U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-206/87-24, 50-361/87-23, 50-362/87-26

Docket Nos. 50-206, 50-361, 50-362

License Nos. DPR-13, NPF-10, NPF-15

Licensee: Southern California Edison Company
P. O. Box 800, 2244 Walnut Grove Avenue
Rosemead, California 92770

Facility Name: San Onofre Units 1, 2 and 3

Inspection at: San Onofre, San Clemente, California

Inspection conducted: August 23, 1987 through October 3, 1987

Inspectors:

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Inspection Summary

Inspection on August 23 through October 3, 1987 (Report Nos. 50-206/87-24, 50-361/87-23, 50-362/87-26)

Areas Inspected: Routine resident inspection of Units 1, 2 and 3 Operations Program including the following areas: operational safety verification, evaluation of plant trips and events, monthly surveillance activities, monthly maintenance activities, refueling activities, independent inspection, licensee event report review, and follow-up of previously identified items. Inspection procedures 530703, 561726, 562703, 571707, 571709, 571881, 571710, 59201, 560710, 593702, 561715 and 561720 were covered.

Results: Of the areas examined, no violations or deviations were identified.

DETAILS

1. Persons Contacted

Southern California Edison Company

H. Ray, Vice President, Site Manager
W. Moody, Deputy Site Manager
*H. Morgan, Station Manager
*M. Wharton, Deputy Station Manager
*D. Schone, Quality Assurance Manager
D. Stonecipher, Quality Control Manager
*R. Krieger, Operations Manager
D. Shull, Maintenance Manager
J. Reilly, Technical Manager
*P. Knapp, Health Physics Manager
W. Zintl, Compliance Manager
*D. Peacor, Emergency Preparedness Manager
P. Eller, Security Manager
W. Marsh, Operations Superintendent, Units 2/3
J. Reeder, Operations Superintendent, Unit 1
V. Fisher, Assistant Operations Superintendent, Units 2/3
R. Santosusso, Maintenance Manager, Units 2/3
L. Cash, Maintenance Manager, Unit 1
T. Mackey, Compliance Supervisor
*C. Couser, Compliance Engineer

San Diego Gas & Electric Company

R. Erickson, San Diego Gas and Electric

*Denotes those attending the exit meeting on October 8, 1987.

The inspectors also contacted other licensee employees during the course of the inspection, including operations shift superintendents, control room supervisors, control room operators, QA and QC engineers, compliance engineers, maintenance craftsmen, and health physics engineers and technicians.

2. Plant Status

During this reporting period, Unit 1 entered Mode 3 on September 3, 1987, in order to repair a body to bonnet leak on the east feedwater pump discharge valve HV852A. Upon completion of the repair, the unit returned to full load on September 8, 1987. The unit was operating at a nominal power of 92% except for power reductions for maintenance related activities, such as condenser cleaning.

Unit 2 initiated the cycle IV refueling outage on August 29, 1987, following a record run of 153 days.

Unit 3 was operating at full power during this inspection period and did not experience a mode change or forced power reduction.

3. Operational Safety Verification

The inspectors performed several plant tours and verified the operability of selected emergency systems, reviewed the Tag Out log and verified proper return to service of affected components. Particular attention was given to housekeeping, examination for potential fire hazards, fluid leaks, excessive vibration, and verification that maintenance requests had been initiated for equipment in need of maintenance.

a. 120 V-AC Vital Bus Breaker Labels (Unit 1)

During a routine tour of the cabinets behind the control panels in the control room, the inspector noticed the breaker identification index cards on the breaker panel for the vital AC buses were removed. The licensee indicated that these index cards, previously mounted on the panel, were not controlled operator's aids. Thus, they were removed from the panel and a controlled breaker book in the control room is to be used by the operator to identify the proper breakers. After reviewing the breaker book and interviewing some of the operators, the inspector expressed concern that during an off normal event, it could be cumbersome for the operator to promptly identify the correct breakers without local labels on the breaker panel. The licensee agreed and committed to install permanent identification labels on the vital AC breaker panels.

b. Plant Shutdown in Preparation for Cycle IV Refueling Outage (Unit 2)

On August 29, 1987, Unit 2 was shut down in preparation for the cycle IV refueling outage, which was scheduled to last approximately seventy days. The unit entered mode 5 on August 30, 1987. The inspector monitored operator actions during this period and verified that the following procedures were properly followed:

- SO23-3-1.2 Reactor Shutdown
- SO23-5-1.5 Plant Shutdown from Hot Standby to Cold Shutdown

After reactor coolant system (RCS) pressure was reduced to approximately 350 psig, the control operator tried to align the shutdown cooling system for service. Valve 2HV-9378, which isolates the ten inch shutdown cooling suction line from the RCS, would not open in response to the remote demand signal. Although the sixteen inch shutdown cooling system suction flow path was aligned and operable, Technical Specification limiting condition for operation (LCO) 3.4.8.3.1 required both the ten inch and the sixteen inch flow paths to be operable for reactor coolant system over-pressure protection when RCS temperature is less than 235°F. With one flow path inoperable, the licensee entered a seven day action statement to restore the flow path, or to reduce the average RCS temperature to less than 200°F, depressurize the RCS and establish a vent path

greater than or equal to 5.6 square inches. The shift supervisor initiated a shift supervisor's accelerated maintenance (SSAM) request to expedite the repairs on 2HV-9378. Additional discussion of the plant cooldown is included in paragraph 4.d of this report, and additional discussion of the maintenance activity associated with 2HV-9378 is included in paragraph 6.b(2) of this report. The licensee exited the seven day action statement when a vent path was established via the pressurizer manway opening.

c. Mid-Loop Operation (Unit 2)

Following RCS depressurization and cooldown, the licensee planned to drain the RCS to mid-loop in order to install steam generator nozzle dams. Steam generator nozzle dam installation allows steam generator tube inspections to be conducted concurrent with fuel movement. Although the licensee's response to Generic Letter 87-12 regarding mid-loop operation was not due until after this evolution, the licensee provided the inspector with a preliminary response to the Generic Letter. The licensee stated that the following controls would be established during RCS draindown and mid-loop operation:

- A tygon tube for local reactor vessel indication would be installed between the RCS hot leg drain and the pressurizer vent in accordance with previously established procedures.

- A wide range and narrow range refueling water level indicator would be installed to provide control room indication and alarm capability. The level transmitters would be calibrated in accordance with previously established procedures.

- The heated junction thermocouples (HJTCs) would not be disabled until after the RCS has been drained to within the narrow range refueling water level indicating band and all level correlation checks had been completed satisfactorily.

- During RCS draindown, correlation checks would be made between the various level indications in accordance with previously established procedures.

- During RCS draindown and mid loop operation, one high pressure safety injection (HPSI) train would be operable, with an operable flow path from the refueling water storage tank to the RCS. In addition, the emergency power source for the HPSI train selected would also be operable.

The inspector discussed the RCS draindown evolution with the licensee, and suggested that some thought be given to the aspect of containment integrity during this critical evolution. The licensee stated that containment integrity commensurate with that required for core alterations would be established during the RCS draindown evolution.

Prior to RCS draindown, the inspector walked down the tygon tube installation to verify that the tygon tube was properly supported and that no loop seals existed. The inspector also verified proper installation of the narrow range and wide range refueling water level transmitters. The inspector monitored the RCS draindown evolution and verified that operations were being conducted in accordance with the following procedures:

°	S023-3-1.8	Draining the Reactor Coolant System
°	S023-5-1.8	Shutdown Operations (Mode 5 and 6)
°	S023-13-15	Loss of Shutdown Cooling
°	S023-I-3.43	Refueling Water Level Indicator (RWLI) Tubing Installation and Removal

The RCS draindown evolution was well controlled and the pressurizer was drained without difficulty. When the RCS water level reached the bottom of the pressurizer, the reactor vessel level (as indicated by the HJTCs) did not correlate with the tygon tube level indication or with the narrow range and wide range refueling water level indicators. This discrepancy in level indication only existed while the RCS was being drained down, and all the level indicators were in agreement when the RCS was not being drained. The licensee believed that this anomaly in level indication during RCS draindown was the result of inadequate equalization of pressure between the pressurizer gas volume and the reactor vessel head. The licensee stopped RCS draindown at 2,000 gallon increments in order to allow the pressurizer gas volume and the reactor head area to equalize in pressure, and to verify that the various RCS level indicators were providing proper level indication. With this additional degree of control, the RCS was drained down to mid-loop without difficulty.

d. Housekeeping Conditions Inside Containment (Unit 2)

While monitoring refueling activities at Unit 2, the inspector monitored housekeeping conditions inside containment. The inspector observed that housekeeping conditions had improved compared to previous outages, and work areas appeared to be maintained in a more orderly fashion. The inspector observed that the licensee had made substantial progress in cleaning up the 17' level of containment following the RCS leak from 2HV-9378 (discussed in paragraph 4.d). Although it appeared that additional improvement in housekeeping could be made inside the bioshield on the 17' level and also in the general vicinity around the equipment hatch on the 30' level near the reactor vessel stud cleaning station, housekeeping conditions inside containment generally appeared to be well maintained.

No violations or deviations were identified.

4. Evaluation of Plant Trips and Events

a. Momentary Loss of Containment Integrity while the Unit was at Power (Unit 1)

On August 25, 1987, at 7:50 a.m., while the Unit was at 92% power, a planned entry was made into the containment through the personnel airlock. At 8:07 a.m., in order to admit another person to the containment, the air lock controls were operated from outside the containment to close the inside hatch of the airlock. The hatch did not fully close due to a hatch drive mechanism failure, although the failure location was such that the position indicator indicated the inner hatch to have closed. Since the controls were operated from outside the containment, the failure of the inner hatch to close was not observed by the hatch operator, who proceeded to open the outer containment hatch. The simultaneous opening of both hatches was recognized immediately and the outer hatch was closed promptly. The inner hatch was manually closed from inside containment at 9:35 a.m. During the brief period (approximately 30 seconds) when both inner and outer hatches were open simultaneously, the Unit was in a condition not permitted by Technical Specification Limiting Condition for Operation 3.6.1(B)(1). The licensee notified the NRC with a four hour telephone report and followed up with a licensee report (LER 87-012). During the time when both hatches were open, the control room apparently did not receive the alarm to indicate both doors were open. The licensee's initial effort to troubleshoot the alarm did not identify any anomaly in the circuit.

The licensee found that one of the four master links of the inner hatch drive assembly had failed. The cause of this failure was determined to have been wear of the swing arm assembly hole to which the failed master link was connected. The enlargement of this hole on the swing arm assembly caused abnormal stress on the master link which resulted in displacement of the master link side bar and its retainer clip and the eventual fatigue failure of the master link. The operation of the hatches from outside the containment precluded observation of the inner hatch during operation because there are no windows on the hatches.

As immediate corrective action, the licensee replaced the broken master link and inspected the other three. The hatch operating station was changed to the air lock between the hatches to assure the hatch operator could visually verify the proper closure of the hatches.

The licensee conducted a root cause analysis and determined that the preventive maintenance program for hatch operating mechanisms, which was developed per manufacturer's recommendations, did not specify a close inspection of the swing arm assembly hole for wear by the disassembly of the master link. Furthermore, the station security instruction for the hatch operators (who are trained security officers) was inconsistent with the operating instruction which calls for the hatch operator to be stationed in the air lock between the two hatches.

As a long term corrective action, the licensee procured new swing arms to replace the worn out ones during the first outage of sufficient duration to allow the hatches be taken out of service. Further alarm troubleshooting will also be performed with both hatches open. The licensee planned to enhance the maintenance program to include disassembly of the master links in order to inspect the condition of the swing arm connections. The operating instructions will also be updated to assure that hatch positions can be verified by the hatch operator.

The inspector reviewed the event and corrective actions. The inspector also independently interviewed some of the hatch operators, observed the operation of the hatches, reviewed the maintenance history of the hatch and the maintenance procedures. A minor weakness in the procedure was identified and the licensee will revise the procedure to clarify specific master links to be inspected as part of the hatch maintenance program improvement effort.

This item remains open pending follow-up review of the licensee's implementation of the revised maintenance procedure and review of the licensee's alarm failure troubleshooting efforts during the next mid-cycle outage (50-206/87-24-01).

b. Failure of ASCO Solonoid Valves (Unit 1)

During the equipment qualification (EQ) upgrade effort in 1986, the licensee replaced eight solenoids for the following control valves:

- Letdown Orifice Isolation Valves CV-202, CV-203 & CV-204
- Containment Purge Isolation Valves CV-10, CV-40 & CV-116
- Containment Spray Discharge Valves CV-82 & CV-114

With the exception of CV-10, all of the valves are located inside containment. In 1987, four of these eight valves failed during routine surveillance tests. The failure mode for the four valves CV-202, CV-204, CV-40 and CV-82 appeared to be similar in that the solenoid valves, when de-energized, failed to exhaust the air from the corresponding control valves. The solenoid valves were supplied by ASCO for the EQ upgrade in 1986.

The licensee initiated a root cause determination by cycling the valves under simulated environments. The effort was prolonged because the failed valves seemed to work properly after they were removed from the containment. Meanwhile, the licensee implemented compensatory measures to assure the reliability of the safety functions associated with the valves by: increasing the in-service testing frequency to once a week; and placing the valve in a conservative alignment while still permitting normal operation. These compensatory measures will be in affect until the root cause determination and corrective actions are completed. The licensee's

actions to date appear to be appropriate and the inspector will follow this as an open item (50-206/87-24-02).

c. Seismic Events (Unit 1, 2 and 3)

At 7:42 a.m. on October 1, 1987, a moderate earthquake was experienced at the site. Seismic alarms were received at the Unit 1 and Unit 2/3 control rooms. The licensee declared an Unusual Event at 7:50 a.m. in accordance with the procedure for recognition and classification of emergencies, SO1-VIII-1 and SO23-VIII-1. The seismic recorder registered a maximum force of 0.032 G. The licensee proceeded with increased inspection and surveillance testing of safety equipment required for safe shutdown. The National Earthquake Information Center indicated the earthquake was 6.0 on the Richter Scale and centered in Whittier, California, approximately 45 miles northwest of San Onofre. The inspector monitored the licensee's inspection and testing effort and observed that all equipment was found unaffected by the earthquake. Due to the proximity of the epicenter, the licensee's corporate headquarters in Rosemead, California, was evacuated due to structural damage. Upon the inspector's inquiry, the licensee stated that the offsite emergency response capability was not affected. Furthermore, the dose release assessment capability was not affected by the loss of the licensee's main frame computer at the corporate office. The Unusual Event was terminated at 10:05 a.m.

An aftershock was experienced at 3:59 a.m. on October 4, 1987. The aftershock registered 5.5 on the Richter Scale and was centered at the same location. The seismic alarms at Unit 1, with the set point of 0.01G was actuated. However, the seismic alarm and recorder at Units 2/3 with the set point of 0.014G was not actuated. The existing procedures, as mentioned above, would have directed the licensee to declare an Unusual Event for Unit 1 only. To avoid confusion, the licensee decided to declare an Unusual Event for all three units. The inspector responded to the event and monitored the licensee's inspection and testing efforts. No damage was observed and the Unusual Event was terminated at 6:14 a.m..

The inspector expressed concern with the October 4, 1987, situation when only Unit 1 received the seismic alarm. The licensee committed to evaluate having a consistent setpoint among the three units, and to revise the procedure such that a site wide Unusual Event will be declared whenever an alarm is received at any unit.

d. Unisolable Leak in the Shutdown Cooling System (Unit 2)

On August 31, 1987, with the reactor in Mode 5, shutdown cooling suction valve 2HV-9378 developed a leak from the packing gland. 2HV-9378 is a ten-inch motor-operated valve which isolates the shutdown cooling system from the reactor coolant system (RCS). The valve could not be opened remotely from the control room, and the packing leak occurred when maintenance personnel tried to open the valve locally using the manual operator. The leak rate was

approximately 75 gallons per minute at an RCS temperature of 125°F and RCS pressure of 350 psig. The licensee maintained RCS inventory by using charging pumps for make-up, and pumped the leakage from the containment to a radwaste collecting tank. The licensee closed the containment equipment hatch, which was initially open, and began cooling down and depressurizing the RCS using the auxiliary pressurizer spray system. Approximately three hours after the leak began, the temperature was 100°F and RCS pressure was 100 psig, and the pressurizer was solid. With the RCS leak rate at approximately thirty gallons per minute, maintenance personnel made an unsuccessful attempt to stop the leakage by compressing the packing that still remained in the stuffing box. As the licensee continued to cool down the RCS to atmospheric conditions, the leakage from valve 2HV-9378 decreased to approximately twenty gallons per minute. Approximately seventeen hours after the leak started, with the RCS at atmospheric pressure, maintenance personnel were able to secure the packing in the stuffing box and stop the leak. The inspectors observed plant conditions from the control room and licensee actions during the initial stages of this event. The inspectors monitored licensee actions and progress using the emergency notification system until the leak was well under control. The inspectors continued to monitor licensee actions until the leak was stopped. Additional discussion regarding the maintenance activity on 2HV-9378 is included in paragraph 6.b(2) of this report.

No violations or deviations were identified.

5. Monthly Surveillance Activities

a. Unit 1

During this inspection period, the inspector observed portions of the following routine surveillance testing activities:

- SO1-12.3-26 Auxiliary Feedwater Pump Operability Test
- SO1-12.3-10 Diesel Generator Load Test
- SO1-12.3-7 Monthly Sequencer Test

b. Unit 2

The inspector witnessed the post maintenance Local Leak Rate Tests (LLRTs) listed below. These tests were performed in accordance with Engineering Procedure SO23-V-3.13, Revision 5 dated August 27, 1987.

- Penetration 27C and its associated CIV's: (2HV-7806, 2HV-7811)
- Penetration 16C and its associated CIV's: (2HV-7805, 2HV-7810)

The inspector also observed portions of the following refueling interval surveillances being conducted:

- SO123-II-8.10.1 Electronic Loop Verification

- S023-I-2.27 Eighteen Month Thermal Overload Bypass Inspection

The electronic loop verification was being conducted as part of the eighteen month calibration on startup channel A. The thermal overload bypass inspection was being conducted to verify that the thermal overload protection was bypassed by integral bypass devices for the motor operated valves listed in Table 3.8.2 of the Technical Specifications.

No violations or deviations were identified.

6. Monthly Maintenance Activities

a. Unit 1

During this period, the inspector observed portions of the following maintenance activities:

- M087090672000 Troubleshooting Intermediate Range Channel 1203
- M087070359000 Safety Injection Loop Flow Calibration
- M087071681002 Furmanite Repair on HV-852A Body to Bonnet Leak

b. Unit 2

The inspector observed the following maintenance activities during this report period:

(1) Troubleshooting of Train A Safety Features spurious actuations:

- M08705076 Jumper all fuel handling isolation system contacts to de-energize fuel handling area ventilation radiation monitors.
- M08705077 Jumper all containment purge isolation system (CPIS) contacts to de-energize containment airborne radiation monitor (purge).
- M08707078 Jumper CPIS actuation relays for containment purge/Train B area radiation monitor.

NOTE: During the above work, Radiation Monitor 7828 was utilized as stack monitor and trip isolation for containment purge.

The inspector reviewed the plant records associated with the repair of the following Containment Isolation Valves (CIVs):

- 2HV7810 M086102936001, M086102936000, WR2-87-477.

- 2HV7806 M08610294000, WR2-87-227/228.

(2) Maintenance on reactor coolant system (RCS) boundary isolation valve 2HV-9378:

As discussed previously in paragraph 4.d of this report, shutdown cooling isolation valve 2HV-9378 failed to open when the shutdown cooling system was being aligned for operation. 2HV-9378 is the RCS boundary isolation valve for the ten inch shutdown cooling system suction piping. The valve is located inside containment and has a limitorque motor operator for remote operation from the control room, and is unisolable from the RCS. For system reliability purposes, a sixteen inch diameter flow path exists in parallel with the ten inch diameter flow path to provide for shutdown cooling system suction from the RCS.

In order to expedite maintenance on 2HV-9378, the shift supervisor declared a shift supervisor's accelerated maintenance (SSAM). The SSAM process allows work to be done under a blanket maintenance order which directs maintenance personnel to investigate, repair and rework as necessary. The blanket maintenance order did not provide precautions, prerequisites or guidance in doing the work. The inspector reviewed the blanket maintenance order, and discussed this maintenance activity with the system engineer and maintenance personnel that were involved with this evolution. The maintenance activity was conducted as follows:

- The system engineer and maintenance personnel entered containment to visually inspect 2HV-9378. The visual inspection revealed that the motor on the limitorque operator was charred and apparently overheated while trying to open the valve. In addition, boric acid crystals and corrosion were present in the packing gland area of the valve.

- A non-conformance report (NCR) was written to document the condition of 2HV-9378. The system engineer gave instructions to clean the boric acid crystals and corrosion from around the packing gland area, and lubricate the valve stem.

- After the packing gland area was cleaned and the valve stem was lubricated, maintenance personnel tried to open 2HV-9378 by using the manual operator. The maintenance personnel used a pipe wrench to gain additional leverage in rotating the valve hand wheel.

- The valve handwheel was rotated in the opening direction, and a "pop" was heard. The maintenance personnel thought that the "pop" was the sound of the valve disk breaking free of the valve seating surfaces.

- The maintenance personnel continued to rotate the valve handwheel in the opening direction, and a second "pop" was heard. Immediately following the second "pop", large quantities of water began spraying from the packing area of the valve. The maintenance personnel immediately notified the control room of this condition.

- The RCS was subsequently cooled down and depressurized, and approximately seventeen hours after the leak started, maintenance personnel were able to insert a split ring into the valve stuffing box and compress the packing enough to stop the leak.

The licensee's preliminary evaluation of this event indicates that the packing gland studs failed while maintenance personnel were attempting to open 2HV-9378. The boric acid in the packing gland area of the valve had caused the studs to corrode away, and the popping noises heard by the maintenance personnel during manual operation of the valve occurred when the packing gland studs failed in tension.

The inspector discussed this maintenance activity with the licensee and expressed concern over the lack of control of the maintenance evolution, and the lack of control provided in general when a SSAM is declared by the shift supervisor. In this particular case, work was being done on a valve which was unisolable from the RCS. In addition, the RCS was pressurized to approximately 350 psig and RCS temperature was approximately 125°F. The SSAM process did not afford this evolution the degree of attention and management involvement warranted for the situation, and it was also not clear that use of the expedited SSAM process was necessary in this case. This item is unresolved pending further review of the SSAM process and the licensee's corrective actions (50-361/87-23-01).

No violations or deviations were identified.

7. Engineered Safety Feature Walkdown

a. Unit 1

During this report period, the inspector walked down the accessible areas of the Containment Spray and Recirculation System using the alignment procedure SO1-4-41 and related piping and instrument drawings.

b. Unit 2

During this inspection period, the inspector walked down the containment penetrations and verified that containment integrity was established. Fuel movement was in progress during this time period, and containment integrity was required in accordance with the Unit 2 Technical Specifications.

No violations or deviations were identified.

8. Refueling Activities (Unit 2)

During this report period, Unit 2 was shut down for the cycle IV refueling outage. Fuel movement began on September 14, 1987, and the last fuel assembly was transferred to the spent fuel pool on September 19, 1987. The core was completely off-loaded in order to allow for detection and inspection of leaking fuel. The inspector observed that fuel movement was well controlled, and was being conducted in accordance with the licensee's procedures. Good visibility existed in both the refueling cavity and the spent fuel pool. While monitoring fuel movement, the inspector also observed modifications being made to the fuel alignment plate (FAP). The FAP modifications were being made to reduce guide thimble wear. The inspector observed cutting operations to size the guide thimble holes in the fuel alignment plate. The holes in the fuel alignment plate had to be sized so that bushings could be pressed into the guide thimble holes. The inside diameter of the bushings provide a tighter fit for the guide thimbles and reduce guide thimble wear. The inspector observed that these refueling activities were being conducted in accordance with the licensee's procedures and were well controlled.

No violations or deviations were identified.

9. Independent Inspection

Updating of Unit 1 Piping and Instrument Diagrams (P&ID)

During the ESF system walkdown, the inspector noted that some of the instrumentation valves and branch lines existing in the plant were not shown on the P&IDs. For example, a sensing line tee and calibration valve on the hydrazine tank pressure switch/gauge PT-400 were not shown on the current revision of the P&ID while similar valves for other gauges were shown. The licensee found that an outstanding Field Change Notice (FCN) has been pending and attached to the control room drawing since 1984. The licensee's QA audit in 1986 identified a similar deficiency in timely updating of drawings.

The inspector will review the licensee's program and efforts in the area of drawing update as an open item (50-206/87-24-03).

No violations or deviations were identified.

10. Review of Licensee Event Reports

Through direct observations, discussion with licensee personnel, or review of the records, the following Licensee Event Reports (LERs) were closed:

Unit 1

87-12 Brief Breach of Containment Integrity - to be followed up under open item 50-206/87-24-01

87-13 Failure to Test Redundant Hydrazine Pump Prior to Performing Maintenance

Unit 2

86-33 Control Room Isolation System (CRIS) Actuation

86-35 Containment Purge Isolation System (CPIS) Actuations

87-07 Containment Purge Isolation System (CPIS) Spurious Actuations

87-10 Toxic Gas Isolation System Actuation During Floor Cleaning

87-11 Containment Purge Isolation System (CPIS) Spurious Actuations

87-13 Fuel Handling Isolation System (FHIS) Actuations During Pressurizer Manway Removal

87-15 Containment Purge Isolation System (CPIS) Spurious Actuations

During this refueling outage, the licensee has experienced a large number of spurious CPIS actuations. The licensee provided additional explanation of the circumstances surrounding these actuations, along with actions that are being planned to correct this problem, in a letter to J. Martin (Region V Administrator) dated September 24, 1987. Although additional troubleshooting is being done, modifications will be completed to resolve this problem.

Unit 3

86-15 Apparent Extremity Exposure In Excess of Regulatory Limits

87-03 Radioactive Particles in an Unrestricted Area

87-03R1 Radioactive Particles in an Unrestricted Area

87-12 Technical Specification 3.0.3 Entry During Safety Injection Tank (SIT) Filling

No violations or deviations were identified.

11. Follow-Up of Previously Identified Items

(Closed) Open Item (50-361/87-19-03), Local Leak Rate Test (LLRT) Weaknesses

NRC Inspection Report 50-361/87-19 dated September 22, 1987 documented observed weaknesses concerning the LLRT program. While witnessing the

LLRT as described in paragraph 5.b of this report, the inspector verified that:

- More thorough ALARA planning was conducted for each containment entry to perform LLRT's.
- Job site planning was conducted. An inventory of the LLRT test cart in containment was used, and additional needed equipment was brought in upon entry.
- The test engineers identified as needing respirator upgrade training have received the necessary training.

Therefore, this item is considered closed.

No violations or deviations were identified.

12. Radiological Practices

The inspectors periodically observed radiological protection practices to determine whether the licensee's program was being implemented in conformance with facility policies and procedures and in compliance with regulatory requirements. The inspector verified that health physics supervisors and professionals conducted frequent plant tours to observe activities in progress and were generally aware of significant plant activities, particularly those related to radiological conditions and/or challenges. ALARA consideration was given to each job that was performed during maintenance activities.

No violations or deviations were identified.

13. Physical Security

The inspectors periodically observed security practices to ascertain that the licensee's implementation of the security plans was in accordance with site procedures. The inspector observed that the number of guards was adequate for the requirements of the security plan; that the search equipment at the access control points was operational; that the protected area barriers are well maintained without breaks; and that personnel allowed access to the protected area were badged and monitored and that monitoring equipment was functional. Night illumination inside the protected area was observed and obstructions were lighted adequately. Surveillance equipment was also observed during this inspection.

No violations or deviations were identified.

14. Exit Meeting

On October 8, 1987, an exit meeting was conducted with the licensee representatives identified in Paragraph 1. The inspectors summarized the inspection scope and findings as described in this report.