UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report No.: 50-302/92-18

Licensee: Florida Power Corporation
3201 34th Street, South
St. Petersburg, FL 33733

Docket No.: 50-302 License No.: DRP-72

Facility Name: Crystal River 3

Inspection Conducted: July 12 - August 22, 1992

Inspector: _____ 10/1/92
R. Schin, Project Engineer, RII Date Signed

Accompanying Personnel: P. Holmes-Ray, Senior Resident Inspector
R. Freudenberger, Acting Senior Resident Inspector
P. Fillion, Reactor Inspector, Region II
T. Johnson, Senior Resident Inspector, Region I
A. Long, Project Engineer, Region II

Approved by: _____ 10/1/92
K. Landis, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope:

This routine inspection was conducted by resident and region based inspectors in the areas of plant operations, maintenance and surveillance, facility modifications, fire protection, security, radiological controls, Licensee Event Reports, and licensee action on previous inspection items. Numerous facility tours were conducted and facility operations observed. Backshift inspections were conducted on July 11, 12, 13, 14, 15, 16, 20, 22, 26, 28, 29, 31, August 3, 4, 5, and 11.

Results:

In the area of plant operations, inspection results were as follows:

- The program to minimize out of service control room alarms and indications appears to be effective in identifying and correcting control room alarm, instrument, and equipment deficient conditions. A

decrease in the number of deficiency stickers over the past month was noted (paragraph 3.a).

- Temporary Instruction 2515/115, Verification of Plant Records, was performed in response to industry concerns with potential falsification of operator logs. No discrepancies were identified (paragraph 3.b).

- On August 4, Battery Charger "D" failed, initiating fire detection equipment in the area. In responding to this event, operator actions were prompt and effective. There was a problem involving timely State notifications to Citrus and Levy counties which were referred to FEMA for followup (paragraph 3.d).

- An Unresolved Item** was identified concerning a potential failure from Emergency Diesel Generator support systems cross-connect valves not being locked in the closed position (URI 50-302/92-18-02, paragraph 4.b.2).

In the area of maintenance and surveillance, the inspection results were as follows:

- An Inspector Follow Item was identified concerning battery and battery charger issues (IFI 50-302/92-18-01, paragraph 4.a).

- The Decay Heat Pump vibration testing was coordinated well and performed in a controlled manner (paragraph 4.c).

In the area of fire protection, the inspection results were as follows:

- The overall occurrence of fires at the facility was low. In particular, the recent refueling outage was completed with no fires. Attention to improve consistency of documentation of fires and corrective action implementation appears warranted.

- An Unresolved Item** was identified involving documentation of TS inspections of fire service pumps diesel engines (URI 50-302/92-18-03, paragraph 5.c).

- The fire protection systems observed were in satisfactory condition and the surveillance procedures reviewed implemented technical specification requirements (paragraph 5.c).

In the area of safety assessment and quality verification, inspection results were as follows:

- The safety evaluation and 10 CFR 50.59 determination performed for the development of PT-337, DHP-1A Vibration Testing, included a thorough analysis of potential safety impact of the testing and complete technical analysis of the basis for conclusions in the evaluation (paragraph 4.c).

- A Non-Cited Violation was identified for failure to treat Plant Review Committee training records as quality records (NCV 50-302/92-18-04, paragraph 6.c).

- The licensee's self assessment activities were considered to have been effective at identifying the need for attention to the fire protection program (paragraph 5.e).

- The status of selected open items from the "Florida Power Corporation Generic Implementations of Reactor Trip Events in December 1991" was reviewed and updated (paragraph 6).

**Unresolved Items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. Alberdi, Manager, Nuclear Plant Operations
*J. Anna, Nuclear Document Control Supervisor
*W. Bandhauer, Nuclear Operations Superintendent
G. Boldt, Vice President Nuclear Production
*J. Buckner, Nuclear Regulatory Specialist
*J. Campbell, Supervisor, Nuclear Plant Security
*E. Froats, Manager, Nuclear Compliance
*B. Hickle, Director, Quality Programs
*H. Koon, Nuclear Maintenance Superintendent
*D. Kurtz, Manager, Nuclear Operations Quality Assurance
*W. Marshall, Nuclear Operations Superintendent
*P. McKee, Director, Nuclear Plant Operations
*B. Moore, Nuclear Maintenance Superintendent
*D. Porter, Nuclear Shift Supervisor
*S. Robinson, Nuclear Chemistry and Radiation Protection Superintendent
*V. Roppel, Manager, Nuclear Plant Maintenance
*W. Rossfeld, Manager, Site Nuclear Services
*R. Shires, Senior Nuclear Quality Assurance Engineer
R. Widell, Director, Nuclear Operations Site Support
*G. Williams, Senior Nuclear Mechanical Engineer

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

NRC Resident Inspectors

P. Holmes-Ray, Senior Resident Inspector
*R. Freudenberger, Acting Senior Resident Inspector
*T. Johnson, Senior Resident Inspector, Region I
A. Long, Project Engineer, Region II
R. Schin, Project Engineer, Region II
P. Fillion, Reactor Inspector, Region II

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Plant Status and Activities

The plant continued in power operation (Mode 1) for the duration of this inspection period.

During the week of July 13, a specialist inspection of Engineering and Technical Support was conducted. The results of this inspection were documented in NRC Inspection Report 50-302/92-19.

On July 15 & 16, the Director of NRR Projectorate II-2 and the NRR Project Manager was on site for a routine visit.

During the week of July 27, a specialist inspector concluded an inspection of Rad Waste and Transportation. The results of this inspection were documented in NRC Inspection Report 50-302/92-15.

During the week of August 3, a specialist inspection of Plant Security/Safeguards was conducted. The results of this inspection were documented in NRC Inspection Report 50-302/92-20.

During the week of August 10, a specialist inspection of Plant Procedures was conducted. The results of this inspection were documented in NRC Inspection Report 50-302/92-22.

On August 13 & 14, The Region II Chief, Operational Programs Section was on site for a routine visit.

A management meeting to discuss the results of 8R refueling outage was held in the NRC Region II office on August 12, 1992.

3. Plant Operations (71707, 93702, & 40500)

Throughout the inspection period, facility tours were conducted to observe operations and maintenance activities in progress. The tours included entries into the protected areas and the radiologically controlled areas of the plant. During these inspections, discussions were held with operators, health physics and instrument and controls technicians, mechanics, security personnel, engineers, supervisors, and plant management. Some operations and maintenance activity observations were conducted during backshifts. Licensee meetings were attended by the inspector to observe planning and management activities. The inspections confirmed FPC's compliance with 10 CFR, Technical Specifications, License Conditions, and Administrative Procedures.

a. Out of Service Control Room Alarms and Indications

The licensee identifies and tracks failed or faulty control room annunciator alarms, instruments, and equipment with a yellow maintenance deficiency sticker or with an out of service sticker. The status of these items is logged as required by AI-500, Conduct of Operations, sections 4.3.5 and 4.3.6, and enclosures 12 & 13. In addition, the licensee tracks these deficient items frequently (usually on a daily basis) including the repair priority, schedule and current status. An operations department individual coordinates these program activities.

The inspector reviewed program implementation including the administrative instruction, the priority tracking forms, and the control room status logs. Selected operators and the program coordinator were interviewed. The inspector also walked down the control room boards comparing indications and deficiency stickers

with the status logs. The inspector did not identify any deficiencies that were not previously identified. With the exception of diesel fuel oil transfer pump, DFP-1D, (see section 4.a.(4)), no system or equipment inoperabilities were identified. The inspector concluded that the program appears to be effective in identifying and correcting control room alarm, instrument and equipment deficient conditions. The inspectors have noted a decrease in the number of deficiency stickers over the past month. The licensee's goal is a "black board" condition (e.g., no illuminated control room alarms).

b. Verification of Plant Records (Temporary Instruction 2515/115)

On April 23, 1992, the NRC staff issued Information Notice 92-30, "Falsification of Plant Records," to alert licensees to the NRC's concern that plant mechanics, technicians, and operators may have falsified plant logs at several nuclear power plants. All personnel involved in NRC regulated activities are responsible for complying with applicable NRC regulatory requirements and other federal laws.

The NRC regulation 10 CFR 50.9(a) states that information required by statute or by the Commission's regulations be complete and accurate in all material aspects. Log keeping activities as well as surveillances performed by licensed or non-licensed personnel are subject to the requirements of 10 CFR 50.9(a) regarding completeness and accuracy of information.

To address this issue, an inspection was performed in accordance with NRC Inspection Manual Temporary Instruction 2515/115, Verification of Plant Records. The inspection included a review of the licensee's actions in response to the Information Notice, including information provided to affected plant personnel and self assessment initiatives.

Operations Study Book Entries related to the accuracy of plant records and logs were made on March 13, March 31, June 2, and July 9, 1992. The entries described the issues as they were identified in the industry, provided refresher information on general practices for maintaining shift records as contained in AI-500, Conduct of Operations, and reemphasized the requirements of 10 CFR 50.9(a).

Licensee management chose not to perform an audit comparing operator logs to plant security information for activities performed prior to the surfacing of this issue. A Quality Programs Evaluation was in progress which included assessment of licensee actions based on the information provided in NRC Information Notice 92-30. The evaluation was to include assessment of the justification for the removal of superfluous surveillance requirements from operator and radiological controls technician rounds, assessment of data collection by accompanying

operation and radiological controls personnel performing surveillance rounds, and assessment of communication of management/supervisory expectations to ensure proper performance of surveillance rounds.

The inspector performed an analysis of operator readings performed in accordance with SP-300, Operating Daily Surveillance Log, and SP-301, Shutdown Daily Surveillance Log by comparing them to security access records. A representative sample of 120 required room entries for the acquisition of log readings in areas monitored by security systems was performed. No discrepancies were identified.

The NRC plans to review the results of licensee initiatives to monitor performance during future inspections. Temporary Instruction 2515/115, Verification of Plant Records, is closed.

c. Emergency Feedwater Actuation on Low Steam Generator Level

On July 17, the unit was operating at 8% power with the turbine off-line when an Emergency Feedwater Initiation and Control system actuation occurred due to low level. Steam flow from the A OTSG was being isolated in preparation for repairing condenser tube leakage. Partial isolation of the A OTSG created a high pressure condition in the OTSG. With feedwater pump control in manual, there was no automatic compensation to overcome the OTSG high pressure. Main feedwater flow to the affected OTSG therefore temporarily stopped and OTSG level reached the low level setpoint for EFIC actuation. Operators reduced reactor power, stabilized the plant, and secured Emergency Feedwater.

During the transient, a steam leak occurred from the packing of a manual isolation valve for one of the two turbine bypass valves associated with the a OTSG. The valve packing was replaced with a new five ring packing system uniquely designed for each specific valve application.

The EFIC actuation was reported to the NRC, Event Number 23894, and LER 92-15, EFW Actuation of Low Steam Generator Level While Isolating Steam From A Steam Generator.

In the LER the licensee stated that an evaluation of operator actions associated with the event was in progress to determine if additional corrective actions were warranted.

This LER remains open pending review of the licensee's corrective action evaluation and the maintenance history of the manual turbine bypass isolation valve (MSV-21).

d. Battery Charger Failure

At 6:02 a.m. on August 4, 1992, the licensee declared an Alert due to a fire in a battery charger lasting more than 10 minutes. Operators promptly deenergized the battery charger, extinguished the fire, and downgraded the event to a NOUE. Operators placed the spare battery charger in service and at 6:26 a.m. the NOUE was terminated. The sequence of events was as follows:

5:50 a.m. - Alarms received in Control Room and recorded on Sequence of Events Recorder: "Battery Charger D - AC Power Failure" and "DC Distribution Panel B Duct - Fire Alert"

5:52 a.m. - Shift Supervisor received reports of smoke in 108 ft. Control Complex in the area of the B side battery chargers. He recorded that alarms indicated problems with D charger. Control Room Shift Supervisor entered AP-880, Fire Protection, and activated Fire Brigade.

5:59 a.m. - Control Room Operators deenergized the D battery charger.

6:02 a.m. - Shift Supervisor declared Alert status based on fire in protected area lasting more than 10 minutes.

6:05 a.m. - Fire team leader reported that fire was out. Shift Supervisor downgraded the emergency classification from Alert to Unusual Event.

6:06 a.m. - Spare F battery charger was placed in service for the D battery charger. Shift Supervisor recorded that actions of TS 3.8.2.3(b) were applicable from 5:52 a.m. to 6:06 a.m.

6:09 a.m. - Notification of Alert was made to State Warning Point.

6:21 a.m. - Notification of Alert was made to NRC.

6:26 a.m. - Shift Supervisor exited Unusual Event.

In responding to this event, operator actions were prompt and effective. Licensee classification of the event as an Alert was consistent with the site Radiological Emergency Plan. Reporting of the event to the State of Florida and the NRC was timely (Event Number 23988). There was a problem with timely State notifications to Citrus and Levy counties, which the NRC referred to FEMA for followup.

The licensee determined that the cause of the damage to the battery charger was a failed rectifier in the battery charger alarm circuit power supply circuit located inside the D battery

charger cabinet. One or more diodes in the rectifier apparently short circuited, blew a piece off the rectifier, and blackened the steel frame of the battery charger cabinet on which the rectifier was mounted. This short circuit drew excessive electrical current through two small wires inside the battery charger cabinet that were feeding power to the rectifier. Much of the insulation burned off the approximate four foot length of the two wires, partially filling the B train battery charger room with smoke. There was no automatic actuation of any fuse or circuit breaker, allowing the short to ground to continue. Before the operators arrived and deenergized the battery charger, one of the wires had burned through and separated.

To ascertain all the facts related to the battery charger failure, an inspector from the Region II office in Atlanta, GA, conducted an inspection at the site on August 4-7, 1992. The inspector's findings and conclusions are included in paragraph 4.a of this report.

e. Radiological Protection Program

Radiation protection control activities were observed to verify that these activities were in conformance with the facility policies and procedures, and in compliance with regulatory requirements. These observations included:

- Entry to and exit from contaminated areas, including step-off pad conditions and disposal of contaminated clothing;
- Area postings and controls;
- Work activity within radiation, high radiation, and contaminated areas;
- RCA exiting practices; and
- Proper wearing of personnel monitoring equipment, protective clothing, and respiratory equipment.

The implementation of radiological controls observed during this inspection period were proper and conservative.

f. Security Control

In the course of the monthly activities, the inspector included a review of the licensee's physical security program. The performance of various shifts of the security force was observed in the conduct of daily activities to include: protected and vital areas access controls; searching of personnel, packages, and vehicles; badge issuance and retrieval; escorting of visitors; patrols; and compensatory posts. In addition, the inspector observed the operational status of protected area lighting, protected and vital areas barrier integrity, and the security organization interface with operations and maintenance. No performance discrepancies were identified by the inspectors.

4. Maintenance and Surveillance Activities (62703 & 61726)

The inspector observed maintenance activities to verify that correct equipment clearances were in effect; work requests and fire prevention work permits, as required, were issued and being followed; quality control personnel performed inspection activities as required; and TS requirements were being followed.

Maintenance was observed and work packages were reviewed for the following maintenance activities:

- WR 299944, MSR "B" Reheat Stop Valve (RHV-2) operating linkage installed improperly, preventing full valve opening;

- WR 300180, Main Steam Isolation Valve (MSV-412) Furmanite injection of packing leak;

- WR 300468, Auxiliary Building Exhaust Fan (AHF-14A) failure of discharge damper open permissive switch;

- WR 300470, Auxiliary Building Exhaust Fan (AHF-14B) suction and discharge dampers failure to open; and

- WR 300432, Corrective maintenance to "D" battery charger following control rectifier failure on August 4, 1992.

Surveillance tests were observed to verify that approved procedures were being used; qualified personnel were conducting the tests; tests were adequate to verify equipment operability; calibrated equipment was utilized; and TS requirements appropriately implemented.

The following tests were observed and/or data reviewed:

- SP-354A, Monthly Functional Test of the Emergency Diesel Generator EGDG-1A;

- SP-340A, RWP-3A, DCP-1A and Valve Surveillance; and

- PT-337, DHP-1A Vibration Testing.

The following items were considered noteworthy.

a. Battery Charger Failure

A review of the "D" battery charger failure on August 4, was performed. The battery charger was manufactured by C & D Batteries Co., and had a nameplate with the following data:

Model: ARR 130K 200
Serial No: ES 71608, Specs: 1705
Input: 480V, 56A, 3PH, 60 HZ

Output: 132V, 200A, 60 cells
60° C ambient

The nameplate did not indicate a date or place of manufacture. The licensee stated that the charger (and the failed component) were original plant equipment, which means it was installed prior to January, 1977.

Major components of the type ARR battery charger are:

- Three single phase transformers with 480V primary windings connected in delta. Each single phase transformer has a 165V secondary winding serving one power rectifier and a 120V secondary winding serving control functions;

- Three silicon controlled rectifier power conversion assemblies;

- Three sets of current transformers, phase control and pulse networks, and auxiliary supply transformers;

- One output voltage error detection and current sensor card;

- Input and output circuit breakers; and

- Monitoring and alarm circuits.

In the type ARR battery charger, one of the 120V AC power transformer secondary windings supplies power to an AC power input monitoring circuit. This monitoring circuit will trigger an external annunciator if the AC input voltage is too high or too low for greater than a preset time period. The monitoring circuit utilizes an alarm card that accepts a DC input. Therefore, the 120V AC is fed to a four diode control rectifier to produce a DC output that is proportional to the AC input voltage. The control rectifier is connected directly (unfused) to the 120V AC power transformer secondary winding with No. 18 AWG, 1/c, switchboard wire (type SIS). The control rectifier unit is about the size of a quarter and about 1/4 inch thick.

The control rectifier was the component that initially failed. One possible scenario is that one diode in the rectifier failed short-circuited which in effect created a short-circuit on the 120V AC power transformer secondary winding. The short-circuit caused high currents to flow, and since the circuit was not fused the No. 18 AWG wire became greatly overloaded. The wire insulation burned, generating sufficient smoke to set off a room smoke detector. At some point, a small portion (about 10 %) of the control rectifier broke off, probably due to internal pressure caused by high temperature caused by the failure. Probably, current was finally interrupted when the No. 18 AWG wire melted open.

This scenario is consistent with alarms received in the control room. The first alarm was "Battery charger D, AC power failure. Then, 19 seconds latter, "Fire in battery charger room" annunciated. A failed rectifier would have caused the alarm card to see low input voltage, thus generating the AC power failure alarm, which is intentionally delayed about 5 seconds. Therefore, 24 seconds elapsed between the rectifier failure and the smoke detector actuation. This time delay may indicate the need to evaluate the appropriateness of the smoke detector location.

At the time of the inspection, August 4-7, the WR to repair the charger had not been finalized. However, the licensee stated that the WR would include, but not necessarily be limited to, the following work and tests:

- Replace all wiring that was in the wire bundle with the two burned wires, or any other wire having visible damage;

- Replace the failed diode rectifier;

- Replace the C phase power transformer. This transformer including No. 12 AWG pigtail did not have any external visible damage. However, it is being replaced as a conservative alternative to evaluating the effects of the overload;

- Install a fuse to protect wires in the failed circuit;

- Clean the battery charger according to preventive maintenance procedure PM-119, Maintenance of Electrical Panels and Cabinets;

- Perform calibration of all alarm circuits according to preventive maintenance procedure PM-141, Battery Charger Preventive Maintenance Setpoint Adjustments DPBC-1A thru 1F; and

- Perform an 8 hour load test.

After inspecting the battery charger, reviewing the drawings, manufacturer's instruction manual, and the licensee's test procedures, the inspector agreed that the proposed WR was sufficient to return the charger to operable status. The inspector however noted that these test procedures would leave one relay not functionally tested i.e. the "higher voltage shutdown relay".

During the inspection period, industry wide failure rate data could not be obtained on the failed control rectifier. However, the licensee stated that this component has never failed in any of the six battery chargers installed at Crystal River prior to this event. The operator who was on duty at the time of this event

stated that he was not aware of any other unusual events or conditions occurring or existing around the time of the failed component in the battery charger.

The inspector also reviewed all of the alarms associated with the battery charger. He identified a discrepancy between the interconnection drawings and the station alarm procedure. Gilbert Associates, Inc. drawing EC-209-023, Interconnection Wiring Diagram Battery Charger 3D-DPBC-1D, Rev. 9, dated March 1992, indicated four charger alarms.

- High voltage shutdown
- AC power failure
- DC voltage high
- DC voltage low

This information was consistent with the actual installation but it did not match the "alarm condition" indicated in alarm response procedure AR-701, SSF-P Annunciator Response, in that AR-701 did not indicate "DC voltage low" as an alarm condition. The licensee stated that they would review and resolve this discrepancy.

In addition, the inspector reviewed a summary of all WRs related to the 250/125V DC distribution system initiated since July 31, 1991. This summary indicated that the recently installed safety-related batteries are experiencing signs of copper contamination. This problem is under investigation by the licensee. The summary also indicated that nine (9) corrective maintenance WR were processed during the past year to correct problems with the safety-related battery chargers. The WR numbers were: WR 287360, 295413, 295696, 290533, 295424, 297151, 289613, 293400, 287703.

In summary, evidence indicated that the battery charger failure was simply a random failure. The inspector agreed that the work request proposed by the licensee to restore the charger to operable status was adequate. Nevertheless, opening of an Inspector Followup Item was warranted to track followup of the following items:

- Review the completed work request for restoring the failed charger;

- Review the licensee's resolution of the battery copper contamination issue; and

- Detailed review of work history on the battery chargers to determine whether or not there exists a pattern of repetitive failures.

Inspector Followup Item (50-302/92-18-01): Battery and Battery Charger Issues.

b. Emergency Diesel Generator (EDG) Test Observation

The licensee performed a technical specification required monthly test of the A EDG on August 12, 1992, in accordance with procedure SP-354A, Monthly Functional Test of the Emergency Diesel Generator EGDG-1A. The test included a slow start of the EDG and parallel operation with the grid. The licensee concluded that the test acceptance criteria were met, and that EDG A was operable.

The inspector observed the test locally in the EDG rooms and from the control room. During the test the inspector noted the following items:

(1) Out-of-specification readings occurred during the operational checks and log keeping for the EDG air intake filter differential pressure (DP) was high and the generator phase ammeter selector switch was not functioning. The licensee had previously identified these issues and they were documented with maintenance deficiency tags. In addition, the EDG system engineer stated that the filter DP had been high since a recent filter changeout, and that this issue was currently being evaluated by engineering. Further, the system engineer stated that these items did not affect EDG operability.

(2) The inspector identified a potential failure due to cross-connect piping between corresponding components associated with the A and B EDGs. Cross-connect piping existed between the EDG air start receivers, fuel oil storage tanks and day tanks (See FSAR section 8.2.3.1 page 8 - 20). Two manual cross-connect isolation valves (EGV-25 and 26, DFV-47 and 48, DFV-56 and 59) between each of these components are normally closed. However an EDG failure could exist if these cross-connect valves were inadvertently opened and a fault occurred on either EDG component (e.g., tank or pipe rupture, etc.). Thus, both EDGs could become inoperable. Further, surveillance procedure SP-381, Locked/Sealed Valve Check List, section 3.4.3.c states that manual safety related valves that inter-connect redundant trains of safety related systems should be considered for locking devices. These EDG valves are not currently included in the locked valve program.

This item was discussed with the system engineer, Operations Management and is unresolved pending licensee consideration and subsequent NRC review.

Unresolved Item (50-302/92-18-02): Locking of Emergency Diesel Generator support systems cross-connect valves in the closed position.

(3) The inspector identified transient combustible material (including barrels of oil, a wooden table and locker, and wood scraps) in the EDG rooms. (See paragraph 5.d for further discussion of this issue)

(4) The inspector reviewed a number of deficiency tags on both EDG systems. System engineering and operations personnel were aware of the issues, and EDG system outages are being considered to clear these items. In addition a mid cycle maintenance outage is scheduled for next year. None of these deficiencies effected EDG operability.

The inspector noted that a deficiency (WR 295571) was identified by the licensee during SP-311, Diesel Fuel Transfer Pump Surveillance, on March 25, 1992. Apparently, the DC motor field circuit rheostat for the DFP-1D diesel fuel oil transfer pump (EDG-B) had to be continually adjusted by the operator during the test to prevent motor/pump runout and possible damage. This item was documented on the completed SP-311 and on WR 295571. However, the pump had not been declared inoperable nor repaired.

The inspector discussed this item with operators and system engineering personnel. The licensee stated that a redundant AC powered pump (DFP-1B) was available for the EDG B and that the fuel oil system could be cross-connected from the EDG A (Section 4.12 of OP-707, Operation of the ES Emergency Diesel Generators, provides the instructions). Based on this, the EDG B was not declared inoperable. FSAR section 8.2.3.1 page 8-19 also states that the DC powered pump is a backup to the AC powered pump. The inspector had no further questions at this time.

(5) The inspector noted several housekeeping items in the EDG rooms:

- Spilled lube oil and fuel oil was noted in several places;

- An apparent oil leak on the EDG B generator end bearing was being contained by a drip device that was full of oil;

- The oily rag cans were full; and

- The EDG radiator cubicles were dirty with some material adrift.

These housekeeping items were discussed with the system engineer.

c. Decay Heat Pump Vibration Testing

During the week of July 27, vibration testing of the "A" Decay Heat Pump was performed. The testing was accomplished in accordance with Performance Testing Procedure PT-337, DHP-1A Vibration Testing. The procedure was developed to allow on-line vibration data collection on DHP-1A. The licensee plans to utilize data collected during the testing to aid in identifying the root cause of chronic decay heat pump high vibration problems.

The testing consisted of utilizing portable vibration instrumentation with the pump shutdown, operating in a recirculation mode with flows of 3000 and 1500 gpm, and artificially inducing vibration at various frequencies using an instrumented, plastic tipped hammer. The testing was performed in conjunction with the Dresser Company, who plans to use the information gathered to complete a proprietary modal analysis of the vibration data.

The inspector reviewed PT-337, DHP-1A Vibration Testing, Revision 0, reviewed the procedure's safety evaluation and 10 CFR 50.59 determination, attended the prejob meeting, observed portions of the testing, and reviewed TS implementation.

The procedure was found to provide sufficiently detailed limits and precautions, and instructions.

The safety evaluation and 10 CFR 50.59 determination included a thorough analysis of potential safety impact of the testing and complete technical analysis of the basis for conclusions in the evaluation.

The prejob meeting was effective at delineating and coordinating responsibilities for implementation of the test among the plant departments involved and the contractor representatives.

At the conclusion of testing, vibration test points normally monitored were verified to be within tolerance and Surveillance Procedure SP-340B, DHP-1A, BSP-1A, and Valve Surveillance, was performed to return the pump to an operable status.

The Decay Heat Pump vibration testing was coordinated well and performed in a controlled manner.

Overall, surveillance and maintenance activities observed and discussed above were performed satisfactorily, in accordance with procedural requirements and met the requirements of the TS.

5. Fire Protection (64704)

a. Fire Reports

The inspector performed a review of the licensee's documentation, evaluation, and corrective actions as a result of fires that had occurred at the facility since January, 1990. The overall occurrence of fires at the facility was low. In particular, the recent refueling outage was completed with no fires.

The licensee utilized two methods to document the occurrence of a fire. "System Fire Reports" were written to document all fires within the Florida Power Corporation, in accordance with corporate safety department procedures. Abnormal Procedure AP-880, Fire Protection, was utilized whenever the Control Room was notified of a fire. Followup Action 3.13 of AP-880 directs the notification of the Shift Supervisor on Duty to complete Enclosure 2 of the procedure, Fire Report, and transmit it to the Senior Fire Protection Specialist.

The inspector reviewed the licensee's file for AP-880, enclosure 2 Fire Reports, and noted that it appeared incomplete. No report was included for an incident in October 1991 that included a Fire Brigade response to an overheated air handling fan motor and smoke in the auxiliary building. Fire detection systems alarmed in the control room, initiating the Fire Brigade response. The inspector was aware that as a result of evaluation of the response of the fire brigade to this incident, additional fire fighting equipment was prestaged in the auxiliary building to enhance initial response.

Further review identified that a System Fire Report had been completed for the failure of the auxiliary building air handling fan in October, 1991. However, fires documented by AP-880, enclosure 2 Fire Reports were not consistently reported with System Fire Reports, and vice versa.

The inspector noted that both methods of reporting fires included descriptions of the licensee's response and corrective action recommendations. Also, fire protection systems and fire brigade response to actual fires in the plant were evaluated and actions were taken to improve performance. However, inconsistencies in the documentation of fires in the two reporting systems made evaluation of the effectiveness of the fire report systems difficult. Attention to improve consistency of documentation of fires and corrective action implementation appears warranted.

b. Fire Barrier Penetrations

TS 3.7.12, Fire Barrier Penetrations, establishes the operability requirements for fire barrier penetrations. Fire barrier

penetrations include cable penetration barriers, fire doors, and fire dampers.

The fire barrier breach report is routinely published in the licensee's plan of the day, and receives management review at that time.

On June 24, 1992, NRC Bulletin 92-01 "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage" was issued. The Bulletin described recent test results that indicated the Thermo-Lag 330 Fire Barrier System did not perform as rated on wide cable trays and small diameter conduits.

The licensee's immediate actions in response to the information provided in Bulletin 92-01 were timely and appropriate. (See NRC Inspection Report 50-302/92-16, paragraph 4.g).

The licensee utilizes this material extensively to meet 10 CFR 50, Appendix R requirements. Although the operability of penetrations protected by these material is questionable, the licensee has continued to emphasize timely restoration of the barriers following work activities.

c. Fire Suppression Systems Operability

The inspector conducted a walkdown of portions of the fire service water system to verify that the lineup was in accordance with license requirements for system operability and that the system drawing and procedure correctly reflect "as-built" plant conditions. No discrepancies were identified.

The inspector performed a review of outstanding work requests associated with the fire service system, and the maintenance history of FSP-2A, one of the two diesel driven fire service pumps and its fuel oil storage tank, FST-2A. No significant outstanding work to be performed on the fire service water system was identified, however several minor deficiencies associated with valves or their position indications were noted. Both of the fuel oil storage tanks for the diesel powered pumps were cleaned in 1990 after one of the tanks was found to have excessive sediment and debris.

Surveillance Procedures implementing TS requirements associated with infrequently performed surveillances were selected for review. Records associated with past performances of the procedures were obtained and assessed for appropriate implementation of the TS requirements. Surveillance Procedure records reviewed included the following:

- SP-501A, Halon ASC Weight and Pressure Check, performed on a six month interval;

- SP-501B, Halon System Functional Test, performed on a 18 month interval;

- SP-408, Fire System Flow Test, performed on a three year interval;

- SP-365D, Fire Service Diesel Engine Fuel Sampling, performed on a 92 day interval; and

- SP-606, Diesel Fire Pump Engine Inspection and Maintenance, performed on an 18 month frequency.

Instructions included in SP-501A and 501B were compared against instructions provided in the licensee's vendor manual #476, Fenwal Halon 1301 Agent Storage Containers. The surveillance procedures correctly implemented the manufacturers recommendations for the testing performed.

The results of the performance of fire service water system flow tests, performed since October of 1981, indicated negligible fouling of the fire service main.

Diesel fuel oil sampling and testing in accordance with SP-365D met TS requirements, however, Cummins Service Bulletin 3379001-03, dated March 1980, included recommendations for more extensive and comprehensive testing of fuel oil supplies than currently performed by the licensee. This issue was discussed with the responsible system engineer. The system engineer was aware of the need to improve diesel fuel oil sampling and planned to incorporate more extensive testing of the fire service diesel engine fuel into an improved testing program that was under development for the fuel supply for the EDG fuel oil supplies.

The inspector's review of the implementation of SP-606, Diesel Fire Pump Engine Inspection and Maintenance, included a review of completed WR 285316 performed on Fire Service Pump 2A and WR 285317 performed on Fire Service Pump 2B in September 1991. TS 4.7.11.1 requires that the diesel engine be subjected to an inspection in accordance with procedures prepared in conjunction with its manufacturer recommendations for the class of service, on an 18 month frequency. The work requests directed that the 18 month and five year inspections identified in SP-606 be performed. The 18 month inspection checklist in enclosure 1 to SP-606 was compared to manufacturer recommendations described in vendor manual 40, Cummins Engine Company, Diesel Engines and was found to be consistent. Enclosure 3 to SP-606 provides the checklist for the five year inspection. Items on the five year checklist are the same as on the 18 month checklist with one additional item which stated that additional inspection items were to be performed per approved Cummins procedure or document and attached to the procedure. No documentation of additional inspection items that were performed for the five year inspection was included. This

inconsistency in the documentation was identified to the system engineer and fire protection personnel. The licensee routinely utilizes a Cummins Engine representative to perform the 18 month and five year inspections. The licensee plans to evaluate the fire service water pump diesel engine inspection scheduling and performance. This issue is unresolved pending the completion of the licensee's evaluation and subsequent NRC review.

Unresolved Item (302/92-18-03): Evaluation of fire pump diesel engines inspection requirements for implementation of vendor recommendations.

Overall, the fire protection systems observed were in satisfactory condition and the surveillance procedures reviewed implemented technical specification requirements.

d. Transient Combustible Material

While observing an EDG surveillance test (paragraph 4.b.(3)), the inspector identified the following combustible material in the EDG rooms:

- Wooden table top in the EDG B room;
- Wood Scraps in the EDG B fan room;
- Wood storage box in the EDG B fan room; and
- Lube oil drums in both EDG control rooms and diesel rooms, and in the EDG B fan room.

These items were discussed with licensee personnel, including the system engineer, operators and fire protection specialists. The wooden table top and wood scraps were removed. The licensee stated that these were made of fire retardant material and were apparently left from the recent EDG outages. In addition, the wood storage box is used to store maintenance tools. The licensee had previously identified an action item to replace the box with a metal one.

The lube oil drums are used by operators to replenish lube oil during EDG operations. The licensee provided an interoffice correspondence (IOC) memo to the inspector discussing the justification for these flammable EDG storage cabinets dated August 2, 1991 (NPSE 91-0219).

This IOC updated the fire loading of the respective EDG rooms as described in the fire hazards analysis, concluding that the oil drums did not impact the allowed fire loading. The licensee informed the inspector that a revision to this IOC was being planned to better represent the actual in plant lube oil storage condition. The inspector reviewed the IOC and had no further questions at this time.

On a weekly basis fire protection personnel performed walkdowns of all plant areas to identify any fire hazards. The inspection is performed in accordance with SP-809, Fire Protection Weekly Inspection. The inspectors accompanied the fire protection specialists performing the inspection on August 20. The inspection identified several minor discrepancies, some of which were corrected by the fire protection specialists, the rest were referred to appropriate plant personnel for correction. If discrepancies were identified during consecutive inspections, a problem report was initiated to ensure appropriate management attention. The inspectors considered the weekly inspections a positive initiative to maintain plant areas free of fire hazards.

e. Self-Assessment Activities

The inspectors reviewed Quality Programs Audits and Evaluations of Fire Protection which had been performed since December, 1989. Quality Programs activities had effectively identified areas for improvement in the implementation of the fire protection program. In January 1992, a replacement Manager of Site Nuclear Services was selected with the intention of improving management oversight of fire protection and ALARA.

In May 1992, a contractor was utilized by the licensee to perform an assessment of the Appendix R Program. Emphasis of the assessment was placed on the safe/alternate shutdown aspects of Appendix R and the adequacy and suitability of the existing documentation to recreate the design basis of the program and facilitate maintenance of the approved design during the plant change review process. In general, the program documentation was adequate, but somewhat disjointed because no single source document existed. Because the analysis is spread among several documents, discrepancies were considered unavoidable and some were noted during the review. At the time of the inspection the licensee had performed an initial review of the results and identified two potentially significant findings, Problem Reports had been initiated and corrective actions were in progress or complete for both issues. A detailed evaluation of remaining issues was in progress.

The licensee's self assessment activities were considered to have been effective at identifying the need for attention to the fire protection program.

6. Licensee Action on Previously Identified Inspection Findings (92701)

On May 15, 1992, the licensee issued a revised status of the long term corrective actions delineated in the FPC Final Report of January 10, 1992, entitled "Florida Power Corporation Generic Implementations of Reactor Trip Events in December 1991." The inspector reviewed the status of selected open items, and determined the status of these items to be as follows:

a. (Open) Operations Item B5, Review "Shift Manager" Concept

Recommendations for replacing the "Man-on Call" with a Shift Manager were documented in a memorandum from Paul F. McKee to G. L. Boldt, dated April 20, 1991, (PM92-0021).

The April 20 memorandum stated that the use of Shift Managers will be partially implemented in October 1992, upon completion of the current SRO license class NRC exams, and full staffing will occur after the 1993 SRO license class is complete.

This item remains open pending additional NRC review after implementation of the Shift Manager positions.

b. (Open) Training Item G3, Enhance Operational Experience and Teamwork Opportunities for SOTAs

The January 1992 Final Report on the December 1992 reactor trips documented that the operating crew and the OTA on duty had difficulty diagnosing the transient as being due to a stuck open pressurizer spray valve. According to the training staff, OTAs are used inconsistently, and some OTAs have exhibited occasional difficulty with basic concepts. The report recommended that mechanisms be identified to increase operational experience and familiarity, and provide for improved teamwork between OTAs and the balance of crew. The report also recommended an evaluation of placing OTAs on shift.

The status of this recommendation was addressed in a memorandum from W. K. Bandhauer to J. Alberdi, dated April 13, 1992 (NOS92-0079).

Actions taken to enhance operational experience and teamwork opportunities for SOTAs have included the following:

- The SOTA requalification program was upgraded in 1991 to require full participation in the licensed operator requalification training program. The frequency of simulator training sessions for SOTAs was increased, and dedicated sessions were implemented;

- The SOTAs attended an INPO Team Training course; and

- A revised SOTA role description was distributed in March 1992, to help plant personnel understand this role. Operations personnel have been made more aware of how and where the SOTA fits into the operating shift team (NOS92-0060).

Licensee management is currently evaluating the recommendation that SOTAs be placed "on shift" as opposed to "on call." A

transition period of one year is planned prior to placing the SOTAs on rotating shifts.

The licensee expects future placement of the SOTAs on shift to have an additional positive impact on the teamwork between the SOTAs and the operating crew.

This item remains open pending NRC review of the SOTA program when implemented.

c. (Closed) Engineering Item A2, Evaluate RCV-14 History

The December 1991 Final Report on the reactor trips described that numerous documented problems have occurred on RCV-14 since 1980, and recommended an evaluation of the long term maintenance history of RCV-14 and initiation of any long term corrective actions.

Failure Analysis 91-RCV-14-01 was performed for the RCV-14 failure, as documented in a memorandum from S. J. Kose and G. H. Halnon to P. F. McKee, dated December 30, 1991 (NPSE91-0452).

The failure analysis concluded that the December 8, 1991, depressurization transient was due to the failure of RCV-14 to close, coupled with false position indication on the Main Control Board. The valve failed in the partially open position due to wedging of a damaged ring of valve packing between the valve stem and the carbon spacer inside the stuffing box. The false valve indication problem was due to a missing anti-rotation key.

The review of the maintenance history of RCV-14 for the period between January 1980 and November 1991, included the evaluation of thirty-six data entries, and revealed a series of problems associated with position indication, valve operation, and packing leaks. Based on discussion with the Manager of Nuclear Plant Systems Engineering, the failure history review did not conclusively establish any common root cause or repetitive failure mode. The missing anti-rotation key was not conclusively implicated in any of the previous failures, nor could it be established during which maintenance the key was left out. This could have occurred during a number of maintenance activities including and subsequent to the Refuel 7 outage.

Although the maintenance history review was inconclusive for component problems prior to the December 1991, failure to close, the inspector found the review to be thorough and comprehensive. Licensee activities on this recommendation are adequate, and this item is closed.

d. (Open) Engineering Item B1, Time Study System Engineering Activities

(Open) Engineering Item B2, Take Corrective Action on the Recommendations of the Time Study

Although the time study was not complete at the time of the inspection, preliminary results showed that not enough time was being spent on system walkdowns. Completion of the time study was scheduled for September 1992, and implementation of corrective actions and recommendations was scheduled for December 1992.

e. (Closed) Engineering Item C2, Establish "Brainstorming" Practices

Revision 4 of the System Engineering Manual includes guidance for aggressive failure analysis utilizing a team brainstorming approach. The team is expected to contain personnel from any applicable department where the required expertise lies. Additional guidance and recommendations for brainstorming are found in the People Achieving Corporate Excellence program (PACE).

Experienced personnel in various disciplines, including the mechanics, interface with the system engineers to work through the event being analyzed. Documentation of brainstorming meeting minutes is included in the failure analysis reports.

This approach has been successfully utilized in several instances. As an example, the successful use of brainstorming for a failure analysis of AHF-1A was documented in a memorandum from E. E. Froats, dated March 18, 1992 (NPSE92-0158). This item is closed.

7. Allegation Followup (40500, 37828)

The NRC issued IR 302/91-15 on September 11, 1991, in response to five alleged safety concerns described in a 10 CFR 2.206 letter to the NRC. That letter requested the NRC to suspend or revoke the operating license for the Crystal River nuclear plant. Based in part on the NRC inspection findings described in IR 302/91-15, the NRC denied the request to suspend or revoke the Crystal River operating license. Subsequently, the alleger provided new information to the NRC related to those five safety concerns. The new information, inspection effort, and conclusions are summarized below:

a. New information: The POQAM index of procedures and the NOCS database are not treated as quality records.

Inspection: The inspector found that the licensee did not consider the POQAM index of procedures or the NOCS computerized database to be quality records, and did not retain copies of them in Records Management as would be required for quality records. The POQAM index of procedures was a listing of the plant procedures that were required by the Plant Operating Quality

Assurance Manual to implement NRC Regulatory Guide 1.33 as required by TS 6.8.1. These procedures covered plant activities important to safety such as plant administration, operation, maintenance, chemistry, and radiological controls. The licensee did consider the procedures themselves to be quality records and maintained a copy of each past revision of each procedure in Records Management on microfilm. The microfilm location of these records could be located by using the licensee's computerized SEEK system. The NOCS computerized database was a cross-reference listing including NRC requirements and licensee commitments to the NRC and the paragraphs/steps in various plant programs and procedures where each of these requirements or commitments was implemented. The inspector reviewed the requirements/commitments for quality records: FSAR chapter 1.7, titled "Quality Program (Operational)," which committed to NRC Regulatory Guide 1.88 of October 1976, titled "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records," which in turn endorsed ANSI N45.2.9 - 1974, titled "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants." The inspector also reviewed licensee procedure AI-1100, titled "Retention of Plant Operating Records."

Conclusion: Based on this review, the inspector determined that the POQAM index of procedures and the NOCS database are not required to be quality records and posed no safety concern.

b. New information: The POQAM index of procedures and NOCS database do not include all procedures and are not maintained accurate.

Inspection: The inspector reviewed the POQAM index of procedures and the NOCS database and interviewed licensee personnel, and determined that neither of these included all procedures nor were they intended to do so. The POQAM index of procedures included those plant procedures required by the Plant Operating Quality Assurance Manual to satisfy TS 6.8.1 and Regulatory Guide 1.33 requirements. It did not include others such as Nuclear Engineering, In-Service Inspection, Welding, Compliance, Licensing, or Procurement procedures. The POQAM index of procedures was maintained as a computerized database by Records Management and was updated daily, as procedures were changed. Records Management personnel stated that the POQAM index was very accurate. The inspector noted that AI-1100, Rev. 24, dated 5/23/91 included a list of the POQAM procedures that contained quality records, and that this list differed from the POQAM index of procedures dated 4/2/92. The inspector selected 10 procedures listed in AI-1100 but not in the POQAM index and found that each had been canceled during the time period of December, 1990 through January, 1992. Over 10 procedures listed in the POQAM index were not in AI-1100 and were safety-related procedures with performance completion signatures required (ie. completed procedures should be quality records). The licensee stated that AI-1100 was in the process of being updated, and a review found that the 10

procedures in question were new and were included in the new revision of AI-1100. In summary, this comparison revealed no indication that the POQAM index of procedures was incomplete or inaccurate. The NOCS database included only procedures that implemented NRC requirements or licensee commitments to the NRC. Those procedures that did not implement such requirements or commitments were not included. A review of the NOCS database was documented in IR 302/91-15. That review revealed no inaccuracies in the NOCS database.

Conclusion: The POQAM index of procedures and the NOCS database did not include all procedures. This condition did not violate NRC requirements and posed no safety concern. Inspection revealed that the POQAM index of procedures and the NOCS database were being accurately maintained.

c. New information: The PRC training records are not treated as quality records.

Inspection: The inspector reviewed requirements for the PRC training records to be quality records and stored by records management, including those references listed in b. above and also AI-300, Plant Review Committee Charter, Rev. 33. As a result of this review, the inspector found that the records of PRC member training were required to be quality records, with life of the plant storage on microfilm. However, this requirement was not mentioned in AI-300. The inspector selected sample names of PRC members and found that records of PRC training for all of them could not be found in the Records Management permanent storage microfilm files. Further review by the licensee found that records of PRC training for almost half of the current PRC members were not in the microfilm files. Completed training records for all PRC members were maintained by the PRC secretary, and the licensee took immediate corrective action by promptly transmitting copies of the PRC member training records to records management for permanent storage on microfilm. The licensee's QA organization also wrote Problem Report 92-0096, which stated that: AI-300, Revision 33, does not identify the Documentation of Training letter for PRC members as a quality record although FSAR 1.7.1.17.2 and AI-1100 state that training records are Quality Assurance Records. The failure to treat PRC training records as quality records is a violation of NRC requirements, with minor safety importance. Also, the licensee took prompt initial corrective action. This NRC identified violation is not being cited because criteria specified in Section VII.B of the NRC Enforcement Policy were satisfied. This item is identified as NCV 302/92-18-04, Failure to treat PRC training records as quality records.

Conclusion: PRC training records were not treated as quality records. This condition was found to be a violation of NRC

requirements, with minor safety importance, and is identified as a non-cited violation.

d. New information: AI-300 revision 3 did not show training for the regular members of the PRC but only the alternates.

Inspection: The inspector reviewed AI-300, rev. 3, dated May 9, 1974. This procedure revision did not stipulate training requirements for any members of the PRC. However, the current revision of AI-300, rev. 33, did require training for all members of the PRC. Records for this training of all PRC members did exist and were maintained by the PRC secretary.

Conclusion: AI-300, rev. 3, did not show training for the regular members of the PRC. There was no safety concern because the current revision 33 of AI-300 did require training of all PRC members and that training had been accomplished.

e. New information: The CMIS database is not treated as a quality record.

Inspection: The inspector reviewed NRC requirements and licensee procedures as listed above and interviewed licensee personnel about the content, use, and treatment of the CMIS computerized database. The inspector also reviewed licensee procedures NEP-132, titled "Control of Records Retention," NEP-215, titled "Configuration Item Data Control" and NEP-222, titled "Qualification for Equipment." The CMIS database included information on all installed plant equipment, and was used as the licensee's master listing of equipment safety classification and environmental qualification classification. This CMIS safety and EQ information was used for equipment maintenance, engineering modifications, and parts procurement. Each change to the CMIS was approved in writing in a Configuration Item Data Package, which was a quality record with a copy sent to Records Management for the required life of the plant storage on microfilm. Computer access for entering the changes was limited. Also, backup tapes of CMIS and all other Integrated Database Management Systems databases were made regularly; with daily, monthly, and yearly storage at different locations.

Conclusion: The CMIS database was being treated as a quality record.

f. New information: Environmental Qualification data was dropped from the CMIS computerized database.

Inspection: The inspector selected 10 items that are typically required to be environmentally qualified, reviewed the CMIS database information for these items, and found that the EQ requirements for those items were in the CMIS database. The inspector also reviewed NRC IR 302/92-201, which inspected

procurement and commercial grade dedication programs, and which identified no problems with EQ data in CMIS. Additionally, the inspector interviewed licensee engineers who use and maintain the EQ data in the CMIS. The engineers stated that they were not aware of any deficiencies in or lack of EQ data in the CMIS database.

Conclusion: Environmental Qualification data was being accurately maintained in the CMIS database.

8. Exit Interview

The inspection scope and findings were summarized on August 24, 1992, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results listed below. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

Item Number	Description and Reference
50-302/92-18-01	IFI - Battery and battery charger issues, paragraph 4.a.
50-302/92-18-02	URI - Locking of Emergency Diesel Generator support systems cross-connect valves in the closed position, paragraph 4.b.2.
50-302/92-18-03	URI - Documentation of TS inspections of fire service pumps diesel engines, paragraph 5.c.
50-302/92-18-04	NCV - Failure to treat PRC training records as quality records, paragraph 7.c.

8. Acronyms and Abbreviations

A - Ampere
AC - Alternating Current
AI - Administrative Instruction
ALARA - As Low as is Reasonably Achievable
a.m. - ante meridiem
ANSI - American National Standards Institute
AP - Abnormal Procedure
AR - Annunciator Response Procedure
C - Celsius
CFR - Code of Federal Regulations
CMIS - Configuration Management Information System
DC - Direct Current
DP - Differential Pressure
EDG - Emergency Diesel Generators
EFIC - Emergency Feedwater Initiation and Control
EFW - Emergency Feedwater
EQ - Environmental Qualification

ES - Engineered Safeguards
FEMA - Federal Emergency Management Agency
FPC - Florida Power Corporation
FSAR - Final Safety Analysis Report
ft - feet
gpm - gallons per minute
Hz - Hertz
IFI - Inspector Followup Item
INPO - Institute of Nuclear Power Operations
IOC - Interoffice Correspondence
LER - Licensee Event Report
NCV - Non-cited Violation
NEP - Nuclear Engineering Procedure
NOUE - Notice of Unusual Event
NRC - Nuclear Regulatory Commission
NRR - Office of Nuclear Reactor Regulation
OP - Operating Procedure
OTA - Operating Technical Advisor
OTSG - Once Through Steam Generator
PACE - People Achieving Corporate Excellence Program
PH - Phase
PM - Preventive Maintenance
PRC - Plant Review Committee
PT - Performance Testing Procedure
QA - Quality Assurance
RCA - Radiation Control Area
SOTA - Shift Operating Technical Advisor
SP - Surveillance Procedure
SRO - Senior Reactor Operator
TS - Technical Specification
UNI - Unresolved Item
V - Volt
WR - Work Request