



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET SW SUITE 23T85  
ATLANTA, GEORGIA 30303-8931**

January 28, 2002

Florida Power and Light Company  
ATTN: Mr. J. A. Stall  
Chief Nuclear Officer  
P. O. Box 14000  
Juno Beach, FL 33408-0420

**SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT  
50-335/01-05 AND 50-389/01-05**

Dear Mr. Stall:

On December 29, 2001, the NRC completed an inspection at your St. Lucie Units 1 and 2. The enclosed report documents the inspection findings which were discussed on January 8, 2002, with Mr. D. Jernigan and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). The issue was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it has been entered in your corrective action program, the NRC is treating this issue as a Non-cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the St. Lucie facility.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of Florida Power & Light's response to these advisories and St. Lucie's ability to respond to terrorist attacks with the capabilities of the current design basis threat. From these audits, the NRC has concluded that the St. Lucie security program is adequate at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Son Q. Ninh, Acting Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

Docket Nos. 50-335, 50-389  
License Nos. DPR-67, NPF-16

Enclosure: Inspection Report 50-335/01-05, 50-389/01-05

cc w/encl: (See page 3)

FPL

3

cc w/encl:

D. E. Jernigan  
Site Vice President  
St. Lucie Nuclear Plant  
Florida Power & Light Company  
Electronic Mail Distribution

R. G. West  
Plant General Manager  
St. Lucie Nuclear Plant  
Electronic Mail Distribution

T. L. Patterson  
Licensing Manager  
St. Lucie Nuclear Plant  
Electronic Mail Distribution

Don Mothena, Manager  
Nuclear Plant Support Services  
Florida Power & Light Company  
Electronic Mail Distribution

Mark Dryden  
Administrative Support & Special Projects  
Florida Power & Light Company  
Electronic Mail Distribution

Rajiv S. Kundalkar  
Vice President - Nuclear Engineering  
Florida Power & Light Company  
Electronic Mail Distribution

M. S. Ross, Attorney  
Florida Power & Light Company  
Electronic Mail Distribution

William A. Passetti  
Bureau of Radiation Control  
Department of Health  
Electronic Mail Distribution

Craig Fugate, Director  
Division of Emergency Preparedness  
Department of Community Affairs  
Electronic Mail Distribution

J. Kammel  
Radiological Emergency  
Planning Administrator  
Department of Public Safety  
Electronic Mail Distribution

Douglas Anderson  
County Administrator  
St. Lucie County  
2300 Virginia Avenue  
Ft. Pierce, FL 34982

Distribution w/encl:  
 B. Moroney, NRR  
 A. Hiser, NRR  
 RIDSNRRDIPMLIPB  
 PUBLIC

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRS	
SIGNATURE	<i>tross</i>	<i>dlanyi</i>	<i>srudisail</i>	<i>gkuzo</i>	<i>mlesser for</i>		
NAME	TRoss	DLanyi	SRudisail	GKuzo	KGreen-Bates		
DATE	<b>1/25/02</b>	<b>1/25/02</b>	<b>1/25/02</b>	<b>1/18/02</b>	<b>1/25/02</b>		
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-335, 50-389

License Nos: DPR-67, NPF-16

Report No: 50-335/01-05, 50-389/01-05

Licensee: Florida Power & Light Company (FPL)

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: 6351 South Ocean Drive  
Jensen Beach, FL 34957

Dates: September 30 - December 29, 2001

Inspectors: T. Ross, Senior Resident Inspector  
D. Lanyi, Resident Inspector  
G. Kuzo, Senior Radiation Specialist (Sections 2OS1, 2OS2,  
2OS3, and 4OA1)  
K. Green-Bates, Project Engineer (Section 1R08.1, 1R08.2)

Approved by: Son Ninh, Acting Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000335-01-05, IR 05000389-01-05 on 09/30-12/29/01, Florida Power & Light Company, St. Lucie Plant, Units 1 & 2. Event Followup.

This inspection was conducted by the resident inspectors and two region based inspectors. The inspectors identified one Green finding, which was a non-cited violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 609 Significance Determination Process (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process web site.

### A. Inspector Identified Findings

Cornerstone: Mitigating Systems

Green. A Non-Cited Violation of Technical Specification (TS) 3.8.1.1 Action b occurred due to continued unit operation for six days while the 1B emergency diesel generator (EDG) was out of service and the opposite required train of 1A reactor vessel level monitoring system (RVLMS) was also inoperable.

This finding was of very low safety significance because the licensee's TS were overly restrictive, and subsequently revised to conform with the standard TS. The newly revised TS would have allowed for continued unit operation for up to 14 days while the 1B EDG was out of service regardless of 1A RVLMS operability (Section 4OA3.3).

### B. Licensee Identified Violations

None

## Report Details

### Summary of Plant Status

Unit 1 operated at essentially full power the entire period except for a short forced outage on November 8 due to a Main Steam drain line rupture. The unit was restarted on November 12, and returned to full power on November 13.

Unit 2 operated at full power until it shutdown for a scheduled refueling outage on November 26. The unit was restarted on December 21. However, the unit was shutdown again on December 26 to repair the 1B Main Feed pump discharge valve. Unit 2 was restarted on December 28. Full power was achieved on December 31, 2001.

## 1. REACTOR SAFETY

### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity (Reactor - R), and Emergency Preparedness (EP)**

#### 1R04 Equipment Alignment

##### .1 Partial Alignment Verifications

###### a. Inspection Scope

The inspectors conducted partial alignment verifications of the safety related systems listed below to evaluate the operability of Technical Specifications (TS) required redundant trains or backup systems while the other trains were inoperable or out of service. These verifications included reviews of plant lineup procedures, operating procedures, and piping and instrumentation drawings which were compared with observed equipment configurations to identify any discrepancies that could affect operability of the redundant train or backup system.

- 2B High Pressure Safety Injection (HPSI) system
- 2B Component Cooling Water (CCW) system
- 1A Startup Transformer
- 2B Containment Spray (CS) System

###### b. Findings

No findings of significance were identified.

##### .2 Complete Equipment Walkdown

###### a. Inspection Scope

The inspectors completed a detailed alignment verification of the 2A CCW system. This verification included a review of the lineup per Operating Procedure OP 2-0310020, Component Cooling Water - Normal System Operation, and applicable plant drawings. The inspectors also reviewed all outstanding modifications, open and recently closed work orders, all recent applicable Condition Reports (CRs) and any outstanding

Temporary System Alterations (TSA) or Plant Manager Action Items (PMAIs) that could affect system alignment and operability. The inspectors also specifically examined the following aspects:

- System alignment and valve position
- Component and system leakage
- Electrical power availability
- Labeling, lubrication, and cooling of major system components
- Hangers and support installation and functionality
- Affect of any auxiliary equipment or housekeeping on system performance

Furthermore, the inspectors evaluated whether the licensee was identifying and documenting equipment alignment problems at an appropriate threshold in their corrective action program.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Routine Tours of Plant Areas

a. Inspection Scope

The inspectors conducted tours of the fire areas and/or witnessed associated activities listed below to verify whether they conformed with Administrative Procedure, AP-1800022, Fire Protection Plan. The inspectors specifically examined any transient combustibles in the areas and any ongoing hot work or other potential ignition sources. The inspectors also assessed whether the material condition, operational status, and operational lineup of fire protection systems, equipment and features were in accordance with the Fire Protection Plan. Furthermore, the inspectors evaluated the use of any compensatory measures being performed per the licensee's procedures and Fire Protection Plan.

- Unit 1 Intake Cooling Water (ICW) Pump Area during hot work
- Unit 1 Steam Trestle
- Unit 2 Vital Switchgear Room
- Unit 2 CCW Room
- Unit 1 Cable Spreading Room
- Unit 2 CCW Room during hot work
- Unit 2 Emergency Core Cooling System (ECCS) Room during hot work

b. Findings

No findings of significance were identified.

## .2 Fire Brigade Drills

### a. Inspection Scope

On November 20, the inspectors observed an unannounced fire brigade drill to evaluate the readiness of the licensee's personnel to fight and extinguish fires. The inspectors evaluated brigade performance regarding the following aspects:

- Prompt response to the scene,
- Dress out in appropriate protective equipment,
- Use of Self Contained Breathing Apparatuses,
- Lay out and deployment of fire hose lines,
- Fire fighting technique and use of fire fighting equipment,
- Fire brigade leader's command and control,
- Communications between Operations and the fire brigade leader,
- Implementation of pre-planned fire fighting strategies,
- Control of fire affected areas to restrict non-essential personnel,
- Actions to prevent propagation into other areas,
- Security guards responded to cordon off the area, were utilized,
- Drill objectives and acceptance criteria, and
- Post-drill critique.

### b. Findings

No findings of significance were identified.

## 1R07 Heat Sink Performance

### a. Inspection Scope

An inspector observed the cleaning and return to service of the 2B CCW Heat Exchanger. Upon restoration, the inspector examined heat exchanger flows, pressures, and temperatures to determine whether they were within expected ranges per Operating Procedures OP 2-0310020, Component Cooling Water - Normal Operation and OP 2-00125A, Surveillance Data Sheets. Additionally, the inspector reviewed the tube plugging map and tube plugging limits to ascertain whether system performance would remain within the design basis.

### b. Findings

No findings of significance were identified.

1R08 Inservice Inspection (ISI)

.1 Unit 2 Steam Generator (SG) Inspection

a. Inspection Scope

The inspector reviewed the implementation of the licensee's inservice inspection program for monitoring degradation of the Unit 2 steam generators (SG), a reactor coolant system boundary component. The inspector observed examinations and reviewed selected inspection records for:

- Eddy current examination (ET) and data acquisition for seven inservice SG tubes
- 2001 ET data analysis and history for two inservice tubes in SG-A and three in SG-B
- In-situ pressure testing to evaluate SG tube structural and leak tight integrity of thirteen SG tubes (eleven in SG A and two in SG B)
- Resolution by on-site resolution analysts of discrepancies between the primary and secondary analysis
- SG tube repair (plugging) lists generated as a result of the Unit 2 SG ET inspection

The above records were compared to the TS, License Amendments and applicable industry established performance criteria to verify compliance. The inspector also verified whether the ET equipment setup parameters, methodology and equipment used were in accordance with FPL St. Lucie Unit 2 Component Specific Technique Sheets, and that site procedures had been reviewed and accepted by the Authorized Nuclear Inservice Inspector. Qualification and certification records for examiners, equipment and procedures for the ET examination activities were reviewed. The inspector reviewed activities to determine that the ET consistently detected previously identified tube imperfections such as dents, cold leg tube thinning, tube wear, and manufactured burnish marks at the expected locations.

The inspector reviewed the results of the licensee's extent-of-condition, root cause analysis and vendor dispositions for CRs 00-0725 and 01-3055, regarding tubes/indication which had inadvertently missed licensee prescribed evaluation during previous Cycle 11 and 12 ET examinations.

b. Findings

No findings of significance were identified.

.2 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed 18 condition reports to determine if the identification of SG problems was at an appropriate threshold in accordance with licensee program requirements. The inspector also reviewed the corrective actions to verify if they were appropriately implemented.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

During the weeks of October 21 and 28, an inspector observed and assessed simulator training conducted to familiarize operators with the newly upgraded Emergency Operating Procedures (Combustion Engineering Revision 5.1). The inspector evaluated the effectiveness and value of the training. In addition, the inspector attended the post-training critiques to verify whether they were self-critical, and to confirm whether the operators were satisfied that this training adequately prepared them to implement the new EOPs.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors selected a sample of identified equipment performance problems from the systems listed below, and assessed the effectiveness of licensee efforts in accordance with Administrative Procedure, ADM-17.08, Implementation of 10 CFR 50.65, The Maintenance Rule. Inspector reviews focused on maintenance rule scoping, characterization of failed systems or components, risk significance, determination of a(1) and (a)(2) classifications, and the appropriateness of performance criteria for systems or components classified as (a)(2), or goals and corrective actions for those classified as (a)(1). The inspectors also evaluated whether equipment problems were being identified at the appropriate level, entered into the corrective action program, and being dispositioned appropriately.

- CR 01-2542 1B Main Steam Drain Line Rupture
- CR 01-1678 1B Vital 125VDC Battery Cell Undervoltage
- CR 01-2397 1C Auxiliary Feedwater (AFW) Pump Suction Cross-tie Failure
- CR 01-2572 Unit 1 CCW Motor Operated Valve MV-14-19 Inadequate Torque
- CR 01-2711 1C AFW Pump Overspeed Trip

b. Findings

No findings of significance were identified.

### 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

#### a. Inspection Scope

The inspectors reviewed and witnessed the following emergent and planned maintenance tasks to evaluate the effectiveness of licensee scheduling, management of online risk, and work control per ADM-17.16, Configuration Risk Management Program, and ADM 10.02, Critical Maintenance Management. The inspectors also examined whether appropriate contingencies were taken to reduce risk and minimize unavailability, and emergent work activities were properly planned per Administrative Procedure, ADM-10.03, Work Week Management. Furthermore, the inspectors evaluated whether specific problems with maintenance, risk assessments and emergent work were identified and appropriately addressed as part of the corrective action program.

- 1B CCW Heat Exchanger and 1B AFW pump out of service
- 2A ECCS online maintenance outage
- 1B Startup transformer online maintenance outage with the AFW cross-tie out of service
- Unit 2 Auxiliary Feedwater Actuation (AFAS) Relay Test during the 2B ECCS fluid testing
- 1A AFW Pump out of service during AFAS monthly functional testing

#### b. Findings

No findings of significance were identified.

### 1R14 Personnel Performance During Nonroutine Plant Evolutions And Events

#### a. Inspection Scope

On November 8, 2001, an inspector monitored plant equipment and Operations personnel performance in coping with an unplanned, expedited shutdown of Unit 1 due to the rupture of a 1B Main Steam drain line. The inspector observed the operating crew shutdown the unit in accordance with Normal Operating Procedure NOP 1-0030125, Turbine Shutdown - Full Load to Zero Load. The inspector also discussed the licensee's decision to not enter the Off-Normal Procedure ONP 1-22.01, Rapid Downpower, with Operations Supervision.

On November 10, operators inadvertently caused the 1A SDC heat exchanger outlet thermal relief valve (V3431) to lift. An inspector assessed Operations' performance that led up to the event, and for restoring 1A SDC back to normal operation. The inspector also reviewed the subsequent root cause determination, and evaluated the licensee's decision to declare and report an Notice of Unusual Event (NOUE) in accordance with 10CFR50.72 due to excessive reactor coolant system leakage (See also Section O4A3.1).

During both events, the inspectors examined operator logs, strip charts, and computer data, interviewed responsible operators and their supervision, and evaluated the operator actions against applicable procedures and TS.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the interim disposition and operability evaluation of the following CRs to ensure that TS operability was properly justified and the system, structure, or component (SSC) remained available, such that no unrecognized increase in risk occurred. Reviews of the Updated Final Safety Analysis Report (UFSAR) and applicable supporting documents and procedures were performed to assess the adequacy of the interim CR disposition.

- CR 01-2674 1B ICW Pump structural support
- CR 01-1678 Two cells jumpered out of 1B Battery
- CR 01-2570 Unit 1 pressurizer level indicator LI-1103
- CR 01-2542 1B Main Steam drain line
- CR 01-2397 AFW Suction cross-tie to 1C AFW pump (V12175)
- CR 01-2997 1A SDC System heat exchanger discharge relief valve

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

An inspector performed a semi-annual evaluation of the licensee's Operator Workaround (OWA) program against Operations Policy OPS-510, Operator Workarounds. This inspection included a review of all outstanding OWAs for both units, confirming their status in the control room, and evaluating any potential cumulative effects.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testinga. Inspection Scope

The inspectors reviewed post maintenance test (PMT) procedures and witnessed testing activities for selected risk significant SSCs. The following aspects were specifically inspected - (1) Effect of testing on the plant recognized and addressed by control room and/or engineering personnel; (2) Testing consistent with maintenance performed; (3) Acceptance criteria demonstrated operational readiness consistent with design and licensing basis documents (e.g., TS, UFSAR, etc.); (4) Range, accuracy and calibration of test equipment; (5) Step by step compliance with test procedures, and applicable prerequisites satisfied; (6) Control of installed jumpers or lifted leads; (7) Removal of test equipment; and, (8) Restoration of SSCs to operable status. The inspectors also verified whether problems associated with PMTs were identified and appropriately entered into the corrective action program.

- 2C AFW Pump WO 31016291
- 2B Low Pressure Safety Injection (LPSI) system Various WOs
- 2C AFW Pump trip and throttle valve MV-08-3 WO 31014302
- 2B AFW pump discharge valve MV-09-10 WO 31014626
- 2A Emergency Diesel Generator (EDG) Voltage Regulator Modification WO 31023485

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activitiesa. Inspection Scope

The inspectors evaluated planned outage activities for the thirteenth Unit 2 refueling outage (SL2-13) which began on November 26, 2001. The inspectors reviewed the risk reduction methodologies developed and employed by the licensee to control system configurations during SL2-13. To assess the effectiveness of the licensee's configuration control management, the inspectors used applicable TS; the UFSAR; and guidance described in NRC Generic Letter 87-12, Loss of Residual Heat Removal While the Reactor Coolant System is Partially Filled; Generic Letter 88-17, Loss of Decay Heat Removal; Generic Letter 98-02, Loss of Reactor Coolant Inventory and Associated Potential for Loss of Emergency Mitigation Functions while in a Shutdown Condition; and NRC Manual Chapter 0609, Appendix G, Shutdown Mitigation Capability.

Outage Plans

The inspectors reviewed the licensee's efforts for considering risk, industry experience, and lessons learned in SL2-13 planning. The inspectors reviewed the safety system protection plan and Administrative Procedure O-AP-010526, Outage Risk Assessment

and Control, and examined their implementation, to verify whether a defense in depth concept was in place to ensure safe operations and avoid unnecessary risk.

#### Monitoring of Shutdown Activities

The inspectors witnessed a portion of plant shutdown activities in the control room on November 25 and 26, verified the cooldown rate was within TS. The inspectors also monitored plant parameters and verified whether activities were conducted in accordance with plant Normal Operating Procedures NOP 2-0030127, Reactor Plant Cooldown - Hot Standby to Cold Shutdown, and NOP 2-0030128, Reactor Shutdown.

#### Outage Activities

The inspectors examined critical outage activities to verify whether they were conducted in accordance with TS, licensee procedures, and the licensee's outage risk control plan. Some of the more significant inspection activities accomplished by the inspectors were as follows:

- Reviewed safety related Equipment Clearance Orders (ECOs) (ECO 2-01-12-080, ECO 2-01-11-097, and ECO 2-01-11-134)
- Verified operability of reactor coolant system (RCS) pressure, level, flow, and temperature instruments
- Verified electrical systems availability and alignment
- Monitored important control room plant parameters
- Verified SDC system and spent fuel pool cooling system operation,
- Evaluated implementation of reactivity controls
- Reviewed control of containment penetrations
- Examined foreign material exclusion (FME) controls put in place inside containment (e.g., around the refueling cavity, near sensitive equipment and RCS breaches) and around the spent fuel pool

#### Reduced Inventory and Midloop Operations

The inspectors reviewed the licensee's commitments from Generic Letter 88-17 to verify that these commitments were still in the licensee's Normal Operating Procedures (2-NOP-01.03, Draining the RCS, and 2-NOP-01.04, RCS Reduced Inventory and Mid-Loop Operation). Additionally, the inspectors verified important procedural precautions and prerequisites, and witnessed licensee execution of reduced inventory and midloop operations. Inspectors verified critical plant parameters and system lineups according to licensee commitments, procedures, and TS requirements.

#### Refueling Activities

The inspectors observed fuel handling operations being performed according to TS and Normal Operating Procedures (2-NOP-67.02, Spent Fuel Handling Machine Operation, 2-NOP-67.03, Fuel Transfer System Operation, 2-NOP-67.04, Refueling Machine Operation, and Pre-operational test (POP) 3200090, Refueling Operation). The inspectors also examined licensee activities to control and track the position of all fuel assemblies.

### Containment Closure

The inspectors evaluated the licensee's ability to close the containment equipment, personnel, and emergency hatches during critical outage periods (e.g., refueling, midloop, etc.). At various times during these evolutions the inspectors conducted containment tours, interviewed responsible containment closure crew members and Operations personnel, verified communications with the control room, and reviewed procedural requirements to ensure timely containment closure capability was in place.

### Heatup and Startup Activities

The inspectors examined selected TS, license conditions, and other commitments and administrative prerequisites were being met prior to mode changes. The inspectors also specifically reviewed RCS pressure boundary leakage and containment integrity at mode appropriate plant conditions. The inspectors performed a containment sump closeout inspection prior to entering Mode 4 and a containment walkdown when the plant had reached normal operating pressure and temperature. Lastly, the inspectors observed portions of the reactor physics startup testing (POP 2-3200088, Unit 2 Initial Criticality Following Refueling) and reviewed the physics data to ensure that the core operating limit parameters were consistent with the design.

### Correction Action Program

The inspectors reviewed almost all of the CRs generated during SL2-13 to evaluate the licensee's threshold for initiating CRs. The inspectors also selected numerous CRs to verify appropriate priorities, mode holds, and significance levels were being assigned. Resolution and implementation of corrective actions of several CRs were also examined. Furthermore, the inspectors routinely reviewed the results of Quality Assurance daily surveillances of outage activities.

#### b. Findings

No findings of significance were identified.

### 1R22 Surveillance Testing

#### a. Inspection Scope

The inspectors reviewed, witnessed and discussed with testing personnel the performance of the surveillance tests listed below in accordance with applicable operating procedures (OP) and operations surveillance procedure (OSP). Applicable test data was reviewed to verify whether they met TS, UFSAR, and licensee procedure requirements. The inspectors also verified whether the testing effectively demonstrated that the systems were operationally ready, capable of performing their intended safety functions, and that identified problems were entered into the corrective action program for resolution.

- OP 1-2200050B 1B EDG Monthly Surveillance
- OP 2-2200050B 2B EDG Monthly Surveillance
- OP-2-0700050 2C AFW Pump Code Run
- 2-OSP-24.01 2A CS System Reactor Auxiliary Building Fluids Leak Test
- OP 2-0410025 Unit 2 Safety Injection Tank Dump Test
- OP 2-0400050 Periodic Test Of Unit 2 Engineered Safeguards Features

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed Temporary System Alterations TSA 2-01-004 (Unit 2 HVS-5A/5B Ductwork) and TSA 2-01-005 (2B EDG Manual Voltage Regulator Removal). The inspectors reviewed these temporary modifications and associated 10 CFR 50.59 screenings against the system design basis documentation (e.g., UFSAR, drawings). These modifications were also evaluated regarding any adverse affects upon system TS operability or availability. Furthermore, the inspectors examined the temporary alterations to verify whether configuration control was maintained and they were consistent with applicable modification documents.

b. Findings

No findings of significance were identified.

**Cornerstone: Emergency Preparedness (EP)**

1EP6 Drill Evaluation

a. Inspection Scope

On October 3, the inspectors observed an emergency preparedness quarterly drill conducted by the site emergency response organization. The inspectors observed licensee activities in the main control room simulator to assess whether emergency classification, notification, and protective action recommendation development activities were in accordance with Emergency Plan Implementing Procedures. Additionally, the inspectors evaluated the adequacy of the post-drill critiques conducted in the simulator.

b. Findings

No findings of significance were identified.

## 2. RADIATION SAFETY

### Cornerstone: Occupational Radiation Safety (OS) and Public Radiation Safety (PS)

#### 2OS1 Access Control to Radiologically Significant Areas

##### a. Inspection Scope

During the week of December 3, administrative and engineering controls were evaluated and their implementation observed for high radiation area maintenance and operational activities conducted in accordance with the following Radiation Work Permits (RWPs):

- RWP 01-3001 Remove/Install Control Element Drive Mechanism (CEDM) Upper Ductwork & Lower Ductwork, Head Missile Shield, Cable Trays, Tray Supports, Stop Logs & Reactor Head Lift Rig Tripod, Reactor Cavity Lines, Dance Floor
- RWP 01-3006 Install Remove Stud Tensioners, Detension/Tension Studs. Install Stud Hole Plugs & Alignment Pins
- RWP 01-3324 Install, Operate, and Remove Genesis Equipment in Steam Generators, Perform Eddy Current Test & Tube Plugging Operations
- RWP 01-3114 Repair Incore and all Associated Work Involved,
- RWP 01-3042 Remove Upper Guide Structure (UGS) with Stuck Incore, Set in Lower Cavity, Set UGS Back in Vessel After Refueling

Evaluation methods included attendance at pre-job briefings, examination of planning and task details, review of job planning, and observations of work-in-progress and Health Physics (HP) technician job coverage. Conduct of selected radiation and contamination surveys was observed and results discussed. Electronic alarming dosimetry (EAD) setpoints were assessed and personnel EAD exposure results were reviewed for selected tasks. During tours of the Unit 1 and Unit 2 auxiliary buildings, the Unit 2 Reactor Building, and radioactive waste storage areas, the inspectors observed and evaluated administrative and engineering controls for access to high radiation, locked-high radiation, and very high radiation areas. Five condition reports documented for radiological control program problems subsequent to November 25, were reviewed and discussed with responsible licensee representatives.

Licensee activities were reviewed against UFSAR, TS, and 10 CFR Part 20 requirements. In addition, personnel monitoring for work in selected high dose rate fields was reviewed against Health Physics Procedure - 112, Multibadging.

##### b. Findings

No findings of significance were identified.

## 2OS2 "As Low As Reasonably Achievable" Program Planning and Controls

### a. Inspection Scope

Licensee "As Low As Reasonably Achievable" (ALARA) program implementation and dose expenditure results were evaluated. Annual dose expenditure data histories were reviewed and discussed. The inspectors reviewed task details, ALARA job evaluations, job histories, and projected and final recorded collective dose expenditures.

For selected refueling outage tasks, the inspectors discussed dose rate and cumulative dose expenditure data trends associated with selected systems and equipment during past refueling outages; reviewed ALARA Review Committee meeting minutes; discussed general dose reduction initiatives; and examined individual details of specific ALARA job evaluations, subsequent in-progress reviews and re-evaluations. Proposed dose reduction initiatives were discussed and their implementation and effectiveness during SL2-13 were reviewed. In particular, the inspectors reviewed, evaluated, and discussed with the responsible department manager or technical representatives detailed ALARA initiatives and planning activities. These activities included the Unit 2 reactor head work and inspection, steam generator eddy current testing, and movement of the upper guide structure.

Program guidance and implementation were reviewed against the facility's 2001 ALARA goals, UFSAR, TS, and 10 CFR Part 20 requirements.

### b. Findings

No findings of significance were identified.

## 2OS3 Radiation Monitoring Instrumentation

### a. Inspection Scope

The adequacy of the licensee's respiratory protection program to provide self-contained breathing apparatus (SCBA) for workers entering or exposed to areas immediately dangerous to life and health (IDLH) or airborne radiological areas was reviewed.

The inspectors observed staged emergency SCBA equipment in lockers maintained for the Unit 1 and Unit 2 control rooms, and the Operations Support Center. Respiratory equipment types and quantities, and material condition were assessed. Material condition and technician operation of SCBA bottle fill station equipment were observed, and air quality data for the April 1 through November 16, 2001 period were discussed and reviewed. Conduct of staged SCBA equipment surveillance was observed and discussed. Control room operators and other Health Physics emergency response personnel were interviewed to assess staff proficiency in SCBA equipment use and respiratory protection program knowledge. Training, fit testing and medical qualification statements for 10 staff members were reviewed to evaluate implementation of the respiratory protection program for personnel designated as potential SCBA equipment users.

The program was evaluated against 10 CFR 20, Subpart H, Respiratory Protection and Controls to Restrict Internal Exposure in Restricted Areas, the licensee's UFSAR, TS, procedural requirements, as well as Regulatory Guide 8.15, Acceptable Programs for Respiratory Protection, October 1999, and American National Standard Institute (ANSI) Z88.2-1992, American National Standard Practices for Respiratory Protection, May 19, 1992. Additionally, implementation of Health Physics Procedure - 62, Inspection and Maintenance of Respiratory Protection Equipment, for staged SCBA equipment was evaluated in detail.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES**

4OA1 Performance Indicator Verification

.1 Reactor Safety - Initiating Events

a. Inspection Scope

Using the criteria specified in NEI 99-02, Revision 1, Regulatory Assessment Performance Indicator Guideline, an inspector reviewed the data associated with the following performance indicators reported to the NRC:

- 1) Unplanned Transients,
- 2) Unplanned Scrams, and
- 3) Unplanned Scrams With Loss of Normal Heat Removal

The Inspector reviewed the performance indicator data reported by the licensee for Units 1 and 2 during the first three quarters of 2001. The inspector also reviewed the input data for the fourth quarter of 2001 to be reported in January 2002. To verify the performance indicator data was complete and accurate, the inspector reviewed applicable reactor operator logs, CRs, and Licensee Event Reports (LERs).

b. Findings

No findings of significance were identified. There was no new performance indicator data identified in the year 2001 related to Unplanned Scrams With Loss of Normal Heat Removal.

.2 Occupational Radiation Safety

a. Inspection Scope

The Occupational Exposure Control Effectiveness performance indicator results for the Occupational Radiation Safety Cornerstone were reviewed for the period May 1, 2001, through November 14, 2001. The inspectors reviewed data reported to the NRC, and

sampled and evaluated applicable CRs and selected Health Physics Program records. The reviewed HP records included health physics shift supervisor logs, radiological event reports, exposure investigation reports, internal exposure evaluations, skin dose assessments, and personnel radiation monitoring exposure discrepancy report data.

b. Findings

No findings of significance were identified.

.3 Public Radiation Safety

a. Inspection Scope

The inspectors reviewed and discussed the Radiological Control Effluent Release Occurrences performance indicator results for the Public Radiation Safety Cornerstone during the period of April 1, 2001, through November 14, 2001. The inspectors reviewed data reported to the NRC and evaluated applicable CRs and selected radiological quarterly liquid, gaseous liquid and gaseous effluent release data, process radiation monitor out-of-service data, and abnormal release results.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

The licensee incorrectly interpreted TS 3.8.1.1 Action b requirements for the final disposition of CR 01-1237. This issue resulted in a violation of TS during the time both of the 1A reactor vessel level monitoring system (RVLMS) and 1B EDG were out of service. (Section 4OA3.3)

4OA3 Event Follow-up

.1 Declaration of Unusual Event Due to RCS Leakage in Excess of 10 Gallons per Minute

a. Inspection Scope

On November 10, 2001, the licensee was preparing to heat up the Unit 1 primary system. The LPSI pumps, used for SDC, had been secured to allow the RCS to begin heating up. Emergent maintenance activities were identified by the licensee, and they decided to halt the heat up. When Operations restarted the LPSI pump, the 1A SDC heat exchanger outlet relief valve lifted. The licensee later declared an Unusual Event due to RCS leakage exceeding 10 gallons per minute (gpm). An inspector responded to the control room to evaluate plant conditions and operator actions according to applicable operating procedures. The inspector also interviewed responsible Operations and Engineering personnel, attended Event Review Team meetings, and reviewed applicable CR dispositions. Furthermore, the inspector reviewed the 10 CFR 50.72 notification regarding the entry and termination of an NOUE.

b. Findings

No findings of significance were identified.

.2 Second Declaration of Unusual Event Due to RCS Leakage in Excess of 10 gpm

a. Inspection Scope

The licensee declared, and promptly terminated, an Unusual Event on November 26, 2001, when the suction relief valve of the 2A SDC system lifted unexpectedly during initial attempts to place the 2A SDC system into service. An inspector responded to the control room to verify plant conditions and operator actions according to applicable operating procedures. The inspectors also interviewed responsible Operations and Engineering personnel, attended Event Review Team meetings, and reviewed applicable CR dispositions. Furthermore, the inspector reviewed the 10 CFR 50.72 notification regarding the declared NOUE.

b. Findings

No findings of significance were identified.

.3 (Closed) LER 50-335/2001-08: Operation with Concurrent Inoperable EDG and Opposite Train Feature Prohibited by Technical Specifications

The inspector reviewed this LER, the final disposition of CR 01-1237, and applicable sections of the UFSAR, TS, and EDG surveillance procedures. The inspector had several discussions with Operations and Licensing Management regarding their TS interpretation. The inspector participated in conference calls with NRR to discuss TS compliance.

On May 2, 2001, the 1A RVLMS failed requiring the licensee to enter Action 4 of TS 3.3.3.8 for post-accident monitoring equipment. Since the 1A RVLMS could not be repaired until the next refueling outage, a TS Special Report was submitted. On May 3, the licensee initiated CR 01-1237 to address a potential conflict between the Action statement requirements of TS 3.3.3.8 regarding RVLMS operability and TS 3.8.1.1 Action b regarding EDG operability. The essence of this problem being that TS 3.3.3.8 Action 5 would allow continued unit operation until the next refueling outage if both trains of RVLMS became inoperable. Whereas, TS 3.8.1.1 Action b would require the unit to shutdown within 6 hours if the 1B EDG was declared inoperable while the 1A RVLMS was out of service due to redundant train inoperability. The final disposition of CR 01-1237 subsequently concluded via an TS Interpretation that RVLMS did not apply to TS 3.8.1.1 Action b.1. However, the inspector questioned whether the licensee's TS Interpretation was correct. The issue of whether RVLMS was indeed a required redundant system per TS 3.8.1.1 Action b.1 was discussed in detail with licensee management.

On June 11, 2001, the 1B EDG was declared out of service due to a radiator leak. The radiator was replaced and the 1B EDG was returned to service on June 17. Although the licensee continued to stand by their previous TS Interpretation, the inspector

considered the licensee to be in violation of TS 3.8.1.1 Action b during the time both of the 1A RVLMS and 1B EDG were out of service. Subsequently, during a conference call between the licensee and NRC on October 9, 2001, the NRC concluded that the licensee's TS Interpretation was incorrect and was in violation of TS 3.8.1.1 Action b. To resolve this problem, the licensee submitted a TS amendment request dated October 17 that would revise the wording of TS 3.8.1.1 Action b to be consistent with the improved standard TS. This amendment would also conform TS 3.8.1.1 Action b to their prior interpretation. On December 17, 2001 the NRC approved the licensee's TS amendment as requested.

This event was considered to be more than minor due to extenuating circumstances associated with the licensee's failure to comply with TS 3.8.1.1 Action b or seek discretion. However, the safety significance was considered to be very low since the licensee's TS were overly restrictive and subsequently revised to conform with the standard TS. The newly revised TS would have allowed for continued unit operation while the 1B EDG was out of service for up to 14 days regardless of 1A RVLMS operability.

For approximately six days in June, the licensee was in a condition prohibited by TS 3.8.1.1 Action b. But because this violation was of very low safety significance and was entered into the licensee's corrective action program (i.e., CR 01-1237, Supplement 1, and TS amendment request), it will be considered a Non-Cited Violation (NCV) in accordance with Section VI.A.1 of the NRC Enforcement Policy. This finding is identified as NCV 50-335/01-05-01, Continued Operation While 1B EDG Out of Service Concurrent With Opposite Train 1A RVLMS Inoperable. This LER is closed.

.4 (Closed) LER 50-335/2001-09: Inoperable Accident Monitoring Instrument Led to Operation Prohibited by Technical Specifications

An inspector reviewed this LER and determined there were no significant findings. The licensee had previously recognized that the Unit 1 pressurizer cold calibrated level instrument (LI-1103) was erroneously required by TS for post accident monitoring. An TS amendment had been submitted to delete LI-1103 on April 18, 2001; and was subsequently approved October 18, 2001. However, during the month of September, the power supply for LI-1103 had degraded to the point that operability was adversely affected for greater than the TS allowed outage time. Although this issue should be corrected, it constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. This LER is closed.

40A5 Other

.1 (Closed) NRC Temporary Instruction (TI) 2515/145, Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles (NRC Bulletin 2001-01)

a. Inspection Scope

The inspectors reviewed the licensee's program, and observed its implementation, for visual inspection of the Unit 2 reactor vessel head penetrations (VHP) as described in

their response to NRC Bulletin 2001-01. The inspection guidelines were provided in TI 2515/145.

b. Findings

1) Visual examination was performed by qualified and knowledgeable personnel:

The inspectors verified that contractor and plant personnel responsible for performing Unit 2 VHP visual examinations were at least VT-2 Level II qualified. In addition, the inspectors verified that examination personnel had received specialized training regarding industry experience of VHP leakage and associated visual examination techniques. The inspectors interviewed responsible examination personnel and concluded they were very experienced and appropriately knowledgeable.

2) Visual examination was performed in accordance with approved and adequate procedures:

Before the Unit 2 VHP visual examination was conducted, the inspectors reviewed the following licensee and contractor procedure, work instruction and inspection plan.

WO 31011264	Reactor Head Nozzle Video Probe Inspection
FRA-ANP 6011693-011	Reactor Head Nozzle Penetration Remote Visual Inspection Plan for St. Lucie Unit 2
FRA-ANP 54-ISI-367-03	Procedure for the Visual Examination for Leakage of Reactor Head Penetrations

The inspectors witnessed licensee and contractor VHP visual examination activities. These activities were conducted in accordance with the established procedure, plan and work instruction. The inspectors verified by direct observation, and in discussions with examination personnel, that the established inspection scope and evaluation criteria to visually examine 360 degrees of every VHP for any visible leakage related to Bulletin 2001-01 were being consistently implemented.

3) Licensee was adequately able to identify, disposition, and resolve deficiencies:

Inspectors observed implementation of the licensee's inspection plan for keeping track of VHP position, and specific quadrants, using applicable drawings and known video probe reference points. Inspectors confirmed licensee actions were adequate to ensure that visual examinations included 100% circumferential coverage of each VHP. The inspectors verified that the examination result for each penetration was individually documented. The examination procedure provided evaluation criteria for the VT-2 examination with specific actions for the detection of boric acid residues or identified leakage. No VHP leakage was identified. Although some minor indications of boric acid leakage associated with incore instrument (ICI) nozzle flange disassembly was observed, these were readily recognized and dispositioned.

4) Licensee was capable of identifying the Primary Water Stress Corrosion Cracking (PWSCC) phenomenon described in Bulletin 2001-01:

The inspectors directly observed the Unit 2 reactor vessel (RV) head assembly on its stand in containment; monitored the licensee's conduct of the examination; directly observed remote video images of a significant percentage of the VHP nozzles; discussed the examination process and progress with the examiners prior to and during the visual examination program; reviewed the documentation to verify 100% circumferential coverage of each VHP; and verified the qualification and training of examination personnel. The licensee was able to adequately view each of the 102 control element assembly drive mechanism, head vent, and ICI nozzles during the visual examinations. Based on the TI 2515/145 inspection results, the inspectors concluded that the licensee had conducted an effective 100% visual examination of the Unit 2 RV head that was capable of identifying leakage resulting from PWSCC cracking of VHP nozzles.

5) Evaluate condition of the reactor vessel head (debris, insulation, dirt, boron from other sources, physical layout, viewing obstructions):

In general, the RV head was clean and very accessible for remote video probe examination under the RV head insulation. Inspectors observed a limited amount of loose insulation, debris, dirt/dust, and surface corrosion. In certain localized areas on the head (particularly around VHP's on the downhill periphery), debris and loose insulation had collected precluding a complete visual examination of the VHP nozzle to head interface. However, in each of these instances the licensee was able to disposition or clear away the obstructing debris and insulation. There was some evidence of dried boric acid due to minor ICI flange leakage (see number 4 above).

6) Evaluate ability for small boron deposits, as described in the bulletin, to be identified and characterized:

The inspectors observed that the reactor head was essentially free and clear of any boric acid deposits, except for a few localized indications of old ICI flange leakage that did not hinder the visual examination. The clarity and magnification capabilities of the remote video probe demonstrated itself capable of discerning and characterizing extremely small quantities of boric acid deposition.

7) Determine extent of material deficiencies (associated with the concerns identified in the bulletin) which were identified that required repair:

The licensee did not identify any material deficiencies that required repair.

8) Determine any significant items that could impede effective examinations and/or ALARA issues encountered

The inspectors noted no ALARA issues or examples of significant items that would have impeded the visual examination process.

.2 Institute of Nuclear Power Operations (INPO) Plant Evaluation Report

Inspectors reviewed the INPO Final Report for the February 2001 Evaluation of the St. Lucie Nuclear Power Plant. The inspectors did not note any significant safety issues that warranted further NRC followup.

40A6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Jernigan and other members of licensee management at the conclusion of the inspection on January 8, 2002. Interim exit meetings were held on November 16, December 7, and December 13, 2001. The licensee acknowledged the findings presented.

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

**PARTIAL LIST OF PERSONS CONTACTED**

Licensee

G. Bird, Protection Services Manager  
 D. Calabrese, EP Supervisor  
 R. De La Espriella, Site Quality Manager  
 B. Dunn, Site Engineering Manager  
 W. Guldmond, Operations Manager  
 D. Jernigan, Site Vice President  
 A. Pell, Training Manager  
 R. Rose, Work Control Manager  
 A. Scales, Operations Supervisor  
 J. Voorhees, Licensing Manager (Acting)  
 R. West, Plant General Manager  
 C. Wood, Maintenance Manager

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

NRC

B. Moroney, NRR Project Manager

**ITEMS OPENED AND CLOSED**Opened and Closed

NCV 50-335/01-05-01 Continued Operation While 1B EDG Out of Service Concurrent With Opposite Train 1A RVLMS Inoperable (Section 4OA3.3)

Closed

LER 50-335/2001-08 Operation with Concurrent Inoperable EDG and Opposite Train Feature Prohibited by Technical Specifications (Section 4OA3.3)

LER 50-335/2001-09 Inoperable Accident Monitoring Instrument Led to Operation Prohibited by Technical Specifications (Section 4OA3.4)

TI 2515/145 Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles (NRC Bulletin 2001-01) (Section 4OA5.1)

Partial List of Documents Reviewed for 1R08.1 and 1R08.2Procedures

FPL St. Lucie Unit 2 Component Specific Technique Sheets- Acquisition - B1, B2, B3;  
Revision 0

FPL St. Lucie Unit 2 Component Specific Technique Sheets- Analysis - R1, R2, R3; Revision 0

CSI-ET-00-001; St. Lucie Unit 2 Steam Generator Eddy Current Analysis Guideline &  
Performance Demonstration, April 2000

CSI-ET-01-038; St. Lucie Unit 2 Steam Generator Eddy Current Analysis Guidelines, Rev 0,  
November 9, 2001

Other Documents

LER 1998-008; Missed TS SG U-Tube Inspection (PSL 2); May 2000

CAPS-RCA-00-000354; Root cause Analysis of SG Tube Encoding Problems in SL2-11 & SL2-  
12 SG Inspections; June 2000

Westinghouse SLRM-100; Interim Disposition to CR 01-3055; December 13, 2001

St. Lucie Letter No. L-2001-14; SL2-12 SG Tube Inservice Inspection Special Report; January  
29, 2001

2001 ET Data Analysis and Tube History for SG 11 Row 70 Column 130; December 6, 2001

2001 ET Data Analysis and Tube History for SG 11 Row 92 Column 58; December 6, 2001

2001 ET Data Analysis and Tube History for SG 21 Row 41 Column 53; December 9, 2001

2001 ET Data Analysis and Tube History for SG 21 Row 53 Column 127; December 9, 2001

2001 ET Data Analysis and Tube History for SG 21 Row 62 Column 96; December 9, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 21 Row 11 Column 151; December 12, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 21 Row 58 Column 88; December 12, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 11 Row 20 Column 2; December 11, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 11 Row 39 Column 103; December 11, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 11 Row 48 Column 57; December 11, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 11 Row 70 Column 76; December 11, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 11 Row 140 Column 80; December 11, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 21 Row 11 Column 151; December 12, 2001

SL2 U2 Cycle 13 In-Situ Pressure Tube Test SG 21 Row 139 Column 95; December 12, 2001

ABB Combustion Engineering Nuclear Power Inter-Office Memo; Genesis 2000 Encoding  
Errors at FPL - St. Lucie Unit 2, S/G B; April 28, 2000

EPRI TR-107569-V1R5; PWR Steam Generator Examination Guidelines; Revision 5

Condition Reports

98-0133 St. Lucie Evaluation of NRC Information Notice 97-88; January 16, 1998

99-0339 SG Tube Examination of Row 47 Column 85 in S/G B Indication was not Reported in 4/97 ET but was in 1998 ET; March 11 1999

99-1802 Potential Foreign Object Identified During ET of S/G B; September 24, 1999

99-1821 ET Testing Has Identified Tubes with Indications greater than 20% thru Wall; September 26, 1999

99-1904 SG Sludge Lancing Sludge was Analyzed; October 1, 1999

00-0027 QA Audit QSL-ISI-99-08; January 6, 1999

00-0725 Missed SG U-Tube Inspection, April 24, 2000

01-0993 ET Identified Small Indications in Periphery Tubes of 1A SG and 1B SG; April 13, 2001

01-3023 ET Testing on SG A Identified Tubes With Indications; December 6, 2001

01-3023 ET Testing on SG B Identified Tubes With Indications; December 6, 2001

01-3039 Calibration Standard for Bobbin Test Found to Be Reversed; December 4, 2001

01-3041 Re-Analysis of ECT Data U2 SG B; December 6, 2001

01-3055 SG Tube Indication not Evaluated, December 7, 2001

01-3076 ET Testing on SG A has Identified Tubes Which Require Plugging; December 8, 2001

01-3077 ET Testing on SG B has Identified Tubes Which Require Plugging; December 8, 2001

01-3078 ET Testing on SG A has Identified Tubes Which Must Be In-Situ Pressure Tested per NEI 97-06; December 8, 2001

01-3079 ET Testing on SG B has Identified Tubes Which Must Be In-Situ Pressure Tested per NEI 97-06; December 8, 2001

01-3091 FPL QA Identified a Mismarked Tube Orifice - Row 78 Line 126; December 8, 2001