UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
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ATLANTA, GEORGIA 30303-8931

October 23, 2002

Mr. Dale E. Young, Vice President
Crystal River Nuclear Plant (NA1B)
ATTN: Supervisor, Licensing &
Regulatory Programs
15760 West Power Line Street
Crystal River, FL 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 - NRC INTEGRATED INSPECTION REPORT 50-302/02-03

Dear Mr. Young:

On September 28, 2002, the NRC completed an inspection at your Crystal River Unit 3. The enclosed report documents the inspection findings which were discussed on October 7, 2002, with you and 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.

This report documents one NRC identified finding of very low safety significance (Green). The finding was not a violation of regulatory requirements. Additionally, one licensee identified violation is listed in Section 4OA7 of this report. If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Crystal River Nuclear Plant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document

Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

//RA//

Leonard D. Wert, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report 50-302/02-03

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	50-302
License No.:	DPR-72
Report No.:	50-302/02-03
Licensee:	Florida Power Corporation (FPC)
Facility:	Crystal River Unit 3
Location:	15760 West Power Line Street Crystal River, FL 34428-6708
Dates:	June 30 to September 28, 2002
Inspectors:	S. Stewart, Senior Resident Inspector S. Sanchez, Resident Inspector G. Kuzo, Team Leader Plant Support Branch (PSB) (Sections 2OS1, 2OS3, 4OA1) Don Forbes, Radiation Specialist (Section 2PS1) James Kreh, Radiation Specialist, (Section 2PS3) K. Davis, Physical Security Inspector (Section 3PP1)
Approved by:	Leonard Wert, Chief Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

Inspection Report 05000302-02-03, Florida Power Corporation, 06/30/2002 - 09/28/2002, Crystal River Unit 3, One finding in Problem Identification and Resolution.

The inspection was conducted by the resident inspectors, a physical security inspector, and three radiation protection specialists. One finding of very low safety significance (Green) was identified in the Problem Identification and Resolution area. The significance of issues is indicated by their color (Green, White, Yellow, Red) and was determined by the Significance Determination Process in the NRC Inspection Manual Chapter 0609. Findings to which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. 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 Findings

Cornerstone: Initiating Events

Green. The licensee's corrective actions for a failed power cable were insufficient to prevent recurrence of a partial loss of offsite power event. The finding was more than minor because it increased the likelihood of a loss of offsite power.

The finding was determined to be of very low safety significance by the safety determination process because it did not involve a total loss of offsite power and power remained available for safety equipment. (Section 4OA2)

B. Licensee Identified Violations

A violation of very low safety significance, which was identified by the licensee, was reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective action tracking number are listed in Section 4OA7 of this report.

Report Details

Summary of Plant Status

Crystal River 3 operated at or near 100% rated thermal power throughout the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity [Reactor-R]

1R04 Equipment Alignment

a. Inspection Scope

The inspectors reviewed the alignment of risk-significant systems to evaluate the readiness of the redundant trains or backup systems while one train was out of service for maintenance. The inspectors checked switch and valve positions using the alignment specified in operating procedures, and checked electrical power to critical components. Nuclear condition reports were reviewed to verify that the licensee was identifying and correcting component alignment issues. The specific systems walked down were:

- Emergency feedwater pump, EFP-3, when feedwater pump, FWP-7, and its backup power supply, MTDG-1, were tagged out of service for preventive maintenance per work orders 370849 and 246497. The walkdown was done using the component position checklists in Operating Procedure OP-450, Emergency Feedwater System.

- Train B control complex chiller when the A train was out of service for preventive maintenance per work order 288986. The walkdown was done using the component positions specified by Operating Procedure OP-409, Plant Ventilation System.

The inspectors also performed a detailed inspection of the high pressure injection system to verify accident mitigation readiness. The verification included checks of supply tank levels and boron concentrations, and verification that critical valves and power supplies were aligned in accordance with technical specification and licensee procedure requirements. Reviews were performed of outstanding design issues and maintenance work requests to determine system operability and reliability. The following documents were reviewed and used in the verifications: Operating Procedure OP-402, Makeup and Purification System, 1st Quarter System Health Report, and drawings for the Makeup and Purification System; P-304-662, FD-302-661, P-304-665.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors walked down risk-significant plant areas to check that controls of transient combustibles and ignition sources were consistent with the licensee's Fire Protection Plan and 10 CFR Part 50, Appendix R. The inspectors also evaluated the material condition, operational lineup, and operational effectiveness of fire protection systems and assessed operational status and material condition of fire barriers used to contain fire damage. The inspections were completed using the standards of the Fire Protection Plan, 10 CFR Part 50, Appendix R, the Florida Power Corporation Analysis of Safe Shutdown Equipment, and the Final Safety Analysis Report. The inspectors reviewed sections of OP-880, Fire Service System, and checked performance of SP-800, Monthly Fire Extinguisher Inspection, to verify the operational condition of fire protection equipment. The inspectors checked that compensatory measures for fire system problems were properly implemented and observed performance of selected fire alarm checks. The components and areas receiving specific fire protection walkdowns were:

- A and B 480 Volt Engineered Safeguards Switchgear Rooms
- Auxiliary Building, Seawater Pump Room
- 160 ft. Control Complex HVAC Equipment Room
- 95 ft. Intermediate Building and Emergency Feedwater Pump, EFP-2, area
- Emergency Diesel Generator Rooms
- A and B Decay Heat and Building Spray Pump Areas
- Main Control Room
- General Auxiliary Building including Spent Fuel Pool Area
- 1E Battery Rooms

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a Inspection Scope

The inspectors reviewed the Crystal River Unit 3, Final Safety Analysis Report, Chapter 2, that depicted the design flood levels and protection for areas containing safety-related equipment to identify areas that may be affected by internal or external flooding. A general site walkdown was conducted, with a specific walkdown of the auxiliary building seawater room, to ensure that flood protection measures were in accordance with design specifications. Specific attributes that were checked included sealing of penetrations below the design flood line and between flood areas, adequacy of watertight doors between flood areas, operability of sump pumps, level alarm and control circuits, and availability of procedures to cope with flooding. The inspectors verified that a deficiency involving the watertight seal between a turbine building ventilation wall and a flood wall, documented in non-conformance report 71763, was corrected by the licensee.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed a licensed operator simulator session to check that operator performance was consistent with 10 CFR 55 requirements and industry guidelines. The inspectors checked that licensee evaluators properly implemented 10 CFR 55.59 requirements. During the observed session, the inspectors checked the crew's abilities in making an alert emergency classification and the required notifications as part of the simulated emergency operations during performance of licensee Evaluated Simulator Exercise SES-05. Proper use of abnormal and emergency operating procedures was also checked.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors routinely checked that the licensee promptly entered problems with plant equipment into either the corrective action program or the corrective maintenance program. The inspectors checked that the licensee monitored work practices and when appropriate, documented work problems in the corrective action program. The inspectors checked that licensee personnel monitored unavailability of equipment important to safety and trended key performance parameters. For the equipment issues described in the nuclear condition reports (NCR) or work orders (WO) listed below, the inspectors reviewed the licensee's implementation of the Maintenance Rule (10CFR50.65) with respect to the characterization of failures, the appropriateness of the associated a(1) or a(2) classifications, and the appropriateness of either the associated a(2) performance criteria or the associated a(1) goals and corrective actions. The inspectors checked if the licensee maintained safety functions when equipment important to safety was out of service for maintenance. The inspectors also periodically reviewed the licensee's implementation of 10 CFR 50, Appendix B and technical specification requirements regarding safety system problems.

- NCR 63922, Water found in lubrication oil for the 1B makeup pump
- NCR 62928 and NCR 66692, Failure of the Offsite Power Transformer due to cabling fault

b. Findings

No findings of significance were identified. A related Green finding is discussed in Section 4OA2.

R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed daily maintenance schedules and observed work controls to check risk management while maintenance was conducted. The inspectors employed standards for operability of equipment such as those found in technical specifications, the Final Safety Analysis Report, licensee procedures, and regulatory information such as NRC Generic Letter 91-18, Revision 1, Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded And Nonconforming Conditions. The inspectors also reviewed maintenance schedules to check that overall risk was minimized through preservation of safety functions such as decay heat removal capability, reactor coolant system inventory control, electric power availability, reactivity control, and primary containment control. The inspectors checked if licensee personnel were managing risk by assuring that key safety functions were preserved and that upon identification of an unplanned situation, the resulting emergent work was evaluated by the licensee for risk and controlled as described in technical specifications, licensee Compliance Procedure CP-253, Power Operations Risk Assessment and Management, and Operations Instruction OI-7, Control of Equipment and System Status. The inspectors checked that risk significant emergent work was documented in the corrective action program and that risk management actions were promptly initiated. The following work week risk assessments and/or the unplanned maintenance conditions were checked:

- Work Week 02W26, updated risk assessment for cleaning of the service water heat exchangers following raw water pump shifts
- Work Week 02W28, updated risk assessment for grass intrusion at the intake
- Work Week 02W29, updated risk assessment for partial loss of off-site power due to de-energization of the offsite power transformer (NCR 66523)
- Work Week 02W31, updated risk assessment for the station battery inspection per surveillance procedure SP-522, Station Batteries, when high resistance readings were identified on one terminal of the B train safety battery
- Work Week 02W37, planned maintenance assessment

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed degraded or nonconforming conditions such as those listed in nuclear condition reports (NCRs), work schedules, or engineering documents to determine if operability was consistent with technical specifications, the Final Safety Analysis Report, 10CFR Part 50 requirements, and when applicable, NRC Generic Letter 91-18, Revision 1, Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions. The inspectors monitored licensee activities to check if operability issues were being identified at an

appropriate threshold and documented in the corrective action program, consistent with 10 CFR 50, Appendix B requirements, and licensee procedure NGGC-200, Corrective Action Program. The inspectors checked that when plant problems were identified, the resulting change in plant risk was identified and managed. The following issues, including nuclear condition reports (NCRs), were specifically checked:

- July 3, 2002, Service Water heat exchanger operability evaluation using Operating Procedure OP-103B, Operating Curves; Curve 15, Service Water Heat Exchangers
- NCR 67591, Grade 68 oil added to emergency feedwater pump EFP-2 in lieu of Synthetic 626
- NCR 67948, Service Water heat exchanger found to be 83 percent blocked with shells and grass, Safety Evaluation SE02-0098
- NCR 71304, Chilled water system pipe supports for EFIC room cooling does not match drawings

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed the operator workaround database on August 13, 2002, to determine the cumulative effects of operator workarounds. The inspectors reviewed the affect of the workarounds on reliability, availability, emergency operations, and potential misoperations of the systems involved. The inspectors checked for operator workarounds that had not been identified by the licensee by reviewing the compensatory actions list for plant operators, the operations communications log, the degraded equipment log, the operator at the controls and superintendent of shift operations logs. Additionally, the inspectors looked for workarounds while accompanying operators on routine rounds, on plant tours, and in related discussions. The inspectors checked whether deficient conditions could increase an initiating event frequency or could affect multiple mitigating systems. The inspectors also checked the cumulative effects of operator workarounds on operator correct and timely response to plant transients and accidents.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed Engineering Change (EC) 50081 for replacement of the 10 CFR 50 Appendix R chiller (CHHE-2). The inspectors verified the electrical requirements of the new chiller and checked the resulting emergency diesel generator

loading against engine operating limits and design requirements. Performance requirements of the chiller such as capacity, rating, and system output were checked for adequacy of design. Post-installation testing was checked to assure that the chiller met design specifications.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors evaluated the following post-maintenance testing activities for risk significant systems to check the following (as applicable): (1) the effect of testing on the plant had been adequately addressed; (2) testing was adequate for the maintenance performed; (3) acceptance criteria were clear and demonstrated operational readiness; (4) test instrumentation was appropriate; (5) tests were performed as written; and (6) equipment was returned to its operational status following testing. The inspectors evaluated the licensee activities against the technical specifications, the Final Safety Analysis Report, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications. The inspectors routinely checked that post maintenance testing issues were documented in the licensee's corrective action program and corrected.

The specific post-maintenance activities evaluated included:

- Post Maintenance Test 287910-02, and 282185-02: weld inspections and leak checks following replacement of raw water valve, RWV-131, in the raw water pump flush system per work order 287910-01
- Surveillance Test SP-340E, Decay Heat Pump DHP-1B, Building Spray Pump BSP-1B, and Valve Surveillance following replacing the torque switch for decay heat valve DHV-12 per work order 221840-3
- Surveillance Test SP-340B, Decay Heat Pump DHP-1A, Building Spray Pump BSP-1A and Valve Surveillance for post-maintenance test of valve DHV-8, following inspection and lubrication of linkage per work order 294268
- Surveillance Test SP-349B, Emergency Feedwater Pump EFP-2 and Valve Surveillance, following inboard and outboard pump bearing and turbine bearing oil change per work orders 292230-01/02
- Surveillance Test SP-395, CHHE-2 Appendix R Chiller Surveillance, following chiller replacement per work order 300779-07
- Surveillance Test SP-340E, Decay Heat Pump DHP-1B, Building Spray Pump BSP-1B, and Valve Surveillance following preventive maintenance on the motor actuator for decay heat pump DHP-1B recirculation isolation valve DHV-7 per work order 295015-01

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed surveillance testing or reviewed test data for risk-significant systems or components, to check compliance with technical specifications, 10 CFR Part 50, Appendix B, and licensee procedure requirements. The testing was also checked for consistency with the Final Safety Analysis Report. The inspectors checked if the testing demonstrated that the systems were ready to perform their intended safety functions. During the inspections, consistent with 10 CFR Part 50, Appendix B, Criterion XVI, and licensee procedure CAP-NGGC-200, Corrective Action Program, the inspectors verified that licensee personnel were documenting surveillance problems in the corrective action program.

Inservice test (IST) activities were reviewed to ensure testing methods, acceptance criteria, and corrective actions were in accordance with the ASME Code, Section XI, and Florida Power Corporation ASME Section XI, Ten Year Inservice Testing Program, dated May 4, 1998.

The specific surveillance activities checked included:

- SP-354A, Monthly Functional Test of Emergency Diesel Generator EGDG-1A
- SP-340E, Decay Heat Pump DHP-1B, Building Spray Pump, BSP-1B, and Valve Surveillance (IST)
- SP-711A, Core Flood Tank Boron Surveillance
- SP-120A, Anticipated Transient Without Scram - Diverse Scram System Functional Test
- SP-317, Reactor Coolant System Water Inventory Balance

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed temporary plant modifications for systems that were ranked high in risk for departures from design basis and for inadvertent changes that could challenge the systems to fulfill their safety function. Also, the specific temporary modification listed below was checked for operability implications and for inadvertent changes to the system design basis. The inspectors conducted plant tours and

discussed system status with engineering and operations personnel to check for the existence of temporary modifications that had not been appropriately identified and evaluated.

- Temporary Modification T-02-00-00-03; Reduce Flow Induced Vibration for Main Steam Safety Valves

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY
Cornerstones: Occupational Radiation Safety (OS) and Public Radiation Safety (PS)

2OS1 Access Controls To Radiologically Significant Areas (71121.01)

.1 Access Controls

a. Inspection Scope

Licensee program activities for monitoring workers and controlling their access to radiologically significant areas and tasks were evaluated. The inspectors assessed adequacy of procedural guidance; directly observed implementation of administrative and established physical controls; and assessed resultant worker exposures to radiation and radioactive material. Radiation worker and Health Physics Technician (HPT) proficiency in implementing Radiation Protection (RP) program activities were appraised.

During the onsite inspection, radiological controls for maintenance and calibration activities associated with the Make-up Tank Room General Area Radiation Monitor (RM-G6) detector were observed and discussed. In addition, access controls and monitoring for five radiologically significant tasks conducted since October 1, 2001, were evaluated. The evaluations included, as applicable, Radiation Work Permit (RWP) details; use and placement of dosimetry to monitor occupational exposures involving significant dose rate gradients; and electronic alarming dosimetry (EAD) set-points and use in loud noise areas. Effectiveness of established controls were assessed against area radiation and contamination survey results, potential for transient elevated dose rates, and occupational doses received. Physical and administrative controls and their implementation for locked-high radiation area (LHRA) and Very High Radiation Area (VHRA) entries and for storage of highly activated material within the spent fuel pool were evaluated through interviews of Health Physics technician and supervisory staff; reviews of current survey records; and direct observations of the Spent Fuel Pool area, selected auxiliary building HRA/LHRA locations, and waste processing and storage facilities.

Occupational workers' adherence to selected RWPs and 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, 2001 through June 17, 2002, were reviewed and assessed independently.

Radiological postings and physical controls for access to designated HRA or LHRA locations within the auxiliary building locations, and waste processing and storage areas were examined during facility tours. In addition, the inspectors independently measured radiation dose rates and evaluated established posting and access controls for the following areas and/or equipment:

- Auxiliary Building (AB) 95 foot (') elevation, Make-Up Pump Equipment and Valve Alley Areas
- AB 95' elevation, Triangle Room
- AB 95' elevation, High Pressure Penetration Area
- AB 119' elevation, Block Orifice Room

Radiation protection program activities and their implementation were evaluated against Title 10 Code of Federal Regulations (10 CFR) 19.12; 10 CFR 20, Subparts B, C, F, G, H, and J; Final Safety Analysis Report (FSAR) Section 11, Radioactive Waste and Radiation Protection; Improved Technical Specification (ITS) Sections 5.6.1, Procedures, Programs and Manuals, and 5.8.1, 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.

b. Findings

No findings of significance were identified.

.2 Problem Identification and Resolution

Issues identified through department self-assessments, Nuclear Assessment Section (NAS) audits, and Corrective Action Program (CAP) documents associated with radiological controls, personnel monitoring, and exposure assessments were reviewed and discussed with responsible licensee representatives. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with licensee procedure NGGC-200, Corrective Action Program, Revision (Rev.) 5.

Specific assessments, audits, and Action Request (AR)/Nuclear Condition Report (NCR) documents reviewed and evaluated in detail for this inspection area are identified in Section 2OS1 of the report Attachment.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

.1 Area Radiation Monitoring and Post-Accident Sampling Systems

a. Inspection Scope

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 conduct of performance checks for selected monitors. Established ARM alarm set-points and recently completed performance checks were evaluated and discussed in detail. Current calibration data for the following radiation monitoring equipment was reviewed and discussed with responsible staff:

- Control Room Gas Channel Radiation Monitor (RM)-A5 Calibration, and associated Control Room Rate Meter Calibration, conducted 08/01/01
- Control Room Iodine Channel RM- A5 Calibration, conducted 06/06/01
- Reactor Building Incore Instrument Removal Area, 135 ‘ elevation, RM-G18 Calibration, conducted 09/30/01
- Decant Slurry Pump/Control Room RM-G12 Calibration, conducted 06/20/01
- Containment High Range Radiation Monitor RM-G29 and RM-G30 Calibrations, conducted 10/19-20/01

Post-Accident Sampling System (PASS) equipment operability, and procedural guidance and its implementation were evaluated. The evaluation included review of current program guidance, assessment of recent surveillance tests, and status of PASS equipment/instrumentation availability and operability and review of completed and planned training.

Program guidance, performance activities, and equipment material condition for the direct radiation detection instrumentation and continuous air sampling equipment were reviewed against details documented in ITS Section 5.6, 10 CFR Parts 20 and 50, FSAR Section 11, and associated licensee procedures. Radiation detection and sampling equipment required for use in accident monitoring was reviewed against ITS 5.6.2.6, Post-Accident Sampling; applicable sections of NUREG-0737, Clarification of Three Mile Island (TMI) Action Plan Requirements, November 1980; Radiological Emergency Response Plan, Rev. 22; and Regulatory Guide (RG) 1.97, Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident, Rev. 3. Licensee guidance documents, records, and data reviewed within this inspection area are listed in Section 2OS3 of the report Attachment.

b. Findings

No findings of significance were identified.

.2 Personnel Survey Instrumentation

a. Inspection Scope

Current program guidance, including calibration and operation procedures, and its implementation to maintain operability and accuracy of selected portable survey instruments was reviewed and evaluated. During the week of August 5, 2002, 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 Health Physics (HP) staff. Instrument selection and operability determinations conducted by HPT staff prior to performing selected radiological surveys and monitoring were reviewed and discussed. The accuracy and operability determinations for instrumentation used to perform surveys in high radiation or greater areas were assessed. Responsible staff's knowledge and proficiency regarding on site instrumentation calibration activities were evaluated through interviews, record reviews, and direct observation of source calibration of the RM-G6 detector.

Operability and analysis capabilities of the whole body counting (WBC) equipment for monitoring internally deposited radionuclides and Personnel Contamination Monitor (PCM) equipment utilized for surveys of individuals exiting the radiologically controlled area (RCA) were evaluated. For both WBC and PCM equipment, current calibration and recent operational/performance test surveillance data, as applicable were evaluated. The inspectors directly observed conduct of monthly PMC-9 surveillance tests. Selected WBC data analysis sheets results were reviewed and discussed with responsible staff to assess knowledge and proficiency in resolving unknown energy peaks and evaluating WBC results. The licensee's data base of radionuclides for the ingestion and inhalation radionuclide libraries used for routine WBC analyses and for the backup master library were reviewed and evaluated.

Licensee activities associated with personnel radiation monitoring instrumentation were reviewed against ITS 5.6; 10 CFR 20.1204 and 20.1501; and applicable licensee procedures listed in Section 2OS3 in the report Attachment.

b. Findings

No findings of significance were identified.

.3 Respiratory Protection - Self-Contained Breathing Apparatus (SCBA)

a. Inspection Scope

The licensee's respiratory protection program guidance and its implementation for Self-Contained Breathing Apparatus (SCBA) equipment use were evaluated. The number of available SCBA units and their general material and operating condition were observed during tours of the Control Room and Technical Support Center. Current records associated with supplied air quality, and maintenance activities for staged SCBA equipment were reviewed and discussed. Proficiency and knowledge of staff responsible for maintaining SCBA equipment were evaluated through discussions and demonstration of a SCBA quarterly functional test. The inspectors reviewed records

and evaluated status of medical qualifications, fit test results, and training status for Emergency Response Organization personnel on-call during the week of August 5, 2002. In addition, staff members were interviewed to determine their level of knowledge of available SCBA equipment storage locations, proper use and bottle change-out, and availability of prescription lens inserts, if required.

Licensee activities associated with maintenance and use of SCBA equipment were reviewed against ITS; 10 CFR Part 20.1703; FSAR Section 11; Radiological Emergency Response Plan Details, Rev. 22; RG 8.15, Acceptable Programs for Respiratory Protection, Rev. 1, October 1999; American National Standards Institute (ANSI)-Z88.2-1992, American National Standard Practices for Respiratory Protection; and applicable licensee procedures listed in Section 2OS3 of the report Attachment.

b. Findings

No findings of significance were identified.

.4 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed selected NCR documented issues associated with area radiation monitoring equipment, portable radiation detection instrumentation, and respiratory protective program activities were reviewed and assessed. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with licensee procedure NGGC-200, Corrective Action Program, Rev. 5.

Specific documents reviewed and evaluated are listed in Section 2OS3 of the report Attachment.

b. Findings

No findings of significance were identified.

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01)

.1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

a. Inspection Scope

The operability, availability, and reliability of selected effluent process sampling and detection equipment used for routine and accident monitoring activities were reviewed and evaluated. Inspection activities included record reviews and direct observation of equipment configuration and operation. The following effluent monitoring equipment was included in the inspection:

- Radiation Monitor (RM)-A1, Reactor Building Exhaust Monitor
- RM-A2, Auxiallary Building Exhaust Monitor

- RM-A5, Control Area Exhaust Monitor
- RM-L2, Main Liquid Release Monitor
- RM-L7, Liquid Radiation Monitor

During the week of August 5, 2002, the inspectors directly observed process effluent sampling and monitoring equipment material condition, installed configurations (where accessible), and operability; evaluated local and control room data regarding flow rates and channel response checks; and reviewed and evaluated established effluent release set-points. In addition, six effluent release permits completed and documented since October 1, 2001, were reviewed, discussed, and evaluated. The inspectors assessed sample representativeness, radionuclide concentration sensitivities, achieved analyses accuracies, pre-release dose calculation completeness, and adequacy of effluent radiation monitor set-point determinations.

Both the licensee and vendor laboratories' quality control (QC) program activities for liquid and airborne sample radionuclide analyses were evaluated. The inspectors discussed and reviewed, as applicable, laboratory QC activities including current gamma spectroscopy and liquid scintillation detection equipment calibrations and daily system performance results; preparation, processing and storage of composite samples; radionuclide lower limit of detection (LLD) capabilities and achieved accuracies; and results of the quarterly cross-check spiked radionuclide samples analyzed during calendar year (CY) 2001.

The inspectors directly observed and evaluated chemistry staff proficiency in conducting weekly plant vent surveillance activities, including particulate filter and charcoal cartridge change-out. Also, technician proficiency in conducting pre-release processing, sampling, and gamma spectroscopy analyses was observed and evaluated. Interviews were conducted with two chemistry technicians to evaluate staff proficiency and knowledge of effluent release requirements, equipment capabilities, and procedural details.

Program guidance, equipment configuration and material condition for the effluent sampling and monitoring equipment were reviewed against details documented in ITS 5.6.1; 10 CFR Part 20, FSAR Section 11; Offsite Dose Calculation Manual (ODCM), Rev. 25; 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, and approved procedures listed in Section 2PS1 of the report Attachment.

In-place liquid effluent release equipment, observed task evolutions, and offsite dose results were evaluated against 10 CFR Part 20 requirements, Appendix I to 10 CFR Part 50 design criteria, ITS 5.6.1; FSAR Section 11 details, ODCM Rev. 25 specifications; and applicable procedures listed in Section 2PS1 of the report Attachment. Laboratory and sample processing QC activities were evaluated against 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.

b. Findings

No findings of significance were identified.

.2 Problem Identification and Resolution

a. Inspection Scope

NCR issues documented for effluent processing and monitoring activities were reviewed. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with licensee procedure NGGC-200, Corrective Action Program, Rev. 5. Five NCRs documented in Section 2PS1 of the report Attachment were reviewed and evaluated in detail.

b. Findings

No findings of significance were identified.

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

.1 REMP Implementation

a. Inspection Scope

The licensee's 2001 Annual Radiological Environmental Operating Report was reviewed and discussed with licensee representatives. The inspectors assessed data analyses, surveillance results, and land-use census information. Report details were evaluated for required sample types, sampling locations, and monitoring frequencies.

During the week of August 5, 2002, the inspectors toured and evaluated selected sampling stations for location and material condition of REMP equipment. Collection of air particulate filters and charcoal cartridges and determinations of flow rates were observed at air sampling stations C07, C40, and C46. The proficiency and knowledge of technicians collecting the samples and the adequacy of collection techniques were assessed. The placement and material condition of thermoluminescent dosimetry (TLD) were evaluated at monitoring locations C07, C14G, C40, C64, C72, C75, and C76. Using Global Positioning System equipment, the inspectors independently determined selected TLD locations and compared the results to the locations documented by the licensee in the Annual Radiological Environmental Operating Report.

Program guidance, procedural implementation, and environmental monitoring results were reviewed against ITS 5.6; 10 CFR Parts 20 and Appendix I to 10 CFR Part 50 design criteria requirements; FSAR Section 12 details; ODCM, Rev. 25 guidance; and applicable procedures listed in Section 2PS3 of the Attachment to this report. Specific QC activities associated with sample collection and analyses, and data reporting were evaluated against 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.

b. Findings

No findings of significance were identified.

.2 Meteorological Monitoring Program

a. Inspection Scope

Licensee program activities to assure accuracy and availability of meteorological data were evaluated. The inspectors reviewed and evaluated data obtained from the primary and backup meteorological towers. During the week of August 5, 2002, the inspectors toured meteorological facilities and assessed equipment material condition, observed conduct of the weekly performance test of the propane generator associated with the primary meteorological tower, and reviewed instrument operability and current meteorological data accuracy within the Control Room. In addition, the inspectors compared the most recent meteorological monitoring data against licensee assumptions used for effluent releases and assessments.

The meteorological program implementation and activities were reviewed against 10 CFR Part 20; ITS 5.6.1; FSAR Section 2.3.3; ODCM, Rev. 25; and applicable procedures documented in Section 2PS3 of the report Attachment.

b. Findings

No findings of significance were identified.

.3 Unrestricted Release of Materials from the Radiologically Controlled Area (RCA)

a. Inspection Scope

Radiation protection program activities associated with the unconditional release of materials from the RCA were reviewed and evaluated. During the week of August 5, 2002, the inspectors directly observed surveys of potentially contaminated materials released from the RCA using Small Article Monitor (SAM)-9, ITM-4T, and Tool Contamination Monitor (TCM) -2 equipment. In addition, SAM-9 equipment sensitivity was assessed using a low-level radioactive source, i.e., activity approximately 5000 disintegrations per minute. Current calibration and performance check data were reviewed and discussed. To evaluate the appropriateness and accuracy of release survey instrumentation, radionuclides identified within the most current waste stream analyses were compared against current calibration and performance check source radionuclide types.

The licensee practices and implementation of monitoring for unconditional release of materials from the RCA were evaluated against 10 CFR Part 20; ITS 5.6.1; FSAR Section12; and applicable licensee procedures. The applicable licensee guidance,

calibration records, and performance data are documented in Section 2PS3 of the report Attachment.

b. Findings

No findings of significance were identified.

.4 Problem Identification and Resolution

a. Inspection Scope

Licensee NCRs associated with REMP operations and with program activities associated with unrestricted release of materials from the RCA were reviewed and evaluated. Specific NCRs reviewed and evaluated in detail are identified in Section 2PS3 of the Attachment to this report. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with licensee procedure NGGC-200, Corrective Action Program, Rev. 5.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection (PP)

3PP1 Access Authorization (AA) Program (Behavior Observation Program)

a. Inspection Scope

During the period of August 19 through August 23, 2002, the inspector reviewed the licensee's behavioral observation program to evaluate the effectiveness and proper implementation of the behavioral observation portion of the personnel screening and fitness for duty (FFD) program. Five representatives of licensee management and six representatives assigned escort duties were interviewed to determine their understanding of the behavior observation program. The inspector evaluated the effectiveness of each individual's training, including their ability to recognize aberrant behavioral traits, indications of narcotic and alcohol use, and knowledge of work call-out reporting procedures.

The inspector reviewed the licensee's Semi-Annual FFD report for the period July through December 2001, and a sample of the licensee's Nuclear Condition Reports (NCRs) and Safeguards Event Logs for the period January through September 2001, and January through April 2002, to evaluate the licensee's threshold for recommending for-cause testing for events related to human performance. In addition, the inspector interviewed the Access Authorization Manager and reviewed licensee's procedures and controls used by supervisors to determine whether employees were continuously observed in accordance with the established continual behavior observation program.

The licensee's activities were evaluated against requirements in the Crystal River 3 Nuclear Plant Physical Security Plan, associated plant procedures, and 10 CFR Part 26, Fitness For Duty Program. Specific licensee documents evaluated are described in the attachment to this report.

b. Findings

No findings of significance were identified.

3PP2 Access Control

a. Inspection Scope

During the period of August 19 through August 23, 2002, the effectiveness of the licensee's access control procedures and associated equipment designed to detect and prevent the introduction of contraband into the protected area were evaluated. On August 20, 2002, the inspector evaluated via direct observation the adequacy of the licensee's equipment testing procedures performed by a licensee representative on in-use access control equipment and on in-service standby equipment at the site's primary personnel access portal. The inspector evaluated the equipment testing procedure to determine if testing was performance based and challenged the presently installed and configured site equipment. Through observation of licensee performance testing, the inspector assessed the adequacy of the card readers and biometric hand readers located at the primary personnel access portal to prevent unauthorized entry into the protected area and to preclude multiple entries without logging out of the protected area. In addition, the inspector reviewed the licensee's process for restoring search equipment to service following repair and post maintenance testing. The inspector also observed and assessed in-processing searches of personnel and packages at the primary personnel access portal and search of vehicles at the Sally Port.

The licensee's Key and Lock Program and associated procedures for limiting and controlling vital area keys were examined, including key inventories for the first and second quarters of 2002. A random audit of security daily shift reports for the current year was conducted to verify each shift's accountability for vital area keys. On August 22, 2002, the inspector verified operations accountability for Emergency Operations Keys maintained in the Control Room to gain access to vital equipment during an emergency. The inspector also discussed with the Access Authorization staff safeguards in place to protect against unauthorized access to the site security computers from outside the protected area.

The licensee's procedures and processes for granting unescorted access to vital area equipment were evaluated to determine if access was granted to only those personnel identified as having a need for such access. Specifically, site access authorization personnel were interviewed to determined their knowledge associated with supervisors' actions when maintaining the employee monthly protected and vital area access list. The inspector assessed a sample of the licensee's evaluations and corrective actions identified in the annual Plant Security Assessment Reports for 2001 and 2002, to determine if observations related to access controls were being appropriately dispositioned.

The licensee's activities were evaluated against requirements contained in the Crystal River 3 Physical Security Plan, associated procedures, 10 CFR 73.55, Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Against Radiological Sabotage, and 10 CFR 73.56, Personnel Access Authorization Requirements for Nuclear Power Plants. Specific licensee documents evaluated are described in the attachment to this report.

b. Findings

No findings of significance were identified.

3PP3 Response to Contingency Events (71130.03)

The Office of Homeland Security (OHS) developed a Homeland Security Advisory System (HSAS) to disseminate information regarding the risk of terrorist attacks. The HSAS implements five color-coded threat conditions with a description of corresponding actions at each level. NRC Regulatory Information Summary (RIS) 2002-12a, dated August 19, 2002, "NRC Threat Advisory and Protective Measures System," discusses the HSAS and provides additional information on protective measures to licensees.

a. Inspection Scope

On September 10, 2002, the NRC issued a Safeguards Advisory to reactor licensees to implement the protective measures described in RIS 2002-12a in response to the Federal government declaration of threat level "orange." Subsequently, on September 24, 2002, the OHS downgraded the national security threat condition to "yellow" and a corresponding reduction in the risk of a terrorist threat.

The inspector interviewed licensee personnel and security staff, observed the conduct of security operations, and assessed licensee implementation of the threat level "orange" protective measures. Inspection results were communicated to the region and headquarters security staff for further evaluation.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Review

.1 Protected Area Equipment Performance Index, Personnel Screening Program Performance and Fitness for Duty/Personnel Reliability Program Performance PIs

a. Inspection Scope

The inspector evaluated the licensee's Performance Indicator (PI) data associated with the Intrusion Detection System (IDS) and Closed Circuit Television (CCTV) to determine

if the licensee provided accurate reporting for compensatory time relative to equipment degradation for the protected area Equipment Performance Index PI. The evaluation included a sample review of tracking and trending reports, security logs, and security event reports for the year of 2001 and the first quarter of 2002. A review of a sample list of licensee's event reports and security logs for the same period were also conducted to determine the accuracy of PI data associated with the Personnel Screening Program Performance and Fitness for Duty/Personnel Reliability Program Performance PIs.

b. Findings

No findings of significance were identified.

.2 Initiating Event and Mitigating Systems Cornerstone

a. Inspection Scope

The inspectors checked the accuracy of the performance indicators for reactor coolant system activity and leakage. Performance indicator data submitted in June 2002, was compared for consistency to data obtained through the review of chemistry department records, monthly operating reports, and control room records from September 2001 through June 2002. During routine plant tours, the inspectors checked proper controls for plant personnel exposure and radioactive releases.

a. Findings

No findings of significance were identified.

.3 Occupational Radiation Safety Performance Indicator Verification

a. Inspection Scope

The licensee's Occupational Exposure Control Effectiveness performance indicator (PI) results for the Occupational Radiation Safety Cornerstone were reviewed for the period October 1, 2001 through July 2, 2002. For the review period, the inspectors reviewed data reported to the NRC, and subsequently sampled and evaluated applicable corrective action program events and selected Health Physics Program records. The reviewed records included selected health physics shift logs, contamination occurrence logs and assessments, internal exposure evaluations, and personnel exposure investigation reports and licensee NCRs listed in Sections 2OS1 and 4OA1 of the report Attachment. The licensee's dispositioning of the reviewed issues and events was evaluated against NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 2.

b. Findings

No findings of significance were identified.

.4 Public Radiation Safety Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed and discussed the Radiological Control Effluent Release Occurrence PI results for the Public Radiation Safety Cornerstone from October 1, 2001 through July 31, 2002. For the review period, the inspectors reviewed data reported to the NRC and evaluated selected radiological liquid and gaseous liquid and gaseous effluent release data, selected out-of-service process radiation monitor and compensatory sampling data, abnormal release results, and NCRs documented in Sections 2PS1 and 4OA1 of the report Attachment.

The licensee's classification of reviewed data was evaluated against NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 2.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

a. Inspection Scope

The inspectors routinely checked that equipment, human performance, and program issues were being entered into the licensee corrective action program and that corrective actions were implemented in accordance with licensee procedure CAP-NGGC-0200, Corrective Action Program and 10 CFR Part 50, Appendix B. Specifically, the inspectors checked that NCR 60607 was written when a valve test was not done as scheduled. The inspectors checked if the licensee adequately evaluated the problem and specified appropriate corrective actions to prevent recurrence. The inspectors also checked that the corrective actions had been completed and independently checked the extent of condition. The inspectors completed similar checks for nuclear condition report NCR 66523, written after a loss of preferred power to one plant safety bus. The inspector checked that the licensee appropriately considered reportability consistent with 10 CFR 50.73. In both cases, the inspectors checked if corrective actions had been implemented and if the occurrence had been reviewed by plant management as specified by licensee procedures.

b. Findings

(Green) The inspectors determined that the licensee's corrective actions for a failed power cable were insufficient to prevent recurrence of a partial loss of offsite power event.

On June 17, during an electrical storm, power from the unit Offsite Power Transformer was lost when a ground fault developed in cabling between the transformer and a 4160 volt Engineered Safeguards bus. After jacketing of the cable, the as-left cable meggar readings showed resistance to ground values below an industry minimum standard. The licensee concluded in Engineering Change 49604R0 that the cable insulation

resistance was adequate and that it was acceptable to return the transformer to service. On July 20, a second non-weather-related cable failure occurred. When the faulted cable was inspected, approximately 0.5 gallons of water was drained from the cable jacketing in the vicinity of the fault. Subsequently, when the cables were dried to the maximum extent practical, and taped with electrical tape, resistance to ground readings above the industry standard minimum were obtained.

Following the cable failures, the inspectors determined that the licensee's corrective actions for the June 17 event were insufficient to prevent recurrence on July 20, 2002. The ineffective corrective action is considered a licensee performance deficiency and the transformer cable failures were evaluated by the inspectors using the NRC Significance Determination Process (SDP). A regional senior reactor analyst performed a validation of the Phase II SDP using the NRC's Crystal River 3, Probabilistic Risk Assessment model and the licensee's full scope probabilistic risk assessment model. In both cases, the loss of offsite power frequency was increased by an order of magnitude and the delta core damage frequency remained less than $1x10^{-6}$. This analysis confirmed a result of Green.

The offsite power transformer power cables were outside of the plant protected area and were not safety related equipment. The cables were maintained with normal utility maintenance procedures and practices. As such, the finding did not involve any violation of NRC requirements.

4OA3 Event Followup

.1 (Closed) Licensee Event Report 50-302/02-001-00: Automatic Start of An Emergency Diesel Generator Due to Loss of the Offsite power Transformer. This licensee event report (LER) reported two actuations of an emergency power source, the first on June 17, 2002, and the second on July 20, 2002. The events were reviewed by the inspectors and resulted in one finding of very low safety significance (Green) discussed in Section 4OA2 of this report. Because the equipment which caused the event, the offsite power transformer cabling, was outside of the plant protected area and was not safety related equipment, the finding did not result in any violation of NRC requirements. The LER is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The resident inspectors presented the inspection results to Mr. D. Young and other members of licensee management at the conclusion of the inspection on October 7, 2002. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. The licensee did not identify any proprietary information.

4OA7 Licensee Identified Violations

The following violation of very low safety significance (green) was identified by the licensee and is a violation of NRC requirements which met the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for disposition as an non-cited violation (NCV).

ITS 5.6.1 requires written radiation protection procedures covering access control to radiation areas, including a Radiation Work Permit (RWP) system, to be established, implemented, and maintained as recommended in Appendix A, of RG 1.33, Quality Assurance Program Requirements, Rev. 2, February 1978. On February 12, 2002, the failure to adequately develop and implement RWP 02-0025 radiological controls for Decay Heat Valve -32 maintenance activities resulted in unplanned intakes of radioactive material and internal exposures to three workers as described in NCR 55691. Because the licensee's personnel contamination monitors identified the potential for internal contamination and subsequent detailed licensee evaluations determined no regulatory occupational dose limits were exceeded, this violation is of low safety significance and is being treated as a non-cited violation.

Supplementary Information

A. PARTIAL LIST OF PERSONS CONTACTED

Florida Power Company

M. Annacone, Manager, Operations
S. Bernhoft, Supervisor, System Engineering
W. Brewer, Manager, Outages and Scheduling
R. Davis, Manager, Training
J. Franke, Plant General Manager
S. Gangi, Senior Security Specialist
P. Gerardin, Lead Assessor, Nuclear Assessment Section
C. Gurganus, Manager, Maintenance
D. Herrin, Lead Engineer, Licensing & Regulatory Affairs
D. Roderick, Director, Site Operations
S. Johnson, Supervisor, Self-Evaluation
M. Folding, Superintendent, Security
S. Powell, Supervisor, Licensing
R. Prince, Radiation Protection Manager
J. Stephenson, Supervisor, Emergency Preparedness
J. Terry, Manager, Engineering
R. Warden, Manager, Nuclear Assessment
D. Young, Vice President, Crystal River Nuclear Plant
M. Folding, Security Manager

NRC
L. Wert, Chief, Reactor Projects Branch 3, NRC Region II

B. ITEMS OPENED AND CLOSED

Closed

50-302/02-001-00	LER	Automatic Start of An Emergency Diesel Generator Due to Loss of the Offsite Power Transformer

Attachment

C. LIST OF DOCUMENTS REVIEWED

2OS1 Access Control To Radiologically Significant Areas (71121.01)

Procedures, Instructions, Lesson Plans, and Manuals

- Health Physics Procedure (HPP) - 106A, Radiation Work Permit Procedure, Revision (Rev.) 10
- HPP-202A, Radiological Surveys and Inspections, Rev. 20
- HPP-213A, Area and Equipment Postings, Rev. 11
- HPP-214, Very High Radiation Area Controls, Rev. 3
- HPP-216, Diving Operations in Radiological Environments, Rev. 4
- CRI-414, Radiation Protection Shift Activities, Rev. 3

Radiation Work Permits (RWPs)

- RWP-0483, Change Out Post Filter, conducted 03/12/02
- RWP-0483, Sluice Primary Resin, conducted 03/15/02
- RWP-0483, Change Out Post Filter, conducted 05/20/02
- RWP-0588, Adjust Packing on Make-Up Valve 41, conducted 05/18/02
- RWP-0483, Move Resin HIC to On Site Storage Cask, conducted 05/21/02

Records and Data

- Health Physics Shift Logs, Selected Entries July 1, 2002, through August 6, 2002
- Contamination Occurrence Logs, October 1, 2001, through August 5, 2002
- Personnel contamination event records and supporting dose assessment data, for selected evaluations conducted from October 1, 2001, through August 5, 2002
- Personnel Exposure Investigation Data Sheets documented from October 1, 2001, through June 12, 2002
- Initial Intake Assessment Data Sheets documented from October 1, 2001, through June 12, 2002

Audits, Self-Assessments, and Nuclear Condition Report (NCR) Documents

- Nuclear Assessment Section (NAS), Environmental and Radiation Control (ERC) Assessment Report Number (No.) C-ERC-01-01, dated August 29. 2001.
- NAS, Offsite Dose Calculation Manual (ODCM) Assessment Report No. C-ODCM-01-01, dated December 18, 2001
- Self-Assessment Report No. SSAERC 51190, conducted March 4 -30, 2002
- NCR-00049102, Contaminated Worker with DRP, 10/03/01
- NCR-00050103, Incore Reel at Receiving Warehouse, 10/18/01
- NCR-00052536, Hot Particles Found in the Auxiliary Building, 12/11/01
- NCR-00064400, Make-Up Pump - 1B, High Radiation Area Posting, 6/29/02
- NCR-00065752, High Radiation Area Swing Gate Open, 7/12/02

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

Procedures, Standing Orders, Guidance Documents

- Chemistry Procedure (CH) -401 E, RM-A5 Calibration, Rev. 1
- Surveillance Procedure (SP)-166, Calibration of the General Area Radiation Monitor (RM-G) 29 & RM-G30, Rev. 14
- Surveillance Procedure (SP)-7011 , RM-A5 Iodine Channel Calibration, Rev. 2
- Chemistry Sampling Procedure (CH)-630A. Post-Accident Sampling and Analysis of the Reactor Building Vent, Rev. 2
- CH-630B. Post-Accident Sampling and Analysis of the Auxiliary Building Vent, Rev. 2
- CH-632A. Post-Accident Sampling and Analysis of the Reactor Coolant System, Rev. 4
- CH-601, Breathing Air Sampling, Rev. 4
- Health Physics Procedure (HPP)-320, Whole Body Counting System Operation, Rev. 13
- HPP-320, Whole Body Counting System Calibration, Rev. 6
- HPP-414, Calibration and Operation of Eberline Personnel Contamination Monitors Rev. 10
- HPP-423, Ion Chamber Calibration, Rev. 8
- HPP-424, Calibration of Neutron Instruments, Rev. 6
- HPP-433, Operation and Calibration of the National Nuclear Portal Monitor, Rev. 4
- HPP-502, Respirator Inspection and Maintenance, Rev. 10
- HPP-507, Respiratory Equipment Leak Testing, Rev.1
- HPP-515, IAP Operation and Maintenance, Rev. 2
- Nuclear Operations Training, Special Technical Training, MSA SCBA Users Practical Training, Rev. 1

Records, Worksheets, and Drawings

- Surveillance Procedure (SP) 335A, RM-G6 Functional Test, conducted 08/07/02
- SP 335A, Quarterly Radiation Monitoring Instrumentation Functional Test , conducted 5/09/2002 and 7/13/2002
- SP 335C, Radiation Monitoring Instrumentation Functional Test of RM-A1, A2, A6, A11, and A12, conducted 07/19/2002, 8/02/2002
- SP 335D, RM-A1 (M), (H) and RM-A2 (M) (H) Source Checks, conducted 7/27/2002,
- HPP-414, Monthly Operational Checks (6/2002) and Weekly Alarm Checks (6/13/2002) for Personnel Contamination Monitor (PCM)-1B/1C Equipment Serial Numbers (S/N) 7640-01, 7640-02, 7640-05, 119, 120, 121, 122, 123, and 124,
- HPP-420, Radiation Calibration Certificate Portable Air Sampling Equipment Calibration Records associated with the Eberline Model RAS-1, SN 39914-05, conducted 9/24/001; RADeCO Model H-809V-1, S/N 3830, 3835, 6364, 4377, 3836, 6240, 3119, 6902, 3199, 3117, 3933, 2827, and 3116 conducted 9/17-18/2001
- Radiation Protection Instrument Calibration Certificate records for Eberline RO-20 survey meter, SN 2444 and RO-2 survey meter SN 5108, conducted 3/11/02
- HPP -433, Radiation Protection Instrument Calibration Certificate records for Gamma 60 Portal Monitor, SN 980017, 12/19/01; SN 930380, 2/15/02; SN 910390, 8/14/01; and Response Checks from October 2001, through June 2002,
- Certificates of Calibration for Ludlum Measurements Neutron Measurement Survey equipment Model 12-4 (SN 141277) and 42-31 (SN PR144368); and Model 12-4

(SN 141275) and 42-31 (SN PR144365) conducted 04/08/02 Neutron Survey
- Whole Body Counter (WBC) Calibration Records, completed 05/01/02,
- WBC Daily Quality Control and Background Performance Records, June 2002
- WBC Radionuclide Library Data, Inhalation, Ingestion, and Master Libraries; as of 7/09/02,
- SCBA Monthly Inspection Data Sheets, March - June 2002
- Annual Grade D Air Sample Results for Fill Station Equipment, 6/19/2002
- Emergency Response Weekly On-Call List, dated 08/05/2002,
- Quarterly PT-160A PASS Standby Operation Testing Results October 2001 through April 2002

AR/NCR Documents

- NCR-00051971, PCM Efficiency Out of Specification, 11/27/01
- NCR-00056015, Air Leak on SCBA Unit, 2/19/02
- NCR-00057048, RM-G26 and RM-G27 Calibration Not Performed in Accordance With HPP 436, 3/07/02
- NCR-00060515, Source Checks for Friskers, 5/09/2002,
- NCR-00060896, Respirator Fit Test Data Is Not Being Entered into PADS, 5/16/02,
- NCR-00061539, SCBA Cylinder in Emergency Kit with Low Pressure, 5/30/02

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01)

Procedures, Guidance Documents, and Operating Manuals

- CH-220V, RM-L7 Calibration, Rev., 6
- Nuclear Chemistry Quality Control Manual, Rev. 1
- CH-230A, Gamma Specroscopy System Operating Instructions, Rev.0
- SP-736G, SDT-1, Release To The Discharge Canal, Rev. 8
- CRI-357, Changing Process Atmospheric Radiation Monitoring System Filters, Rev. 4
- SP-736F, SDT-1, Turbine Building Release To The Settling Ponds, Rev. 3
- CHA-206B, Tritium Air Sample, Rev. 8
- CH-616, RM-A2 Sampling, Rev. 4
- SP-731A, Auxiliary Building Ventilation Continuous Release, Rev. 6
- Operating Instruction (OI)-29, Liquid Release Sampling Request, Rev. 14
- Crystal River Off-site Dose Calculation Manual, Rev. 25
- Crystal River Off-site Dose Calculation Manual Records Transmittal Form 09/06/01

Effluent Monitoring Program Records and Effluent Release Permits Reviewed

- Radiation Monitor RM- A1 and RM- A2, Calibration Data 07/31/01
- Radiation Monitor RM- L7, Calibration Data 08/21/01
- Radiation Monitoring Maintenance Report Data, Previous 12 Months, June 29, 2002
- Gamma Spectroscopy Analysis Data for SDT-1 Liquid Tank release 08/07/02
- Gaseous Effluent Permit Auxillary Building Exhaust, conducted 08/08/02
- Gaseous Effluent Permit Auxillary Building Exhaust conducted 07/31/02
- Gaseous Effluent Permit Reactor Building Purge, conducted 05/17/02
- Liquid Effluent Permit SDT-1, conducted 08/07/02

- Liquid Effluent Permit WDT-10A, conducted 03/07/02
- Liquid Effluent Permit WDT-1A, conducted 04/24/02

Audits, Self Assessments, and NCR Documents

- NAS, Offsite Dose Calculation Manual (ODCM) Assessment Report No. C-ODCM-01-01, dated December 18, 2001
- NCR-52926, Overall SW System Leakage Trending Upward, 12/18/01
- NCR-60352, RM-A6 Gas Channel Set Point Change, 05/06/02
- NCR-60966, RM-L7 Set Point Determination During Condensate Release, 05/17/02
- NCR-56413, Intralaboratory Cross Check Program, 02/25/02
- NCR-59807, Turbine Building Sump, 04/24/02

Annual Reports

- Crystal River-3, 2001 Annual Radioactive Effluent Release Report, dated 04/18/02

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

- Crystal River 3, Off-Site Dose Calculation Manual, Rev. 25
- HPP-418, TCM Calibration and Operation, Rev. 8
- HPP-438, Calibration and Operation of NE Technology Model SAM-9, Rev. 0
- HPP-441, Calibration and Operation of NNC Model ITM-4T, Rev. 1
- SP-153, Primary System Meteorological Monitoring Instrumentation Calibration, Rev. 10
- SP-157A, Meteorological System Surveillance, Revision 18
- SP-158, Backup System Meteorological Monitoring Instrumentation Calibration, Rev. 22

Records

- Annual Calibration of the following contamination monitors: SAM [Small Article Monitor]-9, S/N 265, conducted 07/02/2002; ITM-4T, S/N 370263, conducted 03/19/2002; and TCM [Tool Contamination Monitor], S/N 463, conducted 04/17/2002
- Semiannual calibration of primary meteorological monitoring instrumentation (per SP-153); conducted 08/20/2001 and 02/05/2002
- Semiannual calibration of backup meteorological monitoring instrumentation (per SP-158): conducted 01/08/2002
- Most recent calibration of State of Florida air-sampling equipment: location C07 S/N CA918984, conducted 06/10/2002; location C40, S/N 8191862, conducted 06/07/2002; and location C46, S/N 1695321, conducted 06/07/2002

NCR Documents

- NCR 00045488, Poor Condition of Primary Met. Tower Building, dated 07/25/2001
- NCR 00051051, Contaminated Tool, dated 11/05/2001
- NCR 00052110, Backup Contamination Monitor Out of Service, dated 11/28/2001
- NCR 00052534, Deficiencies in Control of Environmental Sampling Vendor, dated 12/04/2001

- NCR 00057441, ITM-4T Gamma Release Monitor Out of Calibration, dated 03/09/2002
- NCR 00060176, Backup Met. Tower Wind Direction Appears Incorrect, dated 05/02/2002
- NCR 00068397, Rad. Prot. Rad. Monitor ITM-4T Failure to Detect Rad. Source, dated 08/07/2002

Audits and Self-Assessments

Annual Reports

- Crystal River 3, 2001 Annual Radiological Environmental Operating Report, submitted 05/13/2002

3PP1 Access Authorization (Behavior Observation Program) and 3PP2 Access Control

Crystal River 3 Physical Security Plan (Sections applicable to the inspection being performed)

Licensee Procedures:

Fitness for Duty For-Cause Chemical Testing, SEC-NGGC-2142, Revision 9
Fitness for Duty Program, SEC-NGGC-2140, Revision 17
Reporting of Safeguards & Fitness For Duty Events, SEC-NGGC-2147, Revision 0
Continual Behavioral Observation Program, SEC-NGGC-2130, Revision 11
Nuclear Workers Screening Program for Unescorted Access, SEC-NGGC-2101, Revision 20
Compliance Procedure, CP-141, Safeguards Events & FFD Reporting Requirements, Revision 12
Restrained Components & Key Control Procedure, CP-123, Revision 47
Security Key & Lock Controls, SS-301, Revision 12
Security Equipment Testing, Calibration, Inspection & Maintenance, SS-300, Revision 36
Security Access Controls, AI-803, Revision 2
Security Force Personnel General Orders, Duties & Responsibilities, Revision 43

Security Assessment Reports:

C-SC-01-01, dated 5/17/01
C-SC-02-01. dated 5/9/02
Access Authorization/Fitness for Duty Assessment Report, 02-07-AA/FFD-C, dated 6/14/02

NCRs:

00064283, 6/28/01, Unsafe Plant Conditions On AHF-27A/B/C Intake Screens
00044789, 7/11/01, Individual Injured In NAB Document Area by Rolling Shelf
00047829, 9/12/01, Incorrect Date Entered On Permanent Record
00048645, 9/26/01, Packaged Radioactive Material Fell Off Trailer
00054284, 1/18/02, Assessment Capability Deficiency
00057534, 3/15/02, Computer Records Retention

4OA1 Performance Indicator Verification (71151)

Records

- Florida Power Corporation TLD Number General Exposure Listing 01/01/2001 through 12/31/2001, and 01/01/2002 through 8/5/2002,
- Calendar Year (CY) 2001, Electronic Alarming Dosimeter Alarm Summary,
- Electronic Alarming Dosimeter Evaluations, dated 05/18/02 and 05/20/02
- Crystal River-3, 2001 Annual Radioactive Effluent Release Report, dated 04/18/02

Audits, Self Assessments, and Nuclear Condition Report (NCR) Documents

- NAS, ERC Assessment Report Number (No.) C-ERC-01-01, dated August 29. 2001.
- NAS, ODCM Assessment Report No. C-ODCM-01-01, dated December 18, 2001
- Self-Assessment Report No. SSAERC 51190, conducted March 4 -30, 2002