ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-206/95-24

License: DPR-13

Licensee: Southern California Edison Co.
Irvine Operations Center
23 Parker Street
Irvine, California

Facility Name: San Onofre Nuclear Generating Station (SONGS), Unit 1

Inspection At: SONGS site, San Clemente, California

Inspection Conducted: November 13-17, 1995

Inspectors: Louis C. Carson, II
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Approved: D. Blair Spitzberg 12-13-95
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Nuclear Materials Licensing Branch

Inspection Summary

Areas Inspected (Unit 1): Routine, announced inspection of tne licensee's organization, self-assessment programs, operational safety verification, spent fuel pool activities, fire protection and prevention program, radiation protection program, and radiological effluent/environmental monitoring.

Results (Unit 1):

- The licensee's organization and lines of responsibility complied with their Permanently Defueled Technical Specifications (PDTS). The organization and staffing were appropriate for Unit 1's shutdown and defueled condition (Section 1.1).

- The licensee's self-assessment programs were adequately implemented for the shutdown condition of the plant (Section 1.2).

- The licensee's radiation protection program met the requirements of the license and 10 CFR Part 20 (Section 1.3).

- The licensee maintained proper control of the Unit 1 facility. Plant housekeeping was adequate and Unit 1 was in good material condition (Section 2.1).

- A system misalignment was identified that was determined to be the result of inconsistent procedures. Other areas in need of additional management oversight included the auditing of the breaker book (and related documents), ensuring the operability of recently-painted components, and long-term use of deficiency tags (Sections 2.1 and 2.2).

- The licensee was in compliance with the limitations and operational requirements established in the PDTS, including spent fuel pool water level, temperature, and chemistry, as well as control room staffing levels and surveillances (Section 3.1).

- Inspectors toured the spent fuel pool cooling system and found it in service with all components in the correct positions (Section 3.2).

- Several losses of spent fuel pool cooling and level events had occurred which challenged the operations staff. The operator's response actions appeared appropriate (Section 3.3).

- Inspectors concluded the that the licensee's methods for validating spent fuel pool leakage were effective at the time of the inspection (Section 3.3).

- A review of the fire protection and prevention program indicated that the licensee had implemented a program that met license requirements. Fire protection systems were properly aligned to support the plant, and no abnormal fire hazards were identified (Section 4.1).

- The inspectors reviewed an event which occurred on October 25, 1995 in which an electrical fault resulted in the temporary loss of a fire water pump. During the event, backup fire protection systems remained available. The breaker failure indicated that additional preventive maintenance program oversight may be warranted to counteract the effects of equipment age and usage in the plant (Section 4.2).

- The licensee complied with NRC requirements regarding the Offsite Dose Calculation Manual, radiation monitors, the radwaste treatment systems, radiological effluent releases, and environmental monitoring (Section 5.1).

Summary of Inspection Findings:

- Inspection Followup Item 50-206/9423-01 was closed (Section 6.1).

Attachments:

- Persons Contacted and Exit Meeting

DETAILS

1 OCCUPATIONAL EXPOSURE DURING SAFSTOR AND DECON (83100)

1.1 Organization

San Onofre Nuclear Generating Station (SONGS) is a three unit site of which one (Unit 1) had been permanently shutdown. Unit 1 began commercial operation on January 1, 1968, and was permanently shutdown on November 30, 1992. Since that date, the licensee had defueled the reactor, stored the spent fuel in the site's spent fuel pools, and placed the unit in SAFSTOR. A possession-only license was issued for the unit in March 1993.

Inspectors reviewed SONGS' organization with the requirements in Section D6.2 of the PDTS which define lines of authorities and responsibilities. Inspectors found that the SONGS' organization was consistent with PDTS requirements.

Permanently Defueled Technical Specifications (PDTS), Table D6.2-1, "Minimum Shift Crew Composition," lists the minimum shift crew requirements for each on-duty operations shift. The minimum shift composition is required to ensure that personnel are available in case of an emergency. During the inspection, several unannounced entries were made into the control room, in part, to observe the number of on-site crew members present. The actual number of personnel that were on duty during the inspection met or exceeded the minimum total established in the PDTS. A review of the current staffing list indicated that a sufficient number of individuals were qualified to stand watch in the control room.

1.2 Audit, Appraisal, and Self-Assessments

Inspectors reviewed the licensee's self-assessment and audit programs to verify that these programs were adequate to identify, evaluate, and document significant operational occurrences and implement timely corrective actions. This inspection consisted of selected interviews with plant personnel, reviews of audits, and independent verification of related plant activities.

Inspectors reviewed the following self-monitoring reports for 1995:

- Non-Compliance Reports (NCRs)
- Operations Division Experience Reports (ODERs)
- Maintenance Division Experience Reports (MDERs)
- Inter-Divisional Investigation Report (IDIRs)
- Near Miss Reports
- Challenge Reports
- Events Reports

Four IDIRs, two NCRs, one ODER, and one MDER had been written for Unit-1 operation in 1995. The root cause determinations and recommended corrective actions appeared adequate.

1.3 Radiation Protection and Maintaining Occupational Exposures As Low As Is Reasonably Achievable (ALARA)

The purpose of this section of the inspection was to determine the adequacy of the licensee's radiation protection program for Unit 1's defueled operations, and to determine whether the licensee was in compliance with the requirements of PDTS D6.11. The scope of this inspection included a review of the radiation protection organization, procedures, survey records, ALARA reviews, and NRC Inspection Reports 50-361/95-11 and 50-361/95-19.

Inspectors found that SONGS' Units 2 and 3 operational health physics staff, release group, radioactive material control group, and engineering group provided support for Unit 1 radiation protection activities. SONGS' Unit 1's radiation protection staff consisted of 2 full-time senior health physics technicians and 15 health physics support personnel who were allocated to Unit 1 on an as-needed basis. Additionally, three SONGS chemistry technicians were allocated to Unit 1 on an as-needed basis to analyze radiochemistry samples and monitor radiation effluent equipment.

Inspectors reviewed ALARA planning and Radiation Exposure Permit development for work activities conducted in late 1994 and in 1995. Inspectors noted that the collective personnel dose for 1994 was 3.7 person-rem. The 1995 collective dose through November was 5.2 person-rem. Discussions with Unit 1 radiation protection staff revealed that most of the increase in Unit 1 collective dose was due to spent fuel pool (SFP) upender repair activities. Inspectors reviewed five REPs that were issued for upender activities in 1995 and found that 1.4 person-rem was the collective dose assigned to personnel performing upender work.

Inspectors reviewed survey log records, area plot plans, survey pre-job planning cards, and Unit 1 radiation trending data. Detailed periodic radiation and contamination surveys had been performed in accordance with the licensee's radiation survey procedures. During the Unit 1 facility tour of the containment and fuel handling buildings, radiation exposure levels measured independently by inspectors using an NRC radiation survey meter were in agreement with the licensee's survey records and postings. Inspectors determined that ALARA shielding, detailed work planning, and radiation protection pre-job briefings were adequate for the tasks being performed. Radiation Exposure Permits and ALARA evaluations had been conducted adequately by radiation protection staff. Radioactive materials, radiation work activities, and radiation areas were being controlled in accordance with the requirements of 10 CFR Part 20, PDTS D6.8.1, PDTS D6.8.4, PDTS D6.11, and PDTS D6.12.

1.4 Conclusions

Inspectors concluded that the licensee's organization, self-assessment program, and radiation protection program met requirements. The organization and staffing were appropriate to Unit 1's shutdown and defueled condition.

2 OPERATIONAL SAFETY VERIFICATION (71707)

2.1 Plant Tours and System Walkdowns

San Onofre Nuclear Generating Station (SONGS) Unit 1 plant tours were made to observe the material condition of the plant, facility housekeeping, and adherence to requirements established in selected plant operations procedures. Overall, plant housekeeping was adequate. No significant fire hazards, improper radiological postings, or abnormal equipment operating parameters were identified. In addition, the licensee was in the process of painting the outdoor systems in an attempt to prolong the life of the system components.

Locked valves and SFP support systems such as saltwater cooling, component cooling water (CCW), and fire protection were inspected during the plant tours. Most components inspected were found in the correct positions to support plant operations. The exceptions were the CCW heat exchanger outlet motor operated valve (MOV) CCW-MOV-720B power supply fuses. The CCW system alignment verification surveillance procedure listed the required position as "breaker open, fuses removed" for CCW-MOV-720B. The breaker was found open, but the fuses were still installed. A safety concern did not exist, because the open breaker performed the same function as pulled fuses to de-energize the valve circuitry. The inspectors noted an inconsistency between the CCW system operating procedure which required a "breaker open" MOV position and the surveillance procedure, which provided instructions to ensure that the fuses were not installed.

In addition, an inconsistency was found between the CCW operating trains. The "A" train valve fuses were installed while the "B" train valve fuses were not installed. Inspectors verified that corrective actions were taken by the licensee, which included revising the surveillance procedure to agree with the operating instructions.

During the plant tours, many valves were found to be secured with tie-wraps. Tie-wraps were used to prevent the inadvertent operation of SAFSTOR boundary valves and valves located between active and inactive liquid systems. Some valves were noted to be chain-locked in accordance with the locked valve policy and tie-wrapped in accordance with SAFSTOR operations instructions. The inspectors noted that the locked valve policy did not discuss the use of tie-wraps. The licensee stated that they would review the locked valve program to determine whether the use of sealing mechanisms, other than hard locks should be added to the program policy guidance.

Other miscellaneous items found during the tours and reported to the licensee included:

- Several faded deficiency tags were identified. The information that was written on the tags was illegible.

- One component cooling water valve (CCW-346) was found painted in place with paint on the valve stem. In response to this observation, the

licensee issued night orders to have operations personnel inspect the other system valves.

- Component cooling water valve CCW-387 was found locked open, but according to the lineup procedure, the valve should not have been locked.

- Several key lights were out, including a reactor auxiliary building stairwell light.

- An out-of-date procedure was found in a controlled copy of a procedure. This procedure was updated prior to the end of the inspection.

2.2 Operator Aids in the Unit 1 Control Room

On October 25, 1995, an electrical fault developed on the 480-volt bus No. 1. The fault originated in the west fire pump breaker, S1-52-1106, on the bus. The fault resulted in the separation of the bus from its power source when the bus feeder breaker opened to isolate the fault. As a result, loads powered from the bus, such as the running spent fuel cooling pump and operating battery charger, were lost (additional details of this event are provided in sections 3.3.1 and 4.2 of this inspection report).

A resident inspector was promptly notified of this incident and responded to the Unit 1 control room to observe the operators' response to the event. During the response, inspectors noted that operators used an operator aid called the breaker book. During this event, the operator aid was used to identify nonessential electrical loads to be removed to prolong the life of the battery. However, inspectors noted that the recent sale of the Unit 1 diesel generators had not been reflected in the breaker book. The licensee stated that the revised breaker book was near completion but had a lower updating priority. Inspectors noted that the out-of-date version of the breaker book did not detract from the operator's ability to respond to the event.

The licensee audited the administrative program governing operator aids. Inspectors reviewed the audit log and found that the breaker book had been audited. However, the auditor did not document that the breaker book was not up-to-date. One of the operators that performed the audit stated that he was aware that the breaker book needed change, but these changes did not reach his threshold for identification. Licensee management explained to the inspectors that it was their expectation that operator aids would be audited monthly and, if operator aids were found to be out-of-date then these aids would be removed until the updated versions were obtained. Licensee management also stated that the differences should have been documented even if the significance was minimal and, if no action was necessary. Inspectors concluded that the licensee's audit of the breaker book was not completely effective because a condition requiring corrective action was not appropriately documented and corrected.

2.3 Conclusions

Unit 1 systems were in good material condition, and plant housekeeping was adequate. The licensee's plan to paint critical plant systems was proactive. However, the licensee needed to strengthen their oversight to ensure that the plant components remained operable following the painting evolution. A system misalignment was identified and was determined to be the result of inconsistent procedures. Recommendations for additional management oversight were discussed with licensee management and included formalizing the SAFESTOR boundary tag and tie-wrap program, auditing the operator aids breaker book and related documents, and long-term use of deficiency tags.

3 SPENT FUEL POOL ACTIVITIES (86700)

3.1 Compliance with Technical Specifications For Spent Fuel Pool

The primary activities in progress at Unit 1 during the inspection included maintaining the facility in a SAFSTOR configuration, and SFP activities. During the SAFSTOR mode of plant operation, compliance with the PDTS is required by Condition 2.C.(2) of the Possession Only License No. DPR-13. The PDTS provide system parameters and limits to ensure safe operation of the unit. During this inspection, the licensee's compliance with the PDTS and plant procedures were reviewed. Overall, the licensee was found to be in compliance with all limitations and requirements established in the PDTS:

- PDTS D3.1.1.A requires that the spent fuel pool coolant temperature be maintained less than 150 degrees Fahrenheit. Actual water temperature was noted to be 73 degrees Fahrenheit.

- PDTS D3.1.1.B requires that at least one SFP cooling train be functional. During the inspection, the SFP cooling system was operating with the primary pump in service; support systems were also in service.

- PDTS D3.1.2 requires that the water level be maintained in the spent fuel pool at an elevation not less than 40 feet, 3 inches. Actual level was 40 feet, 8.5 inches.

- PDTS D3.1.3 requires that the SFP water chemistry, specifically the chloride and fluoride concentrations, be maintained less than the limits specified in Table D3.1.3-1. The results of sampling indicated that the chloride and fluoride concentrations have remained below the Technical Specification limit of 0.15 parts per million during 1994 and 1995 (the last sample results reviewed for this inspection was the sample taken on October 25, 1995).

- The auxiliary feedwater storage tank served as a source of makeup water for the SFP. PDTS D3.1.3 requires that the water level in this storage tank be above plant elevation 50 feet, 9 inches (corresponds to a minimum volume of 50,000 gallons of water). Actual water level was noted to be about 2.5 feet above the minimum water level.

- PDTS D3.3 requires that loads in excess of 1500 pounds be prohibited from travel over fuel assemblies in the SFP. During the inspection, no loads were noted to be over or near the SFP.

In addition, all surveillance requirements had been performed at the required intervals or more frequently than established in the PDTS.

3.2 Spent Fuel Pool Cooling System Walkdown

A walkdown of the SFP system was performed to ascertain independently whether the system was properly aligned to support the SFP. The system valves, power supplies, and control switches were properly positioned in accordance with guidance provided in the system operating procedure. The storage locker used during emergency pool makeup operations was properly stocked with the required equipment. In addition, the as-built configuration agreed with the piping and instrument diagram and the SFP lineup procedure. SFP clarity was satisfactory, although some minor debris was found on the surface of the pool, including feathers.

3.3 Loss of Spent Fuel Pool Cooling, Level, and Leakage Events

Since the previous inspection, several incidents occurred that resulted in challenges to the licensee's ability to maintain the SFP water level and cooling. The incidents included two losses of pool inventory events, one loss of SFP cooling event, and one abnormal leak detection flow event. None of the incidents were considered safety significant, because backup systems were available and no PDTS limits were exceeded.

3.3.1 Loss of Spent Fuel Pool Cooling

On October 25, 1995, an electrical fault occurred at the 480-volt Bus No. 1, resulting in a loss of power to the "A" train components (further discussion of this incident is provided in sections 2.2 and 4.2 of this report). The operating spent fuel pool cooling pump was rendered inoperable because of the loss of "A" train power.

Spent fuel pool cooling was restored using the Train "B" spent fuel cooling pump shortly after the incident. Pool temperature increased about 1 degree, from 72 to 73 degrees Fahrenheit, because of the incident. In addition, backup fire protection and spent fuel pool water makeup systems were available during the incident; therefore, the breaker malfunction had a negligible effect on the spent fuel pool operating parameters. Licensee analysis indicated that a complete loss of spent fuel pool cooling apparently would not result in the pool temperature reaching the Technical Specification limit of 150 degrees.

3.3.2 Loss of Spent Fuel Pool Level

On March 21, 1995, the licensee noted that the SFP level had dropped over an inch following a routine fill evolution. During the investigation into the level decrease, the licensee noted that the refueling water storage tank had

about 19,000 gallons of water in it. This was unexpected, because the tank had been drained in May 1994. The water in the tank was analyzed and found to be SFP water. The licensee concluded that the SFP water had been slowly leaking into the refueling water storage tank at a rate of roughly 65 gallons per day (GPD). The licensee determined that the loss of SFP level was caused by the loss of fluid via the cable guide tubes. Short-term corrective actions taken included reverifying the flow path alignments between the SFP and the storage tank, and verifying closed the interfacing valves. Other corrective actions taken included the repair of a defective valve. Planned long-term corrective actions identified by the licensee included implementation of a program to monitor the SFP for slow leaks. Also, the licensee secured all SAFSTOR boundary valves with tie-wraps to ensure that the valves were maintained in the correct positions.

This incident suggested that the licensee needed to improve their method of monitoring the SFP for slow leaks. Although the licensee's investigation and actions taken in response to the refueling water storage tank in-leakage was proactive, evidence of the leakage was available to the licensee prior to the observed level drop. The licensee was aware that boron concentration in the SFP was slowly decreasing over time at a rate generally consistent with the water leakage rate and evaporation. The boron concentration was decreasing at a rate comparable to a 75 GPD outflow from the SFP.

On April 10, 1995, the licensee again noted that the SFP level had dropped about an inch following a routine fill evolution. The licensee also noted that the upender area of the SFP, separated from the remainder of the pool by a weir gate, was about 2 inches higher than the rest of the pool. The licensee found that the water had drained from the main SFP area to the transfer tube, which connects the SFP in the fuel storage building to the refueling cavity in the containment building, via the transfer tube carriage cable guide tubes.

Following the second incident, the licensee concluded that a containment entry was required, because several hundred gallons of water were unaccounted for. On April 12, 1995, an inspection revealed that the containment sump was full of water (sump holds almost 2000 gallons of liquid) and that roughly 75 gallons were present on the containment floor. The flange on the containment side of the transfer tube was leaking, water was being transferred from the SFP to the refueling cavity and; subsequently, the containment sump via the flange leak.

Corrective actions taken in response to the second loss of water volume incident included plugging the cable guide tubes and tightening the fuel transfer tube flange bolts. In addition, the licensee planned to inspect the flange for leakage each time a quarterly containment entry was performed.

3.3.3 Spent Fuel Pool Leakage Detection

During this inspection, inspectors wanted to further ascertain if the licensee's methods for detecting SFP leakage were effective. Inspectors examined SFP leakage well detection data for 1995 and the circumstances of a May 16, 1995, report of a 5 gallons per hour (GPH) leakage event. Inspectors

found that SONGS' report of the 5 GPH SFP leakage in May 1995 was valid, and that SONGS repaired the damage to the SFP transfer pool liner.

On November 14, 1995, inspectors and licensee staff entered the Unit 1 containment building to determine if there was measurable leakage from the SFP transfer-tube flange into a 5-gallon bucket. Additionally, the licensee was installing a more sensitive leak detection device at the flange. Licensee staff and inspectors found that the bucket had tipped over. No abnormal leakage was observed during the tour from the transfer tube flange. The containment sump level was not high and standing water was not present on the containment floor. Repairs on the leaking flange appeared to have been effective.

3.4 Conclusions

The licensee was found to be in compliance with the limitations and operational requirements established in the Technical Specifications. These requirements included spent fuel pool water level, temperature, and chemistry, as well as control room staffing levels and surveillance requirements.

Several losses of spent fuel pool cooling and level events had occurred which challenged the operations staff. The operator's actions appeared appropriate. Prior to the incidents, however, trending of SFP water leakage appeared weak.

Based on a detailed examination of the SFP leakage event, SFP leakage data for 1995, and discussions with the SONGS' Unit 1 operations and chemistry, inspectors concluded that the licensee's methods for validating SFP leakage were effective.

4 FIRE PROTECTION/PREVENTION PROGRAM (64704)

A limited inspection of the licensee's fire protection program was performed to independently evaluate the overall adequacy and implementation of the NRC approved program.

4.1 Fire Protection Program Review

The PDTS License Condition 2.C.(9) states, in part, that the licensee shall implement and maintain in effect all provisions of the fire protection program. Portions of the fire protection program were reviewed to ensure compliance with this license condition. The areas inspected included combustible material control, housekeeping, and proper operability of the fire protection systems.

The administrative procedure, SO1-XV-4.5, "Unit 1 Fire Protection Administrative Controls," Revision 1, was a controlled procedure that implemented the fire protection program. A limited review of the procedure was performed. In addition, the licensee's implementation of the fire protection program in Unit 1 was compared to the requirements established in the procedure. The inspectors found that the licensee had implemented the administrative controls program. No significant fire hazards were identified

during the plant tours; however, some minor amounts of potentially combustible material were identified inside the containment.

Portions of the fire protection systems were inspected in the plant, including the fire water and halon systems. All system valves, power supplies, and control switches inspected were in the correct positions to support the plant.

As part of the inspection, the fire system valve alignments in the plant were compared to the requirements established in the licensee's fire system surveillance procedure. Surveillance Procedure SO1-12.3-18, "Fire System Valve Alignment and Functional Check," Revision 6, listed the positions of the diesel generator No. 1 deluge inlet valve and No. 2 deluge inlet valve as locked open. The valves were found to be open but were not locked. Although the valves were not in the correct locked position according to the surveillance procedure, the control room was aware of this procedure deviation.

The licensee sold the diesel generators in the summer of 1995; therefore, the fire hazard associated with the diesel generator building was greatly reduced. However, the administrative and implementing procedures still required fire protection alignment to the diesel generator building. The licensee was in the process of updating the program requirements during the inspection.

4.2 Halon Actuation and Loss of Fire Pump Event

On October 25, 1995, at about 7:47 a.m., electrical bus undervoltage and overcurrent alarms actuated in the Unit 1 control room. The licensee also became aware that the halon system had activated in the "A" train 4160-volt switchgear room. The halon system actuated as a result of a breaker malfunction. An electrical fire, if one had existed, would have been extinguished prior to the emergency response team's entry into the area. The primary bank of halon, consisting of five bottles of halon, was discharged during the event. The secondary bank was not discharged.

At the time of the halon system actuation, fire protection system functional tests were in progress. A motor-driven fire pump, powered by a breaker on the "A" train 480-volt bus No. 1 received an actuation signal. The licensee speculated that the actuation signal was the result of low system header pressure. The licensee anticipated that the pressure in the header could drop and that the motor-driven pump might automatically start to maintain pressure as needed.

The breaker for this pump malfunctioned during the pump start sequence, resulting in the actuation of an overcurrent (86 series) relay and caused the feeder breaker to the 480-volt bus No. 1 to trip open. This resulted in a loss of power to the "A" train safety-related components, including the operating spent fuel pool Pump "A" and 480-volt bus No. 3, which was cross-tied to bus No. 1. Also lost was the "A" train battery charger. Because of the loss of the battery charger, "A" train power was supplied by the batteries for roughly 4 hours.

Backup subsystems were available for the inoperable fire protection pump, including the second Unit 1 fire water pump. Also, a cross-tie connection could have been used to permit the Units 2 and 3 fire protection systems to provide fire water to Unit 1 if necessary. Therefore, fire protection capability was not lost during the incident.

Short-term corrective actions taken by the licensee included restoring power to the 480-volt busses, replacing damaged components, and troubleshooting the cause of breaker malfunction. Preliminary analysis indicated that the cause of the event was a broken breaker-to-bus electrical connector. In addition, the cause of the connector failure was most likely the result of numerous breaker evolutions, including the racking in and out the breaker and opening/closing operations. A nonconformance report was issued to document the incident, corrective actions taken in response to the failure, and a root cause analysis.

Highly cycled breakers are subject to failures similar to the one experienced by the fire pump breaker. Future equipment failures are possible because of the age of the components and the potentially high number of equipment operation cycles. Incidents such as this breaker failure indicate that the licensee's preventive maintenance program may need strengthening to counteract the problems associated with equipment age and usage.

4.3 Conclusions

A limited review of the fire protection and prevention program indicated that the licensee had implemented a program that met the intent of the license. Fire protection systems were properly aligned to support the plant, and no abnormal fire hazards were identified.

The inspectors reviewed an event which occurred on October 25, 1995 in which an electrical fault resulted in the temporary loss of a fire water pump. During the event, backup fire protection systems remained available. The breaker failure indicated that additional preventive maintenance program oversight may be warranted to counteract the effects of equipment age and usage in the plant.

5 RADWASTE TREATMENT, EFFLUENT AND ENVIRONMENTAL MONITORING (84750)

5.1 Details

Inspectors reviewed the licensee's radwaste treatment, radiation effluent release, and environmental monitoring programs for compliance with the PDTS. The Operations Department Health Physics Division (HP) has responsibility for on-site contamination and release events. The Chemistry Division has responsibility for the monitoring of effluent release pathways to the environment and maintaining effluent radiation monitors operational.

Inspectors reviewed the licensee's compliance with the PDTS as related to the Offsite Dose Calculation Manual (ODCM), radwaste system operations, radiation effluent monitoring systems, and unplanned releases. Changes to the ODCM, the gaseous radwaste treatment system, and uncontrolled or unplanned releases at

SONGS-1 were reported in the 1994 Annual Effluent Release Report in compliance with the requirements of the PDTSs. Inspectors verified that reviews or evaluations were performed by qualified individuals and reviewed by appropriate managers. However, inspectors' review of the operational status of liquid and gaseous effluent radiation monitors revealed that ODCM Tables 4-2 and 4-3 needed to be updated. Specifically, ODCM Tables 4-2 and 4-3 states, in part, that certain radiation effluent monitors do not provide control room alarm annunciation when the instrument controls are set in the "not operate" mode. Inspectors, Unit 1 operations' staff, chemistry effluents engineer, and radiation monitor technicians reviewed radiation monitor procedures and electrical diagrams. It was determined that the statement in the ODCM no longer applied to the operational state of the referenced radiation monitors. Licensee management noted the inaccurate statement in the 1995 OCDM, and stated that it would be corrected in the 1995 Annual Effluent Release Report.

Inspectors reviewed radiation effluent monitor calibration records to determine compliance with the 18-month calibration frequency identified in ODCM Tables 4.2 and 4.4. According to licensee's records, the effluent monitors had been calibrated as required by the ODCM. Additionally, radiation effluent monitor surveillance and operability requirements had been maintained in compliance with the ODCM.

Inspectors reviewed the SONGS 1994 Radiological Environmental Monitoring Program (REMP) to determine compliance with PDTSs D6.8.1(i), D6.8.4(b), and D6.9.1.3. There were no major changes reported in the 1994 REMP that affected Unit-1. The REMP was implemented by licensee's personnel who used contractors to collect and analyze environmental samples. The REMP was implemented as described in the ODCM and PDTS. Environmental data analysis was appropriately explained and graphically trended within the 1994 REMP report. Inspectors reviewed the Land Use Census data that was included in the 1994 REMP report. Inspectors determined that the licensee had appropriately assessed the land use around the facility, which included documenting significant changes. Inspectors determined that the licensee's staff and REMP implementation met the requirements of the PDTS.

5.2 Conclusions

Inspectors concluded that the licensee's Annual Effluent Release Report, REMP, and effluent monitoring programs met the requirements of the PDTS and ODCM.

6 FOLLOWUP (92701)

6.1 (Closed) Inspection Followup Item (50-206/9423-01): Spent Fuel Pool Liner Integrity Versus Groundwater Seepage

NRC Inspection Report 50-206/94-23 identified a concern related to the long-term integrity of the SFP liner and leak detection methods. Inspectors noted that because of the design of the SFP leak detection well and the way licensee's procedures were written, groundwater seepage could remain in contact with the outside of the stainless steel SFP liner for extended periods of time. Inspectors were concerned that the licensee had not evaluated the long-term metallurgical effects to the stainless steel from long-term contact

with groundwater. As a result of the NRC's concern, the licensee committed to take immediate action to modify procedures to prevent water from contacting the liner until the condition could be evaluated, to perform chemical analysis of water samples from the leak detection well, and to evaluate the potential degradation that could occur to the stainless steel liner. The licensee also committed to provide the NRC Region IV office a report of the results of their evaluation within 90 days of issuance of this inspection report.

The licensee provided the evaluation to the NRC on March 10, 1995, and the NRC completed its review of the evaluation on October 25, 1995. The licensee concluded that no long-term negative affects existed, and the NRC found the evaluation acceptable.

ATTACHMENT

1 PERSONS CONTACTED

1.1 Licensee's Personnel

M. Bua, Supervisor, Chemistry
J. Clark, Manager, Chemistry
J. Custer, Unit 1 Plant Superintendent
P. Chang, Chemistry/Effluent Supervisor
J. Darling, Licensing Engineer
G. Gibson, Manager, Compliance
E. Goldin, Supervisor, Health Physics & Engineering
P. Knapp, Manager, Health Physics
R. Kreiger, Vice President, Nuclear Generation
T. Llorens, Unit-1 Licensing
G. Plumlee, Supervisor, Compliance
D. Spiker, Nuclear Construction Engineer
R. Waldo, Manager, Operations
K. Weigand, Quality Assurance Engineer
H. Wood, Quality Assurance Engineer
K. Yhip, Health Physics/Environmental Engineer
W. Zintl, Manager, Site Emergency Preparedness

1.2 NRC Personnel

R. Huey, SONGS Project Branch Chief
L. Ricketson, Senior Radiation Specialist
J. Sloan, Senior Resident Inspector
D. Solorio, Resident Inspector

All the personnel listed above attended the exit briefing on November 17, 1995. In addition to the personnel listed above, inspectors contacted other licensee's personnel during the inspection.

2 EXIT INTERVIEW

An exit briefing was conducted on November 17, 1995. During the briefing, the team reviewed the scope and findings of the inspection. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspectors.