



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

Report No.: 50-261/87-37

Licensee: Carolina Power and Light Company
 P. O. Box 1551
 Raleigh, NC 27602

Docket No.: 50-261

License No.: DPR-23

Facility Name: H. B. Robinson

Inspection Conducted: November 11, - December 10, 1987

Inspector: *P. H. Latta* 1/6/88
 R. M. Latta, Acting Senior Resident Date Signed
 Inspector

Approved by: *P. E. Fredrickson* 1/6/88
 P. E. Fredrickson, Section Chief Date Signed
 Division of Reactor Projects

SUMMARY

Scope: This routine, announced inspection was conducted in the areas of plant tour, technical specification compliance, plant operations review, physical protection, monthly surveillance observation, monthly maintenance observation and maintenance program evaluation, operational safety verification, ESF system walkdown and monthly surveillance observation, cold weather preparations, onsite followup of events and subsequent written reports of nonroutine events at power reactor facilities, onsite review committee, preparation for refueling, participation in NRR/Licensee meetings, independent spent fuel storage installation, fastener testing to determine conformance with applicable material specifications.

Results: No violations or deviations were identified within the areas inspected.

8802100485 880106
 PDR ADOCK 05000261
 PDR
 Q

REPORT DETAILS

1. Licensee Employees Contacted

R. Barnett, Maintenance Supervisor, Electrical
 G. Beatty, Vice President, Robinson Nuclear Project Department
 R. Chambers, Engineering Supervisor, Performance
 D. Crocker, Supervisor, Radiation Control
 J. Curley, Director, Regulatory Compliance
 J. Eaddy, Supervisor, Environmental and Chemistry
 R. Femal, Shift Foreman, Operations
 W. Flanagan, Manager, Design Engineering
 W. Gainey, Support Supervisor, Operations
 P. Harding, Project Specialist, Radiation Control
 E. Harris, Director, Onsite Nuclear Safety
 D. Knight, Shift Foreman, Operations
 E. Lee, Shift Foreman, Operations
 F. Lowery, Manager, Operations
 D. McCaskill, Shift Foreman, Operations
 A. McCauley, Principal Specialist, Onsite Nuclear Safety
 R. Miller, Maintenance Supervisor, Mechanical
 R. Moore, Shift Foreman, Operations
 R. Morgan, Plant General Manager
 M. Morrow, Specialist, Emergency Preparedness
 D. Myers, Shift Foreman, Operations
 D. Nelson, Operating Supervisor
 B. Murphy, Senior Instrumentation and Control Engineer
 M. Page, Engineering Supervisor, Plant Systems
 D. Quick, Manager, Maintenance
 B. Rieck, Manager, Control and Administration
 D. Sayre, Senior Specialist, Regulatory Compliance
 D. Seagle, Shift Foreman, Operations
 R. Smith, Manager, Environmental and Radiation Control
 R. Steele, Shift Foreman, Operations
 R. Wallace, Manager, Technical Support
 L. Williams, Supervisor, Security
 H. Young, Director, Quality Assurance/Quality Control (QA/QC)

Other licensee employees contacted included technicians, operators, mechanics, security force members, and office personnel.

2. Exit Interview (30702, 30703)

The inspection scope and findings were summarized on December 7, 1987, with the Vice President, Robinson Nuclear Project Department, the Acting Director of Regulatory Compliance, the Director of Onsite Nuclear Safety, and the Director of QA/QC. The licensee acknowledged the findings without exception. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection. No written material was given to the licensee by the Resident Inspector during this report period.

3. Plant Tour (71707, 62703, 71710)

The inspector conducted plant tours periodically during the inspection interval to verify that monitoring equipment was recording as required, equipment was properly tagged, operations personnel were aware of plant conditions and maintenance activities, and plant housekeeping efforts were adequate. The inspector determined that appropriate radiation controls were properly established, excess equipment or material was stored properly, and combustible material was disposed of expeditiously. During tours, the inspectors looked for the existence of unusual fluid leaks, piping vibrations, pipe hanger and seismic restraint abnormal settings, various valve and breaker positions, equipment clearance tags and component status, adequacy of fire fighting equipment, and instrument calibration dates. Some tours were conducted on backshifts. Plant housekeeping and contamination control were observed to be excellent.

The inspectors performed system status checks on the following systems:

- a. Safety Injection (SI) System
- b. Component Cooling Water (CCW) System
- c. Auxiliary Feedwater (AFW) System
- d. Vital Station Batteries (VSB)
- e. Electrical Switchgear
- f. Chemical and Volume Control System (CVCS)
- g. Emergency Diesel Generators (EDG)

No violations or deviations were identified within the areas inspected.

4. Technical Specification Compliance (71707, 62703, 61726)

During this reporting interval, the inspector verified compliance with selected limiting conditions for operation and reviewed results of certain surveillance and maintenance activities. These verifications were accomplished by direct observation of monitoring instrumentation, valve and switch positions, and review of completed logs and records.

In addition, on a daily basis in the control room, the inspector independently examined Emergency Response Facility Information System (ERFIS) and Safety Parameter Display Systems (SPDS). The inspector reviewed safety related parameters, including component status information, for indications related to conformance with the TS.

No violations or deviations were identified within the areas inspected.

5. Plant Operations Review (71707, 62703, 61726, 61707)

Periodically during the inspection interval, the inspector reviewed shift logs and operations records, including data sheets, instrument traces, and records of equipment malfunctions. This review included control room logs, maintenance work requests, auxiliary logs, operating orders, standing orders, jumper logs, and equipment tagout records. The inspector routinely observed operator alertness and demeanor during shift changes

and plant tours. The inspector conducted random off-hours inspections during the reporting interval to assure that operations and security were maintained in accordance with plant procedures. The inspector also periodically verified the reactor shutdown margin, observed the reactor axial flux difference, and compared the observed values with those required by the TS.

On December 1, 1987, the inspector witnessed the response of the fire brigade to an unannounced fire drill. The simulated fire was located at the dedicated shutdown diesel generator. The inspector determined that the fire brigade responded in a timely manner, that the response team included the required number of personnel, and that appropriate fire fighting equipment was properly deployed. The inspector witnessed the actions of the fire brigade including the team leader (senior reactor operator on duty) and determined that the requirements of the controlling procedure FP-001 (Revision 11), titled "Fire Emergency" were satisfied and that the brigade personnel exhibited good fire fighting techniques throughout the drill.

No violations or deviations were identified within the areas inspected.

6. Physical Protection (71707)

In the course of the monthly activities, the inspector included a review of the licensee's physical security program. The inspector verified by general observation, perimeter walkdowns and interviews that measures taken to assure the physical protection of the facility met current requirements. The inspector routinely observed the alertness and demeanor of security force personnel during plant tours and visited both the central and secondary alarm stations at various times during the reporting period.

The performance of various shifts of the security force was observed in the conduct of daily activities to include: protected and vital areas access controls, searching of personnel, packages, and vehicles, badge issuance and retrieval, escorting of visitors and patrols, and compensatory posts. In addition, the inspector routinely observed protected and vital area lighting, and barrier integrity.

Additionally, the inspector participated in a Regulatory Effectiveness Review (RER) team inspection at the H. B. Robinson, Unit 2. The purpose of this inspection was to assess the effectiveness of the licensee's physical security program. Specifically, the inspector verified the safety/safeguards interface by participating in an interview with members of the licensee's operations and security staff. This interview confirmed that the requirements of 10 CFR 73.55 (d)(7)(ii) were being met in that the potential for rapid escape from enclosed areas within the plant during emergency conditions had been appropriately addressed. The inspector also determined that provisions had been made for the expedient entry into plant areas by both on-site and off-site medical and fire fighting personnel and that prompt access to vital equipment areas to prevent or mitigate the consequences of an accident were provided for.

No violations or deviations were identified within the areas inspected.

7. Monthly Surveillance Observation (61726, 61700, 71710)

The inspector observed certain surveillance related activities of safety-related systems and components to ascertain that these activities were conducted in accordance with license requirements. The inspector determined that the surveillance test procedures listed below conformed to TS requirements, that all precautions and LCO's were met and that the surveillance test was completed at the required frequency. The inspector also verified that the required administrative approvals and tagouts were obtained prior to initiating the test, that the testing was accomplished by qualified personnel in accordance with an approved test procedure and that the required test instrumentation was properly calibrated. Upon completion of the testing, the inspector observed that the recorded test data was accurate, complete and met TS requirements; ensured that test discrepancies were properly rectified; and, independently verified that the systems were properly returned to service. Specifically, the inspector witnessed/reviewed portions of the following test activities:

- a. The inspector witnessed the operability test of the "B" EDG following preventative maintenance performed on the engine. This test was conducted using operations test procedure OST-401 (Revision 13) titled "Emergency Diesels - Weekly." OST-401 is designed to verify the mechanical performance and operability of the emergency diesels and that the requirements of TS 4.6.1.1. and 4.6.1.4 are satisfied. Specifically the inspector observed the testing of the redundant solenoid valves and the air start system, that the "B" trips defeat key switch was in the trips defeat position, that all "B" diesel annunciators were cleared, and that the "A" CCW pump was in the standby position. The inspector also determined that the governor speed droop setting was placed at 50 percent for grid operation and back to zero percent for normal lineup and that the load limit switch was set at 9.0 as required by the procedure. It is noted that the governor speed droop and load limit switch settings were altered as a result of recent EDG load testing conducted by the licensee.

During the conduct of the test the inspector observed that the starting air pressure low alarm light remained lit despite the fact that the starting air receiver was properly charged. The inspector determined that this condition was the result of a faulty sensing switch and that a replacement unit had been ordered and that repair work scheduled. The inspector will continue to monitor this activity during subsequent inspections.

- b. On November 16, 1987, the licensee conducted a scheduled surveillance test of the electro-hydraulic (EH) and lube oil system to verify the automatic start functions of the EH pumps and the lube oil pumps. This test was completed using OST-554 (Revision 2) titled "Turbine Bearing Oil System and EH Control System Hydraulic Components Test." The inspector determined that the reference procedure was technically

adequate and that all system readings were within the acceptable test parameters including the maximum and minimum system header pressures, accumulator nitrogen pressure, and the EH system sump temperature. No deficiencies were identified during the conduct of this surveillance test.

- c. The inspector also witnessed the execution of maintenance surveillance test MST-014 (Revision 13) titled "Steam Generator Pressure Protection Channel Testing." This maintenance surveillance test is conducted monthly to determine the operability of the steam generator pressure protection channel sets II, III, and IV. As noted in the subject procedure, the successful completion of this surveillance test satisfied the requirements of TS table 4.1-1, item 24.

The inspector determined that the surveillance test procedure conformed to TS requirements, that all precautions and limitations were met and that the surveillance test was completed at the required frequency. In particular, for those portions of the surveillance test observed, the inspector confirmed that the annunciators gave the proper status, that the associated alarms responded as required, and that the recorded test voltages were within the required tolerance. Upon completion of the testing, the inspector observed that the recorded test data was accurate, complete and met procedural requirements, that there were no test discrepancies, and that the system was properly returned to service.

No violations or deviations were identified within the areas inspected.

8. Monthly Maintenance Observation and Maintenance Program Evaluation (62703, 62700, 62704, 62705)

The inspector observed several maintenance activities of safety-related systems and components to ascertain that these activities were conducted in accordance with approved procedures, TS requirements and appropriate industry codes and standards. The inspector determined that these activities were not violating LCO's and that redundant components were operable. The inspector also determined (1) that the procedures used were adequate to control the activity, (2) that QC hold points were established where required, (3) that required administrative approvals and tagouts were obtained prior to work initiation, (4) that proper radiological, and appropriate ignition and fire prevention controls were implemented, and (5) that replacement parts and materials used were properly certified. The inspector determined that these activities were accomplished by qualified personnel using approved procedures, and that the effected equipment was properly tested before being returned to service. In particular the inspector observed/reviewed the following maintenance activities:

- a. The inspector witnessed major portions of the scheduled maintenance on valves V2-16C (discharge isolation for the AFW pumps) and SI 870A (boron injection tank discharge isolation valve.) These work

activities were administratively controlled by work requests WR/JO 87-AQEW1 and WR/JO 87-AQFX1 respectively. The inspector observed the disassembly of the valve operator on valve V2-16C and the subsequent measurement and recording of the as-found torque switch settings. The inspector also witnessed the adjustment of the torque bypass and open indication switch settings as well as the installation of a new spring pack and grease relief mechanism. The inspector noted that the switch settings were in agreement with the values stipulated in engineering evaluation 87/90 (attached to the work request) and that all replacement parts were properly identified and controlled.

The inspector also witnessed the limit switch setting of valve SI 870A and determined that it was in agreement with the value stipulated in the controlling work request. During this activity the inspector noted a labeling discrepancy on the subject valve in that the valve body was tagged as SI 870A, however, the motor casing was labeled SI 870B. This condition was subsequently corrected by the licensee.

Following the above described maintenance activity the inspector reviewed the post maintenance testing data and determined that the valves were left in the required position.

- b. The inspector observed the calibration of pressure gages PI-945 and PI-946 in accordance with work request WR/JO 87-BTQ 471 and process instrumentation calibration procedure PIC-302 (Revision 1) titled "Pressure And Vacuum Gages." These pressure gages are locally mounted on the containment spray pumps and are used to indicate the discharge pressure. The inspector reviewed the measured gage readings and compared them to the pressure standard. These values were determined to be within the accuracy requirements for the intended use as specified in maintenance management manual MMM-006 (Revision 6) titled "Calibration Program."
- c. The inspector also witnessed the maintenance activities associated with the repair of the "B" EDG lubricating oil (LO) temperature regulating valve. This corrective maintenance was precipitated by the failure of one of the four thermostatically controlled temperature regulators located in the LO temperature regulating valve. As directed by work request WR/JNO 87-AQXF 1, the repair activity was expeditiously carried out by the mechanical maintenance personnel involved. The inspector observed that all mating surfaces were thoroughly cleaned prior to reassembly, that the replacement components matched the traveler tag descriptions, and that the system was returned to service in accordance with the applicable local clearance and test request form.

The inspector also reviewed several outstanding job orders and the licensee's automated maintenance management tracking system to determine that the licensee was giving priority to safety-related maintenance and that a backlog which might affect performance was not developing on any given system.

No violations or deviations were identified within the areas inspected.

9. Operational Safety Verification (71707)

The inspector observed licensee activities to ascertain that the facility was being operated safely and in conformance with regulatory requirements, and that the licensee management control system was effectively discharging its responsibilities for continued safe operation by direct observation of activities, tours of the facility, interviews and discussions with licensee management and personnel, independent verification of safety system status and limiting conditions for operation, and reviewing facility records.

No violations or deviations were identified within the areas inspected.

10. ESF System Walkdown and Monthly Surveillance Observation (71710, 61726, 56700, 61715)

The inspector verified the operability of an engineered safety features system by performing a walkdown of the accessible portions of the AFW system as prescribed in operations surveillance test OST-201 (Revision 17) titled "Motor Driven Auxiliary Feedwater System Component Test." The inspector determined that the current revision of the subject procedure was used by qualified operations personnel and that the monthly execution of this surveillance test satisfied the requirements of TS Section 4.8.1., 4.8.3., 4.8.4., and Table 4.1-1 Item 33. The inspector noted that all prerequisites for the performance of this test were performed and that all precautions and limitations were met including the limiting of the pump run time to less than 30 minutes while on mini-flow recirculation and that the automatic feed water control system was functioning properly during the performance of the test.

Additionally, the inspector confirmed that the licensees system lineup procedures matched plant drawings and the as-build configuration. The inspector looked for equipment conditions and items that might degrade performance (hangers and supports were operable, housekeeping, etc.) and inspected the interiors of electrical and instrumentation cabinets for debris, loose material, and jumpers. The inspector verified that valves were in proper position, power was available, valves were locked as required, pump flow control valves functioned properly, and that both local and remote discharge flow indications agreed.

While in the motor driven AFW pump room, the inspector witnessed the operational checks of both pumps, the measurement of pump vibration amplitude, valve cycle timing, and differential pressure measurements. The inspector ascertained that the test instrumentation utilized was properly calibrated and that the pump operational parameters were within the stated acceptance range. The inspector noted that discharge isolation valve V2-16B had several missing fasteners on the torque switch cover and that valve AFW-44 was missing the handwheel nut. These discrepancies were identified to the licensee and it was later determined that corrective work requests had been generated.

No violations or deviations were identified within the areas inspected.

11. Cold Weather Preparations (71714)

The inspector conducted a review of the licensee's cold weather preparations to ascertain if an effective program of protective measures for extreme cold weather was being effectively implemented. It was determined that the licensee had inspected systems susceptible to freezing to verify the presence of heat tracing, strip heaters and insulation that thermostats had the proper settings, and that the heat tracing and strip heating circuits were energized. The inspector also determined that, for systems which had been subjected to maintenance and/or modification during the past year, that any required protective measures were re-established.

In particular, the inspector witnessed the operability verification, performed by instrumentation and control technicians, of various freeze protection panels throughout the plant. The inspector observed channel current testing and local status light verification on the subject panels and, for those freeze protection channels which indicated a faulted condition, the inspector determined that corrective maintenance work requests were initiated. Subsequent to the completion of the cold weather preventative maintenance testing, the inspector independently witnessed the return to service of the affected equipment.

No violations or deviations were identified within the areas inspected.

12. Onsite Followup of Events and Subsequent Written Reports of Nonroutine Events at Power Reactor Facilities (92700, 90714, 93702)

For onsite followup of nonroutine events, the inspector determined that the licensee had taken corrective actions as stated in written reports of the events and that these responses to the events were appropriate and met regulatory requirements, license conditions, and commitments. During this reporting period, the inspector reviewed the events described below to verify that the report details met license requirements, identified the cause of the event, described appropriate corrective actions, adequately assessed the event, and addressed any generic implications.

a. (Closed) LER 87-20, Reactor Trip Due to Spurious Operation of "A" Main Feedwater Regulating Valve

This LER involved two reactor trips, one which occurred on July 10, 1987, and another which occurred on July 16, 1987. Both of these trips involved operational defects in the "A" main feedwater regulating valve automatic flow control device which were addressed in Inspection Report 50-261/87-21.

b. (Closed) LER 87-21, Unidentified Primary System Leak

As previously documented in Inspection Report 50-261/87-25, the unit was shut down on July 12, 1987, to repair a valve packing leak on the pressurizer steam space sample valve RC-586. Subsequent to the successful repair of the subject valve, the licensee conducted an extensive evaluation of valve packing leakage problems which have

impacted both maintenance and operations at the plant. As a result of this evaluation and in cooperation with the Institute of Nuclear Power Operations, the licensee is developing a preventive maintenance program which will utilize a superior packing material (die-formed graphite) and which will establish a routine valve repacking schedule. These efforts appear to be adequate to correct the reported condition.

c. Turbine Runback Resulting From Inadvertent Loss of Motor Center MCC-6

On November 4, 1987, Unit 2 experienced a turbine runback from 100 percent power to approximately 60 percent power due to the momentary interruption of power to motor control center MCC-6. The runback was attributed to a combination of personnel error and deficient breaker protective cover design. Specifically, while plant operations personnel were removing a protective cover from over the open/close pushbutton on the front cover of MCC-6 breaker to resolve a labeling discrepancy, the cover touched the pushbutton thus causing the breaker to open. The breaker which is highly sensitive was immediately returned to the closed position (within 10 seconds), however, the loss of MCC-6 and its associated instrument bus 4 caused a turbine runback due to a false rod drop indication generated by the loss of power to one of the power range nuclear instrumentation channels. The unit was stabilized and returned to 100 percent power using normal plant operating procedures.

The inspector determined that the protective cover over the MCC-6 breaker pushbuttons had been installed several years ago to preclude inadvertent operation of the breaker. The design of the cover, however, did not properly consider the operational sensitivity of the device. The licensee has evaluated this event and its generic implications and is in the process of implementing corrective action which will consist of a permanently attached protective cover. The inspector reviewed the new breaker cover design and installation features and determined that they were adequate to preclude future inadvertent contact with the breaker pushbuttons. The inspector will continue to monitor this activity during subsequent inspections.

d. Residual Heat Removal/Safety Injection System Pressure Switch Interlock

As identified to the licensee, in a Westinghouse vendor recommendation letter serial CPL-87-616, dated November 3, 1987, a potential design deficiency in the post-accident operation of the residual heat removal (RHR)/safety injection (SI) system was discovered at a plant with similar design features to those at H.B. Robinson, Unit 2. As stated in the subject letter, a safety concern had been determined to exist in the pressure switch interlock between the RHR and SI systems which must function during long term recirculation when RHR suction is taken from the containment sump following a postulated design basis earthquake (DBE) and a loss of coolant accident (LOCA). The specific problem identified in the

Westinghouse letter was that the pressure switches for valves SI-863 A and B located on the discharge side of the RHR pumps to the suction of the SI pumps and valves SI-862 A and B located on the suction line to the RHR pumps from the refueling water storage tank (RWST) were not powered from a vital bus. Thus, during the postulated DBE with the loss of off-site power these valves could not be remotely operated.

During their analysis of this problem, the licensee determined that although the same design deficiency involving the non-vital power supply to the pressure switches did not exist at the licensee's facility, a deficiency in the vital power supply to these switches did exist. Unit 2 has a single switch which provides an open permissive for valves SI 863 A and B and another switch which provides permissive relays for valves SI 862 A and B. Both of the above relays are powered from the same vital power source (instrument bus 4), thus, if power is lost to this instrument bus, neither set of valves would be able to operate remotely. It is noted that neither set of valves receives a automatic open or close signal during an engineered safety features actuation and the failure of the power does not cause any of the valves to change position.

The purpose of the pressure switch interlock is to prevent an inadvertent over pressurization of the low pressure RHR piping downstream of the SI 863 A and B valves and to prevent the loss of reactor coolant inventory to the RWST during RHR operation.

Upon determination of the lack of uninterruptible redundant power supplies to the subject pressure switches, the licensee reported the event pursuant to 10 CFR 50.72 (b)(2)(iii). Additionally, the licensee instituted immediate compensatory measures to provide a dedicated member of the plant operations staff to manually open valves SI 863 A and B if required until a temporary repair could be completed. The licensee also developed a temporary repair procedure TRP No. 87-10, to install temporary jumpers in the control circuitry of valves SI 863 A and B to by-pass the pressure switch interlock feature. This temporary change was in agreement with a recommendation from Westinghouse delineated in the vendor documentation which identified the deficiency. The temporary jumpers were installed and the valves were tested in accordance with TRP No. 87-10 on December 3, 1987.

The licensee has also revised plant operating procedures to remove the jumper prior to initiating normal cooldown via the RHR system, and to reinstall the jumper upon isolation of the RHR system during plant heatup. This will preclude SI system damage due to an inadvertent opening of valves SI 863 A and B at the higher pressure present while proceeding to or leaving cold shutdown conditions.

As stated in the engineering evaluation EE 87-207 which was prepared concurrently with the aforementioned TRP, the installation of temporary jumpers on the control circuitry of valves SI 862 A and B was not necessary in that postulated accident conditions would allow

adequate time for manual actuation of these valves. It is also noted that the pressure switch interlock for these valves will not prevent the valves from closing on demand.

The licensee has developed a plant improvement item request to correct the design deficiency in the vital power supply to the pressure switch interlock between the RHR and the SI system. Implementation and scheduling of this design change is currently being evaluated by the licensee and will be documented in subsequent inspections.

e. Containment Air Recirculation Cooling Unit HVH-2 Service Water Leak

On November 19, 1987, the inspector was notified of a reportable event involving the containment air recirculation cooling unit HVH-2 and its associated motor operated service water outlet valve V6-34B. As stated by the licensee HVH-2 had been taken out of service at approximately 8:00 p.m. on November 18, 1987, in order to repair a leaking flange on the service water discharge piping of the motor cooler (inside the containment). Upon completion of the flange repair the system was aligned to leak check the subject mechanical joint by closing the position indication switch for valve V6-34B at the reactor turbine generator control board and pressurizing the system. During the conduct of this post-maintenance testing it was determined that the system outlet valve V6-34B was in the partially open position despite the demand signal input to close the valve. The valve was then manually closed at approximately midnight on November 18, 1987. During the period of time that valve V6-34B was inadvertently open, a potential release path from the containment to the environment was determined to exist. This condition was reported in accordance with 10 CFR 50.72 (b)(i)(ii) at 3:00 a.m. on November 19, 1987.

Subsequent trouble shooting and repair activities on valve V6-34B indicated that the valve stem was mispositioned relative to the operator demand signal. This condition was corrected and the valve was returned to service at approximately 9:00 a.m. on November 19, 1987. It is noted that this valve is not a containment isolation valve nor does it receive a closed signal upon engineered safety features actuation. The required position for the valve is to remain open to provide a service water flow path to the HVH fan motor cooler.

Coincident with this event the "B" EDG was out of service for maintenance. The "B" EDG is the emergency power source for two of the four containment air recirculation cooling units; HVH-3 and HVH-4. The plant TS states in part that the reactor not be made critical unless the units are operable. Additionally, the TS states that, during power operation, these requirements may be modified to accommodate one fan cooler or its flow path becoming inoperable up to 24 hours. If the inoperable fan cooler or its flow path cannot be restored within 24 hours, the reactor shall be placed in hot shutdown.

The inspector determined that the isolation of the motor cooler service water inlet and outlet lines and the removal of HVH-2 from service was accomplished in accordance with the plant abnormal operating procedure AOP-023, which addressed the loss of containment integrity. This procedure requires that if a service water leak is discovered inside containment, the affected fan cooler, motor cooler, or service water path shall be removed from service and repaired within 24 hours, or the plant is to proceed to a hot shutdown condition. The immediate isolation of the leak in the service discharge line from HVH-2 motor cooler was required to assure containment integrity. However, by removing HVH-2 from service with the emergency power source for HVH-3 and HVH-4 out of service resulted in only one containment air recirculation cooling unit, HVH-1, being available should the normal power supply for HVH-3 and HVH-4 be lost. This condition existed for approximately one hour and fifty minutes while the "B" EDG was being returned to service.

Subsequently, the licensee determined that isolating HVH-2 had jeopardized component redundancy requirements in that two of the four containment cooling units had no emergency power supply when HVH-2 was removed from service. Following this determination the licensee provided notification of this event at 2:51 p.m. on November 25, 1987, in accordance with 10 CFR 50.72 (b)(2)(iii). The licensee acknowledged the failure to report this event in a timely manner and had initiated a nonconformance report as part of their corrective action.

The failure of the licensee to provide notification within the time prescribed in 10 CFR 50.72 is regarded as a violation of the subject NRC reporting requirements; however, the attendant circumstances including the self-identification of this event, the abnormal plant conditions which existed, and the prompt corrective action taken by the licensee are considered to satisfy the discretionary provisions of 10 CFR 2, Appendix G.

Additionally, the licensee is in the process of correcting procedural deficiencies in both administrative procedure, AP-030 (Revision 5), titled "NRC Reporting Requirements" and abnormal operating procedure, AOP-23 (Revision 1) titled "Loss of Containment Integrity" which contributed to the delinquent reporting of this event.

No violations or deviations were identified within the areas inspected.

13. Onsite Review Committee (40700,36700)

During the reporting period the inspector conducted comprehensive discussions of current safety-related activities with plant management and technical personnel including: Operations, Environmental and Radiation Controls, Quality Assurance, Regulatory Compliance and Onsite Nuclear Safety organizations. Topics discussed included licensee activities associated with plant operations activities, plant

modifications, the fire protection system, ongoing construction activities, and communications interfaces.

The inspector also evaluated certain activities of the plant nuclear safety committee (PNSC) to determine whether the onsite review functions were conducted in accordance with TS and other regulatory requirements. In particular the inspector reviewed the minutes for the special PNSC meeting held on November 30, 1987, concerning the turbine runback due to the loss of motor control center MCC-6 which occurred on November 4, 1987. It was ascertained that provisions of the TS dealing with membership, review process, frequency, qualifications, etc., were satisfied, and that the previous meeting minutes were reviewed to confirm that decisions and recommendations were accurately reflected in the minutes. The inspector also followed up on previously identified PNSC activities to independently confirm that corrective actions were progressing satisfactorily.

No violations or deviations were identified within the areas inspected.

14. Preparation for Refueling (60705)

A refueling outage is scheduled to commence in the latter part of August, 1988. The inspector reviewed licensee preparations for refueling including the adequacy of procedures and administrative controls for the upcoming refueling activities/outage and for the receipt of new fuel. As part of this activity, the inspector verified that technically adequate, approved procedures were available covering the receipt, inspection and storage of new fuel. The inspector also observed the licensees first pre-outage meeting in which the outage organization was identified, a refueling milestone schedule was presented, the preliminary summary level schedule was reviewed, the proposed outage projects were identified and the 1988 outage objectives were discussed. This meeting emphasized the exacting level of detail which is characteristic of the licensees outage management organization.

15. Participation in NRR/Licensee Meetings (94702)

On November 13, 1987, the inspector participated in the second scheduled meeting between representatives of Carolina Power and Light, Region II, and NRC Headquarters Staff, concerning the pilot program for operator requalification examinations administered under the provision of 10CFR 55.59. The meeting was conducted at The Robinson, Unit 2 site to familiarize the operating crew, who will be taking the requalification examination, with the proposed schedule for testing and to answer questions regarding the program. Details of the requalification program were discussed including the format and description of the simulator, oral, and written portions of the test. Currently, the requalification examination is scheduled to be administered the week of December 14, 1987. The inspector will continue to monitor this activity in subsequent inspections.

No violations or deviations were identified within the areas inspected.

16. Independent Spent Fuel Storage Installation (TI0110/5)

The Independent Spent Fuel Storage Installation (ISFSI) at the H. B. Robinson Nuclear Power Station represents an onsite dry storage capacity for spent nuclear fuel. The storage system consists of dry shielded canisters (DSC) and reinforced concrete horizontal storage modules (HSM). Each of the DSC provide support, alignment and neutron poisoning for criticality control for seven irradiated fuel assemblies. Lead plugs provide shielding at the ends of the DSC which will be seal welded shut after the spent fuel assemblies are inserted.

The HSM unit which houses three DSC and its support pad were previously inspected during construction as documented in Inspection Reports 50-261/86-27 and 50-261/86-28. The purpose of this inspection was to determine if the components and operations related to the dry storage of spent nuclear fuel in concrete vaults at Robinson, Unit 2, are in accordance with the license conditions and TS which was issued under the provisions of 10 CFR Part 72.

Specifically, the inspector examined the preoperational aspects of the ISFSI including review of the receipt inspection packages for the three DSC. The inspector determined by direct observation that the manufacturer's identification markings on the DSC matched the designations on the quality assurance certification documentation and the shipping papers. Additionally, the inspector ascertained that the licensee had reviewed the certification documents for the DSC as well as the internal components and that they were certified to have met all material, fabrication, and performance requirements, including nondestructive examination of welds.

The inspector also witnessed major portions of the training exercise covering spent fuel storage loading and handling activities. This exercise was administratively controlled by test procedure H-3 (Revision A) titled "Test Alignment and Loading of the Dry Shielded Canister Into The Horizontal Storage Module." The inspector observed the movement of the transfer trailer containing the fuel transportation cask from the loading area, along the newly constructed heavy haul roadway, to the ISFSI. At the ISFSI, the transportation cask was positioned to insert the DSC with simulated test weights into the HSM. The transfer trailer was then leveled using the hydraulic skid positioning system and the transportation cask was optically aligned to within the specified limits. Subsequent to the docking of the transfer cask to the HSM the personnel involved in the exercise experienced some difficulty in visually verifying that the hydraulic ram grapple mechanism properly engaged the grapple ring located on the DSC test head. These difficulties were aggravated by the mechanical deformation of the hydraulic grapple coupling during the initial phase of the transfer of the DSC into the HSM. This condition resulted in the temporary termination of this phase of the training. The DSC which was undamaged was secured inside the transfer cask and returned to the radiologically controlled area and unloaded.

The above noted operational difficulties together with some procedural inadequacies are currently being addressed by the licensee. Implementation of these changes are currently in progress and a second training exercise is scheduled for December 12, 1987. The inspector will continue to monitor this activity during future inspections.

No violations or deviations were identified within the areas inspected.

17. Fastener Testing To Determine Conformance With Applicable Material Specifications (TI2500/26)

As described in NRC Compliance Bulletin No 87-02, dated November 6, 1987, the licensee was requested to review their receipt inspection requirements and internal controls for fasteners. This review process was to independently determine, through testing, whether fasteners (studs, bolts, cap screws, and nuts) in the facility stores meet the required physical and chemical specification requirements. In support of this effort the inspector reviewed the licensees program for the storage and handling of both safety-related and non-safety related fasteners. The inspector visited both the onsite bulk storage warehouse and the stock room to examine storage and inventory control. In particular the inspector participated in the sample selection of fasteners corresponding to the chemical and mechanical properties described in the subject bulletin.

The inspector confirmed through selective examination of the information on the fastener test data sheets that the fasteners were uniquely identified with duplicate acceptance tags and that the instructions to the testing laboratory properly reflected the requirements associated with the relevant specification, grade, and class of fastener.

The inspector was advised by the licensee that the test samples had been sent to the Harris Energy and Environmental Center for analysis on November 24, 1987. The inspector will continue to monitor this activity during subsequent inspections.