

APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-285/88-13

Operating License: DPR-40

Docket: 50-285

Licensee: Omaha Public Power District (OPPD)  
1623 Harney Street  
Omaha, Nebraska 68102

Facility Name: Fort Calhoun Station (FCS)

Inspection At: FCS, Blair, Nebraska

Inspection Conducted: April 1-30, 1988

Inspector: *for* R. P. Mullikin 6/3/88  
P. H. Harrell, Senior Resident Reactor  
Inspector Date

*for* R. P. Mullikin 6/3/88  
T. Reis, Resident Reactor Inspector Date

R. P. Mullikin 6/3/88  
R. P. Mullikin, Project Engineer Date

Approved: T. F. Westerman 6/6/88  
T. F. Westerman, Chief, Projects  
Section B Date

Inspection SummaryInspection Conducted April 1-30, 1988 (Report 50-285/88-13)

Areas Inspected: Routine, unannounced inspection including followup on previously identified items, licensee event report followup, operational safety verification, plant tours, safety-related system walkdown, monthly maintenance observations, monthly surveillance observations, security observations, radiological protection observations, in-office review of periodic and special reports, followup on the licensee's program for sampling the emergency diesel fuel oil supplies, followup on NUREG-0737 (TMI) Item II.K.3.5 concerning tripping of reactor coolant pumps after a loss-of-coolant accident, and followup on the potential for inadvertent dilution of the reactor coolant system via the sodium hydroxide tank.

Results: Within the 13 areas inspected, one violation (failure to follow a procedure for a radiation portal monitor alarm, paragraph 11) was identified.

DETAILS1. Persons Contacted

- \*R. Andrews, Division Manager, Nuclear Production
- \*W. Gates, Plant Manager
- \*C. Brunnert, Supervisor, Operations Quality Assurance
- M. Core, Supervisor, Maintenance
- T. Dexter, Supervisor, Security
- \*J. Fisicaro, Supervisor, Nuclear Regulatory and Industry Affairs
- J. Foley, Supervisor, I&C and Electrical Field Maintenance
- \*J. Gasper, Manager, Administrative and Training Services
- \*C. Simmons, Plant Licensing Engineer
- \*R. Jaworski, Section Manager, Technical Services
- J. Key, Acting Reactor Engineer
- \*D. Trausch, Supervisor, Operations
- \*K. Morris, Division Manager, Quality Assurance and Regulatory Affairs
- \*J. O'Connor, Plant Engineer
- \*A. Richard, Manager, Quality Assurance
- \*G. Roach, Supervisor, Chemical and Radiation Protection
- \*R. Scofield, Supervisor, Outage Projects
- \*S. Willrett, Supervisor, Administrative Services and Security

\*Denotes attendance at the monthly exit interview.

The inspector also contacted other plant personnel, including operators, technicians, and administrative personnel.

2. Plant Status

During this inspection period, FCS operated at 100 percent power. As of April 30, 1988, FCS had been in continuous operation for 327 days. Major work during this time frame involved overhaul of the traveling screens in the intake structure.

3. Followup on Previously Identified Items (92701)

- a. (Closed) Unresolved Item 4.5-3 of NRC Inspection Report 50-285/85-22: Fuse block enclosure not addressed by the fire hazards analysis. (99025)

This item identified a wooden fuse block enclosure installed in each battery room that was not addressed by the fire hazards analysis report (FHAR).

The licensee issued Revision 1 to the FHAR on April 7, 1988. The revision included the enclosures on the list of the combustible materials for the battery rooms. The licensee performed Calculation ES-86-17 to verify that the enclosures did not adversely affect the combustible loading.

The NRC inspector reviewed Calculation ES-86-17 and the revision to the FHAR. Based on this review, it appeared that the licensee had taken adequate action to address the enclosures installed in the battery rooms.

- b. (Closed) Severity Level IV Violation 285/8729-01: Failure to provide postmaintenance testing instructions for CQE (safety-related) equipment. (62703)

This violation involved the failure of the licensee to provide postmaintenance testing on Maintenance Orders (MO) 875166, 875167, and 875183 which were issued for repair of safety-related Valves PCV-514A, FCV-532A, and LCV-1173, respectively.

The basis of this violation was the inadequacy of the Procedure SO-G-17, "Maintenance Order." At the time of the violation, SO-G-17 required postmaintenance testing instructions be provided only for safety-related equipment required to perform during an accident.

After notification of this violation by the NRC inspector, personnel authorized to perform the technical reviews of MOs were immediately directed to specify postmaintenance testing for all safety-related equipment. Additionally, the licensee revised Procedure SO-G-17 and issued the revision on December 7, 1987. The revised procedure requires that testing be performed on all safety-related equipment to verify operability before it is declared fully operational. The testing requirements are to be specified by the technical review supervisor. The revision required that additional quality control measures to be considered for equipment that cannot be tested due to operational constraints.

The NRC inspector noted that the previous practice of returning equipment to service following maintenance, where no specific testing was required, was at the discretion of the shift supervisor. The revision to Procedure SO-G-17 stated that the technical support staff was responsible for determining the appropriate postmaintenance tests.

The NRC inspector reviewed the actions taken by the licensee as discussed above. Based on this review, it appeared that the licensee had taken actions to correct the identified problem and had taken actions to prevent recurrence of this problem.

- c. (Closed) Open Item 285/8733-01: Excessive personnel were in the control room. (71707)

This item concerned observations by the NRC inspectors that too many people were in the control room. The unnecessary personnel caused the noise level to be distracting to operations personnel.

In response to this concern by the NRC inspectors, the supervisor-operations and the supervisor-maintenance issued a memo to all plant employees stating that only personnel with bona fide reasons should enter the control room. The memo also stressed that personnel should conduct business at the window provided for that reason. The plant manager met with all shift supervisors to stress that management would support any actions the shift supervisors took to remove unnecessary personnel from the control room.

The NRC inspectors have toured the control room frequently since this item was identified in December 1987. During these tours, no instances were noted where it appeared that excessive or unnecessary personnel were loitering in the control room. The NRC inspectors will continue to monitor the control room for excessive personnel during routine tours.

4. Licensee Event Report (LER) Followup (92700)

Through direct observation, discussions with licensee personnel, and review of records, the following event report was reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with Technical Specifications (TS).

The LER listed below is closed:

87-014      Setpoint of pressurizer code safety valve out of specification

LER 87-014 provided information regarding one of two pressurizer code safety valves found to be out of specification during the performance of Surveillance Test ST-PSV-1, "Pressurizer Code Safety Valve Test." During the 1987 refueling outage, ST-PSV-1 was performed and a pressurizer code safety, Valve RC-141, lifted at 2643 psia which is 3.85 percent above the valve's nameplate setpoint value of 2545 psia. This exceeded the minimum operability requirement of TS 2.1.6(1) which requires both the pressurizer code safety valves to be operable with their lift settings between 2500 and 2545 psia with a tolerance of plus or minus 1 percent. The second pressurizer code safety, Valve RC-142, was found to lift at 2498 psia, which is within the required tolerance.

The licensee performed an analysis as documented by Operations Support Analysis Report (OSAR) 87-17. The OSAR analyzed a loss-of-load event using the actual as-found setpoints of three steam safety valves which were out of tolerance as reported in LER 87-003, and the pressurizer code safety valve actual as-found setpoint to determine the safety significance of the out-of-specification conditions. The analysis found the resulting pressure transients were below the design basis acceptance criteria provided in Section 14.9 of the Updated Safety Analysis Report (USAR).



The NRC inspector reviewed OSAR 87-17 in conjunction with Section 14.9 of the USAR. Based on this review, it appeared that the licensee's conclusion that the condition posed no significant safety hazard was correct.

The valves were recalibrated and tested twice, prior to reinstallation, to ensure operability and repeatability. In evaluating this LER, the NRC inspector noted that the licensee had not taken actions to prevent recurrence of the setpoint drift problem. In discussions with the licensee, it was agreed that a review of the feasibility of revising the test procedure to make laboratory conditions more closely approximate actual installed conditions would be performed.

Subsequent to the discussion, the NRC inspector met with the reactor engineer, who had not participated in the original discussion or agreement. The reactor engineer and his staff demonstrated to the NRC inspector that the Wyle Laboratories' procedure used for testing the relief setting does require laboratory conditions to closely simulate plant conditions with the exception that the laboratory testing configuration does not incorporate a loop seal upstream of the safety valve. This issue is the same concern discussed in Item II.D.1.A.(2) of NUREG-0737.

Based on the review, it appeared that the licensee performed adequate analysis in regard to the safety significance of the valve being found to have a higher than tolerance setpoint. This LER is closed based on this analysis provided in OSAR 87-17. The generic issue of laboratory conditions modeling actual inservice conditions will be reviewed during a followup inspection on Item II.D.1.A.(2).

No violations or deviations were identified.

5. Operational Safety Verification (71707)

The NRC inspectors conducted reviews and observations of selected activities to verify that facility operations were performed in conformance with the requirements established under 10 CFR, administrative procedures, and the TS. The NRC inspector made several control room observations to verify the following:

- . proper shift staffing
- . operator adherence to approved procedures and TS requirements
- . operability of reactor protective system and engineered safeguards equipment
- . logs, records, recorder traces, annunciators, panel indications, and switch positions complied with the appropriate requirements
- . proper return to service of components

- . maintenance orders (MO) initiated for equipment in need of maintenance
  - . appropriate conduct of control room and other licensed operators
  - . management personnel toured the control room on a regular basis
- No violations or deviations were identified.

6. Plant Tours (71707)

The NRC inspectors conducted plant tours at various times to assess plant and equipment conditions. The following items were observed during the tours:

- . General plant conditions, including operability of standby equipment, were satisfactory.
- . Equipment was being maintained in proper condition, without fluid leaks and excessive vibration.
- . Plant housekeeping and cleanliness practices were observed, including no fire hazards and the control of combustible material.
- . Performance of work activities was in accordance with approved procedures.
- . Portable gas cylinders were properly stored to prevent possible missile hazards.
- . Tag out of equipment was performed properly.
- . Management personnel toured the operating spaces on a regular basis.

No violations or deviations were identified.

7. Safety-Related System Walkdown (71710)

The NRC inspector walked down accessible portions of the following safety-related system to verify system operability. Operability was determined by verification of selected valve and switch positions. The system was walked down using the drawing and procedure noted.

- . Fire Protection (Procedure OI-FP-6, Revision 53 and Drawing 11405-M-266, Revision 40)

During the walkdown, the NRC inspector noted no discrepancies in the fire protection system.

No violations or deviations were identified.

8. Monthly Maintenance Observations (62703)

The NRC inspectors reviewed and/or observed selected station maintenance activities on safety-related systems and components to verify the maintenance was conducted in accordance with approved procedures, regulatory requirements, and the TS. The following items were considered during the reviews and/or observations:

- . The TS limiting conditions for operation were met while systems or components were removed from service.
- . Approvals were obtained prior to initiating the work.
- . Activities were accomplished using approved MOs and were inspected, as applicable.
- . Functional testing and/or calibrations were performed prior to returning components or systems to service.
- . Quality control records were maintained.
- . Activities were accomplished by qualified personnel.
- . Parts and materials used were properly certified.
- . Radiological and fire prevention controls were implemented.

The NRC inspector reviewed and/or observed the following maintenance activities:

- . Troubleshooting of the bistable trip unit 4 (AI-31C-CW4-C/TU-04) for low-water level in steam generator 1 (MO 881053)
- . Painting of auxiliary building (MO 881236)
- . Painting of the intake structure (MO 875194)
- . Repair of traveling screen CW-2F in circulating water intake (MO 875090)
- . Inspection of spare 480-Volt Breaker 1B4B-3

A discussion of the maintenance activities performed is provided below.

- a. The NRC inspector observed an instrumentation and control technician troubleshooting AI-31C-CW4-C/TU-04 per MO 881053. The trip unit was placed in the bypass position for the troubleshooting. The NRC inspector reviewed the control room log and the turnover sheet and found no entries had been made for placing the unit in bypass. This is contrary to the requirements of Standing Order 0-24. The



condition was discussed with the shift supervisor who agreed a log entry should have been made for placing the trip unit in the bypass condition. The NRC inspector routinely reviews the appropriate logs and found this to be an isolated incident.

- b. During the month of April, considerable cosmetic painting was being performed in the auxiliary building per MO 881236. On April 12, 1988, the NRC inspector observed an individual priming the inside of the door of the emergency battery room and questioned the adequacy of the ventilation in the space. The supervisor-maintenance was informed of the concern and a chemist was dispatched to the scene. The chemist reported to the supervisor-maintenance that the volatile concentration in the space was not dangerous.
- c. On April 21, 1988, the NRC inspector observed maintenance personnel in the intake structure painting the south and middle raw water pump bays while workmen overhead were actively engaged in structural steel repair on traveling screen 2F involving acetylene burning. The workmen involved with the screen repair had placed boards over the grating which provided ventilation pathways to the raw water pump bays. The adequacy of the environment for both the painters and equipment was questioned by the NRC inspector from a habitability, fire protection, and equipment protection standpoint. The NRC inspector immediately notified the supervisor-mechanical maintenance and onsite licensing engineer who accompanied the NRC inspector back to the worksite. The licensee personnel concurred with the NRC inspector that the environment was oppressive and unhealthy but questioned whether the atmosphere was hazardous due to combustible concentrations of volatile material. The painting was temporarily halted while a chemist with an explosives meter was called to the scene. The chemist reported that oxygen content and volatile concentrations at that time were within specification, although painting had already been stopped for a period of time.

The NRC inspector examined the materials which the painters were using. The paint was an oil based combustible paint with a flash point of 105 degrees Fahrenheit. A climatic reducer found on the scene, which the workmen used for cleaning hands and brushes was a mixture of toluol and naptha with a flash point of 45°F.

In addition, covering the grating blocked the ventilation to the intake bay and caused heat to build up from the continuous operation of a raw water pump motor. The normally very cool environment had reached an estimated temperature of 85°F and in the direct vicinity of the pump motor was significantly higher.

The licensee indicated that the development of a policy concerning and the training of general maintenance personnel regarding painting in enclosed areas was being pursued. This issue is considered an open item. (285/8813-01)

- d. On April 5, 1988, the NRC inspector witnessed the cleaning and inspecting of the spare 480-Volt Breaker 1B4B-3. The work was being performed with the use of appropriate procedures and by qualified personnel in a CQE storage area. No discrepancies were noted.

No violations or deviations were identified.

9. Monthly Surveillance Observations (61726)

The NRC inspectors observed selected portions of the performance of and/or reviewed completed documentation for the TS-required surveillance testing on safety-related systems and components. The NRC inspectors verified the following items during the testing:

- . Testing was performed by qualified personnel using approved procedures.
- . Test instrumentation was calibrated.
- . The TS limiting conditions for operation were met.
- . Removal and restoration of the affected system and/or component were accomplished.
- . Test results conformed with TS and procedure requirements.
- . Test results were reviewed by personnel other than the individual directing the test.
- . Deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The NRC inspectors observed and/or reviewed the documentation for the following surveillance test activities. The procedures used for the test activities are noted in parenthesis.

- . Monthly testing of the Channel A safety injection actuation signal (ST-ESF-2)
- . Monthly testing of the Channel A containment spray actuation signal (ST-ESF-4)
- . Monthly testing of the Channel A recirculation test signal (ST-ESF-13)
- . Monthly testing of selected CQE valves (SP-STROKE-1)
- . Monthly testing of the PORV/safety valve tailpipe temperature circuit (ST-SVTEMP-1)
- . Monthly testing of the high pressurizer pressure channels (ST-RPS-5)

Monthly testing of the steam generator pressure channels (ST-RPS-7)

Weekly reactivity balance (ST-RA-1)

A discussion of the surveillance activities performed is provided below.

- a. On April 20, 1988, the NRC inspector witnessed the performance of surveillance testing of several of the engineered safeguards signals. These were the train A safety injection, containment spray, and recirculation actuation signals; and were performed with the use of the procedures listed above. The tests were conducted by a senior reactor operator (SRO). The portions of the tests witnessed (Steps 1 through 19 of ST-ESF-2 and the entirety of ST-ESF-4 and 13) were performed verbatim and the hardware functioned as designed. No abnormalities were identified.
- b. On April 19, 1988, the NRC inspector obtained and reviewed data trending the stroke times of selected CQE (safety-related) instrument air valves which are not in the inservice inspection (ISI) program. The stroke times of these valves were obtained and recorded via Special Procedure ST-STROKE-1. This procedure was written after water was found to have intruded the instrument air system in July 1987 which caused the failure of an air-operated emergency diesel generator exhaust damper in September 1987.

The purpose of the special procedure was to ascertain whether the water intrusion incident was having a degrading effect on the operation of CQE valves which are not routinely tested. The valves chosen for the study were based on their location on the instrument air risers. Of the 39 valves tested, two required corrective maintenance which could be directly attributed to water damage. The 39 valves were tested on a monthly basis for six months and their stroke times recorded. The data obtained is not indicative of degraded stroke times or operability of any of the valves tested. The special procedure will continue to be included in monthly surveillance testing by the licensee. The NRC inspector will routinely follow the results.

- c. On April 14, 1988, the NRC inspector independently verified the recordings taken by an SRO for procedure, ST-SVTEMP-1. This procedure requires the analysis of the primary system power-operated relief and safety valves outlet port temperatures to verify they indicated a reasonable ambient temperature which would, in turn, indicate they are not leaking. The NRC inspector verified the results to be acceptable.
- d. On April 13, 1988, the NRC inspector witnessed an instrumentation and control technician test the logic circuitry for the reactor protection system Channel D high pressurizer pressure trip and the Channel A of the steam generator pressure trip. The NRC inspector noted that the procedures were properly logged prior to beginning the

tests. The portions of the tests witnessed were performed verbatim with the exception of one minor step which did not affect completing the procedure. The minor procedural inadequacy was conveyed to the appropriate licensee personnel.

- e. On April 29, 1988, the NRC inspector observed the shift technical advisor (STA) perform the weekly reactivity balance per Procedure ST-RA-1. It was noted that the STA correctly used the graphical data presented in the technical data book to calculate the reactivities due to boron, xenon and samarium, and power defect. The balance was found to be within required tolerances. The NRC inspector noted that this surveillance test was performed verbatim.

No violations or deviations were identified.

10. Security Observations (71881)

The NRC inspectors verified the physical security plan was being implemented by selected observation of the following items:

- . The security organization was properly manned.
- . Personnel within the protected area (PA) displayed their identification badges.
- . Vehicles were properly authorized, searched, and escorted or controlled within the PA.
- . Persons and packages were properly cleared and checked before entry into the PA was permitted.
- . The effectiveness of the security program was maintained when security equipment failure or impairment required compensatory measures to be employed.
- . The PA barrier was maintained and the isolation zone kept free of transient material.
- . The vital area barriers were maintained and not compromised by breaches or weaknesses.
- . Illumination in the PA was adequate to observe the appropriate areas at night.
- . Security monitors at the secondary and central alarm stations were functioning properly for assessment of possible intrusions.

No violations or deviations were identified.

11. Radiological Protection Observations (71709)

The NRC inspectors verified that selected activities of the licensee's radiological protection program were implemented in conformance with the facility policies and procedures and in compliance with regulatory requirements. The activities listed below were observed and/or reviewed:

- . Health physics (HP) supervisory personnel conducted plant tours to check on activities in progress.
- . Radiation work permits contained the appropriate information to ensure work was performed in a safe and controlled manner.
- . Personnel in radiation controlled areas (RCA) were wearing the required personnel monitoring equipment and protective clothing.
- . Radiation and/or contaminated areas were properly posted and controlled based on the activity levels within the area.
- . Personnel properly frisked prior to exiting an RCA.

On April 12, 1988, at approximately 3:10 p.m., the NRC inspector witnessed five individuals exiting the portal radiological monitors and turnstiles in the security building while an audible alarm sounded. No apparent action was being initiated to verify if the monitor was alarming due to the presence of a contaminated individual. Upon exiting the turnstile, the NRC inspector asked the security guard inside the enclosed security work area if the portal monitor was alarming. The guard confirmed that it was the portal monitor alarm. The guard further explained that it is standard procedure to stop the person who initiated the alarm and send him back through a second time to confirm the alarm, and then contact a health physics technician, if appropriate. The guard stated that the monitor had been giving three or more false actuations per hour, and when a large group went through, it was not possible to identify who initiated the alarm.

In followup of this event, the NRC inspector reviewed the general employee training film on what actions should be taken by an individual if the monitor alarms when he or she passes through. This film, which all employees with unescorted access have viewed, clearly instructs individuals what to do in the event a portal monitor alarms. The instructions in the film state that a health physics technician should be contacted whenever a monitor alarms.

Section 5.8.1 of the TS states, in part, that written procedures shall be established, implemented and maintained that meet or exceed the requirements of Appendix A to Regulatory Guide 1.33. Paragraph 7 of Appendix A to Regulatory Guide 1.33 states, in part, that written procedures for control of radioactivity (for limiting materials released to the environment and limiting personnel exposure) shall be covered by written procedures.



Paragraph 2.21.1 of Section VII-2 of the Radiation Protection Manual states, in part, that personnel suspected of skin contamination, due to monitoring instrument alarms, must contact a radiation protection technician.

Contrary to the above, five individuals passed through a portal radiation monitor that was in alarm and did not contact a radiation protection technician to verify the skin contamination was not present. This is an apparent violation. (285/8813-02)

Upon notification of the event by the NRC inspector, the licensee took the following immediate corrective actions:

- . The licensee pulled the computer printout to determine who had exited the protected area immediately prior to the NRC inspector. The investigation failed to discover anyone who had been in a radiologically controlled area (RCA) and not released by the respective monitors in the RCA.
- . The licensee stationed a junior health physics technician at the portal monitor exit during periods of high traffic to ensure spurious alarms were investigated.
- . The licensee issued security bulletin 88-11 to all security personnel instructing them as to what actions to take in the event that the portal monitor alarms. These include locking the turnstiles and directing personnel back through the monitor.
- . On April 29, 1988, the licensee issued procedure S0-G-76, "Use of the Gamma-10 Portal Monitors." The procedure instructs individual personnel on what actions to take in the event of annunciation of the exit portal monitor.

12. In-office Review of Periodic and Special Reports (90713)

In-office review of periodic and special reports was performed by the NRC resident inspectors and/or the NRC Fort Calhoun project engineer to verify the following, as appropriate:

- . Reports included the information required by appropriate NRC requirements.
- . Test results and supporting information were consistent with design predictions and specifications.
- . Determination that planned corrective actions were adequate for resolution of identified problems.
- . Determination as to whether any information contained in the correspondence should be classified as an abnormal occurrence.

- Correspondence did not contain incorrect, inadequate, or incomplete information.

The NRC inspectors reviewed the following:

- Special report on inoperability of postaccident monitoring instrumentation, dated April 14, 1988
- TS amendment for removal of organization charts from Section 5, dated April 15, 1988
- Letter in response to NRC questions on the 10 CFR Part 50.62 rule, dated April 8, 1988
- Implementation of integrated schedules for plant modification per Generic Letter 85-07, dated April 11, 1988
- March monthly operating report, dated April 13, 1988
- Monthly operations report for March 1988, undated

No violations or deviations were identified.

13. Verification of Emergency Diesel Generator Fuel Oil Quality in the Quality Assurance Program (TI 2500/93)

This inspection was prompted by an NRR request to assure that diesel generator fuel oil is included in the licensee's quality assurance program.

The NRC inspector reviewed the licensee's CQE List, Revision 3, dated March 31, 1987, and found that emergency diesel generator fuel oil is considered "Limited CQE." This is defined as those structures, systems or items whose satisfactory performance is required to prevent or mitigate the failure of those structures, systems, components or items identified as CQE.

The following procedures were reviewed that require the inspection of diesel fuel oil at the time of receipt and on a periodic basis:

- Standing Order T-16, "Diesel-Generator Fuel Oil Receipt Sampling"
- Chemistry Manual Procedure CMP-2.7, "Fuel Oil Storage Tank Sampling"
- Chemistry Manual Procedure CMP-3.71, "Determination of Water and Sediment in Oil"
- Chemistry Manual Procedure CMP-3.72, "Determination of API Gravity"
- Chemistry Manual Procedure CMP-3.73, "Determination of Saybolt Viscosity"

Technical Services Operation Procedure PO-TSOP-2, "Fort Calhoun Station Oil Analysis Program"

The licensee provides for a monthly sampling of fuel oil as well as a sampling when new fuel arrives.

It appears that the licensee has adequately included emergency diesel fuel oil into their quality assurance program.

No violations or deviations were identified.

14. Followup on a NUREG-0737 (TMI) Item (TI 25U0/65)

By letter dated March 25, 1988, NRR informed the licensee that it had satisfied the requirement for the TMI Action Item II.K.3.5. This action item required all licensees to consider other solutions to small break loss-of-coolant (LOCA) problems than tripping the reactor coolant pumps. Via the above letter, the staff confirmed that the licensees' program satisfactorily addressed the concerns.

The NRC inspector reviewed the following emergency operating procedures (EOP) to verify the action statements relative to tripping reactor coolant pumps were in accordance with the Combustion Engineering Owners Group guidelines. In each case, the procedures appeared to be adequate.

<u>Procedure</u>	<u>Emergency Condition</u>
EOP-1	Reactor Trip
EOP-2	Electrical Emergency
EOP-3	Loss of Coolant Accident
EOP-4	Steam Generator Tube Rupture
EOP-5	Uncontrolled Heat Extraction
EOP-6	Loss of all Feedwater

Instrumentation uncertainties for normal and adverse environments were examined by the NRC inspectors in NRC Inspection Report 50-285/85-09. An issue concerning accuracy of the postaccident monitoring instrumentation was resolved in NRC Inspection Report 50-285/86-02.

The licensee has demonstrated that the results of the Combustion Engineering Owners Group generic analyses are conservative for Fort Calhoun. The NRC staff considers these analyses acceptable.

The NRC inspector reviewed the training records for the emergency operating procedures previously listed to ensure that all licensed operators had been trained on this event. The results of the review indicated all had received training.

Based on the review of the EOPs, the examination of instrumentation uncertainties, the NRC staffs' endorsement of the Technical Evaluation Report for FCS conformance to Generic Letter 86-06, and review of the training records for EOPs, it appears the licensee has adequately addressed the requirements of the TMI Action Item II.K.3.5. This item is closed.

No violations or deviations were identified.

15. Followup on Problem for Inadvertent Dilution of the Reactor Coolant System (TI 2500/94)

On October 4, 1977, the NRC issued DOR Information Memorandum No. 7, "PWR Moderator Dilution," that discussed a concern for unanalyzed moderator dilution by inadvertent injection of sodium hydroxide (NaOH) from the NaOH tank during a surveillance testing. Analysis revealed that unterminated injection of NaOH solution could result in reactor criticality and that this manner of moderator dilution was not bounded by the accident analysis.

The NRC inspector reviewed Chapters 14 and 6 of the USAR, and determined that this concern is not applicable to the Fort Calhoun Station. The plant does not employ the use of NaOH injection into the containment spray system. Postaccident iodine removal is accomplished via the containment ventilation system.

No violations or deviations were identified.

16. Exit Interview (30703)

The NRC inspectors met with you and other members of the licensee staff at the end of this inspection. At this meeting, the NRC inspector summarized the scope of the inspection and the findings.