U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-206/85-32, 50-361/85-31, 50-362/85-30

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: September 27 through November 15, 1985

Inspectors: for F. R. Huey, Senior Resident Inspector, Units 1, 2 and 3 — 12/10/85 Date Signed

for J. P. Stewart, Resident Inspector — 12/10/85 Date Signed

for A. D'Angelo, Resident Inspector — 12/10/85 Date Signed

for J. E. Tatum, Resident Inspector — 12/10/85 Date Signed

for R. C. Tang, Resident Inspector — 12/10/85 Date Signed

Approved By: P. H. Johnson, Chief, Reactor Projects Section 3 — 12/10/85 Date Signed

Inspection Summary

Inspection on September 27 through November 15, 1985 (Report Nos. 50-206/85-32, 50-361/85-31, 50-362/85-30)

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. This inspection involved 285 inspection hours on Unit 1, 210 inspection hours on Unit 2 and 196 inspection hours on Unit 3 for a total of 691 inspection hours

by five NRC inspectors, including 96 hours of backshift or week-end inspection activities. Inspection Procedures 93701, 93702, 93703, 92700, 92701, 92702, 92705, 30703, 35751, 37700, 37701, 37702, 40700, 40702, 60705, 60710 61726, 61729, 62703, 71707, 71710, 86700, and 93701 were covered.

Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

Southern California Edison Company

*H. Ray, Vice President, Site Manager
*G. Morgan, Station Manager
M. Wharton, Deputy Station Manager
D. Schone, Quality Assurance Manager
D. Stonecipher, Quality Control Manager
*R. Krieger, Deputy Station Manager
D. Shull, Maintenance Manager
*J. Reilly, Technical Manager
P. Knapp, Health Physics Manager
*B. Zintl, Compliance Manager
J. Wambold, Training 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
B. Joyce, Maintenance Manager, Units 2/3
H. Merten, Maintenance Manager, Unit 1
*R. Santosuosso, Instrument and Control Supervisor
T. Mackey, Compliance Supervisor
G. Gibson, Compliance Supervisor
*C. Kergis, Compliance Engineer
*P. King, Quality Assurance Supervisor

San Diego Gas & Electric Company

*R. Erickson, San Diego Gas and Electric

*Denotes those attending the exit meeting on November 15, 1985.

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. 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.

No violations or deviations were noted.

3. Evaluation of Plant Trips and Events

a. Unit 2

(1) Reactor Trip on October 18, 1985

On October 18, 1985, at 1242, while at 100% power, the reactor tripped due to a turbine trip (loss of load trip). The turbine trip was caused by a false indication of a high level in a moisture separator reheater (MSR) drain tank. The false level indication in the MSR drain tank occurred as a result of a maintenance craftsman breaking a level sensing line while removing a pipe to repair a gage glass level indicator.

(2) Reactor Trip on October 19, 1985

At 0901 on October 19, 1985, with Unit 2 at 19% power, the reactor tripped due to Core Protection Calculator (CPC) auxiliary trips resulting from the hot channel Axial Shape Index (ASI) reaching the CPC Auxiliary trip setpoint.

The hot channel ASI trip setpoint was reached because return to power in transient Xenon conditions requires a more rapid power increase than the actual power increase at the time. In reactor restarts during transient Xenon conditions, the rate of power increase must be rapid enough to minimize Xenon being burned out of the top of the core because only limited corrective action is available due to restrictive Technical Specifications on ASI and available control rod insertion limits. At the time, when reactor power reached 20%, ASI was negative to the point where power could not be increased above 20%, the limit imposed by Technical Specification 3.2.7 Action Statement.

With the reactor staying at 20% power and power concentration in the top of the core, Xenon continued to burn out of the top of the core which slowly drove ASI even more negative. Operators attempted to optimize control rod position while at 20% power. However, the reactor tripped on CPC auxiliary trip for ASI.

ASI is of concern during return to power following a shutdown or power reduction of short duration. The licensee is currently pursuing several alternatives with regard to minimizing ASI events, including utilizing an additional group of control rods, and/or requesting less restrictive ASI limitations at reduced power. Also, as a result of this event, an analysis of plant response to ASI on restart during Xenon transients has been performed. This analysis will help predict the magnitude of the transient and the appropriate delay prior to commencing power escalation in order to assist the operator in dealing with these conditions.

(3) Reactor Trip on November 9, 1985, During a Plant Shutdown Due to a Reactor Coolant System Leak

On November 9, 1985, at 0301, while shutting down Unit 2 to repair a reactor coolant system leak of approximately 0.5 gpm, the reactor tripped on a CPC high negative ASI auxiliary trip. The RCS leak was located on the controlled bleed-off (CBO) return from the 2P003 reactor coolant pump. The CBO leak was determined to be caused by corrosion of CBO flange bolts resulting from boric acid build up in the vicinity of the bolts. The licensee and Combustion Engineering were evaluating this corrosion mechanism to determine if RCS pressure retaining fasteners may have been affected and what corrective actions are necessary. The reason for the high negative ASI auxiliary trip was similar to that discussed above. The licensee was having Combustion Engineering assist them in expanding ASI limits at low power since at low power levels a large ASI is technically acceptable.

This is an open item (50-361/85-31-01).

b. Unit 3

On October 16, 1985, an inadvertent partial engineered safety features actuation (ESFAS) occurred on Unit 3 with the plant in Mode 6. The partial ESFAS was the result of inadvertent de-energization of two power supplies associated with Train "A" ESFAS bays 7 and 8, while performing a design change (DCP 195J) to install controls for the auxiliary feedwater bypass valves. As a result of loss of power to bays 7 and 8, half of the Train "A" ESFAS auxiliary relays were de-energized, causing activation of several engineered safety features (ESF) components.

This event had the following impact on systems affecting plant safety:

- Radiation monitor 3RT-7804 was isolated for about 2 hours and 40 minutes while containment purge was in progress. Monitor 3RT-7804 monitors containment purge air and provides automatic termination of containment purge (as required by Technical Specification 3.3.3.9) in the event that specified release limits for containment air activity are exceeded. The licensee took prompt action (15 minutes) to restore monitor 3RT-7804 as soon as the loss of this monitor was recognized. It should be noted that although no automatic containment purge termination was available based on air activity levels, monitor 3RT-7856 was in service and available to automatically terminate purge (if containment radiation levels exceeded 2.5 mR/hr) in the event of a serious fuel handling accident. It should also be noted that portable airborne and area radiation monitors were in service and being monitored by health physics personnel to identify any radioactivity problems and allow manual purge isolation in the event of less serious fuel handling problems requiring containment isolation. During this event actual

containment air activity levels were more than 4 orders of magnitude less than the 3RT-7804 automatic purge termination setpoint of 9×10^4 cpm.

- Movement of irradiated fuel in containment continued for about 1 hour and 50 minutes while the activity monitoring portion of the containment purge isolation system was inoperable. The licensee took immediate action to suspend fuel handling activities, as required by technical specification 3.9.9, when the loss of automatic containment purge isolation capability was recognized.

- Instrument air to containment was isolated for about 2 hours and 40 minutes. Instrument air is the primary source of pressurization to the reactor cavity seals and steam generator nozzle dams. It should be noted that during this event, there was no loss of seal pressure. Furthermore, in the event of any leakage from these pressurized seals, an independent backup source of nitrogen pressure inside containment would have prevented seal failure as a result of loss of instrument air.

Several problems and deficiencies were noted as a result of review of the circumstances involved with this event. The following is a listing of these problem areas and the corrective actions initiated by the licensee:

(1) Automatic containment isolation (CIAS) and safety injection (SIAS) are not required in Modes 5 or 6. However, there is no readily available means to block inadvertent actuation of CIAS and SIAS signals during Modes 5 and 6. As noted above, inadvertent signals during Modes 5 or 6 can result in the isolation of components required to operate during Modes 5 and 6.

The licensee performed a review of all components affecting plant safety which are required to operate during Modes 5 or 6 and which could be impacted by an inadvertent CIAS or SIAS. As a result of this review the licensee took action to jumper out the CIAS and SIAS "close" signals for radiation monitor RT-7804 and RT-7807 sample line isolation valves during Mode 6 operation. The licensee concluded that no other jumpers were warranted. Specifically, with regard to instrument air, the licensee concluded that sufficient safety margin was incorporated into the redundant seal design and backup nitrogen pressurization system to not warrant an instrument air jumper.

(2) Control room operators did not recognize that radiation monitor 3RT-7804 had become inoperable until 2 hours and 40 minutes after the monitor sample lines were isolated.

The licensee has initiated a design change (DCP 6460.ON) to provide an audible alarm in the control room upon the failure of any radiation monitor. It should be noted that this problem

had been previously recognized by the licensee and the design change was in preparation prior to this event.

(3) This event was initiated by a sequential, inadvertent tripping of 2 ESF bay power supply breakers in the vicinity of construction effort associated with DCP 195J. Each of these breaker trips provided an audible and visual alarm on annunciator panel 56 in the control room. Neither of these alarms was noted or responded to by shift operations personnel because, at the time these alarms came in, a computer technician was operating the annunciator acknowledge and reset buttons at panel 56, as part of a surveillance test he was performing. Apparently, the computer technician inadvertently acknowledged the ESF bay loss of power alarms without advising operations personnel that these unexpected alarms had come in. In this regard, the following specific problems were noted:

(a) Operations personnel did not implement adequate controls to ensure proper response to control room alarms during the period of time that control of annunciator acknowledge and reset was turned over to a computer technician. In this regard, neither station operating or technical procedures provided any specific requirements for controlling turnover of this operating function to nonoperations personnel.

(b) As a result of the large number of invalid annunciators locked into the alarm panels due to the existing Mode 6 plant conditions, control room operators did not note the valid alarms associated with ESF bay loss of power.

The licensee is revising station operating and technical procedures to provide necessary control of activities similar to that discussed in paragraph 3(a) above. The licensee was reviewing the problem discussed in paragraph 3(b) above to determine what corrective actions are warranted.

This is an open item (50-362/85-30-01).

(4) The original work authorization for DCP 195J included a clearance on the power supply for ESF bay 8. This was done to allow temporary repositioning of the power supply in support of cable pulling efforts. On September 24, a work authorization modification (WAM) was implemented to restore power to bay 8, permitting continued DCP work with minimal risk of inadvertent ESF actuation (e.g. ensure that both redundant power supplies were in service). In this regard, two problems with the WAM were noted:

(a) The WAM was not properly filled out (no date or time recorded).

(b) The WAM did not require or document actual restoration of power to bay 8. The WAM only lifted the clearance on the

inverter power supply breaker but did not specifically check the local breaker or power indicating lights at bay 8.

The licensee took action to reemphasize proper completion of operating procedure forms with cognizant operations personnel. The licensee was reviewing the problem discussed in paragraph 4(b) above to determine what corrective action is warranted.

This is an open item (50-362/85-30-02).

No violations or deviations were identified.

4. Monthly Surveillance Activities

a. Failed Surveillance (Unit 1)

The inspector reviewed all Unit 1 technical specification surveillances which did not meet specified acceptance criteria which were performed during the inspection period. The scope of this review included an assessment of the significance of the failure on equipment operability, proper documentation of surveillance results, review of surveillance results by cognizant technical personnel, proper performance of necessary corrective maintenance, proper performance of necessary surveillance retest and evaluation for failure trends. The inspector noted no deficiencies with regard to any of the above review categories.

b. Load Sequencer (Unit 1)

The inspector observed surveillance testing on the #2 load sequencer. The surveillance was conducted in accordance with procedure SO1-12.3-7. No difficulties were encountered and the load sequencer was found to be operable.

c. Daily and Shiftly Surveillance (Unit 2)

During this inspection period, the inspector observed the licensee conducting several daily and shiftly surveillance activities for Unit 2, as required by the Unit Technical Specifications. Activities observed included determination of control element assembly (CEA) transient insertion limits, shutdown margin determination, inspection of differential pressure across hydraulic oil filters in the auxiliary feedwater system, determination of refueling water storage tank (RWST) temperature, monitoring reactor coolant system (RCS) leakage and demonstration of operability of loose parts detection system. These surveillances were conducted in accordance with the approved operating procedures and no deficiencies were noted.

The inspector observed portions of the monthly reactor coolant system calorimetric flow measurement. The surveillance was conducted in accordance with procedure SO23-V-1.20 and satisfied the

requirements specified by note 8 of Table 4.3-1 of the Technical Specifications for Functional Units 10 and 14.

d. 18 Month Surveillance (Unit 3)

The inspector observed a portion of the 18 month surveillance SO23-II-9.258 "Plant Protection System and Bistable Card and Variable Set Point Card Calibration" on Unit 3. The setpoint calibrations observed were performed in accordance with the approved operating procedures and no deficiencies were noted.

As a function of the refueling outage, the inspector observed the following surveillances:

- Steam Generator pressure and level transmitter 18 month calibrations
- Electrical bus 3A04 outage to visually inspect and clean the switchgear internals
- Battery quarterly and refueling interval inspections and the refueling interval battery service test in accordance with procedures SO23-I-2.13, SO23-I-2.14, and SO23-I-2.15.

These surveillances were conducted in accordance with the approved procedures and no deficiencies were noted.

e. Remote Initiation of Shutdown Cooling (Unit 3)

As a function of cooling down Unit 3 in preparation for the refueling outage, the licensee conducted procedure SO3-SPSU-1271, "Remote Initiation of Shutdown Cooling Demonstration". This demonstration was performed to satisfy BTP RSB 5-1 regarding control room operation of the shutdown cooling system for natural circulation cooldown capabilities. No deficiencies were observed.

No violations or deviations were identified.

5. Monthly Maintenance Activities

a. Unit 2

The inspector observed maintenance activities to repair the nitrogen regulator which supplies nitrogen to one of the Marotta valves for Main Steam Isolation Valve (MSIV) 2HV-8205. While work was accomplished on the defective nitrogen regulator, the regulator associated with the other safety train remained operable. Work was authorized in accordance with approved procedures.

b. Unit 3

The inspector observed the following maintenance activities while the unit was shutdown for refueling:

- Diesel Generator 3G002 supply breaker auxiliary contacts were examined for excessive arcing
- Safety Injection Tank vent header isolation valve packing replacement

c. Safety Related Pump Lubrication Program

The inspector performed an inspection of the licensee's program to maintain adequate lubrication for Safety Related Pumps. The inspector reviewed the following documents:

- Pump Technical Manuals
- Pump Lubrication Maintenance Procedures
- Proposed Facility Change (PFC) 2/3-84-170, Auxiliary Feedwater Pump Oil Cooling Systems
- Procedure SO23-0-38, Routine Operations

The inspector interviewed the following station personnel who implement the routine surveillance and preventive maintenance programs for the pump lubrication systems.

- Nuclear Plant Equipment Operators (NPEO)
- Maintenance Planning Engineers
- Cognizant Station Technical Engineers
- Maintenance Craft Workers

The inspector observed the following preventive and corrective maintenance activities:

- Refilling of pump bearing lubrication oilers
- Adjusting pump bearing cavity lube oil level
- Routine preventive maintenance inspection of pump bearing lube oil levels

Based upon the review of the above plant procedures and interviews with the NPEO and maintenance planners, the inspector determined that the operations NPEO's are responsible for implementation of the preventive maintenance program for maintaining adequate lubrication of all safety related pumps. The duties of the NPEO to maintain proper bearing lubrication include the following:

- Checking for proper bearing oil level
- Adding oil to all pumps with oiler bottles and charging pumps

- Initiating maintenance orders to add oil to pumps without oiler bottles

- Writing deficiency tags for observed deficient conditions such as oil leaks

The inspector determined that although NPEO's were knowledgeable about maintaining adequate lube oil level and were aggressive in maintaining oil levels, several deficiencies in the licensee's program to maintain adequate bearing lubrication, were noted. These problems are discussed below.

The inspector observed excessive oil leaks on the Unit 2 charging pumps, auxiliary feedwater pumps and component cooling water pumps which did not have deficiency tags attached or maintenance orders outstanding. The licensee was in the process of developing and implementing an enhanced program for increasing the attention paid to bearing lubrication systems. The inspector will continue to monitor this effort.

The inspector observed the addition of lube oil by an NPEO to CCW pump P024 and noted that no maintenance order was used to document the type or amount of oil added to the oil feeder. The inspector noted that this is standard practice for oil additions performed by the NPEO. The inspector determined that since no documentation of the oil addition is made, there is no tracking of the rate of oil leakage by management, or review by quality control to ensure the correct oil type was added. As noted above, the licensee is currently reviewing what actions are necessary to ensure proper attention to bearing lubrication. This review will address documentation and trending of oil additions to safety-related equipment. This will be examined during future inspections. (50-361/85-31-02)

The inspector observed a bent oiler bottle and sight glass piping extension on the Unit 2 High Pressure Safety Injection Pump P018. The piping extension was bent downward, and thus indicated a false normal level. The actual oil level was approximately a half an inch below normal. The licensee initiated a maintenance order to straighten the piping.

The inspector observed deficiency tags on each of the auxiliary feedwater pump motor emergency gravity feed oil drain tanks due to oil in the tank. The inspector determined that the deficiency tags were initiated as a result of the performance of the monthly surveillance on the drain tanks required by procedure SO23-3-3.16. Procedure SO23-3-3.16 requires that the tanks be maintained empty. The inspector noted that a weakness exists in the procedure in that it does not state the drain tank oil level which would make the emergency lube oil system inoperable. The oil level in the tank was observed to be two and a half inches. The licensee stated that the tanks were designed such that oil level could be as high as the top of the sight glass (about 3 inches) without affecting operation. The licensee took prompt action to drain both tanks and was revising

the procedure to require prompt draining when oil is observed in the tanks.

The gravity lube oil system was added to the AFPs to environmentally qualify the AFW pump motor bearings for a high energy line break accident (HELBA) in the pump room. The inspector noted that the lube oil system addition, a commitment required by License Condition 2.C.(25) is not addressed in the plant technical specifications and therefore, there are currently no technical specification surveillance requirements associated with the gravity oil system. When questioned by the inspector, an operations shift superintendent stated that the motor driven auxiliary feedwater pumps would not be considered inoperable if the emergency lube oil system was declared inoperable. This appeared to be inconsistent with the equipment qualification requirements for the pump.

The licensee subsequently modified procedure SO-23-3-3.16 to require the auxiliary feedwater pumps to be declared inoperable whenever the emergency lube oil system is determined to be inoperable.

No violations or deviations were identified.

6. Engineered Safety Feature Walkdown

During the inspection period, the inspector walked down the safety injection, emergency boration/charging and auxiliary feedwater systems for Unit 1. The systems were aligned as required by the Unit 1 Technical Specifications, Final Safety Analysis Report (FSAR), and Station Procedures.

No violations or deviations were identified.

7. Refueling Activities

The inspector performed a partial review of preliminary Unit 1 refueling procedures to ensure that these procedures included adequate controls to preclude recurrence of the type of rigging deficiencies which recently resulted in the loss of control of a major lift over irradiated fuel at St. Lucie. The following concerns were noted:

a. The procedures, as written, did not include adequate controls to ensure that major refueling lifts are properly performed. In particular, the procedures did not provide adequate weight lift limit restrictions to prevent overloading of lifting equipment, nor did the procedures provide adequate verification of proper rigging assembly and installation.

b. Units 2/3 refueling procedures include numerous precautions and requirements (including ones applicable to the types of problems noted in a. above) which had not yet been factored into Unit 1 procedures.

The licensee acknowledged the above mentioned procedure deficiencies and emphasized that action was in progress to correct these problems and

factor in applicable Unit 2/3 refueling experience. The licensee stated that an aggressive procedure review and checkout program has been initiated and all required procedures will be available prior to start of Mode 6 operations.

No violations or deviations were identified.

8. Independent Inspection

a. Deficient Condition of Unit 1 Electrical Conduit

The inspector noted several instances in which deficient conditions existed in electrical conduit associated with Unit 1 safety related equipment. Examples of observed deficiencies were as follows:

(1) The flexible conduit was broken off a position limit switch on the safety injection suction valve (HV-853A) to the east main feedwater pump.

(2) The flexible conduit was broken off the terminal box for the Woodward governor on diesel generator #2.

(3) The conduit was not properly connected to the vent solenoid on air start valve (DSN-SV-405) of diesel generator #2.

(4) The gasket was broken off the terminal box in the conduit for air start valve (DSN-SV-404) of diesel generator #2.

(5) The conduit was broken off feedwater bypass valve (FWS-SV-150). This valve had a deficiency tag (DT #14716) addressing this deficiency, dated June 5, 1985; however, the deficiency had not been corrected.

The licensee acknowledged that the above deficiencies demonstrated the need for additional attention to this type of material condition deficiency. The licensee emphasized that they recognized the need for improvement in this area and noted that action was already in progress to implement an area monitoring program, as discussed in a November 6, 1985, letter from H. B. Ray to J. B. Martin.

No violations or deviations were identified.

b. Control of Anticontamination Clothing

The inspector noted several instances of improper control of clean and used anticontamination clothing during tours of Units 2 and 3. For example:

(1) Clean anticontamination coveralls and rubber gloves were observed adrift in Unit 2, room 202.

(2) Clean anticontamination coveralls and rubber gloves were observed adrift in the area of the step off pad adjacent to the Unit 3 safety injection pumps.

(3) Used anticontamination clothing was observed adrift in several locations on the 9 foot elevation of the radwaste building.

The inspector discussed these items with the Unit 2/3 health physics supervisor. The deficiencies were corrected and the licensee committed to reemphasize proper control of anticontamination clothing as specified by site procedures.

No violations or deviations were identified.

9. Review of Licensee Event Reports

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

Unit 1

85-014 Reactor Trip in Response to a Turbine Trip

Unit 2

85-039 Toxic Gas Isolation System (TGIS) Hydrocarbon Analyzer Malfunction
85-040 Spurious Control Room Isolation System (CRIS) Train "B" Actuation
85-041 Reactor Trip - Non-1E Instrument Bus Transient
85-042 Improper Level Detection for Spray Chemical Storage Tank T105
85-044 Containment Purge Isolation System (CPIS) Spurious Actuations
85-045 Missed Control Element Assembly Position Verification
85-046 Reactor Trip Caused by a Generator Exciter Fire
85-048 Delinquent Purge Sample
85-049 Pacific Scientific Snubber Failures on the Shutdown Cooling System

Unit 3

85-023 Fuel Handling Isolation System (FHIS) Actuations
85-024 Spurious FHIS Actuations
85-025 Containment Purge Isolation System (CPIS) Spurious Actuations
85-027 Containment Purge Isolation System (CPIS) Actuation
85-028 Fuel Handling Isolation System (FHIS) Actuation
85-029 18 Month Snubber Surveillance Deficiencies

10. Follow-Up of Previously Identified Items

a. (Closed) Violation (50-361/82-15-03) Appendix B - Bypass Valves Missing from Drawings and Procedures

This violation was due to an inadequate drawing which did not describe two bypass valves in the Safety Injection System. The licensee's corrective action included the addition of the missing bypass valves to the Piping and Instrumentation Drawing (P&ID) 40112. The licensee also compared P&IDs with the appropriate

isometric drawings to determine whether or not other existing bypass valves had been omitted. As a result 168 bypass valves were added to P&IDs and appropriate procedures were revised to identify the bypass valves. This item is closed.

b. (Closed) Open Item (50-361/82-23-03) SO23-5-2.9 Loop 2 Hot Leg Injection Check Valve Leakage Pressure High

The inspectors had previously observed that the operators were responding to this alarm on a frequent basis, when in fact the actual check valve leakage was less than five percent of the allowable leakage. The licensee revised Procedure SO23-5-2.9 and SO23-5-2.10 "ESF - Alarm Response Procedure" to eliminate unnecessary operator attention before the development of excessive check valve leakage. This item is closed.

c. (Closed) Open Item (50-361/82-25-05) Position Indication Inservice Test Upgrade

During the review of test procedures the inspectors noted that actual valve travel had not been timed. The inspector reviewed Procedure SO2-3-3.30 Revision 8 and verified that step 6.3 requires that local valve position indication be checked with remote position indication. This item is closed.

d. (Closed) Open Item (50-361/82-25-06) Position Indication - Test Retest Requirements

Following maintenance on a safety related valve, the valve failed to travel to the full open position when the operator attempted to open the valve. Post maintenance testing did not identify that the valve failed to go to the full open position. The licensee's commitment to upgrade equipment retest requirements was completed with the issuance of a retest requirements procedure SO23-XV-1.0, which is used by maintenance planners. This item is closed.

e. (Closed) Violation (50-361/82-30-01) Overtime Repeat Violation

The licensee failed to comply with the technical specification to have overtime exceeding the required guidelines approved by Station Management. Based upon the inspector's review of the licensee's program for the tracking and approval of overtime, the inspector determined that except for isolated minor deviations the program has been effectively implemented during the last four months. This item is closed.

f. (Closed) Open Item (50-361/83-03-01) Annunciator Problems

During startup testing of Unit 2, the inspectors observed excessive plant alarms and locked in alarms for operable systems. The licensee's program to reduce nuisance alarms and correct other annunciator problems has been essentially completed. Based on the inspector's observation of the reduced number of alarms during power operations, this item is closed.

g. (Closed) Open Item (50-361/83-06-01) Revised Calibration Procedure to Reflect Actual Practice

An inspector observed earlier that a technician failed to use the test equipment specified during the performance of a system surveillance. The inspector determined that the licensee had revised the procedure to reflect the actual practice performed by the technician. This item is closed.

h. (Closed) Open Item (50-361/83-10-02) No Procedure for Spurious Alarm Form Log

The inspectors observed that a Spurious Alarm Log Sheet being used by operators was not described in a procedure. The licensee changed procedure SO23-6-29 "Operation of Annunciators and Indicators" to give guidance to operators in the use of the Spurious Alarm Form Log. This item is closed.

i. (Closed) Open Item (50-361/83-10-03) Alarm Clear Buzzer

The inspector observed that the control room audible annunciator, which indicates that an alarm has "cleared" was inoperable. The licensee repaired this deficiency. This item is closed.

j. (Closed) Open Item (50-361/83-12-01) Ineffective Corrective Action for Repetitive LER

During the period 1982-1983, the inspectors noted that repetitive LERs were occurring as a result of spurious Toxic Gas Isolation System (TGIS), Containment Purge Isolation System (CPIS) and Fuel Handling Isolation System (FHIS) actuations. The inspector reviewed licensee corrective actions and noted that design changes had been implemented improving equipment reliability. The reduction of LERs involving the TGIS is a result of these corrective actions. Additional design changes were under review to reduce spurious CPIS and FHIS actuations. This item is closed.

k. (Closed) Open Item (50-361/83-15-05) Review Nuclear Safety Group (NSG) Action on Identifying Repetitive Problems

The licensee had committed to having the NSG review nonconformance reports (NCRs) on a quarterly basis. The inspector reviewed the monthly Nuclear Safety Reports for the months of June and August, 1985. The inspector determined that the Nuclear Safety Group was reviewing NCRs for problem trending on a quarterly basis as previously committed. This item is closed.

l. (Closed) Open Item (50-361/83-16-01 and 50-362/83-15-01) Discrepancy Between Technical Specification Requirements for CPIS (TS 4.6.3 and 4.3.2.1)

This item involved a misunderstanding of the functions of airborne activity monitors RT-7804 and RT-7807 and area radiation monitors

RT-7804 and RT-7807. The inspector's review concluded that this item is closed.

m. (Closed) Open Item (50-361/83-29-01) Failure to Provide Procedure for Evaluating Overdue Preventive Maintenance

A licensee scram breaker report issued on April 15, 1983, committed to implement a program for reporting and evaluating overdue preventive maintenance. The inspector determined that licensee maintenance department management has been reviewing overdue preventive maintenance for the last 30 months on a weekly basis. This item is closed.

n. (Closed) Open Item (50-361/84-11-03) Procedure Review to Determine if a Second Operability Verification Test is Required

The licensee had completed the review of all required procedures and revised procedures which required independent verification or a system operability check. This item is closed.

o. (Closed) Violation (84-14-01) Failure to Declare an Unusual Event

This violation, for failure to declare an unusual event, occurred due to operator failure to properly monitor or evaluate radiation monitor indication. The inspector noted that alarm response procedure SO23-5-2.24 section 61A09 was revised such that meter count rate output is compared to Emergency Plan Implementing Procedure values and requires the operator to inform the shift supervisor when levels are exceeded. In addition, the licensee also revised SO23-0-25 to reflect revised changes in the ODCM. The licensee also completed training of operators and chemistry technicians on proper evaluation of radiation monitor readings and alarms.

The inspector questioned reactor operators, senior reactor operators and a shift superintendent concerning their actions per procedure SO123-0-14 "Notification and Reporting Significant Events" and emergency implementing procedure SO23-VIII-1 during potential offsite releases. The inspector determined that raising the alarm and technical specification-related setpoints has improved the alertness of the operators in responding to the alarms. The setpoints had previously been set considerably below any level which would have required making a notification to the NRC or initiating corrective action. This item is closed.

p. (Closed) Open Item (50-361/84-35-03) Foreign Material Exclusion (FME) Practices on Refueling Machine Need Improvements

The inspectors observed several weaknesses in the licensee's implementation of the FME Program during the Unit 2 first refueling. Based on several observations by the inspector of refueling operations during the first Unit 3 refueling, the inspector noted that the licensee FME program had significantly improved. This item is considered closed.

q. (Open) Violation (50-362/84-14-01) Radiation Monitor Response

The inspector examined the licensee's training program and found the lesson plans to be satisfactory. The aspect of this issue that remains open is verification that the control operators have received the required training.

11. Exit Meeting

On November 15, 1985, 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.