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REGION II

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Licensee: Florida Power and Light Company

Facility: Turkey Point Nuclear Plant, Units 3 & 4

Location: 9760 S. W. 344 Street
Florida City, FL 33035

Dates: March 21 - May 1, 1999

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Enclosure

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EXECUTIVE SUMMARY

Turkey Point Nuclear Plant, Units 3 & 4 NRC Inspection Report 50-250/99-02, 50-251/99-02

This integrated inspection included aspects of licensee operations, maintenance, engineering, and plant support. The report covers a 6-week period of resident inspection; in addition, it includes the results of inspections by a regional reactor inspector and a regional physical security specialist.

Operations

- Operations demonstrated a conservative approach to fuel movement. Good communications were maintained between the control room, containment, and the spent fuel pool. During fuel movement, the reactor operator and senior reactor operator were consistently attentive and followed procedures (Section O1.1).
- During the Unit 4 refueling outage, control room operators maintained good communications with personnel in the plant. Procedure adherence and peer checking in the control room was noteworthy. Strong management oversight was noted in the control room during major plant evolutions and tests (Section O1.2).
- Prompt response by operators in isolating a failed instrument air compressor check valve minimized the potential impact of the failure on the instrument air system and the operating units. The failure was addressed in the licensee's corrective action process (Section O1.3).
- The material condition of the containment was good in preparation for plant startup. Management attention to cleanup and closeout of containment was good (Section O2.1).
- The Corporate Nuclear Review Board Meeting was professionally conducted with emphasis on nuclear safety, self assessment, and continuous improvement in the correction action program (Section O7.1).

Maintenance

- Inservice Inspection (ISI) activities were being performed in accordance with requirements with strong licensee direction and oversight of contract personnel. Overall, the licensee's ISI program was considered to be a strength. (Section M1.2)
- A detailed Flow Accelerated Corrosion (FAC) program was in place and was being implemented in accordance with procedural requirements by knowledgeable licensee personnel. (Section M1.3)
- Upon identifying excessive leakage on the 4A RHR pump mechanical seal, the licensee's actions in declaring the RHR pump inoperable and the overall corrective actions taken to repair the pump were appropriate. Use of previous lessons learned and corrective actions supported effective and timely repair of the seal (Section M2.1).

- Testing of the integrated safeguards system was well controlled by a test director. Consistent application of peer checks was noted during switch manipulations (Section M3.1).

Engineering

- Modifications completed during the Unit 4 refueling outage were implemented effectively. Required documentation was well written and provided detailed information. Post maintenance testing specified for the modifications was appropriate (Section E2.1).
- Good Reactor Engineering support and communications with refueling teams were noted throughout the refueling activities. Good reactor engineering management oversight was noted throughout the core alterations (Section E2.2).
- A Non-Cited Violation was identified involving an inoperable containment isolation valve. This condition was identified by the licensee and reported in a Licensee Event Report (Section E8.1).

Plant Support

- Health Physics technicians closely monitored activities and dose rates during work in the refueling cavity. A detailed plan was developed and successfully implemented for retrieval of a highly irradiated small piece of metal (Section R1.1).
- Access Authorization Program records reviewed complied with the requirements of 10 CFR 73.56 and implementing procedures (Section S1.1).
- A preliminary review by the inspector determined the licensee appropriately trained and tested a temporary licensee supervisor who failed to report a drug related arrest while granted unescorted access to the facility. An Unresolved Item was opened pending further detailed NRC review of the circumstances associated with the event (Section S1.5).
- The licensee appropriately suspended safeguards during severe weather in accordance with 10 CFR 50.54(x) and implementing procedures. The issue was reported to the NRC as a 50.73 report. The licensee subsequently determined that the event should have been addressed under the provisions of 10 CFR 73 rather than 10 CFR 50.73 (Section S2.6).
- Revisions to the Physical Security Plan, Training and Qualification Plan, and Contingency Plan, submitted by the licensee, met the requirements of 10 CFR 50.54(p) and did not decrease the effectiveness of the program (Section S3.1).

Report Details

Summary of Plant Status

Unit 3 operated at full power during this period and has been online since October 29, 1998.

Unit 4 completed a 23 day refueling outage and was returned to service on April 8, 1999. The unit operated at full power the remainder of the period.

I. Operations

O1 Conduct of Operations

O1.1 Refueling Activities

a. Inspection Scope (71707)

The inspectors reviewed refueling activities for the Unit 4 outage.

b. Observations and Findings

The inspectors routinely observed fuel offload and reload activities in the control room. On two occasions, fuel movement was stopped when there was a question or unexpected occurrence. These issues were minor and indicated a conservative approach by the operators to fuel movement. Communication was maintained between the control room, refueling cavity in containment, and the spent fuel pool room. On March 25, 1999, the inspectors observed fuel movement on the refueling bridge in containment. Operators were very attentive during fuel movement.

On March 26, 1999, during backshift, one of the inspectors observed fuel reloading activities in the containment. A minor issue developed when the Senior Reactor Operator (SRO) needed better lighting in order to place a fuel assembly into the core. The SRO exhibited good coordination and communications with the control room and with the fuel movement crew in communicating and addressing this issue. During fuel movement, the reactor operator and SRO were consistently attentive and followed procedures.

When the inspector initially entered the refueling area, he noted that a non-licensed operator (NLO) stationed at the upender controls was resting and not attentive to fuel movement except during upender operation. The inspector also noted that the manipulator crane cable/rail NLO observed fuel movement activities only when fuel was being positioned into the core. After an assembly was placed in the core, the NLO would rest until the manipulator crane was moved back to pick up another assembly. The inspectors communicated these observations to the shift Nuclear Plant Supervisor and later to plant management. Management indicated that the observed performance did not meet expectations and was not professional. Operations management reviewed this issue at the nuclear plant supervisors meeting and reviewed operator and supervisor expectations for fuel movement.

The inspectors reviewed Operating Procedure OP-038.23, Fuel Transfer System Operation, OP-038.10 Manipulator Crane - Operating Instructions, and other applicable procedures for fuel movement. Operations Department Instruction (ODI)-CO-022, Fuel Handling Instructions During Outages, provides additional guidance for fuel movement during outages. It includes descriptions of the duties of personnel and is intended to improve consistency regarding details of the activities. Expectations in the ODI regarding maintaining a professional atmosphere and monitoring to ensure that cables are free from obstructions during crane movement were not consistently met by the NLOs. Although the two NLOs did not consistently meet the expectations established by the ODI, all activities associated with fuel movement were conducted in accordance with the Operating Procedures. The observed conduct did not adversely affect the controls on fuel movement.

The inspectors independently verified technical specifications and other procedure requirements such as system alignments, minimum spent fuel pool water level, and operability of the source range nuclear instrumentation.

c. Conclusions

Operations demonstrated a conservative approach to fuel movement. Good communications were maintained between the control room, containment, and the spent fuel pool. During fuel movement, the reactor operator and SRO were consistently attentive and followed procedures.

O1.2 Control Room Observations

a. Inspection Scope (71707)

The inspectors observed control room activities during major evolutions of the Unit 4 refueling outage.

b. Observations and Findings

The inspectors observed control room activities during reactor power decrease and increase; core fuel unloading and reloading; reactor system heat-up and approach to criticality; and operability testing of the Emergency Diesel Generator, Auxiliary Feed Water system, Safeguards, Motor Operated Valve, and the Standby Steam Generator Feed pumps. Prior to the testing, the inspectors reviewed selected testing procedures and prints with either the responsible system engineer, field operators performing the tests, control room operators, or control room supervisors. During the tests, the inspectors noted good command and control exhibited by the control room supervisors. Control room communications with the field operators and surveillance procedure adherence and peer checking was noteworthy. Throughout the control room observations, the inspectors noted strong Operations management oversight of the ongoing activities. For example, the Operations Manager was in the control room during all major evolutions observed by the inspectors. The inspectors observed several issues that developed during the testing. Prompt engineering support in addressing the issues was evident and provided for conservative decision making.



c. Conclusions

During the Unit 4 refueling outage, control room operators maintained good communications with personnel in the plant. Procedure adherence and peer checking in the control room was noteworthy. Strong management oversight was noted in the control room during major plant evolutions and tests.

O1.3 Instrument Air Compressor Failure

a. Inspection Scope (71707)

The inspectors reviewed the failure of an instrument air compressor during testing.

b. Observations and Findings

On April 22, 1999, the Unit 4 motor-operated instrument air compressor (4CM) failed during surveillance testing in accordance with procedure 4-OSP-013.3, Diesel Instrument Air Compressor Operability. Instrument air (IA) pressure immediately started decreasing. At the time of the incident, the Unit 3 and Unit 4 IA systems were cross-tied. Immediately following the 4CM failure, the Unit 3 motor-operated instrument air compressor automatically started. Soon after that, the Unit 3 and Unit 4 back-up diesel driven IA compressors also automatically started. Two non-licensed operators that were in the area of the 4CM promptly provided assistance. The operators quickly isolated the 4CM and stopped the decrease in IA system pressure. These actions helped to prevent a transient in secondary systems dependent on IA.

The inspectors reviewed the issue with Operations and with the responsible systems engineer. Additionally, the inspectors reviewed the issue with the NLOs that assisted in securing the 4CM. Preliminary investigation by the licensee indicated that a check valve failed on the 4CM which caused air pressure from the other compressors to escape through the check valve. The IA system has a unit isolation feature that should function on decreasing pressure to separate the IA system between the units. The isolation did not occur on this event. After reviewing the incident, engineering determined that the IA pressure had stabilized before it reached the setpoint for IA isolation between the units. The licensee wrote CR 99-0658 to address the 4CM failure, including generic implications to the other IA compressors and the Maintenance Rule aspects.

c. Conclusions

Prompt response by operators in isolating a failed instrument air compressor check valve minimized the potential impact of the failure on the instrument air system and the operating units. The failure was addressed in the licensee's corrective action process.

O2 Operational Status of Facilities and Equipment

O2.1 Containment Walkdown

a. Inspection Scope (71707)

The inspectors accompanied licensee management on a walkdown of containment in preparation for containment closeout and plant startup.

b. Observations and Findings

All elevations of the containment were inspected. The general housekeeping of the containment was good. All equipment was properly stored or removed from containment. A few minor housekeeping issues were given to the shift outage director for disposition. The inspectors observed that environmentally qualified (EQ) seals were installed on labeled EQ instruments. Electrical junction boxes and conduit seals were in place.

c. Conclusions

The material condition of the containment was good in preparation for plant startup. Management attention to cleanup and closeout of containment was good.

O7 Quality Assurance in Operations

O7.1 Licensee Oversight Activities (40500)

During the inspection period, the inspectors reviewed several licensee oversight activities.

Condition Report Oversight Group

On March 26, 1999, the inspectors attended the daily Condition Report Oversight Group (CROG) meeting. The CROG reviewed several Condition Reports (CRs). The CROG assigned responsibility for the actions, significance level, and event codes. These responsibilities were specified in procedure O-ADM-518, Condition Reports. The CRs dispositioned were properly assigned.

Company Nuclear Review Board

On April 20, 1999, the inspectors attended the Company Nuclear Review Board (CNRB) meeting #466. Presentations observed by the inspectors included a Plant Managers Report, Review of Significant Condition Reports, Self Assessment in Maintenance Planning Process, and an Engineering Report. The presenters were well versed with the subjects and provided good presentations. As evidenced by the questions asked by the CNRB members, the members exhibited a strong nuclear safety focus, and emphasized self assessment and continuous improvement in the licensee's corrective action program. The CNRB chairman ran the meeting very professionally and ensured



all issues were either closed or provided action items to management personnel to provide additional information for closure of issues at future CNRB meetings. The inspectors reviewed the CNRB presentation package that had been distributed prior to the meeting and verified Technical Specification (TS) minimum CNRB member quorum requirements during the meeting.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Maintenance Observations (61726, 62707)

The inspectors observed all or portions of the following work activities:

WO 98012371	480 VAC Breaker Maintenance
3/4-OSP-075.6	Auxiliary Feedwater Train 1 Backup Nitrogen Test
3/4-OSP-075.7	Auxiliary Feedwater Train 2 Backup Nitrogen Test
4-PMI-051.7	Containment Ventilation Isolation Valves Position Indication Channel Calibration.
WO 98025099	MOV-4-1418 Post Maintenance Test
WO 98025100	MOV-4-1417 Post Maintenance Test
WO 99007688	4A Residual Heat Removal Seal Replacement
WO 99007688	4CM Instrument Air

Routine maintenance and testing activities were properly conducted in accordance with procedures. Measuring and test equipment was verified as properly calibrated. No problems were identified.

M1.2 Inservice Inspection

a. Inspection Scope (Unit 4) (73753)

The inspectors evaluated implementation of the licensee's inservice inspection (ISI) program by observing in-process work activities and review of selected procedures and records. The observations, procedures and records were compared to the Technical Specifications (TS), the Updated Final Safety Analysis Report (UFSAR), and the applicable code (ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition, with no Addenda). Portions of the following in-process ISI NDE examinations were observed:

- Liquid Penetrant (PT) examination of the following welds:
 - Zone 4-038, Weld Nos. 10"-SI-1402-1 and -4
 - Zone 4-081, Weld No. 10"-SI-2407-4
 - Zone 4-089, Weld No. 8"-SI-2407-8



- Visual (VT) examination of the following Pipe Supports:
 - Zone 4-089, Supports SR-445 and SR450E
 - Zone 4-037, Support SR-450D
- Ultrasonic (UT) examination of the following welds:
 - Zone 4-063, Weld Nos. 14"-RHR-2401-9, -10, -9LS, and -10LS
 - Zone 4-067, Weld Nos. 14"-RHR-2404-4, -16, and -17
 - Zone 4-081, Weld Nos. 10"-SI-2407-4 AND -5
 - Zone 4-038, Weld Nos. 10"-SI-1402-1 AND -4

In addition, current outage VT examination records of pressure boundary bolting in accordance with Procedures 4-OSP-045.1, ASME Section XI Quality Group A Bolting Examination, and 4-OSP-045.2, ASME Section XI Quality Group B Bolted Connection Examination, were reviewed.

The inspectors also reviewed the following ASME Section XI Repair and Replacement packages:

- Work Order 98011738 01, Replace Seal Water Injection Filter Letdown Isolation valve 4-293B
- Work Order 98002140 01, Repair Support for Component Cooling Water Heat Exchanger C Basket Strainer

The inspectors also reviewed 13 Contractor Surveillance and Overview reports performed by FP&L personnel between March 17 and March 23, 1999.

b. Observations and Findings

During observation of the above in-process ISI activities, the inspector's found that: detailed instructions and procedures were in place and were being followed by knowledgeable and qualified inspection personnel; approved and calibrated inspection equipment was being used; inspections were being performed in accordance with applicable Code requirements; program changes, including appropriate approval of code relief requests, were being controlled; and examination results were being properly evaluated and corrective actions taken as required. Plans and schedules for the current inspection period were in accordance with the approved ISI program. Qualified and knowledgeable licensee personnel provided strong direction and oversight of contract personnel performing ISI examinations.

Fourteen Condition Reports (CRs), generated during the current ISI, were reviewed to verify that unacceptable examination results were being documented and corrected.



c. Conclusions

Inservice Inspection activities were being performed in accordance with requirements with strong licensee direction and oversight of contract personnel. Overall, the licensee's ISI program was considered to be a strength.

M1.3 Flow Accelerated Corrosion (FAC) (Unit 4) (49001)

The inspectors reviewed the FAC program procedures and observed UT thickness measurements and/or grid layout for the following components:

- E5A-E-6
- E5A-P-7
- E5B-E-8
- E5B-P-9
- HPH-P-19
- HPH-E-18
- HPRH-P-4A

Compliance with program procedure requirements, including evaluation and disposition of inspection results, was verified. The inspectors found that a detailed FAC program was in place and was being implemented in accordance with procedural requirements by knowledgeable license personnel.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Residual Heat Removal Pump Seal Replacement

a. Inspection Scope (62707 and 37551)

The inspectors observed and reviewed the licensee's corrective actions and repair of a mechanical seal leak on a residual heat removal (RHR) pump.

b. Observations and Findings

On April 12, 1999, during the monthly flow path verification surveillance, the licensee identified that the mechanical seal of the Unit 4A RHR pump was leaking. The leakrate was approximately 180 drops per minute. The maximum allowed leakrate is 29 drops per minute when the pump is running as specified in 4-OSP-050.2, Residual Heat Removal System Inservice Test. The licensee declared the pump out of service and entered a 72 hour action statement per TS 3.5.2. Condition Report 99-0595 was initiated and a root cause analysis and seal replacement were commenced.

The inspectors attended meetings which addressed the maintenance planning of the seal replacement. Additionally, previous corrective actions on RHR pump seal failures were reviewed and discussed for lessons learned. The pump-motor assembly was disassembled, the seal replaced, and the assembly reassembled. Post maintenance tests included an inservice test to verify the seal leakage was within acceptable limits.



The inspectors reviewed the leaking seal issue with engineering and reviewed corrective actions on previous RHR pump seal leaks. In the late 1980's to early 1990's, several RHR pump seal failures had occurred at Turkey Point. Corrective actions performed on the RHR pump seal due to the latest failure were consistent with the licensee's previously documented corrective action commitments. For example, a task team had recommended changing the seal material from a tungsten to a tungsten-carbon seal. The inspectors verified that the seal that was installed was a tungsten-carbon seal. Another significant finding by the task team was to ensure adequate venting of the RHR system. Inadequate venting could lead to thermal shock on the seals and may result in seal-face cracks. Preliminary information indicated that the failed seal had several seal-face cracks. The licensee sent the seal to a materials laboratory for materials analysis and was reviewing, as part of the root cause, whether appropriate venting had been performed on the pump. Additionally, as a result of this issue, the licensee indicated they would pursue a license amendment to change the 3 day action statement for an inoperable RHR pump to a 7-day action statement. The licensee stated that this was based on an updated risk model that indicated the core damage frequency would not be increased significantly and would be within acceptable levels.

The inspectors observed portions of the maintenance on the pump, reviewed the field procedures, plant work order, and the Health Physics (HP) controls and radiological work permit for performing maintenance on the pump. Compliance with the 72 hour TS action statement was verified. Additionally, the inspectors verified the other three operable RHR pump seals were not leaking.

c. Conclusions

Upon identifying excessive leakage on the 4A RHR pump mechanical seal, the licensee's actions in declaring the RHR pump inoperable and the overall corrective actions taken to repair the pump were appropriate. Use of previous lessons learned and corrective actions supported effective and timely repair of the seal.

M3 Maintenance Procedures and Documentation

M3.1 Integrated Safeguards Test

a. Inspection Scope (61726)

On April 2, 1999, the inspectors observed a portion of the integrated safeguards testing in the control room.

b. Observations and Findings

The inspectors observed the performance of the feedwater isolation test as part of the overall engineered safeguards integrated test specified in procedure 4-OSP-2031.1, Train A Engineered Safeguards Integrated. The inspectors observed the shift briefing by the test director before performance of the test. The test was conducted without any problems. Workers implemented peer checks anytime a switch position was changed.

The inspectors observed the feed water isolation logic actuate as expected during the test.

c. Conclusions

Testing of the integrated safeguards system was well controlled by a test director. Consistent application of peer checks was noted during switch manipulations.

III. Engineering

E1 **Conduct of Engineering**

E2 **Engineering Support of Facilities and Equipment**

E2.1 Outage Modifications

a. Inspection Scope (37551)

Selected modifications performed during the Unit 4 refueling outage were reviewed, including adequacy of the 10 CFR 50.59 safety evaluation or screening. Plant restrictions or impacts of the implementation of the modifications were verified against actual plant conditions.

b. Observations and Findings

Plant Change/Modification (PC/M) 97-050, 3C Bus Lockout, Transformer Lockout, and Under Voltage Circuit Modifications and PC/M 97-007, 4C Bus Lockout, Transformer Lockout, and Under Voltage Circuit Modification.

These modifications consisted of relocating some relays from 3C/4C switchgear cubicles to the cable spreading room. This was done to correct a previous problem when vibration of these relays had caused a 3C Bus lockout. Additional annunciation was provided in the control room. This modification received a 50.59 screening evaluation. The equipment involved was classified as quality related due to the seismically qualified panel. The justification for completing a 50.59 screening review and not a 10 CFR 50.59 evaluation was thorough. The portions of the modification affecting Unit 3 were performed during the previous Unit 3 outage. The Unit 4 portions of the modification were completed during the current outage. The inspectors reviewed the modification with the system engineer and observed work activities in the field. No deficiencies were noted.

PC/M 98-015, Unit 4 Cycle 18 Reload Design.

This modification was for the core reload. This was performed under a 10 CFR 50.59 evaluation. Previous licensee TS changes allowed the modification to be made without a TS change. TS specify that certain parameters are based on current core operating limits reports. The licensee submitted updates to this report. The inspectors reviewed this update to the report. Also, the inspectors independently verified the core reload

pattern specified in the modification was the actual core reload pattern by verifying the core map after fuel reload. No discrepancies were identified and all documentation was detailed and thorough.

PC/M 98-049, Motor Operated Valve (MOV) Enhancements-Limitorque Technical Update 98-01

This modification made changes to MOVs as a result of a reduction in the application factor as described in Limitorque Technical Update 98-01. The application factor was reduced from 1.0 to 0.9. The modifications consisted of changing actuator gear ratios or replacing the motors with a higher torque motor. Additionally, to accommodate the larger motor capacity, the corresponding breaker in the motor control center was changed. The inspectors monitored implementation in the field, observed the post maintenance testing on selected MOVs and reviewed the test procedures, and discussed specific details with the responsible system engineer. No discrepancies were identified.

PC/M 98-005, Auxiliary Feedwater (AFW) Control Valve Instrument Air Supply Filters

This modification reconfigured the instrument air supply filters to a parallel flow arrangement. The modification addressed excessive nitrogen leak rates that were observed during surveillance testing. The modification would eliminate possible debris from the instrument air galvanized piping causing debris related failures of the check valves separating the nitrogen backup supply. Isolation valves were also installed for performing maintenance on one filter bank without disrupting filtered instrument air to the AFW system. Redundant check valves were also installed. Additionally, the galvanized piping upstream of the filters and all of the downstream piping was replaced with stainless steel tubing. The inspectors reviewed the modification package, walked down the completed modification in the field and observed portions of the post maintenance test with the responsible system engineer.

PC/M 97-033, Elimination of Electronic Trip to Auxiliary Feed Water Turbines

This modification disabled the electronic over-speed protection for the turbine driven auxiliary feed water pumps. There were no changes made to the mechanical over-speed trip portion of the system. The actual removal of the electronic over-speed feature had been completed last year. During this outage, the licensee completed removal of the electronic circuitry that provided electronic over-speed indication in the control room. The inspectors reviewed the modification with the responsible systems engineer and also discussed the completed modification with the control room operators.

c. Conclusions

Modifications completed during the Unit 4 refueling outage were implemented effectively. Required documentation was well written and provided detailed information. Post maintenance testing specified for the modifications was appropriate.

E2.2 Reactor Engineering**a. Inspection Scope (71707 and 37551)**

The inspectors reviewed the Unit 4 Reactor Engineering activities and support to operations during fuel movement in the core. Additionally, the inspectors reviewed the core map after the fuel loading sequence had been completed.

b. Observations and Findings

During fuel unloading and reloading, the inspectors monitored reactor engineering support activities in the control room. The inspectors verified TS requirements were met during the fuel reload, including direct communications between the control room and the personnel at the refueling stations. Good communications, mapping of the core, and procedure adherence was noted throughout the refueling activities. Additionally, the inspectors noted continuous reactor engineering management oversight in the control room during the fuel reloading activities.

On April 2, 1999, after the fuel reloading had been completed, the inspectors reviewed the licensee's videotape of the core. Procedure 0-OSP-059, Core Mapping Following Core Loading, and 0-ADM-556, Fuel Assembly and Insert Shuffles, were reviewed and discussed with the reactor engineering manager. Using the core loading pattern, the inspectors verified selected assemblies were in the required core position, and verified the assembly number and type of insert.

c. Conclusions

Good reactor engineering support and communications with refueling teams were noted throughout the refueling activities. Reactor engineering management oversight was evident throughout the core alterations.

E8 Miscellaneous Engineering Issues (92903)

- E8.1 (Closed) Licensee Event Report 50-250/98-007-00: Containment Purge Supply Valve Opened Wider Than Technical Specifications (TS) Limit.** The licensee identified that a Unit 3 containment purge valve had been opened in excess of the TS limit on valve position. The cause of the condition was poor measurement methods used to position the valve stops. The inspectors noted that during a previous Unit 4 outage, a Condition Report (CR) had been written to address containment purge valves found to open wider than the TS limit. In that instance, the TS action statements were not violated because the purge valves were not open longer than the action statement time period. The licensee initiated immediate corrective action on Unit 4 and planned to address the issue during the next refueling outage on each unit. Consequently, using an improved measurement process, a Unit 3 containment isolation valve was found to open wider than the TS limit. In this case, the TS action statement for an inoperable valve was violated because the purge valves had been open longer than the allowed time.



The licensee completed an evaluation which concluded that the small amount of valve stop mispositioning on the Unit 3 purge valve had no significant adverse impact on safety. The inspectors did not identify any discrepancies in the evaluation. The failure to comply with the requirements of TS 3.6.4 for an inoperable containment isolation valve is a violation of regulatory requirements. This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy, and will be referenced as NCV 50-250, 251/99-02-01, Containment Purge Isolation Valves. This violation occurred on October 20, 1999, and is in the licensee's corrective action program as CR 98-1611.

Corrective actions for the Unit 4 purge valves were observed. On March 11, 1999, prior to containment purge for the Unit 4 refueling outage, the licensee performed a check to determine if the purge valve positions were within TS limits. The inspectors attended the pre-job briefing and observed the field tests on POV-2600 and POV-2602. A calibrated protractor had been manufactured which facilitated measuring the angle around the valve body. Minor adjustments were made to ensure the valves were within TS limits. The revised surveillance procedure was reviewed and discussed with the licensee. The LER is closed.

- E8.2 (Closed) Violation 50-250, 251/98-05-01: Failure to Update the UFSAR for Full Core Offload. The NRC recently revised NUREG - 1600, Rev. 1, "General Statement of Policy and Procedures for NRC Enforcement Actions," (Enforcement Policy) by the addition of Appendix C. Appendix C, Interim Enforcement Policy for Power Reactor Severity Level IV Violations, effective March 11, 1999, revises the NRC's enforcement approach for Severity Level IV violations. Appendix C permits closure of most Severity Level IV violations, based on the violation being entered into the licensee's corrective action program, as well as other considerations as described in the Appendix. The NRC has conducted a review of the following Severity Level IV violation, and considers it appropriate to close this violation consistent with Appendix C of the Enforcement Policy:

<u>Violation Number</u>	<u>Corrective Action Program File Number</u>
50-250, 251/98-05-01	CR 99-0212

IV Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Refuel Cavity Radiological Controls

a. Inspection Scope (71750)

The inspectors reviewed radiological controls in the refueling cavity during reactor vessel reassembly and the plans for retrieval of a small irradiated piece of metal from the cavity area.

b. Observations and Findings

On March 28, 1999, the inspector observed work in the cavity from a HP office setup with camera and telemetry. A HP technician was on a headset with another HP in the cavity area. They were constantly monitoring the worker's doses. The workers were assigned a dose limit of either 200 millirem (mr) or 250 mr. While observing for several minutes, the highest dose seen was about 50 mr. From the survey map it was evident that the dose was higher on one side of the reactor head due to radiation from a small piece of highly irradiated metal. The HP technician cautioned workers to stay on the other side of the head as much as possible.

From the licensee's survey data, the inspector noted that the piece measured 8640 Rem per hour (R/hr) on contact and 60 R/hr at one foot. This radiation level was not high enough for a very high radiation area. It was posted as a high radiation area with HP assigned and HP required for entry. The licensee developed a detailed retrieval plan approved by site management. The inspectors observed a demonstration of the retrieval tool. Subsequently, the piece was successfully removed from the area.

c. Conclusion

Health Physics technicians closely monitored activities and dose rates during work in the refueling cavity. A detailed plan was developed and successfully implemented for retrieval of a highly irradiated small piece of metal.

S1 Conduct of Security and Safeguards Activities

S1.1 Access Authorization Program

a. Inspection Scope (81700)

The licensee's Access Authorization Program (AAP) was reviewed against regulatory requirements and the Physical Security Plan (PSP). In addition, Licensee Event Report (LER) 50-250, 251/1998-006-00 was reviewed.

b. Observations and Findings

The licensee's AAP was reviewed at the corporate office located in Juno Beach during the period of March 29 and 30, 1999. From review of procedure A1-1, "Processing Applications for Unescorted Access," Revision 6, dated September 4, 1998, the inspector verified that requirements of 10 CFR 73.56 were clearly outlined. For eight of ten records reviewed, the inspector determined the licensee appropriately performed background investigations, adjudicated negative information, and granted appeals as required. The following two issues were reviewed and discussed in detail:

- LER 1998-006-00 issued on October 6, 1998, addressed an incident involving a contract supervisor who was unfavorably terminated due to criminal history information which was discovered upon return of the Federal Bureau of Investigation (FBI) fingerprint record. The individual had been granted



temporary unescorted access to protected and vital areas on August 31, 1998. The individual listed that he had no arrests on his Personnel History Questionnaire (PHQ); however, the FBI criminal record revealed 14 arrests. Upon interview by the licensee, the individual admitted all the arrests were correct and resulted in convictions, and that he knowingly failed to list the arrests in order to gain employment. The licensee's evaluation determined that the work performed by the individual involved safety-related equipment; however, safety systems were not affected nor threatened. The licensee entered the individual into the Personnel Access Data System (PADS).

- In addition, the inspector reviewed information regarding a contract Health Physics technician granted temporary unescorted access September 21, 1998, who was unfavorably terminated on October 8, 1998, for failing to list several arrests on his PHQ. These arrests were discovered by the licensee when the individual's FBI criminal history was returned.

A preliminary review of the licensee's actions by the inspector identified that the processing and termination of the individuals was in accordance with regulatory requirements. LER 50-250, 251/1998-006-00 is closed.

c. Conclusions

For those access authorization records reviewed, the licensee complied with the requirements of 10 CFR 73.56 and implementing procedures.

S1.5 Fitness for Duty Program

a. Inspection Scope (81502)

The licensee's Semiannual Fitness for Duty (FFD) Performance Report was reviewed against the requirements of 10 CFR 26.

b. Observations and Findings

Upon review of the January 1 through June 30, 1998, Semiannual FFD Performance report, the inspector noted that the licensee generated a 24-hour report. The licensee discovered January 13, 1998, that a Health Physics temporary supervisor had been arrested for possession of an illegal drug in March 1997 and failed to report the arrest to the licensee. The inspector reviewed the individual's training history record and determined that the licensee appropriately trained the individual as required to report all arrests. The individual's name had been included in the licensee's FFD testing pool since 1990. From 1990 to 1997, twelve random FFD tests were performed for the individual with negative results. The individual's unescorted access was suspended pending the licensee's investigation; however, the individual resigned June 2, 1998. Unresolved Item (URI) 50-250; 251/99-02-02 has been opened pending further NRC review of the circumstances associated with the event.

c. Conclusions

A preliminary review by the inspector determined the licensee appropriately trained and tested a temporary licensee supervisor who failed to report a drug related arrest while granted unescorted access to the facility. A URI was opened pending further detailed NRC review of the circumstances associated with the event.

S2 Status of Security Facilities and Equipment

S2.6 Compensatory Measures

a. Inspection Scope (81700)

LER 50-250, 251/1998-005-00 was reviewed by inspector to determine if the provisions of the PSP were followed during suspension of safeguards activities that occurred during a severe weather event.

b. Observations and Findings

On September 24, 1998, the licensee declared an Usual Event (UE) as a result of a warning issued by the National Hurricane Center and suspended safeguards under 10 CFR 50.54(x) due to personnel safety. Access control measures were not suspended. Safeguards activities were suspended on the perimeter intermittently for approximately 10 hours with the longest suspension for two hours and 44 minutes. Condition Report (CR) 98-1333 was initiated to review actions taken. The licensee later determined that a suspension of safeguards under 10 CFR 50.54(x) was incorrect and that the event should have been reported under 10 CFR 73. Since a certain portion of the intrusion detection system (IDS) was degraded and the licensee did not provide compensatory measures due to personnel safety, a provision of the PSP was not met. The inspector evaluated the PSP requirements and determined the licensee's decision to report events of this nature in the future under 10 CFR 73 to be correct.

The inspector reviewed the circumstances surrounding the event, in addition to Daily Shift Logs maintained by the licensee and Alarm History records. The inspector verified that a compensatory post for a portion of the IDS was established and removed intermittently from 11:00 p.m. on September 24, 1999, to 8:40 a.m. on September 25, 1999. The inspector also confirmed that implementing procedures to suspend safeguards were followed. LER 50-250, 251/1998-005-00 is closed.

c. Conclusions

The licensee appropriately suspended safeguards during severe weather in accordance with 10 CFR 50.54(x) and implementing procedures. The issue was reported to the NRC as a 50.73 report. The licensee subsequently determined that the event should have been addressed under the provisions of 10 CFR 73 rather than 10 CFR 50.73.

S3 Security and Safeguards Procedures and Documentation**S3.1 Security Program Plans****a. Inspection Scope (81700)**

The inspector reviewed and evaluated PSP, Training and Qualification Plan (TQP), and Contingency Plan (CP) changes against the provisions of 10 CFR 50.54(p).

b. Observations and Findings

The inspector reviewed PSP Revisions 12 and 13, TQP Revisions 14 and 15, and CP Revision 1 and determined that those changes did not decrease the effectiveness of the program.

c. Conclusions

Revisions to the PSP, TQP, and CP submitted by the licensee met the requirements of 10 CFR 50.54(p) and did not decrease the effectiveness of the program.

S4 Security and Safeguards Staff Knowledge and Performance**S4.2 Response Capabilities****a. Inspection Scope (81700)**

By letter dated September 28, 1998, the licensee informed the NRC that two key response posts were relocated to augment the response strategy and provide shelter to those officers posted in the positions. The inspector reviewed and evaluated the licensee's relocation of these two response posts against PSP and CP commitments.

b. Observations and Findings

The inspector verified the movement of the two officers was appropriate and met the commitments of the PSP and CP. There were no changes to target sets or the number of responders required to protect against the Design Basis Threat (DBT).

In addition, the inspector reviewed the licensee's actions to Information Notice (IN) 98-35, "Threat Assessments and Consideration of Heightened Physical Protection Measures," issued September 4, 1998. The licensee generated Action Item 98-113, to develop a Security Force Instruction (SFI) to incorporate the guidelines set forth in the IN. The inspector reviewed the SFI and determined the levels of assessment to be accurate and suggested response actions appropriate.



c. Conclusions

Two relocated response posts met the requirements of the PSP. IN 98-35 was appropriately reviewed by the licensee and incorporated into an SFI for future implementation.

S8 Miscellaneous Security and Safeguards Issues

S8.1 (Closed) Violation 50-250, 251/97-10-06, Failure to Limit Unescorted Access. The inspector reviewed and verified the licensee's corrective actions during an inspection conducted May 21-22 and June 1-3, 1998, which has been documented in Inspection Report No. 50-250, 251/98-06. Since that time, no other failures of this nature have occurred. This item is closed.

S8.2 (Closed) Violation 50-250, 251/98-06-01, Failure to Protect Safeguards Information (SGI). In response to the violation, the licensee generated CR 98-310. The inspector verified those corrective actions were appropriate and timely. This item is closed.

V. Management Meetings and Other Areas**X1 Exit Meeting Summary**

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on May 8, 1999. Interim exit meetings were held on March 26, and April 2, 1999 to discuss the findings of Region based inspections. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED**Licensee**

G. Alexander, Supervisor Inspections
 J. Connor, Supervisor Codes & Components
 S. Franzone, Licensing Manager
 R. Gil, Components, Supports and Inspections (CSI) Manager
 R. Hovey, Site Vice-President
 D. Jernigan, Plant General Manager
 T. Jones, Operations Manager
 J. Kirkpatrick, Protection Services Manager
 M. Lacal, Training Manager
 D. Lowens, Quality Assurance Manager
 M. Pearce, Work Control Manager
 K. Remington, System Performance Supervisor
 R. Rose, Maintenance Manager
 E. Thompson, License Renewal Project Manager

D. Tomaszewski, Site Engineering Manager
 J. Trejo, Health Physics/Chemistry Supervisor

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation, and corporate personnel.

NRC

C. Patterson, Senior Resident Inspector
 R. Reyes, Resident Inspector

INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering
 IP 40500: Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems
 IP 49001: Inspection of Erosion/Corrosion Programs
 IP 61726: Surveillance Observations
 IP 62707: Maintenance Observations
 IP 71707: Plant Operations
 IP 71750: Plant Support Activities
 IP 73753: Inservice Inspection
 IP 81502: Fitness for Duty Program
 IP 81700: Physical Security Program for Power Reactor
 IP 92903: Followup - Engineering
 IP 92904: Followup - Plant Support

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-250, 251/99-02-01	NCV	Containment Purge Isolation Valves (Section E8.1)
50-250, 251/99-02-02	URI	Supervisor's Failure to Report Arrest While Granted Unescorted Access (Section S1.5)

Closed

50-250, 251/99-02-01	NCV	Containment Purge Isolation Valves (Section E8.1)
50-250/98-007-00	LER	Containment Purge Supply Valve Opened Wider Than Technical Specifications Limit (Section E8.1).
50-250, 251/98-05-01	VIO	Failure to Update the UFSAR for Full Core Offload (Section E8.2).
50-250, 251/1998-006-00	LER	Contract Supervisor's Failure to Report Criminal History (Section S1.1)

50-250, 251/1998-005-00

LER Suspension of Safeguards During the Severe Weather (Section S2.6)

50-250, 251/97-10-06

VIO Failure to Limit Unescorted Access (Section S8.1)

50-250, 251/98-06-01

VIO Failure to Protect Safeguards Information (Section S8.2)

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