UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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January 29, 2001

Carolina Power & Light Company
ATTN: Mr. John W. Moyer
Vice President
H.B. Robinson Steam Electric Plant
Unit 2
3851 West Entrance Road
Hartsville, SC 29550

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT- NRC INSPECTION REPORT 50-261/00-05, 72-03/00-01

Dear Mr. Moyer:

On December 30, 2000, the Nuclear Regulatory Commission (NRC) completed an inspection at your Robinson facility including the Independent Spent Fuel Storage Installation. The enclosed report presents the results of that inspection which were discussed with you and other members of your staff on January 8, 2001.

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.

No findings of significance were identified by the NRC.

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 Public Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,
/RA/
Brian R. Bonser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No.: 50-261, 72-03
License No.: NPF-23, SNM 2502

Enclosure: Inspection Report
cc w\encl: (See page 2)

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Enclosure

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	50-261, 72-03
License No:	NPF-23, SNM 2502
Report No:	50-261/00-05, 72-03/00-01
Licensee:	Carolina Power & Light (CP&L)
Facility:	H. B. Robinson Steam Electric Plant, Unit 2
Location:	3581 West Entrance Road Hartsville, SC 29550
Dates:	October 1 - December 30, 2000
Inspectors:	B. Desai, Senior Resident Inspector A. Hutto, Resident Inspector G. Hopper, Senior Operations Engineer (1R11.1) G. Salyers, Emergency Preparedness Inspector (1EP2, 1EP3, 1EP4, 1EP5, 4OA1) R. Dodson, Health Physicist, Region IV (2PS1) R. Carrion, Project Engineer (2OS1, 2OS2, 4OA1, 4OA5) F. Wright, Senior Health Physicist (2OS3, 4OA7)
Approved by:	B. Bonser, Chief Reactor Projects Branch 4 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000261-00-05, on 10/01 - 12/30/2000, Carolina Power & Light Company, H. B. Robinson Steam Electric Plant, Unit 2. Resident inspection report.

The inspection was conducted by resident inspectors, and regional health physicists, an operations engineer, an emergency preparedness inspector and a project engineer. No findings of significance were identified during this inspection. The significance of issues is indicated by their color (green, white, yellow, red) as determined by the Significance Determination Process in Inspection Manual Chapter 0609 (See Attachment).

A. Inspector Identified Findings

None

B. Licensee Identified Findings

Violations of very low significance which were identified by the licensee have been reviewed by the inspectors. Corrective action taken or planned by the licensee appear reasonable. These violations are listed in section 4OA7 of this report.

Report Details

Summary of Plant Status

The plant operated at 100 percent power until October 6 when power was reduced to 80 percent for heater drain pump maintenance. The unit returned to full power operations on October 7 and continued to operate at 100 percent power until November 22 when power was reduced to 97 percent to allow troubleshooting on a frozen steam generator power operated relief valve (PORV) pressure sensing line. The unit returned to full power operations the same day and continued to operate at 100 percent power through the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and licensee procedure OMM-21, "Operation During Adverse Weather Conditions," Revision 20 which is applicable for adverse weather conditions. This review was performed to assess licensee readiness for coping with potential cold conditions prior to the onset of seasonal cold weather. The inspectors also performed a plant walkdown to verify that freeze protection circuits/panels were working, protective coverings were in place, and portable heaters were staged to protect risk significant plant instrumentation vulnerable to cold conditions. Additionally, during actual cold weather conditions, the inspectors periodically observed the status of freeze protection circuits and portable heaters to verify operability.

The inspectors reviewed the licensee's follow-up and corrective actions related to a main steam pressure sensing line that froze due to gaps in the insulation (condition report (NCR) 25913). The freezing of the sensing line caused a steam generator (SG) PORV to lift. Licensee corrective actions included a walkdown of risk significant sensing lines vulnerable to cold weather and repair of the areas where the insulation was noted to have degraded.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

The inspectors reviewed plant documents and performed partial system walkdowns to verify proper equipment alignment and to identify any discrepancies that could impact the safety function of the system. Partial system walkdowns included:

- A and C Deepwell Pumps
- Residual Heat Removal (RHR) System Train B
- Safety Injection (SI) A, B, and C Pumps
- Emergency Diesel Generator (EDG) B
- Auxiliary Feedwater (AFW) Steam Driven and B Train

The inspectors reviewed corrective actions associated with NCR 25647 written as a result of the B SI pump suction valve being found in a condition inconsistent with plant drawings and procedures. The valve was required to be in a locked open position. The inspectors found the valve in the correct position but the chain used to lock the valve was not secured to the yoke rendering the valve unlocked. A walkdown of all locked valves on risk significant systems was performed by the licensee. No additional discrepancies were noted.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Following a review of the UFSAR and on-going maintenance activities, the inspectors conducted a tour of the following areas in the plant to determine licensee control of transient combustibles and ignition sources, material condition, fire detection and suppression system condition, and fire barrier condition.

- SI Pump Room
- Component Cooling Water (CCW) Pump Room
- Steam Driven AFW Area (Turbine Bldg.)
- A/B Battery Room / MCC-5 / Relay Room

In addition, the inspectors observed a fire drill that simulated a fire in the charging pump room. The inspectors evaluated fire brigade response timeliness, communications, equipment status and availability, and overall fire fighting strategy.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed the UFSAR to identify areas that could be affected by internal or external flooding and reviewed the risk analysis that identified the plant areas with greatest contribution to core damage frequency due to flooding concerns. The inspectors walked down the auxiliary building first floor, the EDG rooms, and the station battery rooms to assess flood protection measures.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

.1 Biennial Review

a. Inspection Scope

The inspectors reviewed a segment of the licensee's annual operating examination and evaluated its effectiveness in providing a basis for assessing operator knowledge of subjects covered in the requalification program. Examination quality, licensee effectiveness in incorporating plant, industry and student feedback into the training program, and examination development methodology were evaluated for compliance with guidelines contained in the Operations Training Administrative Procedures. The inspectors observed the annual dynamic simulator examination for one shift of operators and one staff crew to evaluate the adequacy of licensee training on high risk operator actions. During these observations, the inspectors assessed licensee evaluator effectiveness in identifying operator performance deficiencies requiring supplemental training. The inspectors also evaluated and observed a portion of the walkthrough examination administered during this requalification segment.

The inspectors reviewed and evaluated the licensee's remedial training program for selected operator deficiencies identified during the previous year. The inspectors also reviewed a sample of on-shift licensed operator qualification records, watchstanding records and medical records to ensure compliance with 10 CFR 55.59, Requalification and 10CFR 55.53, Conditions of License.

b. Findings

No findings of significance were identified.

.2 Quarterly Review

a. Inspection Scope

The inspectors observed operator training activities which included simulator scenarios involving new license candidates. The training scenarios involved a loss of coolant accident (LOCA), loss of offsite power (LOOP), and subsequent station blackout. The inspectors assessed licensed operator performance during the scenarios by verifying that the appropriate procedures were used and that effective command and control of the crew was demonstrated. The inspectors also observed the evaluator's critique following the simulator training.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors assessed the effectiveness of the licensee's maintenance efforts by evaluating several conditions that occurred during the inspection period. The inspection determined the risk significance of the condition, licensee implementation of the maintenance rule (10 CFR 50.65), and licensee utilization of the corrective action program. The specific conditions evaluated by the inspectors included:

- Refueling water storage tank level decrease
- RHR system valve packing leakoff (cutting and capping)
- B deepwell pump replacement
- Unit 1 diesel fuel oil tank work
- Failure of freeze protection on A steam generator PORV sensing line
- B instrument air compressor inspections and air dryer maintenance

During the inspection, the inspectors reviewed condition report NCR 26472 that identified several instances where equipment unavailability times were not captured by the system engineers but were identified by the maintenance rule program coordinator. The condition report identified several enhancements to alleviate this problem.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed licensee risk assessments for removal of the following components from service. The inspectors verified that the licensee appropriately evaluated plant risk in accordance with Operations Management Manual OMM-048, "Work Coordination and Safety Assessment," Revision 11, during the scheduling of planned and emergent work items. The inspectors reviewed the effectiveness of licensee actions to plan and control scheduled work to minimize overall plant risk while the emergent work items were being addressed. Specifically, the inspectors reviewed the applicable plant risk profiles, work week schedules, and maintenance work requests associated with the out of service equipment. Additionally, the inspectors held discussions with the work week managers and probabilistic safety assessment (PSA) engineer as part of the risk assessment review.

- RHR System valve packing leakoff (cutting and capping)
- A EDG maintenance and B reactor coolant system flow instrument calibrations
- Emergent control room ventilation system problems
- A SG PORV out of service due to frozen sensing line

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

a. Inspection Scope

The inspectors reviewed operator performance, operator logs, plant computer data, and control room instrumentation and annunciator panels following the operators' response to an inadvertent opening of the A SG PORV, resulting from the freezing of the valve controller sensing line. The operators closed the PORV from the control room by manipulating the controller potentiometer. Subsequently, reactor power was reduced to 97 percent to provide margin in case of inadvertent opening of the PORV during maintenance activities on the sensing line.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors evaluated the technical adequacy of the following condition report evaluations affecting mitigating systems and barrier integrity. The inspectors verified that operability was properly justified and the component or system remained available such that no unrecognized increase in risk occurred.

- NCR 23046 Possible Loose Part on Secondary Side of B SG
- NCR 20378 Decreasing RWST Level Indication

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors performed a review of existing operator work-arounds to determine any change from the previous inspection period. Additionally, the inspectors periodically reviewed CRs and held discussions with operators to determine if any conditions existed that should have been identified by the licensee as operator work-arounds and that the threshold for identification was commensurate with plant risk.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors performed a review of the following permanent plant modification to verify that the design bases, licensing bases and performance capability of the affected risk significant structures, systems and components (SSCs) had not been degraded as a result of the modification. The inspectors also, where applicable, verified that the modification performed during risk-significant configurations did not place the plant in an unsafe condition.

- ESR 00-00161 "HVS-5, HVS-6, HVE-17, and HVE-18 Manual Start Switches," Revision 6

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors witnessed the following post maintenance test (PMT) activities and/or reviewed the test data to verify that the systems or components met the design/licensing basis requirements and commitments, and demonstrated that the systems or components were capable of performing their intended safety functions.

- OST-352-1, “Containment Spray Component Test - Train ‘A’ Quarterly),” Revision 15, (A containment spray pump maintenance)
- OP-201-2, “MDAFW System Component Test - Train B,” Revision 12, (B train AFW scheduled periodic maintenance)
- PM-163, “Inspection and Testing of Circuit Breakers for 480 Volt Bus E2," Revision 7, (Amptector replacement on SW pump D breaker 52/25B)
- OP-604, “Diesel Generators A and B,” Revision 47, (Replacement of failed jacket water pressure switch)
- OST-409-1, “EDG A Fast Speed Start,” Revision 12, (EDG A room ventilation control circuitry modification)
- OST-302-1, “Service Water System Component Test Train A (Quarterly),” Revision 25, (Service water pump A re-baseline following impeller lift)

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed the following surveillance tests and/or reviewed test data to verify the selected SSCs met the Technical Specifications (TS), UFSAR, and licensee procedure requirements; and demonstrated that the SSCs were capable of performing their intended safety functions.

- OST-943, “Service Water to Safety Related Equipment Valve Position Verification,” Revision 6
- OST-302-2*, “Service Water System Component Test Train B (Quarterly),” Revision 24

- OST-751, “Control Room HVAC R-1 Initiation and ERFIS Point Test (Quarterly),” Revision 5
- OST-910, “Dedicated Shutdown Diesel Generator (Monthly),” Revision 25
- OST-101-1*, “CVCS Component Test Charging Pump A (Quarterly),” Revision 29
- EST-146, “EOL MTC Measurement,” Revision 2

* This procedure included inservice testing requirements.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed an existing temporary modification to determine its impact on safety functions. The following ESR involving temporary modifications to the AFW system was reviewed, including the associated 10 CFR 50.59 screening against the system design basis, UFSAR, and TS. The review verified that configuration control of the modification was adequate by verifying that any affected plant documents, such as drawings and procedures were properly controlled.

- ESR 00-00242, “Furmanite Valve AFW-70," Revision 0

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert Notification System Testing

a. Inspection Scope

The inspectors reviewed the alert and notification system (ANS) design and associated testing commitments, and evaluated the adequacy of the testing program. Reviews were conducted of the ANS (sirens) testing results and related corrective action documentation.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing

a. Inspection Scope

The inspectors reviewed the design of the emergency response organization (ERO) augmentation system and the maintenance of the licensee's capability to staff emergency response facilities within timeliness goals. Records of a September 26, 2000, unannounced ERO augmentation off working hour drill were reviewed. The drill involved travel to the plant by ERO personnel. Follow-up activities for problems identified through augmentation testing were reviewed to determine whether appropriate corrective actions had been implemented.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The inspectors reviewed Revision 41 to Robinson's Radiological Emergency Plan (REP), to determine whether any of the changes decreased the effectiveness of the REP. The inspectors reviewed the REP changes against the requirements of 10 CFR 50.54(q).

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

a. Inspection Scope

The inspectors evaluated the efficacy of the licensee's programs that addressed weaknesses and deficiencies in emergency preparedness. Documents reviewed included exercise and drill critique reports, emergency plan implementing procedures, self-assessment reports, and audit report (Robinson Nuclear Assessment Section) RNAS 99-100, dated July 22, 1999. No emergency declarations had been made since the last NRC inspection of the emergency preparedness program.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas

a. Inspection Scope

The inspectors reviewed radiological surveys and access controls, and verified their implementation for at-power maintenance work and quarterly surveillances in the Unit 2 containment. Work conducted in accordance with Radiation Work Permit (RWP) R00-0107, Revision 2, was observed including the pre-job briefing. Health physics technician job coverage was observed during the containment entry and the inspectors independently measured dose rates at selected locations of the containment. The inspectors reviewed licensee control of highly activated materials (e.g., fuel channels and low power range monitor (LPRM) sources) stored underwater in the spent fuel pool (SFP) on short-hangers which could be raised inadvertently to the pool surface. The inspectors reviewed licensee implementation of Fuel Management Procedure (FMP)-021, "Control of Materials in the Spent Fuel Pit," Revision 9, which provided instruction on the movement and placement of non-fuel materials in the SFP.

b. Findings

No findings of significance were identified.

2OS2 As Low As Is Reasonably Achievable (ALARA) Planning and Controls

a. Inspection Scope

To assess the licensee's planning for the upcoming Spring 2001 refueling outage (RFO), the inspectors reviewed the Unit 2 Refueling Outage #19 ALARA Report used to analyze estimated exposures versus actual exposures from the previous RFO and determine how to reduce them. The inspectors reviewed the licensee's program for lessons learned in estimating and tracking department and job-specific dose expenditures, ALARA work plan dose estimates, and dose controls used to track and minimize worker doses.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation

.1 Plant Radiation Monitoring Systems and Portable Radiation Survey Instrumentation

a. Inspection Scope

The operability of the plant area radiation monitors (ARMs), used to alert the site staff of changing radiation exposures, were examined to verify that the equipment was properly maintained and functioning as described in the UFSAR. Operability of the ARMs was checked by comparing measured radiation levels at the monitors placement with measured radiation levels displayed on local and control room instrumentation.

Routine instrument operation checks, source checks, and calibration records for selected plant instruments were reviewed to verify licensee surveillances met procedural and TS requirements. Instrument setpoints and their basis for plant radiation measuring equipment were evaluated for adequacy.

Recently identified problems with plant instrumentation documented in the licensee's corrective action program were reviewed for adverse trends on radiation monitoring system performance.

The inspectors reviewed the operability of portable survey instrumentation used for the protection of occupational radiation workers in high radiation work areas. Calibration records were reviewed and health physics technicians were observed to determine if they made instrument source checks prior to use.

Recent whole body counter calibrations, daily quality control checks, check source standardization, and efficiency parameters were reviewed.

b. Findings

No findings of significance were identified.

.2 Respiratory Protection - Self Contained Breathing Apparatus (SCBA) Equipment

a. Inspection Scope

The inspectors reviewed SCBA qualifications of control room operators, SCBA training, and the impact of SCBAs on control room operators during an emergency. The review included inspections of SCBA equipment for readiness, SCBA air quality to industry standards, respiratory training for the licensee's control room operators, readiness of SCBA equipment in the control room, and the licensee's capability for replenishing control room SCBA air bottles during adverse conditions.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed licensee self-assessment audits, and NCRs of radiation protection issues to determine whether the licensee was identifying and resolving problems. Corrective actions for identified issues were checked to verify their adequacy and timely resolution.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

a. Inspection Scope

The inspectors interviewed cognizant personnel and walked down the major components of the gaseous and liquid release systems to observe ongoing activities, equipment material condition, and system configuration, as compared to the description in the UFSAR. The following items were reviewed and compared with regulatory requirements:

- 1999 Radiological Effluent Release Report
- Changes to the Offsite Dose Calculation Manual and to the radioactive waste system design and operation
- Anomalous results, if any, reported in the Radiological Effluent Release Report
- Effluent radiological occurrence performance indicator incidents
- Sample collection and analysis of the (R-20) fuel handling building lower level gaseous effluent release point
- Selected radioactive effluent release permits and associated projected doses to members of the public (2000-41G, 83G, 87L, 100G, 117L, 119L, 132L, 155G, 159G, 193G, 201L, 221L, 229G)
- Compensatory sampling and radiological analyses conducted when effluent monitors were declared out-of-service

- Monthly, quarterly, and annual dose calculations
- Air cleaning system surveillance test results (EST-016, EST-017, EST-022, EST-023)
- Surveillance test results for the stack and vent flow rates (F-14)
- Records of instrument calibrations performed since the last inspection for each point of discharge effluent radiation monitor and flow measurement device
- Effluent radiation monitor alarm setpoint values
- Calibration records of counting room instrumentation associated with effluent monitoring and release activities
- Quality control records for the counting room instruments
- Audits (Nuclear Assessment Reports RR-ERC-00-01 and R-ERC-99-01) and self assessments (#15234 and ERC Program Assessments 12/29/99, 5/11/2000, 7/21/2000) related to the radioactive effluent treatment and monitoring program
- Selected condition reports related to the radioactive effluent treatment and monitoring program

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

40A1 Performance Indicator (PI) Verification

.1 Mitigating Systems

a. Inspection Scope

The inspectors verified the accuracy of PI data for safety system unavailability for the period of October 2000 through December 2000. Specifically, the PI data was verified for the AFW and RHR systems. This was accomplished through discussions with the system engineer and a review of operator logs for the quarter.

b. Findings

No findings of significance were identified.

.2 Emergency Preparedness - Emerency Response Organization Drill/Exercise Performance PI

a. Inspection Scope

The inspectors assessed the accuracy of the PI for ERO drill and exercise performance over the past eight quarters through review of drill records for that period. The documentation was reviewed for successes in emergency classifications, notifications, and protective action recommendations and compared to the submitted PI.

b. Findings

No findings of significance were identified.

.3 Emergency Preparedness - ERO Drill Participation PI

a. Inspection Scope

The inspector assessed the accuracy of the PI for ERO drill participation during the previous eight quarters by comparing the licensee's Key ERO member drill participation tracking list to actual drill participation list in the "Drill Packages" for that period. Due to the relatively large number of Control Room Emergency Communicators, the method of conducting their drill participation was reviewed in detail.

b. Findings

Robinson's ERO drill/exercise participation reported to the NRC for the first three quarters of 2000 were reported as 100%, 99.2%, and 100% respectively.

The licensee used table top scenarios to meet the drill participation requirements for some key ERO positions. A review of records showed that 44 of 57 Control Room Emergency Communicators s received credit for ERO drill participation using table top drills. Some of the following key ERO positions also took credit for ERO drill participation but in a relatively smaller number: Emergency Response Manager, Plant Operations Advisor, Site Emergency Coordinator, and Technical Assessment Director.

Although Nuclear Energy Institute 99-02 "Regulatory Assessment Performance Indicator Guideline," Revision 0, allows the use of table top scenarios for ERO drill participation, the licensee's interpretation and implementation appeared to be inconsistent with the guidelines described in NEI 99-02. When the drill participation functions of key ERO members include classification, notification or PAR opportunities, the success rate of these opportunities must contribute to a second Emergency Preparedness Cornerstone, "Drill/Exercise Performance" (DEP) statistics in order to take credit for drill participation. The licensee did not include the results of the table top scenarios in their DEP Cornerstone. Additionally, NEI-99-02 stated in the clarifying notes that a "drill" is intended to simulate the interaction between appropriate centers and/or individuals that would be expected to occur during emergencies. The Control Room Emergency Communicator's drills did not simulate interaction with off site agencies.

The adequacy of the licensee's use of table top exercises to take credit for ERO drill participation will be resolved pending further discussion and review by Region II. This issue is considered an Unresolved Item (50-261/00-05-01).

.4 Emergency Preparedness - Alert and Notification System Reliability PI

a. Inspection Scope

The inspectors assessed the accuracy of the PI for the alert and notification system reliability through review of the licensee's records of the siren tests for the previous 12 months. A sample of records for the weekly silent, weekly low growl tests, and quarterly full-cycle tests was reviewed.

b. Findings

No findings of significance were identified.

.5 Occupational Radiation Safety

a. Inspection Scope

The inspectors reviewed the Occupational Exposure Control Effectiveness PI through review of licensee condition reports for the previous 12 quarters (3rd quarter 1997 through 3rd quarter 2000) for high radiation area, very high radiation area, and unplanned exposure occurrences to assess whether non-conformances were properly classified as PIs. The licensee's database, which contains radiologically-controlled area (RCA) exit transactions with exposures greater than 100 mrem, was reviewed by the inspectors to determine whether the exposures were within RWP limits and whether any met this criteria for a PI.

b. Findings

No findings of significance were identified.

.6 Public Radiation Safety

a. Inspection Scope

The inspectors reviewed the Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual (RETS/ODCM) PI by review of licensee condition reports for liquid or gaseous effluent releases that were reported to the NRC, Licensee Event Reports, and the 1999 Annual Radioactive Effluent Release Reports for the past four quarters to assess whether all radiological effluent release occurrences in excess of limits were counted as PIs.

b. Findings

No findings of significance were identified.

4OA5 Other

.1 Operation of an Independent Spent Fuel Storage Installation (ISFSI)

a. Inspection Scope

The inspectors reviewed implementation of selected elements of the licensee's radiological control program for the Independent Spent Fuel Storage Installation (ISFSI). Specifically, to assess whether the requirements of 10 CFR 72.106 were being properly implemented, the inspectors reviewed the most recent quarterly surveillance completed in November 2000; to assess whether the requirements of 10 CFR 72.44(d)(3) were being properly implemented, the inspectors reviewed the 1999 Annual Radioactive Effluent Release Report for the ISFSI; and to assess whether the requirements of 10 CFR 72.72(b) were being properly implemented, the inspectors reviewed the Spring 2000 inventory check of the stored fuel assemblies. In addition, to assess whether the requirements of 10 CFR 72.44(c)(5) were being properly implemented, the inspectors reviewed the following procedures related to ISFSI operation: FMP-004, "Special Nuclear Material Inventory," Revision 13; Independent Spent Fuel Storage (ISFS)-005, "Retrieval of the Dry Shielded Canister from the Horizontal Storage Module," Revision 6; ISFS-006, "Start-Up Monitoring of the Horizontal Storage Module," Revision 2; ISFS-008, "Removal of Fuel from Weld-Sealed Dry Shielded Canister," Revision 7; and ISFS-009, "High Radiation," Revision 3. Furthermore, to assess whether the requirements of 10 CFR 72.140 were being properly implemented, the inspectors reviewed R-ISFSI-99-01, Independent Spent Fuel Storage Installation Functional Area Assessment, dated July 25, 1999; RR-ERC-00-01, Round Robin Environmental and Radiation Control Functional Area Assessment, dated July 18, 2000; and self-assessment report for Assessment No. 15254, Cross-Function Review of the ISFSI Program/System.

b. Findings

No findings of significance were identified.

.2 Institute of Nuclear Power Operations (INPO) Report Review

The inspectors reviewed the final report issued by INPO for the evaluation that was conducted at the Robinson facility during the weeks of February 7 and 14, 2000. The inspectors did not note any safety issues in the INPO report that needed further NRC follow-up.

4OA6 Meetings, including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. Moyer and other members of licensee management on January 8, 2001. The licensee acknowledged the findings presented during the exit meeting.

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

.2 December 14 Commissioner Visit

Commissioner Jeffrey S. Merrifield visited the H.B. Robinson Steam Electric Plant Unit 2 on December 14 to tour the plant and discuss its operation with CP&L/Progress Energy officials. Commissioner Merrifield was accompanied by other members of the staff. A public meeting including news media representatives was conducted after the plant tour.

4OA7 Licensee Identified Violations

The following finding of very low significance was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as a Non-Cited Violation (NCV).

NCV Tracking Number	Requirement Licensee Failed to Meet
NCV 50-261/00-05-02	10 CFR Part 20.1301 requires that licensed operations limit dose to members of the public to allowable limits and 10 CFR Part 20.1501 and Part 1802 requires that licensee's perform adequate surveys to control byproduct material contamination and to evaluate the radiological hazards. 49CFR Part 173 specifies the Department of Transportation (DOT) requirements for shipping radioactive material. The licensee failed to perform adequate surveys, to control dose and to meet DOT shipping requirements resulting in a contaminated lifeline being shipped offsite in June, 2000. Reference Condition Report 0020327.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

E. Kapopoulos , Operations Manager
C. Martin, Site Support Services Manager
S. Collins, Radiation Protection Superintendent
D. Stoddard, Robinson Engineering Support Services Manager
E. Rothe, Maintenance Manager
T. Walt, Director of Site Operations
R. Steele, Outage Management Manager
T. Cleary, Plant General Manager
J. Fletcher, Regulatory Affairs Manager
A. Williams, Training Manager
J. Moyer, Vice President, Robinson Nuclear Plant

NRC

B. Bonser, Chief, Reactor Projects Branch 4, Region II
E. Hackett, Technical Assistant to Commissioner Merrifield
B. McCabe, Technical Assistant to Commissioner Merrifield
V. McCree, Deputy Director, Division of Reactor Projects, Region II
J. Merrifield, Commissioner

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-261/00-05-01	URI	Adequacy of the use of table top exercises for ERO drill participation PI (Section 4OA1.3)

Opened and Closed

50-261/00-05-02	NCV	Failure to perform surveys, control dose and meet shipping requirements resulted in release of contaminated lifeline (Section 4OA7)

Closed

None.

Discussed

None.

DOCUMENTS REVIEWED

The inspectors reviewed the following documents to accomplish the objectives of the inspection and to support these findings:

Updated Final Safety Analysis Report (UFSAR), Chapter 11, “Radioactive Waste Management” and Chapter 12, “Radiation Protection”

POM, Volume 3, Part 2, Operating Procedure (OP) - 807, “Breathing Air Charging Station,” revision 7

POM, Volume 3, Part 9, “Operations Surveillance Test, “OUT - 924 - 1, “Area Radiation Monitoring System (Quarterly),” revision 6

POM, Volume 5, Part 2, Health Physics Procedure (H.P.), H.P. - 001, “Radiologically Controlled Area Surveillance Program,” revision 71

POM, Volume 5, Part 8, E&RC Surveillance Test, RPT - 001, “Radiation Source Checks,” revision 65

POM, Volume 5, Part 8, E&RC Surveillance Test, RPT - 008, “Calibration of Radiation Monitor Systems. Monitors R-1 through R-8,” revision 22

POM, Volume 5, part 8, E&RC Surveillance Test, RPT - 023, “Routine Respirator Maintenance,”Operations Management Manual, “Radiation Monitor Setpoints,” revision 33

POM, Volume 8, Part 1, Training Program Procedure (TPP) - 219, “Fire Protection Training Program,” revision 7

Operations Training, Fire Brigade Lesson Plan (FBLP) - 004R, “Firefighter Personnel Protective Equipment,” revision 2

Nuclear Generation Lesson Plan, “Respiratory Protection Training,” GN6C10G/GN7C10G/GN6C24G, revision 14

Plant Operating Procedure, Volume 3, Part 5, Abnormal Operating Procedure, “AOB-004, Control Room Inaccessibility,” revision 12

Operations Management Manual - 14, “Radiation Monitor Setpoints,” revision 33

Action Item Assignment, Project ID: 98-01565, “Information Notice 98-20, Problems With Emergency Preparedness Respiratory Protection Programs”

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

Attachment