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

October 25, 2004

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

SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000335/200405 AND 05000389/200405

Dear Mr. Stall:

On September 25, 2004, the US Nuclear Regulatory Commission (NRC) completed an inspection at your St. Lucie Units 1 and 2. The enclosed integrated inspection report documents the inspection findings which were discussed on October 5, 2004, with Mr. Jefferson 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, three inspector identified findings and one self-revealing finding of very low safety significance (Green) were identified. These findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs), in accordance with Section VI.A of the NRC's Enforcement Policy. If you contest these NCVs, 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 Senior Resident Inspector at the St. Lucie facility.

In accordance with 10 CFR 2.390 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/

Joel T. Munday, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report 05000335/200405, 05000389/200405
w/Attachment - Supplemental Information

cc w/encl: (See page 3)

cc w/encl:
William Jefferson, Jr.
Site Vice President
St. Lucie Nuclear Plant
Florida Power & Light Company
Electronic Mail Distribution

G. L. Johnston
Plant General Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

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

David Moore, Vice President
Nuclear Operations Support
Florida Power & Light Company
Electronic Mail Distribution

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

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

Marjan Mashhadi, Senior 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: (See page 4)

Distribution w/encl:
E. Brown, NRR
C. Evans (Part 72 Only)
L. Slack, RII EICS
RIDSNRRDIPMLIPB
PUBLIC

OFFICE	DRP/RII	DRP/RII	DRP/RII	DRP/RII	DRP/RII	DRS/RII	DRS/RII
SIGNATURE	SON	TMR	SPS	SBR	SMS per phone	GBK1	FNW
NAME	SNinh:vyg	TRoss	SSanchez	SRudisail	SShaeffer	GKuzo	FWright
DATE	10/ 18 /2004	10/ 22 /2004	10/ 22 /2004	10/ 19 /2004	10/ 20 /2004	10/ 20 /2004	10/ 20 /2004
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
PUBLIC DOCUMENT	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICE	DRS/RII	DRS/RII	DRS/RII	DRS/RII			
SIGNATURE	RKH	TCK	LRM	SDR2			
NAME	RHamilton	TKolb	LMiller	SRose			
DATE	10/20/2004	10/ 20 /2004	10/20/2004	10/20/2004			
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
PUBLIC DOCUMENT	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: E:\Filenet\ML042990492.wpd

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-335, 50-389
License Nos.:	DPR-67, NPF-16
Report Nos.:	05000335/200405, 05000389/200405
Licensee:	Florida Power & Light Company (FPL)
Facility:	St. Lucie Nuclear Plant, Units 1 & 2
Location:	6351 South Ocean Drive Jensen Beach, FL 34957
Dates:	June 27 - September 25, 2004
Inspectors:	T. Ross, Senior Resident Inspector S. Sanchez, Resident Inspector S. Shaeffer, Senior Project Inspector (1R22, 1R23) S. Rudisail, Project Engineer (1R12) G. Kuzo , Senior Health Physicist (2OS1, 2PS1, 4OA1) F. Wright, Senior Health Physicist (2PS3) R. Hamilton, Health Physicist (2OS3, 4OA4) T. Kolb, License Examiner (Acting Resident Inspector) L. Miller, Senior License Examiner (4OA3) S. Rose, License Examiner (4OA3)
Approved by:	Joel Munday, Chief Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000335/2004-05, 05000389/2004-05; 06/27/2004 - 09/25/2004; Florida Power & Light; St. Lucie Nuclear Plant, Units 1 & 2; Post Maintenance Testing; Access Controls to Radiologically Significant Areas; Radiation Monitoring Instrumentation and Protective Equipment; and Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems.

The report covered a three month period of inspection by resident inspectors and several inspectors from Region II. Four Green non-cited violations (NCVs) were identified. The significance of most findings is identified by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. A self-revealing non-cited violation (NCV) was identified for failing to properly implement procedure OP-2-0010125A, Surveillance Data Sheets, Data Sheet 8A, Quarterly Valve Cycle Test (All Modes), as prescribed by Technical Specification (TS) 6.8.1.a. Specifically, an I&C journeyman inadvertently lifted an electrical lead on a terminal board, rendering the 2A-Containment Spray Pump (CSP) out-of-service (OOS) for a period of time without the knowledge of the on-shift Operations personnel.

The finding is more than minor because it affected the Mitigating Systems Cornerstone objective of equipment reliability, in that when the electrical lead was lifted it rendered the 2A-CSP OOS. The finding was determined to be of very low safety significance based on the other train of containment spray being operable and available and the TS Limiting Condition for Operation (LCO) allowed outage time not being exceeded. This finding involved the cross-cutting element of human performance. (Section 1R19)

Cornerstones: Occupational and Public Radiation Safety

Green. The inspectors identified an NCV of TS 6.11 for failure to meet procedural guidance for locked high radiation area (LHRA) postings and signs, and to have adequate guidance for control of equipment maintained in the vicinity/adjacent to LHRA barrier gates and walls. During the week of August 16, 2004, the licensee failed to post all accessible walls of the Unit 1 Drumming Room LHRA waste storage facility with the required labels (postings) and failed to provide additional signs on walls to deter climbing as specified in Health Physics Procedure (HPP)-3), High Radiation Area, Revision (Rev.) 15. Further, the procedure failed to address the use and storage of other equipment placed against established physical barriers which could potentially facilitate unauthorized access to LHRAs. Equipment examples observed by the inspectors included portable step stools maintained in the vicinity of the LHRA posted Unit 2 (U2) Volume Control Tank (VCT) cubicle and several empty 55 gallon drums placed against the Unit 1 (U1) Drumming Room LHRA storage facility's eastern wall and entrance gate.

This finding is greater than minor because it adversely affected the access control program and process attribute of the Occupational Radiation Safety cornerstone in that failure to follow or have adequate procedures for maintaining LHRA barrier controls decreased the licensee's ability to provide reasonable assurance to prevent unauthorized entry required for adequate protection of worker health and safety from exposure to radioactive materials as a result of routine civilian nuclear reactor operations. The finding is of very low safety significance because the event did not result in any unanticipated and unexpected worker exposures. Immediate corrective actions included removal of the equipment away from the LHRA barrier walls and gates and positing of proper labels and signs. (Section 2OS1)

Green. The inspectors identified an NCV of TS 6.11 for failure to have adequate procedural guidance to meet area radiation monitor (ARM) radiation protection design objectives during periods of prolonged local alarm annunciation. During calendar year 2003 and year-to-date (YTD) 2004, several examples of ARM equipment in prolonged audible or visual alarm, ranging from several days to approximately eight months, were identified with no guidance to address and minimize potential worker habituation and indifference to potential radiological conditions that the alarm annunciators are designed to identify.

This finding is greater than minor because it adversely affected the access control program and process attribute of the Occupational Radiation Safety cornerstone in that failure to properly address prolonged ARM alarms could result in workers improperly responding to actual changes or unexpected operating conditions as a result of routine civilian nuclear reactor operations. The finding is of very low safety significance because there was no failure to identify atypical radiological conditions, no failure to assess doses to workers, nor unexpected personnel exposures (Section 2OS3).

Green. The inspectors identified an NCV of TS 6.8.1.i for failure to implement Quality Control activities to ensure representative sampling and monitoring of particulates in the main plant vent airborne effluents. Specifically, the licensee failed to establish appropriate guidance for tests and test acceptance criteria for the U1 and U2 Reactor Auxiliary Building (RAB) HEPA ventilation exhaust (HVE) 10A/10B fan plenum cleanup systems which limit maximum diameter of airborne effluent particulates to ensure representative sampling.

This finding is greater than minor because it adversely affected the effluent monitoring program and process attribute of the Public Radiation Safety cornerstone in that failure to ensure representative sampling could impact representative sampling and subsequent monitoring of particulates in airborne effluents released into the public domain as a result of routine civilian nuclear reactor operations. The finding is of very low safety significance because there was no failure to assess dose to the public from airborne particulates released from the main plant vents and doses did not exceed Appendix I to10 CFR Part 50 design criteria. Licensee immediate corrective actions included adoption of industry approved testing guidance and acceptance criteria for the RAB HVE filters. The finding involved the cross-cutting element of problem

identification and resolution, specifically the timeliness of corrective actions. (Section 2PS1).

B. Licensee Identified Violations

Several violations of very low safety significance were identified by the licensee, and have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations are listed in Section 4OA7 of this report.

Report Details

Summary of Plant Status

Unit 1 began the report period at 100% power and operated continuously at full power until September 4, 2004, when it was shutdown due to Hurricane Frances. After recovering from the storm, Unit 1 was restarted on September 13, and returned to full power operation on September 15. On September 25, the unit was again shutdown due to Hurricane Jeanne. Late that same night the unit lost offsite power, which was restored later the next day. After recovering from this second storm, Unit 1 was restarted on October 2, and returned to full power operation on October 4.

Unit 2 began the report period at 100% power and operated continuously at full power until September 4, when it was shutdown due to Hurricane Frances. After recovering from the storm, Unit 2 was restarted on September 17, and returned to full power operation on September 19. On September 25, the unit was again shutdown due to Hurricane Jeanne. Late that same night the unit lost offsite power, which was restored later the next day. After recovering from this second storm, Unit 2 was restarted on October 4, and returned to full power operation on October 5.

1. **REACTOR SAFETY**
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity [Reactor-R]

1R01 Adverse Weather Protection

.1 Site Specific Weather Related Condition: Hurricanes

a. Inspection Scope

During the weeks of August 8, August 29, and September 19, the inspectors verified the status of licensee actions in accordance with procedure AP-0005753, Severe Weather Preparations, as Hurricanes Charley, Frances, and Jeanne threatened the site. This verification included physical walkdowns of the licensee's property and discussions with responsible licensee personnel regarding systems, structures, and components (SSCs) vulnerable to high winds and potential flooding during a hurricane. The inspectors also reviewed applicable Technical Specifications (TS), and a memo issued by the site Vice President regarding "Hurricane Season." During the licensee's implementation of severe weather preparations for the aforementioned hurricanes, the inspectors also specifically examined the state of preparation and readiness of the following systems and structures for hurricane conditions:

- Unit 1 EDG Rooms
- Unit 2 EDG Rooms
- Ultimate Heat Sink
- Switchyard

b. Findings

No findings of significance were identified.

.2 Impending Weather Conditions

a. Inspection Scope

The inspectors reviewed the licensee's overall preparations and protective actions prior to and during the onset of the following two extreme weather conditions:

- Hurricane Frances (September 4 and 5)
- Hurricane Jeanne (September 25 and 26)

The inspectors independently reviewed and verified the status of licensee actions in accordance with procedure AP-0005753, Severe Weather Preparations. The inspectors also toured protected area and exterior plant grounds for loose debris and unsecured material, supplies, and equipment which could pose a hazard to important plant SSCs during high winds. During the approach, onset and passing of Hurricanes Frances and Jeanne, the inspectors continuously monitored control room activities, including the shutdown and cooldown of both units.

During the approach and passing of Hurricanes Frances and Jeanne, the inspectors routinely attended hurricane preparation status and progress meetings in the Outage Control Center (OCC). The inspectors also reviewed and discussed with management the provisions for staffing, relieving, and supplying plant operators, security guards, health physics, maintenance, and emergency response organization (ERO) personnel included in the station lock-down. On September 4 and 5, and again on September 25 and 26, the inspectors observed, and participated with, licensee ERO personnel in the Technical Support Center while they monitored storm conditions, unit status, and implemented necessary corrective actions and compensatory measures. Furthermore, significant aspects of the licensee's planning and conduct of post-hurricane plant damage assessment and recovery were also observed and examined by the inspectors. The inspectors reviewed condition reports generated by the licensee to verify that adverse weather related problems were being identified and resolved.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Equipment Walkdowns

The inspectors conducted three partial alignment verifications of the safety-related systems listed below to review the operability of required redundant trains or backup systems while the other trains were inoperable or out of service. These inspections included reviews of applicable TS, plant lineup procedures, operating procedures, and/or piping and instrumentation drawings (P&ID) which were compared with observed equipment configurations to identify any discrepancies that could affect operability of the redundant train or backup system. The inspectors also reviewed applicable reactor control operator (RCO) logs; out of service (OOS) and operator work around (OWA) lists; active temporary system alterations (TSA); and any outstanding condition reports (CR) regarding system alignment and operability.

- 1B Emergency Diesel Generator (EDG) per OP-1-2200020, EDG Standby Lineup
- 1A EDG per OP-1-2200020, EDG Standby Lineup
- 1A Component Cooling Water (CCW) per P&ID 8770-G-082 and 083

b. Findings

No findings of significance were identified.

.2 Complete Equipment Walkdown

a. Inspection Scope

During the week of September 5, the inspectors completed a detailed alignment verification of the Unit 2 vital alternating current (AC) distribution system, which included both 4160 volt and 480 volt AC switchgear, buses, load centers and motor control centers. The inspectors used applicable one-line wiring diagrams and procedure 2-ADM-03.01, Unit 2 Power Distribution Breaker List, to walkdown and verify equipment alignment. This walkdown also included verification of breaker positions, both local and remote, and cubicle physical conditions. The inspectors also reviewed relevant portions of Section 8.0, Electrical Systems, of the Updated Final Safety Analysis Report (UFSAR) and TS 3.8.1.1, AC Sources. Furthermore, the inspectors reviewed applicable RCO logs; OOS and OWA lists; active TSAs and outstanding work orders (WO) and CRs regarding system alignment and operability.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Routine Inspections

a. Inspection Scope

The inspectors conducted tours of the following seven fire areas or witnessed associated activities listed below during the inspection period to verify 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 in accordance with the licensee's procedures and Fire Protection Plan.

- 2A Diesel Oil Storage Tank Area (Fire Area AA)
- 2B Diesel Oil Storage Tank Area (Fire Area BB)
- Unit 1 EDG Building (Fire Areas HH and II)
- Unit 2 EDG Building (Fire Areas HH and II)
- Unit 1 Emergency Core Cooling System (ECCS) Room (Fire Area M)
- Unit 2 Vital AC Switchgear Rooms (Fire Area A and C)
- Unit 1 Fuel Handling Building (Fire Area PP)

b. Findings

No findings of significance were identified.

1R6 Flood Protection

Inspection Scope

.1 External Flooding

a. Findings

The inspectors reviewed multiple CR's, including associated corrective actions, involving flooding that were generated and dispositioned within the last year. The inspectors also performed detailed walkdowns of Unit 1 and Unit 2 Auxiliary Feedwater (AFW) pump areas. Furthermore, the inspectors reviewed the applicable UFSAR section for flooding, which included specific plant design features to accommodate the maximum flood level; and reviewed UFSAR Section 13.8.2.3.1 requirements for beach dune and old beach road inspections and verified the surveillance was completed after the last hurricane. Inspectors also reviewed ADM-04.01, Hurricane Season Preparation, with regard to protective actions to prevent excessive flooding in the AFW Pump area; and reviewed AP-0005753, Severe Weather Preparations, with regard to potential external flooding issues.

.2 Internal Flooding

a. Inspection Scope

The inspectors reviewed UFSAR Section 3.4, Water Level (Flood) Design and UFSAR table 3.2-1, Design Classification of Structures, System and Components, and verified specific areas met the stated requirements. The inspectors also walked down procedure 1-ONP-24.01, RAB Flooding, to ensure actions required to be taken in the plant could be accomplished as stated. Procedure conduct for RAB flooding was discussed with Health Physics and Operations personnel. Specific equipment and components in the RAB susceptible to damage from flooding were examined. Furthermore the inspectors reviewed the sump level switch preventative maintenance (PM) schedule and reviewed a sample work order (WO94023666) used to calibrate the switch. The inspectors also verified the corrective action program was being used to identify equipment issues that could be impacted by potential internal flooding.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

On July 26, 2004, an inspector observed and assessed licensed operator actions during a simulator evaluation. During this simulator evaluation, the inspector witnessed the operating crew respond to an accident scenario (i.e., main steam line break inside of containment), which included various critical equipment failures (e.g., loss of 2A5 bus, 2A containment spray (CS) pump failed to start). The inspector specifically evaluated the following attributes related to the operating crews' performance:

- Clarity and formality of communication
- Ability to take timely action to safely control the unit
- Prioritization, interpretation, and verification of alarms
- Correct use and implementation of Emergency Operating Procedure (EOP)-1, Standard Post Trip Actions; and EOP-5, Excess Steam Demand
- Timely and appropriate Emergency Action Level declarations per Emergency Plan Implementing Procedure (EPIP) - 01, Classification of Emergencies
- Control board operation and manipulation, including high-risk operator actions
- Oversight and direction provided by Operations supervision, including ability to identify and implement appropriate TS actions, regulatory reporting requirements, and emergency plan actions and notifications
- Effectiveness of the post-evaluation critique

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

.1 Routine Inspection

a. Inspection Scope

The inspectors reviewed the reliability and problems associated with the three SSCs listed below, including associated condition reports. The inspectors verified the licensee's maintenance effectiveness efforts met the requirements of 10 CFR 50.65 and Administrative Procedure ADM-17.08, Implementation of 10 CFR 50.65, The Maintenance Rule. The inspectors' efforts focused on the licensee's work practices and ability to identify and address common causes, maintenance rule scoping, characterization of reliability issues and assigning unavailability time, determination of a(1) and a(2) classification, corrective actions, and the appropriateness of established performance goals and monitoring criteria. The inspectors also attended applicable expert panel meetings, interviewed responsible engineers, and observed some of the corrective maintenance activities. Furthermore, the inspectors verified that equipment problems were being identified at the appropriate level and entered into the corrective action program.

- CR 04-2645, OOS Time for Unit 2 Main Feedwater Isolation Valves Exceeded Maintenance Rule Time
- CR 03-4184, Unit 1 and 2 Generation/Distribution
- CR 02-2256, Unit 1 Containment Penetrations

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed six risk assessments for the following SSCs that were OOS for planned and/or emergent work. The inspectors also walked down and/or reviewed the scope of work to evaluate the effectiveness of licensee scheduling, configuration control, and management of online risk in accordance with 10 CFR 50.65(a)(4) and applicable program procedures such as ADM-17.16, Implementation of the Configuration Risk Management Program. Furthermore, the inspectors interviewed responsible Senior Reactor Operators on-shift, verified actual system configurations, and specifically evaluated results from the online risk monitor (OLRM) for the combinations of OOS risk significant SSCs listed below:

- 2C Component Cooling Water (CCW) and 2C Intake Cooling Water (ICW) Pumps OOS During Planned Maintenance on the Station Blackout Crosstie, Along with 2A Instrument Air Compressor (IAC)

- 2B Boric Acid Makeup (BAM) Tank OOS Due to Apparent Level Instrument Failure, 2B ICW Pump OOS Due to Planned Maintenance, and 2B EDG OOS Due to Scheduled Code Run
- 1B ECCS Pumps OOS Due to Critical Maintenance Management (CMM) evolution
- 2A CS Pump, 2B BAM Tank, 2C Charging Pump, and 2A and 2B IACs OSS
- 2B ICW, 2B CCW and 2B BAM Tank OSS during 2C AFW CMM
- Unit 2 Mode 3 Conditions With Numerous Systems OOS

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events

a. Inspection Scope

The inspectors conducted two inspections of personnel performance during non-routine events. Operator performance during both units shutdown on September 4 and 25 due to Hurricanes Frances and Jeanne respectively, were witnessed. In addition, the inspectors observed operator performance during the loss of offsite power (LOOP) that affected both units. Through interviews, direct observations of operator actions, and examination of available information (e.g.,operator logs, plant computer data, and strip charts), the inspectors evaluated operator response in accordance with applicable plant procedures (e.g., abnormal operating procedures, EOPs, etc.).

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following five CR interim dispositions and operability determinations to ensure that TS operability was properly supported and the affected SSC remained available to perform its safety function with no unrecognized increase in risk. As applicable, the inspectors reviewed the UFSAR, and associated supporting documents and procedures, and interviewed plant personnel to assess the adequacy of the interim CR disposition.

- CR 04-4645, Vibration Instruments Used on Safety Related Equipment Found to be Miscalibrated
- CR 04-5041, 1C ICW Pump Increased Leakage
- CR 04-5608, Loose Bolt Found on 2A-LPSI Pump Inlet Flange
- CR 04-3418, 2B 125 Volt direct current (DC) Bus Electrical Loading Capacity
- CR 04-3301, 1B ICW Pump Degraded Flowrate

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

.1 Routine Review of Operator Work Arounds

a. Inspection Scope

The inspectors routinely reviewed the Operator Work Around (OWA) log for both units and discussed new items with Operations supervision. The inspectors also routinely walked down unit MCBs, reviewed operator chronological logs and equipment OOS logs, and examined MCB plant work order (PWO) tags for potential OWAs and minor operator burdens.

The inspectors reviewed in detail the OWA established for the 2B Qualified Safety Parameter Display System (QSPDS) in accordance with Operations Policy 510, Operations Workaround Policy, due to the complete loss of the display screen on the main control board. The inspector also reviewed the disposition and interim corrective actions of CR 04-5678 written to address the degraded capability of the 2B QSPDS. Furthermore, the inspector examined the compensatory measures put in place by reviewing 2-OP-1150020, Qualified Safety Parameter Display System Operation, and witnessing a reactor control operator obtain subcooling margin and reactor vessel level at the local panel.

b. Findings

No findings of significance were identified.

.2 Cumulative Effects of Operator Work Arounds

a. Inspection Scope

The inspectors performed a semi-annual evaluation of the potential cumulative effects of all outstanding Unit 1 and 2 OWAs. The inspectors discussed these potential effects with control room supervision and operators. The inspectors also reviewed the minutes of previous quarterly OWA Team meetings, which met to systematically examine individual and cumulative OWA status and repair priority, and assess overall risk.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors witnessed and reviewed post-maintenance test (PMT) activities of the six risk significant SSCs listed below. 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 such as TS, UFSAR, and others; (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 reviewed problems associated with PMTs that were identified and entered into the corrective action program as condition reports.

- 2B AFW Pump per OP 2-0700050, AFW Periodic Test, and Time Delay Relay per WO #3400733001
- 1B ECCS Train Supply Valve From Refueling Water Tank (MV-07-1B) per WO #33020532
- Unit 2 Control Room Emergency Ventilation Exhaust Fan (2-HVE-13A) Time Delay Relay per WO #33007272
- 1B CCW Heat Exchanger Post-Cleaning And Repair Leak Test
- Unit 2 Control Element Drive Mechanism Control System per 2-IMP-66.06, CEA System Meggering Coil and Resistance Testing
- 2A Hydrazine Pump Discharge Valve, SE-07-3A, per 2-0010125A

b. Findings

Introduction. A Green self-revealing non-cited violation (NCV) was identified for failing to properly implement procedure OP 2-0010125A, Surveillance Data Sheets, Data Sheet 8A, Quarterly Valve Cycle Test (All Modes), as prescribed by TS 6.8.1.a.

Description. On August 4, 2004, Unit 2 Operations personnel were performing a valve cycle test on the 2A hydrazine pump discharge valve SE-07-3A. The valve failed its stroke test due to dual position indication on the main control board. The failure of this valve placed Unit 2 in an unexpected 72 hour LCO causing the need for immediate and expedited repairs. Repairs were completed later that day and after a two hour burn-in period the valve was ready for its PMT using Data Sheet 8A. As required by Data Sheet 8A, I&C personnel were to lift a lead on terminal board TB-549-2 in the ESFAS SA Actuation cabinet to eliminate a circuit that would power the closed indication lamp for SE-07-3A. However, an I&C journeyman inadvertently lifted the lead on TB-546-2, which disabled the 2A-CSP containment spray actuation system (CSAS) actuation signal. The lead remained lifted for about three hours rendering the 2A-CSP OOS for that period of time without the knowledge of the on-shift Operations personnel. This was discovered when maintenance personnel went to re-land the lifted lead.

Analysis. The inspectors determined that the licensee's failure to follow their procedure during post-maintenance testing, which resulted in the unplanned disabling of a safety-related system, constituted a human performance deficiency. The finding is more than minor because it affected the Mitigating Systems Cornerstone objective of equipment reliability, in that when the wrong electrical lead was lifted it rendered the 2A-CSP OOS. This finding was determined to be of very low safety significance because the B train of containment spray was operable and unaffected, and the TS LCO allowed outage time for A train had not been exceeded. This finding involved a human performance cross-cutting aspect.

Enforcement. TS 6.8.1.a requires that written procedures shall be established, implemented, and maintained as recommended in Appendix A of Regulatory Guide (RG) 1.33, Revision 2, February 1978. Contrary to TS 6.8.1.a, on August 5, 2004, an I&C journeyman failed to properly implement the provisions of procedure OP-2-0010125A, Surveillance Data Sheets, Data Sheet 8A, Quarterly Valve Cycle Test (All Modes). However, because this violation is of very low safety significance in accordance with the Significance Determination Process (SDP) phase 1 and was addressed by the licensee's corrective action program (i.e., CR 04-5707), it is being treated as an NCV consistent with Section VI.A of the NRC Enforcement Policy - NCV 05000389/2004005-01, Wrong Lead Lifted During Maintenance Rendering Containment Spray Pump 2A Inoperable.

1R20 Refueling and Outage Activities

a. Inspection Scope

Monitoring of Shutdown Activities Due To Hurricanes Frances and Jeanne

The inspectors witnessed the shutdown and cooldown of both units due to the approach of Hurricanes Frances and Jeanne beginning on September 3 and 24, 2004, respectively. The inspectors also monitored plant parameters and verified that shutdown activities were conducted in accordance with TS and applicable operating procedures, such as: GOP-123, Turbine Shutdown - Full Load to Zero Load; GOP-203, Reactor Shutdown; GOP-305, Reactor Plant Cooldown - Hot Standby To Cold Shutdown; and NOP-03.05, Shutdown Cooling.

Licensee Control Of Short Notice Outage Activities

The inspectors regularly attended outage progress and status meetings in the OCC subsequent to Hurricanes Frances and Jeanne. The inspectors also frequently reviewed the forced outage, critical activities, and restart schedules. Furthermore, the inspectors discussed plant configuration changes to support ongoing forced outage work (e.g., water intrusion inspections, megger testing of motors) with control room operators, and personnel in the OCC and One Stop Shop. The inspectors also reviewed Mode 4 risk assessment and controls implemented per ADM-17.16, and discussed the same with Operations and Work Control management.

Heatup, Mode Transition, and Reactor Startup Activities

The inspectors examined selected TS, license conditions, and other commitments and verified administrative prerequisites were being met prior to mode changes. The inspectors also specifically reviewed the initial RCS inventory balances used to measure RCS leakage, and verified containment integrity was properly established. Lastly, the inspectors witnessed portions of the reactor coolant system heatup, reactor startup and power ascension of both units following post-hurricane recovery. The inspectors monitored plant parameters, observed system performance, and witnessed operator actions in accordance with plant procedures, such as: GOP-302, Reactor Plant Startup - Mode 3 to Mode 2; and, GOP-201, Reactor Plant Startup - Mode 2 To Mode 1.

Containment Tours

The inspectors toured the interior of both containments following shutdown and prior to startup. The inspectors conducted a comprehensive walkdown of all accessible areas to identify reactor coolant leaks, verify no significant debris existed that could compromise ECCS containment sump performance, and to ensure identified reactor coolant leaks were being addressed as part of the Boric Acid Corrosion Control (BACC) Program. An inspector also met with responsible engineering personnel and went over the scope and details of the BACC inspections conducted by the licensee in the Unit 1 and 2 containments, and discussed resolution of identified leaks.

Correction Action Program

The inspectors reviewed CRs generated during the dual unit hurricane shutdowns 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 witnessed portions of the following eight surveillance tests and monitored test personnel conduct and equipment performance, to verify that testing was being accomplished in accordance with applicable Operating Procedures (OP) and Operations Surveillance Procedures (OSP). The actual test data was reviewed to verify it met TS, UFSAR, and/or licensee procedure requirements. The inspectors also verified that the testing effectively demonstrated 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. The tests reviewed included one inservice test (IST) and one reactor coolant system (RCS) leak detection TS surveillance test.

- OP 2-0010125A, Data Sheet 1, RCS Inventory Balance (RCS Leak Detection)
- OP 1-2200050A, 1A EDG Periodic Test and General Operating Instruction
- OP 2-0400053, Engineered Safeguards Relay Test
- OP 1-1220050, Linear Power Range Safety Channel Quarterly Calibration
- OP 2-0410050, High Pressure Safety Injection and Low Pressure Safety Injection Periodic Test
- 2-OSP-25.02, Containment Fan Cooler Monthly Operability Run
- OP 1-0700050, 1C Auxiliary Feedwater Periodic Test (IST Code Run)
- 1-OSP-25.01, Control Room Pressure Periodic Test

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors continued to periodically screen active temporary modifications, especially for risk significant systems. The inspectors examined the following two temporary modifications identified below which included a review of the technical evaluation and its associated 10CFR50.59 screening. The temporary modifications were compared against the system design basis documentation to ensure that (1) the modification did not adversely affect operability or availability of other systems, (2) the installation was consistent with applicable modification documents, and (3) did not affect TS or warrant prior NRC approval. The inspectors also observed accessible equipment related to the temporary modification to verify configuration control was maintained. Furthermore, the inspectors verified and reviewed required condition monitoring, compensatory actions, and the planned time for the temporary modification to be in place to determine if each met the licensee's process for these attributes.

- TSA 02-03-011, Temporary pressure monitoring for identified leakage past secondary check valve V3525 (Unit 2 hot leg injection loop 2A SDC feed).

- TSA 02-04-005, Temporary modification to 2B EDG electric fuel oil priming pump to isolate pump at engine speeds greater than 500 rpm.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation

a. Inspection Scope

On August 4, the inspectors observed a quarterly EP drill of the licensee's emergency response organization personnel in the simulator and the Technical Support Center (TSC). During this drill the inspectors assessed operator actions in the control room simulator and personnel in the TSC to verify whether emergency classification, notification, and protective action recommendations were made in accordance with the EPIPs. Additionally, the inspectors evaluated the adequacy of the post drill critique.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety and Public Radiation Safety

2OS1 Access Controls to Radiologically Significant Areas

a. Inspection Scope

Access Controls Licensee program activities for monitoring workers and controlling access to radiologically significant areas and tasks were inspected. The inspectors evaluated procedural guidance; directly observed implementation of administrative and established physical controls; assessed worker exposures to radiation and radioactive material; and appraised radiation worker and technician knowledge of, and proficiency in implementing radiation protection program activities.

During the onsite inspection, radiological controls for completed and ongoing maintenance activities were observed and discussed. Reviewed tasks included the Unit 1 (U1) Spent Fuel Pool (SFP) cask pit cleaning and inventory activities, U1 '1B' Chemical Volume Control System (CVCS) Ion Exchange Exchanger Manway Maintenance, and five radiologically significant tasks associated with the previously completed Unit 1 End-of-Cycle 19 Refueling Outage. The evaluations included, as

applicable, Radiation Work Permit (RWP) details; use and placement of dosimetry and air sampling equipment; electronic dosimeter (ED) set-points, and monitoring and assessment of worker dose from direct radiation and airborne radioactivity source terms. Effectiveness of established controls were assessed against area radiation and contamination survey results, and occupational doses received. Physical and administrative controls and their implementation for locked-high radiation area (LHRA) locations and for storage of highly activated material within the SFPs were evaluated through discussions with licensee representatives, direct observations and record reviews.

Occupational workers' adherence to selected RWPs and Health Physics Technician (HPT) proficiency in providing job coverage were evaluated through direct observations, review of selected exposure records and investigations, and interviews with licensee staff. Occupational exposure data associated with direct radiation, potential radioactive material intakes, and from discrete radioactive particle (DRP) or dispersed skin contamination events identified from October 1, 2003, through July 31, 2004, were reviewed and assessed independently.

During the week of August 16, 2004, radiological postings and physical controls for access to designated high radiation area (HRA) and LHRA locations within the U1 and Unit 2 (U2) SFP and Reactor Auxiliary Building (RAB) areas were evaluated during facility tours. In addition, the inspectors independently measured radiation dose rates and evaluated established posting and access controls for selected U1 and U2 RAB locations. Proficiency of HPTs in job performance was evaluated through direct observation of staff performance during job coverage and routine surveillance activities.

Radiation protection program activities were evaluated against 10 CFR 19.12; 10 CFR 20, Subparts B, C, F, G, H, and J; UFSAR details in Section11, Radioactive Waste Management and Section12, Radiation Protection; TS Sections 6.8.1, Procedures and Programs, 6.11, Radiation Protection Program, and 6.12, High Radiation Area; and approved licensee procedures. Licensee guidance documents, records, and data reviewed within this inspection area are listed in Section 2OS1 of the report Attachment to this report.

Problem Identification and Resolution Licensee Corrective Action Program (CAP) documents associated with access controls to radiologically significant areas were reviewed and assessed. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with Nuclear Administrative Procedure (NAP) 204, Condition Reporting, Revision (Rev.) 1. Licensee CR documents associated with access controls, personnel monitoring instrumentation, and personnel contamination events were reviewed. Licensee audits, self-assessments and CR documents reviewed and evaluated in detail during inspection of this program area are identified in Sections 2OS1, and 4OA1 of the report Attachment.

b. Findings

Introduction. A Green NCV of TS 6.11 was identified for failure to follow radiation protection procedural controls for LHRA posting and signs, and to have adequate guidance to maintain established physical controls when equipment is stored adjacent to or within the immediate vicinity of posted LHRA facilities.

Description. Licensee procedure HPP-3, High Radiation Areas, Rev. 15, Section 6.6 requires that each LHRA be locked to physically prevent access and that enclosure walls be a minimum of six feet in height, labeled (posted) properly, and no ladders are to be stored or used in a manner to allow access over the walled enclosure. During the week of August 16, 2004, the inspectors observed examples of postings and signs that did not meet the established LHRA guidance. In addition, although the procedure addressed the use/storage of ladders around LHRAs, the inspectors noted that the procedure did not address the use/maintenance of other equipment which was observed near or placed against established physical barriers which potentially could facilitate unauthorized access to LHRAs. Specific observations included the following:

U2 Volume Control Tank (VCT) cubicle The inspectors noted an unattended/unsecured step-stool, approximately two and one-half to three feet in height, within the corridor associated with the U2 VCT cubicle. The step stool was easily moved adjacent to the VCT LHRA entrance which consisted of a locked gate approximately six feet in height with an open area between the top of the gate and the ceiling. The inspectors noted that the procedure did not specifically address maintenance/storage of the observed equipment which could be used by personnel to facilitate unauthorized access to the LHRA location. From discussions with licensee representatives, determination of current operating conditions, and reviews of the most recent surveys of the VCT cubicle, the inspectors noted that the area radiological dose rates did not meet LHRA conditions but that the area was expected to be controlled as a LHRA.

U1 Drumming Room LHRA Radioactive Waste Storage Facility The inspectors observed several empty 55 gallon drums approximately (~) 34 inches (") in height placed against the 85 “high gate and 92" high wall comprising the eastern barrier of the U1 drumming room LHRA radioactive waste storage facility. The area above the established barrier was open and the distance between the top of the drums to the gate and wall was 51" and 58", respectively. From the top of the barrier wall, a ladder attached to the inside of the wall was available to allow access to the floor of the established LHRA facility. The inspectors noted that although HPP-3 addressed the use/storage of ladders around LHRAs, it did not address the use and maintenance of other equipment such as the observed drums which when placed against established physical barriers could potentially facilitate unauthorized access to LHRAs. Also, the inspectors noted that although the entrance gate to the area was posted with the proper labels (postings), no LHRA postings or signs to prevent climbing were maintained on the eastern barrier wall in accordance with HPP-3. Licensee surveys for the posted LHRA facility identified maximum general area dose rates ranging from 1,200 to 1,300 millirem per hour (mrem/hr).

Analysis. The inspectors determined that the licensee's failure to follow and to have adequate radiation protection procedural controls for established LHRAs was a performance deficiency because the licensee is expected to meet TS required procedural administrative and physical controls for high radiation areas. Although, the licensee had established barrier heights of six feet and designated posting and sign specifications to meet the reasonable assurance criteria for preventing access to LHRA, the failure to follow procedures and inadequate procedural guidance could compromise the licensee program for controlling access to high radiation areas. The finding is more than minor because it was associated with the Occupational Radiation Safety Cornerstone access control program and process attribute and affected the associated cornerstone objective to ensure adequate protection of worker health and safety from exposure to radioactive materials as a result of routine civilian nuclear reactor operations. Although the observed issues were not in accordance with licensee procedural requirements for LHRA controls, the finding was determined to be of very low safety significance based on licensee RWP controls, and the fact there was no evidence that individuals improperly accessed known LHRA facilities nor any individuals received unexpected occupational doses or exposures in excess of licensee administrative or regulatory limits.

Enforcement. TS 6.11 requires procedures for radiation protection activities. Licensee procedure HPP-3, High Radiation Areas, Rev. 15, Section 6.6 requires that each LHRA be locked to physically prevent access and that enclosure walls be a minimum of six feet in height, labeled (posted) properly, and no ladders are to be stored or used in a manner to allow access over the walled enclosure. Contrary to the above, during the week of August 16, 2004, the licensee failed to follow established procedures for LHRA barrier postings and signs and failed to adequately address the maintenance and storage of equipment, other than ladders, adjacent to LHRA barrier gates and walls. However, because this violation is of very low safety significance and was addressed by the licensee's corrective action program as CR 04-6743, it is being treated as an NCV consistent with Section VI.A of the NRC Enforcement Policy: NCV 50-335, 389/2004005-02, Failure To Follow And To Have Adequate Procedure Guidance For Controls Associated With Posted LHRA Locations.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

a. Inspection Scope

Area Radiation Monitoring and Post-Accident Sampling Systems (PASS) The operability, availability, and reliability of selected direct area radiation monitor (ARM) and continuous air monitor (CAM) equipment used for routine and accident monitoring activities were reviewed and evaluated. The inspectors directly observed ARM equipment material condition, installed configurations (where accessible), and completion of a U1 Containment Particulate monitor R-26-31 functional test. Current calibration data for the U1 Containment High Range Monitor (CHRM) equipment and the U1 Control Room Outside Air Intake monitors were reviewed and discussed with responsible personnel.

The inspectors discussed changes to PASS requirements with chemistry, and toured and observed material condition of the abandoned PASS components and equipment. Current methods to maintain grab sampling capabilities were discussed with a chemistry supervisor. The procedure used for post accident sampling / screening without the PASS system was reviewed and evaluated against the applicable license amendments deleting TS 6.8.4.3 Post-accident Sampling.

Program guidance, monitor performance, and equipment material condition were reviewed against details documented in 10 CFR Parts 20 and 50; and UFSAR Section 12.1.4, Area Monitoring and approved procedures. Current licensee programs for CHRMs and PASS capabilities were reviewed against applicable sections of NUREG-0737, Clarification of Three Mile Island (TMI) Action Plan Requirements, November 1980; RG 1.97, Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident, Rev. 3; Safety Evaluation for License Amendments 174 and 114, issued March 27, 2001; and applicable licensee procedures. Reviewed documents are listed in Section 2OS3 of the report Attachment.

Personnel Survey Instrumentation Current program guidance, including calibration and operation procedures, and its implementation to maintain operability and accuracy of selected personnel survey instruments were reviewed and evaluated. Instrument selection and operability determinations conducted by HPT staff prior to performing selected radiological surveys and monitoring were reviewed and discussed. Conduct of daily source checks for an ion chamber survey meter were observed and the results compared to specified tolerances. Responsible staff's knowledge and proficiency regarding on-site instrumentation calibration activities were evaluated through interviews, record reviews, and direct observation of source calibrations of selected portable instrumentation. The inspectors interviewed an HP supervisor regarding the licensee's program for the use of electronic dosimeter (ED) equipment and observed the calibration and battery changes on several electronic dosimeters. The inspectors reviewed current calibration data for selected personnel survey instruments and assessed operability of various portable survey instruments staged or in use by the HP staff. Inspectors reviewed the calibrations for an AMP-100 Serial Number (S/N) 5002139 used by HPTs providing job coverage of U1 SFP modifications.

Operability and analysis capabilities of the licensee's whole-body counter (WBC) FAST SCAN analysis, personnel contamination monitor (PCM), and Portal Monitor (PM) equipment were reviewed and evaluated. Reviewed PCM and PM detectors which included equipment staged at the Radiological Controlled Area (RCA) and the Protected Area (PA) exit points. For selected WBC, PCM, and PM equipment, current calibration and recent operational/performance test surveillance data, as applicable, were evaluated.

Whole-body counter calibration records, radionuclide library data base, and daily source check trends were reviewed and evaluated. The inspectors observed and discussed the conduct and results of a daily WBC source check with the responsible dosimetry technician. Licensee activities associated with personnel radiation monitoring instrumentation were reviewed against UFSAR Section 12; TS Sections 6.11 and 6.12;

10 CFR 20.1204 and 20.1501; and applicable licensee procedures listed in Section 2OS3 of the report Attachment.

Respiratory Protection - Self-Contained Breathing Apparatus (SCBA) The licensee's respiratory protection program guidance and its implementation for SCBA use were evaluated and discussed with plant personnel. The number of available SCBA units and their general material and operating condition were observed during tours of the Control Room and RAB storage locations. Current records associated with supplied air quality for staged SCBA equipment were evaluated. In addition, control room operators were interviewed to determine their level of knowledge of available SCBA equipment storage locations, proper use, bottle change-out, and availability of prescription lens inserts, if required.

Program guidance, performance activities, and equipment material condition were reviewed against details documented in 10 CFR Part 20, and RG 8.15, Acceptable Programs for Respiratory Protection, Rev. 1; and applicable licensee procedures. Reviewed guidance documents and applicable records are listed in Section 2OS3 of the report Attachment.

Problem Identification and Resolution Issues identified through selected CAP documents including department self-assessments, audits, and CRs associated with ARM equipment, portable radiation detection instrumentation, and respiratory protective program activities, as listed in Section 2OS3 of the report Attachment, were reviewed and assessed. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with NAP 204, Condition Reporting, Rev.1.

b. Findings

Introduction. A Green NCV of TS 6.11 was identified for failure to have adequate procedural guidance to meet ARM radiation protection design objectives.

Description. During review of selected January 1, 2003, through August 16, 2004 CAP program documents the inspectors noted several examples of ARM equipment where the local audible annunciator and/or light remained in the alert/alarm mode for prolonged periods of time. The ARMs initially annunciated both locally and within the control room at the alert (high) level resulting from equipment malfunctions or from routine outage activities which caused general area (GA) dose rate levels to exceed established ARM set-points. From discussion with operations personnel and review of applicable procedures, the inspectors noted that upon initial receipt of an alert (high) ARM signal, operators acknowledge and silence the control room audible annunciator and determine alarm validity. However, from review of selected documents and interviews of operations personnel, the inspectors identified the following examples where operators initially addressed and silenced the control room alarm but the local in-plant annunciator remained in alert/alarm mode status for prolonged time intervals:

- U2 Chemical Drain Tank area ARM Radiation Instrument Monitor (RIM)-25-26: CR 03-4262 dated December 1, 2003, documented concerns regarding worker complacency to a ARM RI-25-26 prolonged audible alarm since April 15, 2003 (230 days). Repairs to be performed in accordance with PWO No. 33007309 were not scheduled until February 12, 2004. On January 2, 2004, a temporary remote area monitor was staged in the area and a request was submitted to the Maintenance/Instrument and Control (I&C) representative to disable the local audible alarm which had been in alarm for approximately 262 days. HP management stated that when notified of the conditions, the area around the alarming ARM was posted to control access as an interim compensatory action.

- U1 RAB -0.5 foot (') elevation ARMs: CR 04-1424 initiated March 26, 2004, identified worker concerns including prolonged ARM alarms desensitizing workers to other monitor annunciators and unsatisfactory worker practices of putting smears (filter paper) over the monitor speakers to dampen the audible alarms. The specific concern noted several ARMs located on the U1 RAB -.5' elevation which intermittently went into prolonged audible alert or alarm status since January 19, 2004. The monitors went into local alarm status, some for several days, as a result of increases in GA radiation levels associated with scheduled outage activities. Although the HP staff placed a remote dose rate monitoring system to track the elevated dose rates within the monitored areas and assigned additional HPTs to the U1 RAB; the CR questioned the need for keeping the ARMs in service and the failure to raise the alert alarm set-point levels to take into account outage conditions.

- U2 Ion Exchange (IX) Corridor ARM RIM-26-17: CR 03-2686 initiated on July 23, 2003, documented a concern regarding the ARM RIM-26-17 local alarm light being energized for extended periods. The concern noted that the visible alarm could lead to worker complacency with regard to response to ARM alarms. The CR documented that PWO No. 33008338 was issued on May 4, 2003, to repair the U2 ARM RIM-26-17 equipment. On May 5, 2003, PWO 33002852 was being worked when its status changed to awaiting circuit board parts with replacement parts unavailable until August 19, 2003. Subsequently CR 03-4079 initiated on November 11, 2003, documented that the original concern in CR 03-2686 had been overlooked and that the original PWO started on April 8, 2003, was finally completed on September 5, 2003. The monitor light appears to have been in alarm state from April 8, 2003, until completion of repair work on September 5, 2003 (150 days).

The inspectors noted that routine protocol for invalid ARM annunciators included HP examining local operation of the affected monitor and surveying the affected accessible areas, and notification of I&C to inspect the affected monitor. The inspectors noted that no procedural guidance was available for systematic actions to be taken when the local annunciators could not be cleared. Guidance was not available for reestablishment of area access following initial troubleshooting nor for guidance on actions, e.g., terminating the local annunciator, to minimize desensitizing workers to the prolonged alarm conditions.

Analysis. The inspectors determined that the licensee's failure to maintain adequate controls and procedural guidance for ARM system operation was a performance deficiency because the licensee is expected to meet TS requirements. The ARM system design objectives require the system to annunciate and warn of abnormal radiation levels in specific areas of the plant; warn of uncontrolled or inadvertent movement of radioactive material in the plant; provide local indication and alarms at key points where substantial change in radiation might be of immediate importance to personnel frequenting the area, and annunciate and warn of possible equipment malfunctions in specific areas of the plant. The finding is more than minor because it was associated with the Occupational Radiation Safety Cornerstone access control program and process attribute and affected the associated cornerstone objective to ensure adequate protection of worker health and safety from exposure to radioactive materials as result of routine civilian nuclear reactor operations. The finding impaired the licensee's ability to monitor area dose rates and operating conditions within general plant work areas and is considered of very low safety significance because it did not result in any unexpected doses or exposures in excess of licensee administrative or regulatory limits. The finding involved the cross-cutting element of problem identification and resolution, specifically the timeliness of corrective actions.

Enforcement. TS 6.11 Radiation Protection Program requires procedures for personnel radiation protection to be prepared consistent with the requirements of 10 CFR 20 and to be approved, maintained and adhered to for all operations involving personnel radiation exposure. Contrary to the above, between CY 2003 and 2004, the licensee failed to have adequate procedural guidance to meet the radiation protection design objectives for personnel radiation protection during periods of prolonged ARM local alarm duration resulting from equipment malfunctions or prolonged elevated GA dose rates. However, because this violation is of very low safety significance and was addressed by the licensee's corrective action program as CR 04-6768, it is being treated as an NCV consistent with Section VI.A of the NRC Enforcement Policy: NCV 50-335, 389/2004005-03, Failure To Have Adequate Procedural Guidance For Response To Extended Duration ARM Alarms.

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

a. Inspection Scope

Effluent Processing Equipment During the week of August 16, 2004, the inspectors reviewed and evaluated the operability, availability, and reliability of selected radioactive effluent processing, sampling, and detection equipment used for routine effluent release and accident monitoring activities. Inspection activities consisted of direct observation of installed equipment configuration and operation, and review of calibration and performance data for the liquid and gaseous effluent process systems.

The inspectors directly evaluated selected U1 and U2 effluent process monitoring equipment for material condition and assessed selected processing and monitoring components against design configuration and operating specifications. Inspected components of the main gaseous effluent process and release system included radiation monitoring instrumentation U1 and U2 main plant vent Particulate Iodine Gas

(PIG) monitors and associated sample lines. The inspectors interviewed chemistry supervision regarding liquid and gaseous radwaste system configurations, system modifications, and effluent monitor operation. In addition, the inspectors compared U1/U2 plant vent flow rates and velocities to initial PIG sample line flow rates and resultant velocities to evaluate equipment operation for isokinetic sampling conditions. In addition, the most recent cleanup system surveillance test results for the U2 Emergency Core Cooling System (ECCS) High Efficiency Particulate Air (HEPA) Ventilation Exhaust (HVE) 9A and 9B trains, the U1 RAB HVE 10A and10B trains, the U1 Control Room HVE 13A train, and the U2 Control Room HVE 13B train were reviewed and discussed with licensee representatives.

The inspectors reviewed applicable sections of licensee effluent monitor calibration procedures and evaluated results of calibration and/or functional tests for the U1 Liquid Radwaste Discharge Process Monitor RE-6627, U1 Gaseous Waste Process Monitor RE-6648, U2 Plant Vent Gas RIM 26-90, U2 Plant Vent Stack Particulate Gas Iodine (PIG) RIM 26-14, and the U2 Steam Generator Blow Down monitor RIM-26-6 (A and B). The reviewed data included isotopic calibration records, source check results, and flowmeter calibration records. The inspectors also reviewed out-of-service data and selected contingency sampling records for effluent monitors from January 1, 2003 through June 30, 2004.

Installed configuration, material condition, operability, and reliability for selected effluent sampling and monitoring equipment were reviewed against 10 CFR Parts 20 and 50; RG 1.33, Quality Assurance Program Requirements (Operation), February 1978; RG 1.21, Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plant, June 1974; American National Standards Institute (ANSI)-N13.1-1969, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities; ANSI-N13.10-1974, ANS Specification and Performance of On-Site Instrumentation for Continuously Monitoring Radioactivity in Effluents; ANSI/American Society of Mechanical Engineers (ASME) N509-1980 Nuclear Power Plant Air Cleaning Units and Components; ANSI/ASME N510-1980, Testing of Nuclear Air-Cleaning Systems; TS Section 6.8 1; the Offsite Dose Calculation Manual (ODCM), Rev. 25; and UFSAR Chapter 11. Procedures, records and drawings reviewed during the inspection are listed in Section 2PS1 of the report Attachment.

Effluent Release Processing and Quality Control Activities The inspectors evaluated licensee performance in conducting effluent release processing and quality control (QC) activities including implementation of program guidance and chemistry and operations staff proficiency. The inspection consisted of direct observation of sampling and release operations, examination of count room equipment and daily QC activities, and review of effluent release procedural guidance and documentation.

The inspectors directly observed the weekly collection of airborne particulate, iodine, and gas effluent samples from the U1 Main Plant Vent as part of a continuous gaseous release. The inspectors evaluated chemistry technician proficiency in collecting, processing, and counting the samples. In addition, the inspectors interviewed and

observed operations personnel during conduct of an August 19, 2004, '1C' Waste Gas Decay Tank gaseous effluent release.

QC activities regarding gamma spectroscopy and liquid scintillation counting instrumentation were discussed with a count room technician and Chemistry supervision. The inspectors reviewed calibration records and daily QC check trends, observed daily QC check performance, and evaluated the data against procedural guidance for selected intrinsic germanium detectors and the liquid scintillation counting equipment. In addition, quarterly radiochemistry cross-check program results from CY 2003 were reviewed and discussed with cognizant licensee representatives.

Procedures for effluent sampling, processing, and release were evaluated for consistency with licensee actions and ODCM requirements. Three liquid and two gaseous release permits were reviewed against current procedural guidance and ODCM specifications. The ODCM was reviewed and discussed with responsible licensee representatives to identify and evaluate any changes made since January 1, 2002. The inspectors also reviewed the CY 2002 and CY 2003 annual effluent reports for effluent release data trends and anomalous releases.

Observed task evolutions, count room activities, and offsite dose results were evaluated against details and guidance documented in the following: 10 CFR Parts 20 and Appendix I to 10 CFR Part 50; ODCM; RG 1.21, Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plant, June 1974; RG 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operation) - Effluent Streams and the Environment, December 1977; RG 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50 Appendix I, October 1977; ANSI-N13.1-1969, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities; and ANSI-N13.10-1974, ANS Specification and Performance of On-Site Instrumentation for Continuously Monitoring Radioactivity in Effluents. Procedures and records reviewed during the inspection are listed in Section 2PS1 of the report Attachment.

Problem Identification and Resolution Licensee CAP documents including selected condition reports, Quality Assurance Audits, and self-assessments were reviewed and evaluated. The inspectors assessed the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with licensee procedure NAP-204, Condition Reporting, Rev. 1. Reviewed documents are listed in Sections 2PS1 and 4OA of the report Attachment.

b. Findings

Introduction. A Green NRC-identified NCV of TS 6.8.1.i was identified for failure to implement adequate QC activities to ensure representative sampling and monitoring of particulates in the U1 and U2 main plant vent airborne effluents.

Description. During review of design and current operating sampler and stack flow-rate characteristics for the U1 and U2 main plant vent, the inspectors noted current sampling flow rates, were at approximately 25 percent (%) and 75 % of the documented design/operating limits required to perform isokinetic sampling of airborne effluent particulates. The inspectors noted that significant differences between the stack duct and monitor sample line velocities could result in significant errors in sampling the airborne particulates released in normal effluent releases. Plant St. Lucie (PSL) Safety Evaluation ENG-SENS-00-108, justified the acceptability of the current non-isokinetic sampling conditions based on design criteria for the U1 and U2 RAB HEPA exhaust ventilation system (HVE) filters in the 10A/10B fan plenums. With proper installation and operation of the HEPA filters, maximum diameters of airborne effluent particulates are limited to less than 0.3 microns (μ). The evaluation noted that ANSI 13.1 specifies that for particulates less than 4 μ in diameter, no significant sampling errors are expected for non-isokinetic conditions, thus isokinetic (same velocity) sampling was not needed to ensure representative sampling. However, from discussion with licensee representatives and review of selected CAP documents, the inspectors identified quality control concerns regarding the licensee's current program for testing and ensuring proper operation of the HEPA filters. Although the U1 and U2 RAB 10A/10B HVE HEPA filters were tested, the licensee had not established a formal documented program regarding testing and acceptance criteria in accordance with current ANSI/ASME N509-1980 guidance to ensure airborne effluent particulates were limited to less than 0.3 μ in diameter specified as the design bases allowing non-isokinetic sampling conditions. The inspectors noted that CR No. 04-0396 documented concerns regarding a lack of detailed maintenance, testing, and test acceptance criteria for U1 and U2 RAB HVE 10A/10B filtration systems. In addition, when deviations in the filter installation were identified during the visual inspection, licensee actions were not in accordance with ANSI/ASME N509 specifications. Specifically, CR 04-0937 documented that visual inspection of the U1 RAB HVE-10A/10B fan plenum equipment identified that two of seventy-two HEPA filters were installed improperly with the pleats running horizontally. Although ANSI/ASME N509-1980 specifies that all HEPA filters shall be installed with pleats running vertically, the improperly installed HEPAs were not corrected. The inspectors noted that although the filters were deemed acceptable based on the removal efficiency tests, the improper installation increased the potential for mechanical failure of the filters in the future.

Analysis. The inspectors noted that the failure to establish proper maintenance, testing, and acceptance criteria for the U1 and U2 HVE 10A/10B filters is a performance deficiency because the licensee is expected to meet TS requirements. The licensee is required to have established QC program activities such as testing and maintenance of the RAB 10A/10B HVE equipment to maintain representative sampling of particulates in the main plant vent airborne effluents. This finding is associated with the Public Radiation Safety Cornerstone and could adversely affect the cornerstone objective attribute of having adequate programs and processes for accurate measurement of offsite dose and is, therefore, more than minor. This finding was evaluated using the Public Radiation SDP. It is of very low safety significance based on current plant operations and processing of plant vent effluents which result in small diameter particulates which are not readily affected by the observed anisokinetic conditions.

The finding did not result in the licensee's failure to assess dose and doses did not exceed Appendix I to 10 CFR Part 50 values.

Enforcement. TS 6.8.1.i requires written procedures to be established, implemented, and maintained covering the QC Program for effluent monitoring using the guidance in RG 1.21, Rev. 1, June, 1974. Footnote 1 of RG 1.21 references ANSI N.13.1-1969 as an acceptable standard which includes general principles and guidance for representative sampling of particulates in airborne effluent streams. Contrary to TS 6.8.1.i, the inspectors determined QC programs or processes for testing the U1 and U2 RAB HVE 10A/10B cleanup systems were not established to ensure representative sampling of effluent particulates released in the main plant vent airborne effluents. However, because this violation is of very low safety significance and was addressed by the licensee's corrective action program as CR 04-6784, it is being treated as an NCV consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000335, 389/2004005-04, Failure To Maintain Adequate QC Program Activities To Meet Design Specifications To Ensure Representative Sampling of Main Plant Vent Airborne Effluent Particulates.

2PS3 Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program

a. Inspection Scope

REMP Implementation The licensee's Annual Radiological Environmental Operating Reports for Calendar Year (CY) 2003 was reviewed and discussed with cognizant licensee representatives. The inspectors discussed and evaluated the reported data for trends in radionuclide concentrations, anomalous/missing data, and land-use census information. QC activities and data for selected sample types listed in the reports were reviewed and evaluated including inter-laboratory comparison results.

Equipment operational status and staff proficiency for implementing REMP activities were assessed through review of records, observations of equipment material condition and operating characteristics, and through assessment of selected sample collection activities. Collection of samples was observed and discussed with licensee and State of Florida personnel. Air particulate filters/charcoal cartridges and air flow rate determinations were observed at sampling station location numbers (nos.) H-14, H-30, H-33 and H-34. Collection of surface water was observed at H-13, H-15, and H-36 sample locations. Samples of sediment were taken at H-13 and H-15 and vegetation at sampling stations H-51 and H-52. During observations of sample collection, the inspectors evaluated the proficiency of staff collecting the samples, and assessed the adequacy and implementation of selected collection techniques. The placement and material condition of thermoluminescent dosimetry (TLD) equipment were assessed at sample station location nos. H-34, H-33, SE-1, SSE-5, H-14, S-5, SSW-2, SW-2, WSW-2, and H-30. Using Global Positioning System equipment, the inspectors independently assessed selected air, surface water, vegetation, sediment and TLD sampling locations and compared the current location data to ODCM specified locations.

REMP guidance, implementation, and results were reviewed against ODCM, Rev. 25 specifications and applicable procedures listed in section 2PS3 of the report Attachment.

Meteorological Monitoring Program Licensee program activities to assure accuracy and availability of meteorological monitoring data were evaluated through review of calibration and surveillance data and direct observation of equipment and data readouts at the primary tower and control room. Current calibration data were reviewed and equipment performance, reliability, and conduct of routine surveillances were discussed with operation and vendor technician staff responsible for tower equipment maintenance and surveillances. Meteorological data availability were reviewed and discussed with licensee representatives for the period CY 2002 through August 16, 2004. The inspectors observed material condition of the meteorological tower equipment and discussed performance of daily control room surveillances. The inspectors also verified consistency between meteorological tower local readouts and control room data.

Meteorological instrument operation, calibration, and maintenance were reviewed against details listed in the UFSAR, Chapter 2; NRC Safety Guide 23, Onsite Meteorological Programs-1972; ANSI -3.11-2000, Determining Meteorological Information; RG 1.21, Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials In Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plant, June 1974; and RG 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operation) - Effluent Streams and the Environment, December 1977 and applicable licensee procedures. Reviewed documents and data are listed in section 2PS3 of the report Attachment.

Unrestricted Release of Materials from the RCA Radiation protection program activities associated with the unconditional release of potentially contaminated materials or personnel from dress-out facilities and RCA egress points were evaluated. The evaluation included review of calibration records associated with PCM, portal monitor (PM), and Small Article Monitor (SAM) equipment located at the RCA exit portal. The inspectors also observed source checking of two personnel contamination monitors, two portal monitors, and two material survey monitors. Source activity and radionuclides used for checks and equipment minimum detectable activities were discussed with an instrument technician. In addition, a low level source using site radionuclide materials, approximately 5,000 disintegration per minute, was used to evaluate monitor sensitivity for selected PM and PCM equipment.

The inspectors verified that radiation detection sensitivities were consistent with NRC guidance in IE Circular 81-07 Control of Radioactively Contaminated Material, May 14, 1981, and IE Information Notice 85-92, Surveys of Wastes Before Disposal from Nuclear Reactor Facilities. Documents reviewed are listed in section 2PS3 of the report Attachment.

Problem Identification and Resolution Selected licensee CAP documents including CR documents and vendor audits associated with REMP and meteorological monitoring program activities and with unrestricted release of materials from the RCA were reviewed and discussed with responsible licensee representatives. In addition, licensee quality assurance vendor audits and vendor self-assessments associated with REMP activities were reviewed and discussed with cognizant licensee and vendor personnel. The inspectors assessed the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with licensee procedure NAP-204, Condition Reporting, Rev. 1. Specific documents reviewed and evaluated in detail for these program areas are identified in Section 2PS3 of the report Attachment.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

.1 Mitigating Systems Cornerstone

a. Inspection Scope

The inspectors assessed the accuracy of the Unit 1 and 2 Residual Heat Removal System (i.e., CS and Low Pressure Safety Injection Systems) Unavailability Performance Indicator (PI) reported to the NRC in accordance with the criteria specified in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, and ADM-25.02, NRC Performance Indicators. The inspectors reviewed the PI data of both Units 1 and 2 for the previous four quarters. Applicable operator logs, condition reports, Maintenance Rule history, and Licensee Events Reports were reviewed to verify the reported PI data was complete and accurate. Furthermore, the inspectors interviewed the responsible engineering and licensing personnel.

b. Findings

No findings of significance were identified.

.2 Occupational Radiation Safety Cornerstone

a. Inspection Scope

The inspectors sampled licensee data for the PIs listed below for the period from October 1, 2002, through June 30, 2004. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 2, were used to verify the basis in report for each data element.

- TS High Radiation Area (HRA) (> 1 Rem/hour) Occurrences
- Very High Area (VHRA) Radiation Occurrences
- Unintended Exposure Occurrences

For the review period, the inspectors assessed CAP documents to determine whether HRA, VHRA, or unplanned exposures, resulting in TS or 10 CFR 20 non-conformances, had occurred during the review period. For the specified period, the inspectors evaluated data reported to the NRC, and subsequently sampled and assessed applicable CAP documents and selected Health Physics Program records. The reviewed records included personnel contamination occurrence logs and assessments, internal exposure evaluations, and personnel exposure investigation reports. Reviewed documents relative to this PI are listed in Sections 2OS1, 2OS3, and 4OA1 of the report Attachment.

b. Findings

No findings of significance were identified.

.3 Public Radiation Safety Cornerstone

a. Inspection Scope

The inspectors sampled licensee data for the PI listed below for the period from October 1, 2002, through June 30, 2004. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 2, were used to verify the basis in report for each data element.

- Radiological Effluent Technical Specification (RETS) / ODCM Radiological Effluent Occurrences PI

The inspectors reviewed the RETS/ODCM Radiological Effluent Release Occurrences PI results for the Public Radiation Safety Cornerstone from October 1, 2002, through June 30, 2004. For the subject period, the inspectors reviewed data reported to the NRC, and evaluated selected radiological liquid and gaseous effluent release data, selected out-of-service process radiation monitor and compensatory sampling data, abnormal release results, and CRs documented in Sections 2PS1, 2PS3, and 4OA1 of the report Attachment. In addition, the inspectors reviewed out-of-service effluent monitor logs, compensatory sampling records, and selected effluent release permits.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Routine Review of Condition Reports

a. Inspection Scope

As required by Inspection Procedure 71152, “Identification and Resolution of Problems”, and to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of all condition reports as they were entered into the licensee’s corrective action program.

b. Findings and Observations

There were no specific findings identified from this overall review of the CRs issued each day.

.2 Cross References to PI&R Findings Documented Elsewhere

The finding in Section 2OS3 describes inadequate resolution of worker radiation protection concerns associated with ARM operation documented in the licensee’s CAP CR system. The finding identified three events where the licensee failed to take timely action to address prolonged ARM annunciator conditions. which could have desensitized worker response to ARM equipment.

4OA3 Event Follow-up

.1 Notice of Unusual Events Due to Hurricane Warning - Hurricanes Frances and Jeanne

a. Inspection Scope

At 1043 EDT on September 2, and again at 1723 EDT on September 24, the licensee issued a Notice of Unusual Event (NOUE) due to the declaration of a Hurricane Warning for the east coast of Florida because of the impending onset of Hurricanes Frances and Jeanne, respectively. In both situations, the inspectors reviewed EPIP-01, Classification of Emergencies, to verify the licensee’s actions to classify and make timely notification were consistent with site emergency plan requirements. The inspectors reviewed plant status including the availability of mitigating systems and the effect of storm conditions on the plant. The inspectors assessed licensee performance with respect to the licensee’s staffing of the emergency response organization, provisions for the relief of plant operators, and plant damage assessment. During the actual storms, the inspectors continuously monitored control room activities and also manned the Technical Support Center to communicate plant status to the Region II Incident Response Center on a routine basis. At 1720 EDT on September 5, and 1412 on September 26, the licensee exited the NOUE due to the lifting of the hurricane warning for Hurricanes Frances and Jeanne, respectively. See Section 1R01 for additional inspector activities associated with adverse weather preparations.

b. Findings

No findings of significance were identified.

.2 (Closed) Licensee Event Report (LER) 05000335/2003005, Condition Prohibited by Tech Specs Due to Failed Containment Vacuum Breakers

On December 3, 2003, while Unit 1 was operating at full power, repair activities for the containment vacuum relief valve FCV-25-8 were ongoing when the licensee discovered a common cause failure mechanism affected the past operability of both of the containment vacuum relief valves' actuator quick exhaust valves. Based on the licensee's observed surveillance test failures and the common cause age related failure mechanism of the quick exhaust valve, the licensee determined that a failure to open on demand would have been highly likely during a containment vacuum relief event. This failure mechanism was indicative of a condition where both trains of containment vacuum breakers were inoperable in excess of the allowed TS 3.6.5.1 outage time. These valve failures were captured in the licensee's corrective action program as Condition Report 03-4285. Both containment vacuum relief valve quick exhaust valves were replaced and tested satisfactorily. This finding is greater than minor because it involved the equipment performance attribute of the mitigating system cornerstone and affected the objective of ensuring that equipment is available and capable to respond to transients, including activation of all containment fan coolers concurrent with operation of both trains of the containment spray system. Because the finding involved an actual loss of relief function of two vacuum breakers, for longer than the Technical Specification allowed outage time, and affected the containment barrier integrity, an SDP Phase 1 analysis was completed using NRC Manual Chapter 0609, Appendix A. The finding was determined to be of low safety significance (Green), since the valve failures did not result in an actual open pathway in the physical integrity of the reactor containment or actual reduction of atmospheric control function of the reactor containment. The failed quick exhaust valves do not impact the ability of the valves to remain closed and provide a passive containment pressure integrity function. This licensee-identified finding involved violation of TS 3.6.5.1, Vacuum Relief Lines. The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

.3 (Closed) LER 05000335/2004001, PSB-1 Analysis Non-Conservatisms Led To Past Operation Prohibited By TSs

On April 15, 2004, as part of a stationwide upgrade of electrical calculations, the licensee concluded that a condition prohibited by TS 3.8.1.1 had existed for extended periods of time during the past ten years or more due to nonconservative assumptions in the electrical distribution analyses. As part of the original design requirements, degraded voltage relays were not intended to actuate during the significant load transients that could occur following a reactor trip, loss of coolant accident, startup or shutdown, presuming switchyard grid voltage was maintained within a prescribed range. However, the licensee's upgrade effort determined that the minimum prescribed grid voltage was insufficient to preclude actuation of degraded voltage relays following a safety injection actuation signal (SIAS) that would then result in a loss of (i.e., separation from) offsite power which was contrary to the original design requirements.

This issue was addressed by the licensee's corrective action program as CR 04-2044. The cause of nonconservative assumptions being used in the original electrical distribution analyses was attributed to human error. This finding is greater than minor because it involved the Mitigating System Cornerstone equipment performance attribute, and adversely affected the ability of the switchyard to provide a reliable source of offsite power that upon loss would also result in unnecessary challenges to the onsite EDGs. The finding was determined to be of low safety significance (Green) using Phase 3 of the SDP, because the likelihood of core damage was not significantly increased since offsite power was available for post accident recovery, the plant was analyzed to mitigate design basis accidents assuming a loss of offsite power, and the inadvertent actuation of degraded voltage relays was only anticipated during SIAS-related accident events. This licensee-identified finding involved a violation of TS 3.8.1.1, Electrical Power Systems - AC Sources. The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

4OA4 Cross Cutting Aspects of Findings

The finding in Section 1R19 describes a human performance issue involving an I&C journeyman who incorrectly lifted a lead which resulted in the 2A containment spray pump being inoperable for three hours without knowledge of the on-shift Operations personnel.

4OA5 Other Activities

.1 (Closed) NRC Temporary Instruction (TI) 2515/153, "Reactor Containment Sump Blockage (NRC Bulletin 2003-01)" Units 1 and 2

a. Inspection Scope

The inspectors reviewed the Florida Power and Light response to NRC Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors" as it related to the St. Lucie Plant. The inspectors verified that the compensatory measures described in the licensee's response had been implemented or are planned and scheduled. The inspectors interviewed operations, engineering, and training personnel regarding sump design, site-specific risk implications of sump screen clogging, and verification that compensatory measures to minimize sump clogging vulnerabilities had been taken. The inspectors reviewed training records, procedures, and containment inspection documentation to assure that the licensee's schedule of mitigating actions was commensurate with risk. The inspectors reviewed Facility Review Group meeting minutes which summarized the management review of the interim compensatory measures taken by the licensee. Finally, the inspectors completed a walkdown of the Unit 1 containment including the containment sump area to assess cleanliness and physical condition of the equipment during the Spring 2004 refueling outage. The Unit 2 refueling outage is scheduled for the beginning of 2005, at which time the inspectors will complete a routine walkdown of the Unit 2 containment including the ECCS sump area, however, the Unit 2 ECCS sump was thoroughly inspected during the previous refueling outage in 2003.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The inspector presented the inspection results to Mr. Bill Jefferson and other members of licensee management on October 5, 2004. Interim exits were also held during the report period by resident and regional inspectors. The licensee acknowledged the findings presented. No proprietary information was identified.

4OA7 Licensee Identified Violations

The following findings of very low significance were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as NCVs.

- Technical Specification Limiting Condition of Operation (LCO) 3.6.5.1 required that "Two vacuum relief lines shall be operable" in Modes 1, 2, 3, and 4. Technical Specification 3.6.5.1 Action required that "with one vacuum relief line inoperable, restore the vacuum relief line to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours." Contrary to the above, while Unit 1 was at 100 percent power, the licensee determined that the two vacuum relief valves were inoperable and would not likely have opened on demand due to a common cause age related failure since December 2, 2004. These valve failures were captured in the licensee's corrective action program as CR 03-4285. This finding is of very low safety significance (Green) because the failed quick exhaust valves do not impact the ability of the valves to remain closed. Therefore, the passive containment pressure integrity function of the breakers was not impacted by this failure.

- Technical Specification LCO 3.8.1.1.a required that two physically independent AC circuits between the offsite transmission network and the onsite Class 1E distribution system shall be operable in Modes 1, 2, 3, and 4. If both of the required offsite AC circuits were considered inoperable, then TS Action d. would have required restoring an offsite source within 24 hours or be in HOT STANDBY within the next six hours. Contrary, to this TS Action, Unit 1 operated for extended periods of time with grid voltages below the minimum necessary to ensure degraded voltage relays would not actuate during a SIAS event and directly cause a loss of offsite power. This issue was addressed by CR 04-2044. The finding was determined to be of very low safety significance because

offsite power was available for post accident recovery, the plant was analyzed to mitigate design basis accidents assuming a loss of offsite power, and the inadvertent actuation of degraded voltage relays was only anticipated during SIAS-related accident events.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Supplemental Information

KEY POINTS OF PERSONS CONTACT

Licensee Personnel

M. Alfonso, Work Control Manager
P. Bailey, Radiation Services Specialist, (Health Physicist), FP&L, Co, Corporate Office
D. Calabrese, Emergency Planning Supervisor
C. Costanzo, Operations Manager
R. De La Espriella, Site Quality Manager
L. Edwards, Training Manager
K. Frehafer, Licensing
R. Hughes, Site Engineering Manager
E. Katzman, Performance Improvement Department Manager
G. Johnston, Plant General Manager
W. Jefferson, Site Vice President
J. Martin, Operations Support Supervisor
R. McDaniel, Fire Protection Supervisor
D. Mothena, Manager - Plant Support Services
W. Nurberg, Chemistry Manager
W. Parks, Operations Supervisor
T. Patterson, Licensing Manager
J. Porter, Operations Support Engineering Manager
G. Swider, Systems Engineering Manager
J. Tucker, Maintenance Manager
M. Bruecks, Security Manager
S. Wisla, Health Physics Manager
D. Wolf, Engineer

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

Vendor

J. Williamson, Environmental Manager, Florida Department of Health

NRC personnel

B. Moroney, NRR Project Manager

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Closed

05000335/2003005	LER	Condition Prohibited by Tech Specs Due to Failed Containment Vacuum Breakers (Section 4OA3.2)
05000335/2004001	LER	PSB-1 Analysis Non-Conservatisms Led To Past Operation Prohibited By TSs (Section 4OA3.3)

Opened and Closed

05000389/2004005-01	NCV	Wrong Lead Lifted During Maintenance Rendering Containment Spray Pump 2A Inoperable (Section 1R19)
05000335, 389/2004005-02	NCV	Failure To Follow And To Have Adequate Procedure Guidance For Controls Associated With Posted LHRA Locations (Section 2OS1)
05000335, 389/2004005-03	NCV	Failure To Have Adequate Procedural Guidance For Response To Extended Duration ARM Alarms (Section 2OS3)
05000335, 389/2004005-04	NCV	Failure To Maintain Adequate QC Program Activities To Meet Design Specifications To Ensure Representative Sampling of Main Plant Vent Airborne Effluent Particulates (Section 2PS1).

Closed

05000335, 389/2515/153	TI	Reactor Containment Sump Blockage (NRC Bulletin 2003-01) (Section 4OA5.1)

LIST OF DOCUMENTS REVIEWED

2OS1 Access Control To Radiologically Significant Areas (71121.01)

Procedures, Instructions, Guidance Documents, and Operating Manuals

Letter of Instruction (LOI) - 05.01, Fuel Pool Cask Pit Cleaning/Inventory, Revision (Rev.) 1A
Administrative Procedure (ADM) - 09.12, Conduct of Infrequently Performed Tests or Evolutions at St Lucie Plant, Rev. 2
Health Physics Procedure (HPP) - 1, Preparing Radiation Work Permits, Rev. 23E
HPP-3, High Radiation Areas, Rev. 15
HPP-20, Area Radiation and Contamination Surveys, Rev. 18A
HPP-22, Air Sampling, Rev. 16,
HPP-30, Personnel Monitoring, Rev. 35
HPP-63, Derived Air Concentration (DAC) - Hour Assessment, Rev. 3B
HPP-70, Personnel Contamination Monitoring, Rev. 22B
Nuclear Administrative Procedure (NAP) 204, Condition Reporting, Rev.1

Records and Data Reviewed

Health Physics Survey (HPS) Form HPS-7, Radiation Survey for the Unit 1 (U1) Reactor Auxiliary Building (RAB) -.5 foot elevation ('El) Charging Pumps, Conducted 08/17/04
HPS-45, Radiation Survey for the Unit 2 (U2) Reactor Auxiliary Building (RAB) 19.5 'El Volume Control Tank Area, Conducted 02/20/04
HPS-245 for the Unit 2 (U2) Reactor Auxiliary Building (RAB) Volume Control Tank, Purification Filters, Letdown Valves, Flash Tank, and Boronometer, Conducted 11/15/01, 4/28/03,7/16/03, and 8/23/04
Unit1 (U1) and Unit 2 (U2) Alpha Air Sample Analysis Results - Calendar Year (CY) 2004
U1 and U2 Beta-Gamma To Alpha Smear Ratios, CY 2004
10CFR Part 50/61 Analysis Report - for May 14, 2004 Sample
HPP Forms 30.17, Exposure Investigation Reports, 30.18, Internal Dose Calculations; and 30.19, Internal Dose Worksheet DAC - Hour Dose Calculations, and Support WBC Analysis Data: Year-To-Date 2004
HPP Form 70.1, Personnel Skin and Clothing Contamination Report, Year to Date 2004
HPP- 30.18, Internal Dose Calculations, CY 2003
Radiation Work Permit (RWP) 04-152, Remove Replace Manway Leak, Inspection, Survey and Miscellaneous Support, Rev. 0
RWP 04-1030, U1 Reactor Containment Building (RCB) All Elevations and Areas (HRA), Install Remove Scaffolding, Rev. 0
RWP 04-1309, U1 RCB All Elevations and Areas (HRA), Decon/ALARA Personnel: Decon, Shielding, and Trash, Rev. 0
RWP 04-1031, U1 RCB 18' El V3245 (LHRA), Open, Inspect, Rebuild, Close, Remove/Replace Valve - Includes Grinding, Welding and Pressure Wash, Rev. 0
RWP -1324, U1 RCB 18' El, '1A', '1B' Steam Generator Channel Heads, (LHRA), Install, Operate, and Remove Roger Equipment in Steam Generators; Perform Eddy Current Test and Tube Plugging Operations, Rev. 0
U1 Cask Pit Project Exposure Data as of August 17, 2004 for Radiation Work Permit (RWP) No. 147 Inventory/Cleanup/Includes Tri-Nuc Vacuum and RWP- No. 148 Spent Fuel Pool Cask Wash: Transfer Tri-Nuc Filters

Corrective Action Program (CAP) Documents

Florida Power and Light (FP&L) St. Lucie Quality Assurance Audit (QSL) Radiation Protection (RP)-03-04, Radiation Protection Functional Area Audit, 08/29/2003
Plant St. Lucie (PSL) Nuclear Assurance Quality Reports: Quality Report Number (QRNO) 04-0080, Unit 1 (U1), SL1-19 Radiation Protection Program, dated 05/14/04
St Lucie Health Physics Program Self Assessment, Radiological Risk Significant Work Planning, High Radiation Area Controls, and Remote Monitoring Assessment Report, Dated 1/05/04
Condition Report (CR) Number (No.) 02-2336, During U1 Reactor Head Hydrolazing Activities - Airborne Radioactivity Resulted in Numerous Personnel Contaminations within the Reactor Containment Building (RCB)
CR No. 03-1468, Sixteen Foot Ladder Positioned on Unit 2 VCT Wall, Creating Potential Pathway to LHRA

2OS3 Personnel Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

Procedures, Instructions, Guidance Documents, and Operating Manuals

1-ONP-26.02, Area Radiation Monitors, Rev. 1A
2-ONP-26.2, Area Radiation Monitors, Rev. 2
Chemistry Operating Procedure (COP)-06.06, Guidelines for Collecting Post Accident Samples, Rev. 3A
COP-07.05, Process Monitor Setpoints, Rev 7.
HPP-10, Whole Body Counting System Calibration Log Form, 8/5/02, 8/2/03
1-IMP-26.14, Containment Atmosphere Process Monitor Functional and Calibration Instruction, Rev 10
1-IMP-26.24, Functional Testing of the Control Room Outside Air Intake (CROAI) Monitors, Rev. 2B
1-IMP-26.57 Secondary Calibration of the Control Room Outside Air Intake (CROAI) Monitors, Rev. 6A
1-IMP-26.58, Area Radiation Monitoring System (ARMS) Functional Test, Rev. 9
2-IMP-26.05, Functional Test of Particulate, Iodine and Gas (PIG) Monitors, Rev. 4A
2-IMP-26.06, Secondary Calibration of Particulate Iodine and Gas Monitors (PIG), Rev. 0B
2-IMP-26.07, Primary Calibration of Particulate Iodine and Gas Monitors (PIG), Rev. 1
1-1120070, High Range Radiation Monitor Calibration, Rev. 17
1-1220055, Calibration of Area Radiation Monitoring System(ARMS), Rev. 13A
2-1400069, Calibration of the PSL-2 Control Room Outside Air Intake Monitors (CROAI's), Rev 9
1-IMP-26.14, Containment Atmosphere Process Monitor Functional and Calibration Instruction, Rev. 8
HP-2, FP&L Health Physics Manual, Rev. 18
HP-13A, Operation of Portable Survey Instruments, Rev. 22C
HP-13C, Calibration of Portable Dose Rate Survey Instruments, Rev. 20
HPP-5, Health Physics Department Conduct of Operations, Rev. 2
HPP-31, Operation of the Whole Body Counting System, Rev. 17
HPP-62, Inspection and Maintenance of Respiratory Protection Equipment, Rev.9

Records and Data Reviewed

Work Order (WO) 32012345, TS/PM26030 RIS-26-31/32 Cal (18 mo), 9/29/02
WO 32014877, TS/PM1C 2603 CROAI Monitors CH. 46/4, 11/21/02
WO 32014149, TS/PM2 090F/ RM-26-25 CNTMT ATM PIG CAL, 11/19/02
WO 32012245, TS/PM2 091/ CROAI RIM-26-61/65 Cal, 9/5/03
WO 33004500, TS/FYP8085 RIS-26-58/59 Hi Range Rad Monitor, 4/5/04
Training database query: Department=Health Physics, 09:48 8/17/04
Listing SCBA Qualified Users Operations Department, 8/17/04
Cross-Functional Trend Coordinator Team Report, 7/23/04 (adverse trends)
Work Order 33011153 01, PM2602A ARMS CH.#10, 13,14, 15,21, 8/12/03
Scott PosiChek3 Visual/Functional Test Results (for approximately 45 units tested on 9/12-13/2002), Version 2.82
SSC Performance Indicator, SSC-26 Unit 1, Radiation Monitoring, 7/12/04
SSC Performance Indicator, SSC-26 Unit 2, Radiation Monitoring and SGBD Radiation Monitoring, ½3/04
Health Physics Form HPP-64.1 Breathing Air Purification Unit Monthly Check Form, monthly 10/24/02 -6/23/04
St Lucie Units 1&2 - Issuance of Amendments Regarding Elimination of Requirements For Post-Accident Sampling Systems [ML011140017], 3/27/01
Combustion Engineering Owners Group (CEOG) Topical Report CE NPSD-1157, Rev. 1, "Technical Justification for the Elimination of the Post-Accident Sampling System from the Plant Design and Licensing Basis for Combustion Engineering Owners Group (CEOG) Utilities."[ML0036998020], March 2000
Self Assessment Report Radiological Respiratory Protection Program 03-01, 6/18/03
Radiological Risk Significant Work Planning, High Radiation Area Controls, and Remote Monitoring Assessment Report, 12/2-13/2003

CAP Documents

CR 03-2686, The Area Radiation Monitor RI-26-17 in the U-2 Ion Exchange Corridor has Alarm Lights on for Several Months.
CR 03-4079, On 7/23/04 CR 03-2686 Initiated to Address an Alarm Condition on a Local Area Radiation Monitor That Had Been in Alarm for Several Months. Basis for the CR Was to Address the Unsatisfactory Practice of Operating with the Alarm Locked In.
CR 03-4262, On Unit 2 RI-25-26, Local Area Radiation Monitor, (Located by Chem Drain Pump Area) Is in Alarm and Has Been since 4/15/03. This is an alarm complacency issue.
CR 04-0124, the Negative Trend of CR Data Initiated for Radiation Monitors Has Been Determined by the Cross Functional Trend Team to Be Adverse.
CR 04-0854, During CVCS Resin Transfers, West Valve Gallery Radiation Monitor Alarms Due to Increased Dose Rates Caused by High Activity Resin. Alarm Decibel Level So High That Workers Find it Difficult to Communicate in What Is Many Times a LHRA and Workers Tape over the Alarm Speaker in Order to Communicate.
CR 04-1424, Currently There Are Several Area Radiation Monitors in Alert or Alarm on the -.5' Elevation in the Unit 1 RAB.
CR 04-2601, ARM Channel No. 27 is in a False Continuous Audible Alarm Desensitizing Workers to Real Alarms. Alarm channel setpoints are Alarm at 50 mr/hr- High Alarm at 100 mr/hr and In the Control Room the Channel Is Not in Alarm. Control Room and Local Channel Readouts Indicate 5 mr/hr ~3.5 mr/hr respectively. Currently there is no WO tag on this ARMs Channel and the Monitor Has Been in this Condition for over Two Weeks.

2PS1 Radioactive Gaseous and Liquid Effluent Monitoring (71122.01)

Procedures, Manuals, and Guidance Documents

Chemistry Procedure (CP)-01.03, Correlation of Process Monitor Readings to Specific Activity, Rev. 0
Chemistry Operating Procedure (COP)-01.05, Processing Aerated Liquid Wastes, Rev. 10
COP-01.06, Processing Gaseous Waste, Rev. 7
COP-7.05, Process Monitor Setpoints, Rev. 7
COP 65.01, ORTEC Multichannel Analyzers, Rev. 7A
COP 65.01, Effluent Grab Sampling, Rev. 12A
COP-C-200, Offsite Dose Calculation Manual (ODCM) Rev. 25
CP 2-C-66A, Calibration of the General Atomic Gas, Liquid, Steam Line, and Wide Range Gas Monitors, Rev. 6
CP 1-C-64, Calibration of the Liquid Waste Discharge Radiation Monitor, Rev. 16
CP 1-C-65, Technical Specification Calibration of the Gaseous Radwaste Monitor, Rev. 7
1-Instrument and Control Maintenance Procedure (IMP)-26.12, Liquid Radwaste Discharge Process Monitor Functional and Calibration Instructions, Rev. 5
1-IMP-26.13, Gaseous Radwaste Process Monitor Functional and Calibration Instructions, Rev.10,
2-IMP-26.05, Functional Test of Particulate, Iodine, and Gas Monitors (PIGs), Rev. 4
2-IMP-26.06, Secondary Calibration of Particulate, Iodine, and Gas Monitors (PIGs), Rev. 0B
2-IMP-26.02, Functional Test of Wide Range Gas Monitors, Rev. 2A
2-IMP-26.03, Secondary Calibration of Wide Range Gas Monitors, Rev. 1
2-IMP-26.37, Functional Test of Single Stage Liquid Monitors, Rev. 4
2-IMP-26.38, Secondary Calibration of Single Stage Liquid Monitors, Rev. 1
2-IMP-26.59, RM 80 Power Supply Assemblies Functional Testing, Rev. 3A

Annual Reports, Records and Data

St. Lucie 2002 Annual Radioactive Effluent Release Report, February 28, 2003
St. Lucie 2003 Annual Radioactive Effluent Release Report, February 27, 2004
Work Order (WO) Task 3301423801, U1 Liquid Radwaste Discharge Process Monitor (RE)-6627, Functional and Calibration Data, completed 12/10/03
WO Task, 3300993201, U1 Gaseous Waste Process Monitor RE-6648, Calibration Data, completed 9/26/03
WO Task 3300225001, U2 Plant Vent Gas Radiation Monitor (RIM) 26-90, completed 9/2/03 Including: Sample Flow Meter Calibration; RM-80 Power Supply Assembly Functional Test, Monitor Functional Test, and Secondary Calibration Results of Wide Range Gas Monitor
WO Task, 3201765001, U2 Plant Vent Stack Particulate Gas Iodine (PIG) Radiation Monitor (RM) 26-14 Calibration Data, completed 2/14/03 Including: Sample Flow Meter Calibration; RM-80 Power Supply Assembly Functional Test, and Secondary Calibration Results
WO Tasks 3301111801 & 3301047601, U2 Steam Generator Blow Down RM-26-6 (A and B) Calibration Data, completed 1/10/04 and 1/15/04 Including: Secondary Calibration Data, RM-80 Power Supply Assembly Functional Testing, Monitor Functional Test
U1 Plant Vent Continuous Release Data for 8/17/2004 including U1 Plant Vent/Fuel Handling Building Worksheet and Gamma Spectroscopy Data
U1 Gaseous Permit Number (No.) 1-04-15 for “C” Gas Decay Tank and Gamma Spectroscopy Analysis Data processed 8/19/2004

Liquid Release Permits Numbers (Nos.). 1-03-69, processed 12/31/03; No. 1-04-12, processed 03/05/04; No. 1-04-40, processed 06/20/04
Gaseous Effluent Release Permits, No. 2-03-100, processed 12/29/03; No. 2-03-101C, processed 12/31/03
Operations Surveillance Procedure (OSP)-25.04 Filter Test Data for the U2 Emergency Core Cooling System (ECCS) 9A and 9B HEPA Ventilation Exhaust (HVE) System Trains Including: Visual Inspection, Flow Rate, Differential Pressure, In-Place HEPA Filter Test, In-Place Charcoal Adsorber Test, and Laboratory Charcoal % Efficiency Penetration Test Analyses conducted March 2003
OSP-25.04 Filter Test Data for the Reactor Auxiliary Building (RAB) HVE 10A/10B Trains Including Visual Inspection, Flow Rate, Differential Pressure, and In Place Filter HEPA Filter Test, for U1 conducted March 4, 2004 and U2 conducted March 31, 2003
OSP-25.04 Filter Test Data for the U1 Control Room 13A and U2 13B HVE Trains Including Visual Inspection, Flow Rate, Differential Pressure, In-Place HEPA Filter Test, In-Place Charcoal Adsorber Test, and Laboratory Charcoal Adsorber Analysis for U1 conducted March 4, 2004 and U2 conducted March 2003
Counting Room Quality Control Data: Beckman Liquid Scintillation Counter H-3 Response Data September 2003 through August 18, 2004, Intrinsic Germanium Detector No.1 Co-60 Response Data March 2004 - July 2004
Engineering Evaluation, PSL-ENG-SENS-00-108, 2000 FSAR Review Findings Requiring Changes or Clarifications to the FSARs In Accordance with 10 CFR 50.59, Rev. 0
Drawing No. 2998-G-897, HVAC -Control Diagrams - Sheet 2, Revision (Rev.) 24, dated 02/17/03
Drawing No. 2998-13134, Plant Stack Sampling Nozzle, Rev 3
Drawing No. 8770-5837, Isokinetic Nozzle For Plant Stack Normal Flow, Rev. 0

Corrective Action Program (CAP) Documents

Plant St Lucie Nuclear Assurance Quality Report 04-0055, Waste Gas System Operation and Maintenance, dated 04/30/04
FP&L QSL Chemistry and Effluents (CHM)-03-03, Chemistry Functional Area Audit, Conducted 02/24-04/18/2003
CR No. 04-0396, Generic Issue Regarding Required Maintenance and Testing of U1 and U2 Non-Technical Specification Ventilation Systems
CR No. 03- 0715, Filter Housing for HVS-19 Degraded and Need Repair, Holes Identified Around Base
CR No. 04-0937, U1 Reactor Auxiliary Building Exhaust Fan HEPA Filters - Improper Orientation of Several Installed HEPA Filters
CR No. 04-3393, Radiation Monitors Identified as Leading Contributor to Main Control Room Deficiency Generation

2PS3 Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program (71122.03)

Procedures, Manuals, and Guidance Documents

Off-Site Dose Calculation Manual (ODCM), Rev. 25
Instrument & Control Maintenance Procedure No. 1400055, Environmental Data Acquisition Semi-Annual Calibration, Rev. 42

Electrical Maintenance Procedure, "The Semi-Annual Preventative Maintenance and Cleaning of the Met Tower UPS System," Revision 2
0-HPP-35, Operation and Calibration of the TSA Systems Model SPM-906 Portal Monitor, Rev. 5A
HP-114, Calibration and Operational Check of the Nuclear Enterprises Personnel Contamination Monitors, Rev. 10B
State of Florida, Department of Health, Calibration Procedure 7, Calibration of Gasmeters and Flowrators, 04/1999, Rev. 6
State of Florida, Department of Health, Sampling Procedure 1, Collection of Air Particulates and Radioiodines, 04/02/04, Rev. 6
State of Florida, Department of Health, Sampling Procedure 4, Collection of Surface Water, 11/22/1999, Rev. 4
State of Florida, Department of Health, Sampling Procedure 5, Collection of Broadleaf Vegetation, 11/22/1999, Rev. 2
State of Florida, Department of Health, Technical Memorandum 3, Data Reporting, 04/02/04, Rev. 1

Records and Data

Florida Department of Health, June 2004 Land Use Survey, 08/04
St. Lucie Plant, 2003 Annual Radiological Environmental Operating Report
Bicron-NE SAM Calibration Form for Serial Number (S/N)104, conducted 12/09/02, 1/10/03 and 02/25/04; S/N 265, conducted 01/10/03; S/N 103, conducted 02/26/03 and 2/26/04; S/N 380, conducted 03/06/03, 09/04/03 and 02/25/04; S/N 330, conducted 04/19/03, 07/11/03 and 02/24/04; S/N 305, conducted 05/07/03, 06/04/03and 12/08/03; S/N 413 conducted 07/11/03, 01/09/04, and 02/20/04; and S/N 328, dated 03/04/04
Operation and Calibration of the TSA Systems Model SPM-906 Portal Monitor, 906061, 08/17/04
IMP8 AM Calibration Data Sheet and Parameter Form, Rev. 9, Unit 130, conducted 09/16/02
IMP8 AM Calibration Data Sheet and Parameter Form, Rev. 9A, Unit 127, conducted 09/23/02; Unit 114, conducted 02/26/03 and Unit 128, conducted 02/26/03
IMP9D Calibration Data Sheet and Parameter Form, Rev. 9A, Unit 129A, conducted 09/24/02, Unit 129, conducted 02/27/03
IMP8D Calibration Data Sheet and Parameter Form, Rev. 9A, Unit 348, conducted 02/27/03
IMP8 AM Calibration Data Sheet and Parameter Form, Revision 9A, Unit 130, conducted 03/14/03
IMP8A Calibration Data Sheet and Parameter Form, Rev. 10, Unit 111, conducted 03/25/03; Unit 129A, conducted 04/19/03
IMP9D Calibration Data Sheet and Parameter Form, Rev. 10, Unit 249, conducted 04/09/03; Unit 248, conducted 04/11/03
IMP8D Calibration Data Sheet and Parameter Form, Rev. 10, Unit 279, conducted 04/11/03
IMP9D Calibration Data Sheet and Parameter Form, Rev 10, Unit 278, conducted 04/11/03; Unit 129A, conducted 04/19/03
IMP8 AM Calibration Data Sheet and Parameter Form, Rev 10. Unit 281, conducted 05/22/03
IMP8 DM Calibration Data Sheet and Parameter Form, Rev.10A, Unit 348, conducted 09/23/03
IMP9D Calibration Data Sheet and Parameter Forms, Rev. 10A, Unit 249, conducted 10/09/03; Unit 278, conducted 10/14/03; Unit 279, conducted 10/14/03; Unit 283, conducted 10/16/03; Unit 284, conducted 10/30/03; Unit 281, conducted 11/19/03; Unit 280, conducted 12/11/03; and Unit 129, 02/20/04
IMP8 A Calibration Data Sheet and Parameter Form, Revision 10A, Unit 129A, 10/15/03

IMP9D Calibration Data Sheet and Parameter Forms, Rev. 10B, Unit 282, conducted 02/17/04;Unit 283, conducted 02/17/04; Unit 279, conducted 02/19/04; Unit 278, conducted 02/20/04; Unit 249, conducted 04/04/04; Unit 284, conducted 04/04/04; Unit 281, conducted 05/20/04; and Unit 280, conducted 06/11/04
Meteorological (MET) Tower Semi-Annual Calibrations (Cals), conducted 06/19/03, 11/03/03 and 05/25/04

CAP Documents

State of Florida Department of Health Report, Radiological Surveillance of Florida Power & Light Company's St. Lucie Site, Second Quarter 2004."
Florida Department of Health, Environmental Monitoring Levels Quality Assessment Program Report, 07/28/04
QAS-ENV-03-1, Radiological Environmental Monitoring Program and Site Non-Radiological Environmental Protection Plans Functional Area Audit,
St Lucie Nuclear Assurance Quality Report, Meteorological Tower Corrective Action Review, 08/01/02
Environmental Radiation Control, Nuclear Power Plant Surveillance Program, Semi-Annual Self-Assessment, 07/02
Environmental Radiation Control, Nuclear Power Plant Surveillance Program, Semi-Annual Self- Assessment, 02/03
Environmental Radiation Control, Nuclear Power Plant Surveillance Program, Semi-Annual Self- Assessment 08/03
Environmental Radiation Control, Nuclear Power Plant Surveillance Program, Semi-Annual Self-Assessment 02/04
CR No. 04-0223, Investigate and Correct Meteorological Tower Elevator Problems, ½3/04
CR No. 04-3021, Investigate and Correct Invalid Meteorological Tower Temperatures, 05/26/04

4OA2 Identification and Resolution of Problems (71152)

CAP Documents

CR No. 03-1285, Employee Dose Alarm While in U2 Pipe Penetration Room
CR No. 03-2378, U2 Waste Gas System Realignment from Plant Vent to 2'C' Waste Gas Decay Tank Resulting in Unplanned Release
CR No. 03-2742, U2 Radiation Liquid Monitor RM-26-5 Failed During Functional Test
CR No. 03-4352, U1 Plant Vent Radiation Monitor Repeat Failure.
CR No. 04-0124, Cross Functional Team Identifies Adverse Negative Trend for Radiation Monitor
CR No. 04-1163, Inadequate Engineering Controls For Work in High Contamination Areas
CR No. 04-1398, U2 Plant Vent PIG Showed Increasing Trend on the Iodine Channel
CR No 04-1521, Worker Dose Rate Alarm Associated with Pressurizer Insulation Removal
CR No. 04-2493, Adverse Trend in Positive Whole Body Count Condition Reports Since 1/1/04
CR No. 04-2858, Perform Collective Significance Review of Unplanned Releases,
CR No. 04-3271, U2 Plant Vent Particulate Detectors Declared Out of Service

LIST OF ACRONYMS

ANSI	American National Standards Institute
ARM	Area Radiation Monitor
ASME	American Society of Mechanical Engineers
CAM	Continuous Airborne Monitor
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CHRM	Containment High Range Monitor
CR	Condition Report
CY	Calendar Year
ED	Electronic Dosimeter
FP& L	Florida Power and Light
GA	General Area
HEPA	High Efficiency Particulate Air
HPA	Health Physics Administrative Procedure
HPP	Health Physics Procedure
HPS	Health Physics Surveillance
HPT	Health Physics Technician
HVE	HEPA Ventilation Exhaust
LHRA	Locked High Radiation Area
NAP	Nuclear Administrative Procedure
NCV	Non-Cited Violation
no.	Number
ODCM	Offsite Dose Calculation Manual
OP	Operations Procedure
OSP	Operations Surveillance Procedure
NIST	National Institute of Standards and Technology
PASS	Post Accident Sampling System
PIG	Particulate Iodine Gas
PM	Portal Monitor
PCM	Personnel Contamination Monitor
PWO	Plant Work Order
QC	Quality Control
R	Radiation Monitor
RAB	Reactor Auxiliary Building
RCA	Radiologically Controlled Area
REMP	Radiological Environmental Monitoring Program
Rev.	Revision
RG	Regulatory Guide
RWP	Radiation Work Permit
S/N	Serial Number
SAM	Small Article Monitor
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SGBD	Steam Generator Blow Down
SFP	Spent Fuel Pool
TLD	Thermoluminescent Dosimetry
TMI	Three Mile Island
TS	Technical Specification

U1	Unit 1
U2	Unit 2
UFSAR	Updated Final Safety Analysis Report
VCT	Volume Control Tank
WBC	Whole Body Counter
WO	Work Order
YTD	Year-To-Date