



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 2100
 ATLANTA, GEORGIA 30303

Report No. 50-261/82-20

Licensee: Carolina Power & Light Company
 411 Fayetteville Street
 Raleigh, NC 27602

Facility Name: H. B. Robinson Steam Electric Plant

Docket No. 50-261

License No. DPR-23

Inspection at H. B. Robinson Unit 2 near Hartsville, South Carolina

Inspectors:	<u>C. W. Burger, for</u>	<u>7/12/82</u>
	S. Weise	Date Signed
	<u>C. W. Burger, for</u>	<u>7/12/82</u>
	T. Stetka	Date Signed
	<u>C. W. Burger, for</u>	<u>7/12/82</u>
	T. Peebles	Date Signed
	<u>C. W. Burger, for</u>	<u>7/12/82</u>
	P. Bemis	Date Signed
Approved by:	<u>C. W. Burger</u>	<u>7/12/82</u>
	C. Burger, Section Chief, Division of Project and Resident Programs	Date Signed

SUMMARY

Inspection on May 11 - June 10, 1982

Areas Inspected

This routine, announced inspection involved 229 resident inspector-hours on site in the areas of technical specification compliance, plant tour, operations performance, reportable occurrences, housekeeping, site security, surveillance activities, maintenance activities, quality assurance practices, radiation control activities, outstanding items review, IE Notice followup, procedures and drawing review, environmental monitoring, procurement and storage, PTS training, general employees training, requalification training and independent inspection.

Results

Of the 19 areas inspected, no violations or deviations were identified in 16 areas; four violations were found in three areas (failure to implement drawing controls, paragraph 8.b; failure to maintain operating procedures, paragraph 8.b;

failure to establish and implement procedures for control of storage and preservation of quality controlled material and equipment; paragraph 14; and failure to implement health physics procedures, paragraph 16c).

DETAILS

1. Persons Contacted

Licensee Employees

- °R. B. Starkey, Plant General Manager
- +J. Curley, Manager Technical Support
- +F. Gilman, Senior Specialist, Regulatory Compliance
- °F. Lowery, Unit 2 Operations Supervisor
- *W. Crawford, Manager, Operations and Maintenance
R. Chambers, Unit 2 Maintenance Supervisor
- °*C. Wright, Specialist, Regulatory Compliance
- °*S. Crocker, Manager, Environmental and Radiation Control
- *H. J. Young, Director, Corporate QA/QC
- +R. Connolly, Assistant to Plant Manager
- *M. Page, Engineering Supervisor
- *D. Waters, Principal Engineer, Operation
- +*B. Watkins, Administrative Supervisor
- *W. Flanagan, Project Engineer
- °+D. Baur, Project QA/QC Specialist
- °C. Bethea, Training Supervision

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

Other Organizations

- *T. Stetka, NRC
- *T. Peebles, NRC
- *C. Hehl, NRC
- *C. Julian, NRC

- *Attended exit interview May 14, 1982
- °Attended exit interview May 21, 1982
- +Attended exit interview June 10, 1982

2. Exit Interview

The inspection scope and findings were summarized on May 14 and June 10, 1982, with those persons indicated in paragraph 1 above. The licensee acknowledged the four violations presented and has begun to institute corrective actions. Some of this corrective action is documented in paragraph 5.

3. Licensee Action on Previous Inspection Findings

(Open) Unresolved Item 81-25-02, Misinterpretation of pass-fail criteria on Requalification examination. The inspector had received a letter from NRC

Headquarters confirming that the licensee was not following NRC Policy. The licensee made a commitment to change their training instruction to reflect the NRC Policy.

(Closed) Severity Level VI Violation 81-22-04. This item concerned the licensee's failure to implement storage procedures. The inspector conducted a tour of the storage areas and verified that equipment had been installed as discussed in CP&L's response letter dated September 25, 1981. Additionally, a chemical storage procedure has been established as Administrative Instruction Section 11.13. The procedure appeared adequate.

(Closed) Severity Level V Violation 81-12-04. This item dealt with the licensee's failure to implement drawing control procedures. This area was reviewed in depth as discussed in paragraph 8. Inasmuch as the licensee's corrective actions, as described in CP&L response letter of June 5, 1981, did not prevent recurrence, a new violation has been opened. The correction of all drawing control program deficiencies will be tracked under the new violation.

4. Unresolved Item

Unresolved items were not identified during this inspection.

5. Drawing Control and Valve Lineup Commitments

In a conference call on May 18, 1982 with C. Julian of NRC Region II, the resident inspector, and Robinson plant management, CP&L commitments were made relative to corrective actions in response to the violations presented in Appendix A. Specifically, prior to return to power operation plant personnel would:

- a. For those plant safety systems identified by the resident inspector, system walkdowns would be conducted to insure that appropriate plant flow diagrams and operating procedure valve lineup checklists reflect plant as-built conditions.
- b. Based on the results of the above walk-downs, CP&L would formally approve corrected valve lineups within 30 days following plant startup and would correct appropriate flow diagrams within six months.
- c. In the interim, while procedures and drawings are being updated, current information reflecting the as-built conditions will be provided to the operators and other necessary personnel.

6. Plant Tour

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 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 inspector looked for the existence of unusual fluid leaks, piping vibrations, pipe hanger and seismic restraint abnormal setting, various valve and breaker positions, equipment clearance tags and component status, adequacy of firefighting equipment, and instrument calibration dates. Some tours were conducted on backshifts. The inspector performed major flowpath valve lineup verifications and system status checks on the following systems:

- a. Liquid Radioactive waste disposal system
- b. Component cooling water system
- c. Spent fuel pit cooling system

No violations or deviations were observed.

7. Plant Operations Review

- a. This inspector periodically during the inspection interval reviewed shift logs and operations records, including data sheets, instrument traces, and records of equipment malfunctions. This review included control room logs, auxiliary logs, operating orders, standing orders, jumper logs and equipment tagout records. The inspector routinely observed operator alertness and demeanor during plant tours. During abnormal events, operator performance and response actions were observed and evaluated. The inspector conducted random off-hours inspection during the reporting interval to assure that operations and security remained at an acceptable level. Shift turnovers were observed to verify that they were conducted in accordance with approved licensee procedures.
- b. During a review of the control board, the inspector identified several discrepancies in labeling of the control board:
 - 1) Safety injection cold leg flow indication (FI-943) is labeled hot leg flow.
 - 2) Boron Injection Tank outlet valves' (SI 870 A & B) position indication labels incorrectly identify these valves as 868 A & C.
 - 3) North and south service water header pressure gages (PI 1616, 1684) are not labeled as north and south and the northernmost gage is for the south header.

- 4) Low pressure letdown relief line temperature (TI-141) is labeled low pressure letdown temperature.

Operations personnel were aware of these discrepancies and licensee management stated that the discrepancies would be corrected. (IFI 50-261/82-20-01). Items 1), 3), and 4) were corrected by the end of the reporting period.

8. Plant Operations Procedures Review

- a. A special inspection was conducted during the week of May 10-14 to determine if current plant operating, emergency, and abnormal procedures are adequate for plant operation. To accomplish this inspection, the procedures were reviewed to assure that procedure interface is adequate to provide continuity between procedures, that current design and as-built plant conditions are incorporated, and that personnel are able to effectively utilize the procedures to accomplish plant operations. To this end the procedures were compared to the following criteria:

- Precautions, limitations, and setpoint documentation;
- Plant curve book;
- Flow Diagrams;
- Actual as-built conditions (as determined during fluid system and control panel walkdowns);
- Plant Technical Specifications (TS's);
- Operator and plant personnel interviews.

The inspection consisted of a sampling of 8 Emergency Instructions (EI's), 22 Abnormal Procedures (AP's) 7 General Procedures (GP's), and 10 Operating Procedures (OP's). The following procedures were reviewed:

- 1) General Procedures (GP's)
 - GP-1, Fill and Vent RCS, Rev. 33;
 - GP-2, Cold Solid to Hot Subcritical at No Load T-Avg, Rev. 38;
 - GP-3A, Normal Plant Startup from Hot Shutdown to Critical, Rev. 15;
 - GP-3B, Reactor Trip Recovery, Rev. 9;
 - GP-5, Plant Shutdown from Power to Hot Shutdown, Rev. 7;

- GP-5A, Plant Temperature and Pressure Control Using Natural Circulation, Rev.7;
 - GP-6, Plant Cooldown from Hot Shutdown to Cold Shutdown Conditions, Rev. 15.
- 2) Operating Procedures (OP's), Including associated check-off list (s).
- OP-6, Service Water System, Rev. 18;
 - OP-14, Auxiliary Feedwater System, Rev. 19;
 - OP-25, Reactor Coolant System Operation, Rev. 5;
 - OP-28, Charging and Volume Control, Rev. 16;
 - OP-29, Reactor Coolant Pump Operation, Rev. 8;
 - OP-34A, Waste Disposal (Liquid) Check-Off List, Rev. 26
 - OP-37A, Pressurizer Relief Tank Control Check-Off List, Rev. 7;
 - OP-42, Safety Injection and Containment Spray, Rev. 18;
 - OP-49, Post Accident Containment Venting System, Rev.4;
 - OP-50, Low Temperature Overpressure Protection System, Rev. 0.
- 3) Abnormal Procedures (AP's)
- AP-1, Malfunction of Reactor Control System, Rev. 3;
 - AP-2, Emergency Boration, Rev. 3;
 - AP-3, Malfunction of Make-up, Rev. 2;
 - AP-4, Malfunction of Nuclear Instrumentation, Rev.4;
 - AP-6, Turbine Vibration, Rev. 3;
 - AP-8, Loss of one Heater Drain Pump, Rev.7;
 - AP-9, Loss of one Feedwater Pump Rev. 2;
 - AP-10, Loss of one Condensate Pump, Rev. 2;
 - AP-11, Loss of one Circulating Pump, Rev. 3;
 - AP-12, Partial Loss of Condenser Vacuum, Rev. 3;

- AP-14, Loss of Auxiliary Cooling, Rev. 7;
- AP-15, Secondary Load Rejection, Rev. 4;
- AP-16, Excessive Primary Plant Leakage, Rev. 2;
- AP-17, Loss of Instrument Air, Rev. 4;
- AP-18, Reactor Coolant Pump Abnormal Condition, Rev. 4;
- AP-19, Malfunction of RCS Pressure Control System, Rev. 4;
- AP-20, Loss of Residual Heat Removal System, Rev.1;
- AP-21, Seismic Disturbances, Rev. 2;
- AP-22, Loss of Service Water, Rev. 1;
- AP-23, Loss of Containment Integrity, Rev. 1;
- Ap-24, Loss of Instrument Bus, Rev. 0;
- AP-25, Spurious Safeguard Actuation, Rev. 1.

4) Emergency Instructions (EI's)

- EI-1, Reactor Coolant System Depressurization, Rev. 30;
- EI-4, Loss of Reactor Coolant Flow, Rev. 2;
- EI-6, Loss of Feedwater, Rev. 8;
- EI-7, Station Blackout Operation, Rev. 12;
- EI-14, Reactor Trip, Rev. 7;
- EI-15, Control Room Inaccessibility, Rev. 6;
- EI-17, Emergency Diesels Failure to Start, Rev. 2;
- EI-18, Loss of Emergency Busses and/or D.C. Batteries, Rev. 0.

b. As a result of this inspection, two violations and four Inspector Followup Items were identified.

- 1) As discussed in paragraph "a" preceding, the procedures were compared to Flow Diagrams and to "walked down" fluid systems. During these walk-downs it was determined that the controlled Flow Diagrams were not current, that they contained a number of errors, and that drawing controls were inadequate. In the area of plant modifications, the inspection was expanded to include a review of

three modifications for systems other than those listed in paragraph "a". The following are examples of these inadequacies:

- a) To keep drawings current, the licensee issues Drawing Revision Notices (DRN's) that are attached to the drawing until a revised drawing is issued. The following two drawings were found to have the DRN's missing and the following two modifications did not have any DRN issued:
 - Drawing G-190202, Fire and Makeup Water System, Rev. 13, located in the maintenance shop;
 - Drawing CP-200-5379-1082, Safety Injection System, Rev. 12, located in the Control Room;
 - Modification 471 on the Reactor Protection System was completed in 1981 and a Drawing Change Request (DCR) was issued on September 21, 1981. By procedure, this DCR should have prompted a DRN to be issued. No DRN has been issued;
 - Modification 626 on the Engineered Safety Features reset had DCR 81-113 entered in the system on December 1, 1981. No DRN has been issued.
- b) A number of drawings had out-of-date revisions as follows:
 - Drawing CP-100-5379-1971, Reactor Coolant System, sheet 2, has the master as Revision 12 issued on February 25, 1982, yet the copy in the Control Room was Revision 11;
 - Drawing G-190197, Feedwater, Condensate & Air Evacuation System, for the auxiliary feedwater system, has the master as Revision 16 issued on March 1, 1982, yet the copy in the Control Room was Revision 15;
 - Drawing G-190199, Service and Cooling Water System, Revision 15, has the same revision number on the master and on the Control Room copy yet the drawings are not the same.
 - Additionally, the out-of-date drawing plus attached DRN's did not correspond to the newer master.
- c) Drawings have not been revised to reflect plant modifications or existing lines:
 - Pressure transmitters PT-500 and PT-501 were installed in 1978 and tee off the pressurizer level sensing lines. These transmitters do not appear on the applicable drawing

(CP-100-5379-1971);

- The licensee utilizes the RC vent system in accordance with procedures GP-1 and OP-50 and check-off list OP-25A for filling and venting the reactor coolant system (RCS). The applicable drawing (CP-100-5379-1971), does not diagram this system, although it was installed in 1980;
 - Each of the two Safety Injection (SI) pump bearing cooler heat exchangers have a drain (two valves on each of three pumps for a total of six valves). These drains and their associated piping, that contain SI water, do not appear on the applicable drawing (CP-200-5379-1082);
 - Modification 445-0 was installed in 1980 on the fire water system that goes to and is inside of the containment building. This modification does not appear on the Fire and Makeup Water System drawing G-190202.
- d) There are numerous examples of uncontrolled drawings in the plant:
- As discussed in item c., previously, the controlled RCS drawing did not diagram the RC vent system. As a result of discussion with plant personnel, an uncontrolled "sketch" of the RC vent system was discovered taped inside a drawer of a control room desk. The operators drew this sketch to assist them with system operation;
 - There were inaccurate uncontrolled drawings found mounted on the computer room auxiliary panel (drawing B1090629, sheets 1-72) and taped inside several instrument bus cabinets (drawing B1090627, sheets 45, 49, and 51) and inside and outside the pressurizer cubicle. Licensee procedures require these drawings to be controlled, stamped for information only, or destroyed.
- e). Drawings have numerous errors:
- Drawing CP-200-5379-1082 has unlabeled valves, is inconsistent in diagramming instrument valves, has missing drawing notes, has valves shown in the wrong locations, and has valves shown that do not exist;
 - Drawing G-190199 has incorrectly numbered valves;
 - Drawing CP-200-5379-684 to 686, Chemical and Volume Control System, has missing valves, has duplicate number valves that perform different functions, and has incorrectly numbered valves.

- 10CFR Part 50, Appendix B, Criterion VI as implemented by Section 6 of the Corporate Quality Assurance Program and Procedures ENG-4 and DC-1 of the Plant Operating Manual requires drawings to be accurate and controlled. The examples cited document the fact that controlled drawings do not indicate actual system configuration and that drawings are not being adequately maintained and controlled. Failure to maintain adequate drawings and implement drawing controls is a violation (50-261/82-20-02). In NRC Inspection Report 50-261/81-12, the licensee was cited for a similar violation, therefore, this Violation is considered to be recurrent and uncorrected.
- 2) The licensee utilizes supplements to the OP's called check-off sheets to conduct valve and breaker alignments. Review of these check-off sheets revealed the following discrepancies:
- a). Numerous check-off sheets have incorrect valve descriptions and/or valve numbers, have missing vent and drain valves, and have duplicate numbers for different valves.
 - b). The check-off sheets are missing valves (other than vent and drain valves) that exist on the actual system.
 - c). There are discrepancies between the check-off sheets and their associated drawings. In some cases the actual system configuration is different than either that described in the check-off sheet or diagramed on the drawing.
 - d). There is inconsistency with respect to instrument valves on the check-off sheets. Also some instrument valves are listed incorrectly.
 - e). The check-off sheet for procedure OP-52 has a containment isolation valve listed as "operable". This valve should be positioned closed and listed in the check-off sheet for procedure OP-49 as are the other containment isolation valves.
 - f). Two check-off sheets, OP-28.ID and OP-28.IE do not provide a return to normal lineup. Procedure OP-28 relies on the check-off sheets to perform either evolutions, however the check off sheets are not adequate.
 - g). Copies of OP-50A, check-off sheet for the Low Temperature Overpressure Protection System, are posted both inside and outside the pressurizer cubicle and are designated Revision 0. Revision 2 has been implemented since December 1981.

The review of this sampling of procedures revealed inadequacies in the check-off sheets and their control. Technical Specifications requires procedures to be accurately maintained. The examples

listed above indicate that operating procedure check-off sheets were not maintained and is a violation. (50-261/82-20-02).

- 3) During a review of the GP-1/OP-25A interface, it was noted that step 2.3 of GP-1 requires valves RC-455C or RC-456 (Pressurizer Relief Valves) to be open in preparation for filling and venting of the Reactor Coolant System (RCS). Step 2.9 of GP-1 requires completion of Valve Check-off OP-25A, and the valve check-off requires the control switches for these relief valves to be placed in "Auto." Placing these control switches in "Auto" will shut these valves. There appears to be a discrepancy between step 2.3 of GP-1 and valve check-off list OP-25A since the intent is to have these valves open as an initial condition for procedure GP-1. The licensee will review this issue and revise procedures accordingly. Inspector Followup Item 50-261/82-20-04.
- 4) Procedure GP-6, step 4.18, requires opening of the air supply to valves RHR-605 and RHR-758 but also allows the operator to delay opening of this supply until step 4.24.8 of the procedure. The sign-off blank for step 4.18 does not indicate this option and when signed indicates step completion. The licensee will review this procedure and revise the procedure such that sign-off of step 4.18 will reflect the actual operation completed. Inspector Followup Item 50-216/82-20-05.
- 5) Procedure GP-5A requires the operator to maintain a 40° subcooling margin while on natural circulation but does not alert the operator to adhere to the heatup and cooldown curves during this evolution. The licensee agreed to revise GP-5A to include a caution to remind the operators to adhere to the heatup and cooldown curves. Inspector Followup Item 50-261/82-20-06.
- 6) The licensee has incorporated the short term recommendations discussed in the letter of April 20, 1982, of the Pressurized Thermal Shock (PTS) task force review of April 5-7, 1982. However, during a review of the EI's, the inspector determined that procedure EI-1 appeared to be disorganized and therefore could cause operator confusion when utilized in an emergency. The licensee concurred with the inspector's findings and stated that procedure EI-1 was under review to improve the organization. Inspector Followup Item 50-261/82-20-07.

9. Technical Specification Compliance

During this reporting interval, the inspector verified compliance with selected limiting conditions for operation (LCO's) and reviewed results of selected surveillance tests. These verifications were accomplished by direct observation of monitoring instrumentation, valve positions, switch positions, and review of completed logs and records. The licensee's compliance with selected LCO action statements were reviewed as they happened.

10. Physical Protection

The inspector verified by observation and interview during the reporting interval that measures taken to assure the physical protection of the facility met current requirements. Areas inspected included the organization of the security force, the establishment and maintenance of gates, doors and isolation zones in the proper condition, that access control and badging was proper, that search practices were appropriate, and that escorting and communications procedures were followed.

11. Retrieval of Parts from "A" Reactor Coolant Loop

During the inspection of the "A" Reactor Coolant Pump (RCP) diffuser adapter bolts, it was determined that several pieces of bolt were missing. Through the use of cameras, the licensee determined that some bolt material was present in the loop piping between the steam generator and the RCP suction. Over about a two week period the licensee used remote cameras and various retrieval devices to try to remove all foreign objects from the loop. Most of the material was pushed down the loop drain line, and the drain line was removed to release the parts. Further camera studies indicated additional material in the loop, and all remote removal means failed to accomplish removal. Due to the extensive dose and time considerations, the licensee developed a procedure to send a man into the loop to remove all parts. Due to the high dose rate in the piping (About 20R/hr), extensive training and mockup runs were conducted to find a fast, safe removal means and anticipate potential emergencies. The inspector reviewed procedures and discussed with licensee personnel dose histories to ensure that the preparation for and conduct of the evolution would be safe. The loop entry was made via the steam generator channel head on June 5, 1982. Total entry time for the individual was about 2½ minutes, and all material was removed. The individual received a maximum exposure of 974 mrem and his whole body count showed negligible intake. The inspector observed the evolution and noted that it was undertaken in a serious and professional manner and only after other methods had failed and extensive preparation was completed. No violations or deviations were noted.

12. Pressurized Thermal Shock (PTS) Training

As a result of an NRC audit conducted at Robinson, the NRC forwarded a findings letter dated April 20, 1982 to CP&L. This letter included several recommendations concerning the need for additional operator training and procedural revisions necessary to adequately address the PTS issue. In response, by letter dated May 4, 1982, CP&L provided its commitments and clarifications on steps taken to address the recommendations. The inspectors reviewed the above letters and Revision 30 to Emergency Instruction-1 (EI-1), Incident Involving Reactor Coolant System Depressurization. The inspector also attended two sessions of the PTS classroom training for the licensed operators and shift engineers. After completion of the courses, the inspector reviewed a sampling of the examination grading and results. Simulator training was held at the Harris plant simulator and participants were graded on their performance. The inspector reviewed the

evaluations of the personnel tested. Personnel who failed any portion of the course are required to repeat the failed area and pass a subsequent test.

While the training program appeared adequate to accomplish the NRC recommendations, the inspector identified the following concerns:

- a. The safety injection pressurizer level termination criteria in EI-1 for main steam line break and loss of coolant accident were not consistent for high energy break inside containment. The licensee is reviewing this area for resolution.
- b. Graphs were not provided to the students on the power operated relief valve failure case history until the inspector informed training personnel of their existence.
- c. Operators are not provided with one curve which incorporates both the Appendix G operating curves and the saturation/ 40°F subcooling curves. The information is available on separate curves. Such a combined curve appears to be of more value during an accident with PTS concerns. The licensee agreed to review this area.
- d. The inspector found no evidence of operator feedback of questions or comments for the training course. The licensee agreed to solicit such feedback from operations personnel in the next few weeks.

The above item a., c., and d. will be reviewed after the licensee has concluded their review. (Inspector followup item 50-261/82-20-08).

The licensee's General Procedure changes and their safety evaluations were reviewed by the inspectors and appeared adequate and in accordance with NRC recommendations.

13. IE Notice Closeout

IE Notice 80-26 was verified by the inspector to have been received and reviewed by the licensee, and that adequate action has been taken.

14. Procurement and Storage

This inspection required the inspector to tour the licensee's storage areas, verify compliance with 10CFR50 Appendix B and the Corporate Quality Assurance Program, and verify that specific plant implementing procedures had been established and followed. The inspector witnessed a receipt inspection and verified it was properly conducted by qualified personnel. Several safety-related items were selected and their traceability and adequacy of documentation were verified. The storage facilities were toured and practices noted with the following discrepancies:

- a. There was no preventive maintenance schedule or procedures for either insulation testing of electric motors or shaft rotation of applicable

equipment in storage. Stockroom personnel had requested that maintenance personnel evaluate the type and frequency of preventive maintenance in July 1981. A list of both Q and non-Q list motors and pumps was provided recently to maintenance personnel, but no action has been taken. Presently, no preventive maintenance program has been implemented. ANSI N45.2.2-1972 Section 6.4.2 requires that written maintenance procedures be established and maintenance documented for items in storage. Failure to have such a program is a violation. (50-261/82-20-09).

- b. Not all limited shelf-life items are controlled. In accordance with licensee procedure SR-3, Storing Plant Material and Equipment, Some Q-list items purchased prior to the implementation of shelf-life procedures have not been included in the system. The inspector identified both Q-list valve diaphragms and chemicals that are not shelf-life controlled, although similar or identical material purchased more recently are controlled. Failure to have a program to control all Q-list shelf-life items is an additional example of the violation noted above. (82-20-09)

Additionally, a 10CFR21 report dated April 20, 1982 from the Brunswick facility identified potential problems where replacement components could be installed that do not meet the applicable specifications. While the control system is somewhat different at Robinson, the inspector discussed applicability of this problem with plant personnel. The licensee is continuing to investigate this area, but apparently a similar problem could occur. For example, parts in the same bin may have different certifications, depending on the application they were procured for. However, all parts would get an accept tag on which certifications are not delineated. Therefore, an unqualified replacement could be used in lieu of a qualified one. The inspector will monitor licensee resolution of this problem. (Open item 50-261/82-20-10).

15. Environmental Monitoring

The inspector reviewed Technical Specification Table 4.10.1, Environmental Surveillance Procedure-1 Revision 7, and the 1981 Annual Environmental Monitoring Report for completeness, accuracy and the existence of any trends. No significant trends were noted. The inspector toured selected environmental sampling stations inside and outside the plant site boundaries to verify that monitoring equipment is installed and operational. The inspector also observed sample collecting technique and preventive maintenance activities on equipment in the field. No violation or deviations were observed. The program appeared to be well organized and conscientiously performed.

16. Independent Inspection

- a. HVH Fan Cooler Cooling Coils

During the 1979 refueling outage, plant modifications were implemented which replaced all four HVH fan cooler tube bundles. The original coolers had experienced significant tube leakage. These coolers utilize lake water from the service water system. In memorandum RSEP/80-80 dated February 27, 1980, the Robinson Plant Manager identified several items under consideration to monitor cooler condition:

- 1) Inspection and cleaning, if necessary, during refueling outage of cooler air side surfaces.
- 2) Monthly verification of proper service water flow to each cooler.
- 3) Verification of proper air flow during each refueling outage.
- 4) Investigation of effects of water side fouling on cooler heat transfer.
- 5) Investigation of effects of tube plugging on cooler heat transfer.

Of the above, 2) has been incorporated into Periodic Test (PT) 4.1 and item 4) has been completed and indicated that the actual scaling factor was less than one-fourth the design scaling factor. Item 5) is in progress at Westinghouse. Items 1) and 3) have been incorporated into PT 24.11.

The inspector has the following concern on surveillance of the fan cooler units. The Westinghouse Technical Manual for the HVH units indicates that about 50 gpm motor heat exchanger cooling water is required to maintain HVH operability during normal and accident conditions. No surveillance is presently conducted to verify an acceptable flowrate. The surveillance of PT. 4.1 on HVH cooler flow does not measure motor cooler flow. In light of the potential for service water flow blockage, identified in CP&L's Corporate Nuclear Safety (CNS) Service Water System Assessment dated March 16, 1982 and encountered during the refueling outage, the motor coolers appear susceptible to unmonitored flow blockage which could cause unit failure. This item is open pending resolution. (50-261/82-20-11).

b. Failure of Letdown Line Relief Valve (CVC-203) Bellows; The inspector noted a trend during past plant transients involving containment isolation of failure of the letdown relief valve bellows. This problem has occurred during transients at or near normal operating pressures and temperatures. The relief valve is located between the orifice isolation valves (CVC-204A,B). Through discussions with licensee personnel, review of past transients, and review of the system several potential causes for the problem were identified:

- 1) Opening the orifice isolation valves prior to opening the CVC-204A,B valves. Not having the letdown line pressure control valve (CVC-145) sufficiently open may also contribute to the failure.

- 2) Attempting to restore letdown with instrument air to containment isolated.
- 3) Inadequate bellows design for the application.
- 4) Closing of the letdown line containment isolation valves prior to the orifice isolations on Phase A isolation. Both sets of valves receive the Phase A isolation T signal.

Due to past problem and the potential for leakage of reactor coolant or pressurizer relief tank water to containment, the inspector is concerned that resolution and correction of the failure mechanism is needed. Item 2) has been addressed in Abnormal Procedure-25, and item 3) is being researched by the licensee. However, items 1) and 4) have not been completely addressed. Specifically, item 1) is not prevented by interlock or appropriate precaution in the applicable operating procedure (OP-28), abnormal procedure (AP-25), or precautions, limitations, setpoint document (PLS-3). Item 4) was investigated and maintenance personnel determined that orifice isolation valve spring tension allowed system pressure to lift the valves partially off their seats. This condition was corrected and updated Maintenance Instructions are pending approval. This item is an inspector followup item pending approval of the revision to Maintenance Instruction-10, Procedure 1 and implementation of procedural guidance on restoring letdown flow to minimize bellows failure. (50-261/82-20-12).

- c. During the course of this inspection the inspector observed health physics practices and calibration due dates on health physics equipment in use.

Based on this observation two items contributing to a violation were identified. On May 19, 1982, the frisker being used in the hot machine shop, number 14092, was beyond its calibration due date of April 9, 1982. On May 17, 1982 the inspector witnessed two individuals using friskers at the exit of the protected area and the friskers were off when they were used. These two items constitutes a violation of Technical Specification 6.8.1 which requires certain procedures to be implemented and these procedures were not followed, this is a violation (82-20-13).

17. Outstanding Items Review

(Closed) Inspector Followup Item 80-39-01. This item concerned the need for a surveillance program to ensure operability of public address system loudspeakers used for plant evacuation alarm transmission. The licensee has instituted monthly preventive maintenance procedure MI-3, PM-13 for system inspection and testing. This procedure appears adequate.

(Closed) Inspector Followup Item 82-04-18. This item concerned the need for administrative controls which assume that prompt notification siren system status changes are promptly reported to plant personnel for dissemination.

Through discussion with licensee personnel and a review of siren test documentation and procedure PEP 4.2, the inspector determined that licensee controls appear adequate to keep County Civil Defense personnel informed of system degradation.

(Closed) Open Item 81-27-29. This item concerned deficiencies noted in licensee procurement of Plant Material and Equipment, and quality assurance procedure QAP-203 Revision 5, Procurement Document Review. Section 2.2 of SR-1 and Section 6.1 of QAP 203 appear to adequately address the concerns.

(Closed) Open Item 81-27-30. This item concerned deficiencies observed during a tour of storage facilities. The inspector conducted a tour of the storage facilities in conjunction with the inspection described in paragraph 14. All deficiencies had been corrected with the exception of those described in paragraph 14. The deficiencies described in Paragraph 14 will be independently tracked.

(Closed) Inspector Followup Item 81-27-36. This item concerned the need to periodically inspect the air dryer installed on the control room emergency ventilation control system. The inspector reviewed Periodic Test 24.8, Revision 0, and verified that the inspection requirement had been incorporated.

18. General Employee Training (41700)

The inspector reviewed the training and retraining programs for all non licensed plant personnel and the general employee training (GET) for all personnel to verify that: the program complies with regulatory requirements and licensee commitments; the program covers training in the areas of administrative controls and procedures, radiological health and safety, industrial safety, security procedures, the emergency plan, quality assurance, formal technical training commensuration with job classification, firefighting and prenatal radiation exposure; and audits conducted by the licensee in the areas of GET and documentation of training records were adequate.

The inspector reviewed the GET record for the present year for all personnel at the Robinson Station to verify training or retraining had been received on the persons missing training had their security badges removed. The inspector reviewed approximately 200 training records for non licensed personnel, and interviewed 30 people to verify by direct questioning that the licensee was meeting their commitments.

Based on the review one inspector followup item was identified. The licensee is presently developing a management program for plant personnel to insure all personnel in supervisory positions will be exposed to management techniques.

The program is in the development phase and until such time as it is implemented it will remain as an inspector follow-up item (82-20-13).

19. Requalification Training

The inspector reviewed the implementation and documentation of the licensee's accepted requalification program. The specific areas of review were: schedules for conducting required lectures; lesson plans for 20 selected lecture areas; the evaluation by the licensee of the results of the most recent examinations and subsequent training to identify and correct deficient areas; records for 16 licensed personnel; and the revised training program for Pressurized Thermal Shock (PTS). The inspector attended four classroom training sessions to verify technical content and method of instruction were adequate. The inspector interviewed 10 people holding SRO or RO licenses to insure they have been receiving required training and were being kept informed of industry topics related to their plant. The inspector questioned licensed personnel relative to the PTS training they had received and their understanding of the problems involved and its relationship to the Robinson Station.

Based on this review one inspector followup item was identified and will be discussed in the following paragraphs.

a) PTS Training

As a result of an NRR audit of the licensees' program on PTS, the licensee developed a longer more in-depth training program in this area. The inspector attended three sessions of the revised training and reviewed the examinations given as a result of this review. The overall program was considered satisfactory with the following concerns: the program could have better addressed why the PTS is of more concern at Robinson; how will examination failures be handled; and the students were not provided with copies all training aids or objectives for future study.

b) Records Storage

While tracing down documentation of the additional training received by licensed personnel due to failing parts of their annual requalification examination, the inspector found that many areas had to be searched before all needed documentation could be located. The licensee committed to centralizing all documentation into each licensed individuals training folder. Until such time as this centralizing of records takes place, this will remain as an inspector followup item (82-20-14).