified in this area.

4. Changes in Radiation Monitoring System Design and Operation

The inspectors reviewed the following Design Change Package (DCP) and Minor Modification Package (MMP) for completeness, and to verify that the licensee had conducted a 10 CFR 50.59 review.

A. DCP 2&3 6191

This design change installed a flow meter to be used with the liquid radwaste discharge monitor, R-7813. This flow meter was needed to correlate the counts-per-minute reading of the liquid radwaste discharge monitor to the activity in the effluent seen by the monitor.

B. MMP 2&3 6835

This minor modification updated the firmware data base for the Unit 2 plant vent stack wide range gas monitor. This data base upgrade was needed to correct a deficiency with the previous data base. The licensee planned to update the Unit 3 plant vent stack wide range gas monitor during the next scheduled refueling outage.

Based on a review of these change packages, the inspectors concluded that the licensee had adequately reviewed these modifications. The inspectors had no concerns in this area.

5. Dose Commitments

The inspectors reviewed both liquid and gaseous 31-day cumulative dose evaluations and projections for the period April 1993 through July 1993, for conformance with the Offsite Dose Calculation Manual (ODCM) and procedure S0123-II-5.10, "Liquid and Gaseous Effluent Dose Determinations (Manual Method)."

Based on a review of these records, the inspectors concluded that the licensee was meeting the dose calculation surveillance requirements of the ODCM. The inspectors had no concerns in this area.

6. Radwaste Storage

The inspectors reviewed the licensee's radwaste programs to ensure that gaseous, liquid, and solid radwastes were being adequately stored, monitored, and inventoried.

A. Gaseous Radwaste

- (1) The inspectors toured the licensee's Unit 2/3 radwaste control room and discussed the gaseous radwaste system with a radwaste control room operator. The inspectors verified that the operator was knowledgeable about the amount of radioactive gases stored in the decay tanks and the status of the various radiation monitors, which were part of the gaseous radwaste system. The current status of the gaseous radwaste system radiation monitors was maintained on a status board in the radwaste control room. The inspectors had no concerns in this area.
- (2) During this inspection, the inspectors noted that the Waste Gas Header (WGH) Monitor, R-7814, was not operational. This monitor was described in the UFSAR Section 11.5.2.1.4, "Waste Gas Header (WGH) Monitor (2/3RT-7814)," as follows:

"The WGH monitor measures the activity concentrations in this discharge stream and provides a control room alarm, if the radiation level reaches a preset level. Separate contacts (same setpoints as high alarm) are provided to shut the waste gas isolation valve when the preset level is reached."

The UFSAR also stated that this monitor's output was supplied to the technical support center in response to NUREG 0660, Item III.A.1.2. The isolation function of this monitor was again described in Section 11.3.1.5, "Instrumentation," of the UFSAR.

In discussions with members of the licensee's staff regarding the status of radiation monitor R-7814, the inspectors learned the following facts:

- The monitor's design did not allow for reliable operation.
- Licensee records provided to the inspectors indicated that this monitor was last calibrated on January 2, 1985.
- The monitor had been dropped from the licensee's maintenance tracking and scheduling program.
- The strip chart recorder for this monitor in the Unit 2/3 control room was running and gave the appearance that the monitor was operational.
- The low-flow light for this monitor in the control room was illuminated.
- Operators were aware that the monitor was not operable.
- The functions described in the UFSAR for this monitor were actually being performed by the Unit 2 and Unit 3 plant vent stack monitors, R-7865.
- The plant's piping and instrumentation drawings (P&IDs) had not been updated to reflect the non-functional status of the monitor.

The inspectors were informed by members of the licensee staff that the status of the monitor was documented by Temporary Facility Modification (TFM) No. C-89-SPA-001, and that the plant's P&IDs and the UFSAR would be updated once the modification became permanent. The inspectors noted that this TFM was implemented on August 13, 1990; however, the inspectors also noted that according to calibration records provided to them, this monitor had not been calibrated since January 2, 1985.

Based on these facts, the inspectors concluded that a weakness existed in the licensee's temporary facility modification procedures, which had allowed the licensee to track this facility modification for several years as a temporary modification. The inspectors further determined that although the licensee had not violated its procedures, the licensee had not updated the UFSAR or the plants P&IDs in a timely manner to reflect the status of the waste gas header monitor, R-7814.

Overall, the licensee's gaseous radwaste program appeared adequate. The inspectors had no other concerns in this area.

B. Liquid Radwastes

- (1) The inspectors observed and reviewed one liquid effluent batch release from tank T-076 during this inspection. This liquid effluent release was covered by Permit No. 3L-0120-0.

The inspectors observed and reviewed the collection of a liquid sample from tank T-076, the analysis of that sample, and the generation of the release permit. The inspectors verified compliance with the following licensee procedures:

- S0123-III-5.2.23 "Units 2/3 Liquid Effluent Sample Collection"
- S0123-III-5.1.23 "Units 2/3 Effluent Sampling and Analysis"
- S0123-III-5.23.23 "Units 2/3 Nuclear Data 6685 Computer Operation for the Generation of Radioactive Effluent Release Permits"

Based on observations and record reviews, the inspectors had no concerns in this area.

- (2) The inspectors observed two radiation monitor technicians change the setpoint of the liquid radwaste discharge monitor, R-7813, for the liquid effluent release from tank T-076. The inspectors noted that the alarm setpoint for this monitor was lowered from the pre-release setpoint of 20,000 counts per minute (cpm) to 17,000 cpm for the release. Further review of both gaseous and liquid release permits revealed that the licensee routinely lowered effluent radiation monitor alarm setpoints prior to planned effluent releases, and then reset the alarms at the higher pre-release setpoints once the release was completed.

A review of the non-release alarm setpoints for Units 2&3 effluent radiation monitors revealed that the licensee did not appear to have a firm bases for how the non-release alarm setpoints were derived. The inspectors determined that although there appeared to be no firm bases for the alarm setpoints, the installed setpoints would have ensured that the licensee did not exceed the limits specified in 10 CFR Part 20, Appendix B, Table II. The licensee decided to conduct a review of how non-release alarm setpoints were determined for effluent radiation monitors. The inspectors had no other concerns in this area.

Overall, the inspectors concluded that the licensee's liquid radwaste program met 10 CFR Part 20 requirements in the areas inspected. The inspectors had no further concerns in this area.

C. Solid Radwaste Storage

The inspectors reviewed the licensee's solid radwaste storage program in the areas below to ensure regulatory requirements were being met.

(1) Postings and Labels

The inspectors toured the licensee's solid radwaste storage areas during the inspection and examined several containers. The inspectors verified that the containers were properly labeled and that the dose rate information contained on the labels was correct. The inspectors had no concerns in this area.

(2) Radioactive Equipment and Material Storage (REMS)

The inspectors obtained a copy of the master REMS inventory list and reviewed it for conformance to Health Physics Procedure S0123-VII-8.16. The inspectors noted that the licensee was in the process of repairing lids and repainting several of the boxes used in the REMS program as required by this procedure. The inspectors had no concerns in this area.

(3) Decontamination of Radioactive Tooling and Equipment

The inspectors noted that a new contractor was decontaminating radioactive tools and equipment at the licensee's facility. The contractor had set up a decontamination unit that uses dry ice pellets to decontaminate tools and equipment. The licensee planned to use the new process for a six-month period and evaluate its merits.

The inspectors verified that the licensee had conducted a 10 CFR 50.59 review, and that the contractor's operation was incorporated into San Onofre's procedures. Based on a review of records, observations, and discussions with the licensee, the inspectors had no concerns in this area.

(4) Oil Separation System

The inspectors observed the licensee preparing to ship used oil offsite for recycling. The inspectors observed this operation for compliance with procedure S0123-IX-2.204, "Oil Separation System and Miscellaneous Sumps."

The operation was being performed under Maintenance Order No. 93081411000. The inspectors discussed the maintenance order with the individual in charge, and reviewed the licensee's summary of nuclide activity, Sample ID No. 4532,

associated with this shipment. During their observations, the inspectors noted that a Health Physics technician was monitoring workers for hot particle contamination. The inspectors had no concerns in this area.

Based on observations in the field, review of records, and discussions with members of the licensee's staff, the inspectors concluded that the licensee's solid radwaste program was adequate. The inspectors had no concerns in this area.

Overall, the inspectors concluded that the licensee was meeting the requirements of 10 CFR Part 20 and that the licensee was properly storing, monitoring, and accounting for radioactive waste at its facility. No violations or deviations were identified in this area.

6. Exit Interview

The inspectors met with members of licensee management at the conclusion of this inspection on August 27, 1993. The scope and findings of the inspection were summarized. The inspectors concern about the lack of timeliness in updating the UFSAR and the plant's P&IDs to reflect the status of radiation monitor R-7814 was also addressed by members of the licensee's staff. None of the material given to the inspectors was identified as proprietary. The licensee acknowledged the inspectors observations.