APPENDIX C

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/88-11 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: March 1-31, 1988

Inspector: P. H. Harrell, Senior Resident Reactor Inspector — Date: 4-26-88

P. H. Harrell for T. Reis, Resident Reactor Inspector — Date: 4.26.88

T. F. Westerman for R. P. Mullikin, Project Engineer — Date: 4-26-88

Approved: T. F. Westerman, Chief, Reactor Project Section B — Date: 4-26-88

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Inspection Summary

Inspection Conducted March 1-31, 1988 (Report 50-285/88-11)

Areas Inspected: Routine, unannounced inspection including followup on previously identified items, operational safety verification, plant tours, safety-related system walkdowns, monthly maintenance observations, monthly surveillance observations, security observations, radiological protection observations, in-office review of periodic and special reports, followup on NRC Conformance Bulletin 87-01, followup on licensee-identified design problems, followup on an allegation, and followup on an enforcement conference on fire protection.

Results: Within the 13 areas inspected, two violations (failure to provide accurate information in response to an NRC-identified violation, paragraph 10; and failure to make a 4-hour report in accordance with 10 CFR Part 50.72, paragraph 7) and one deviation (failure to implement corrective actions related to the control of scaffolding erected in safety-related areas, paragraph 6) were identified.

DETAILS

1. Persons Contacted

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

*Denotes attendance at the monthly exit interview.

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

2. Followup on Previously Identified Items

a. (Closed) Open Item 285/8733-04: Potential problem with the operability of Emergency Diesel Generator (EDG) 2.

This open item was previously discussed in NRC Inspection Report 50-285/88-05. The discussion in the inspection report noted that the licensee had stated that the recommendations made by a field service technician, to ensure that EDG 2 remained in a satisfactory condition, would be performed. The recommendations included continued monitoring of the cooling water system surge tank sightglass for signs of oil and increase the monthly surveillance test from a 1-hour to a 3-hour run.

The NRC inspectors reviewed the actions taken by the licensee to implement the technician's recommendations. The review performed by the inspectors included periodic monitoring of the sightglass and observation of the surveillance tests performed for EDG 2. The reviews were performed for a 2-month period. During performance of the reviews, no apparent anomalies were noted with EDG 2. Based on the reviews performed, it appeared that the licensee had taken

appropriate actions to identify and correct the anomaly of oil appearing in the cooling water sightglass. No further questions regarding the operability of EDG 2 were identified at this time.

b. (Open) Unresolved Item 285/8803-01: Operability of Containment Penetration Assembly F-11.

This unresolved item involved a concern as to the operability of Assembly F-11. The concern was identified because the NRC inspector noted that the assembly internal pressure was only 2 psig. The normal internal pressure for penetration assemblies is approximately 20 psig.

In response to this concern, the licensee contacted the assembly manufacturer, Conax Corporation, to determine if the low internal pressure affected the electrical equipment qualification of the assembly. Conax stated that an internal pressure was not required to be maintained in the assembly in order to maintain the qualification of the assembly.

On March 9, 1988, the licensee issued an evaluation that discussed the operability of the penetration. The evaluation included a review of the past local leak rate tests performed on Assembly F-11. For the tests reviewed, it was determined that no leakage was identified. The evaluation also noted that Assembly F-11 is a double-barrier canister penetration assembly. This type of construction provided a double leakage barrier which would require a failure in two distinct barriers before containment integrity would be lost. Based on the reasons discussed above, the licensee concluded that Assembly F-11 was operable.

The NRC inspector reviewed the evaluation and other documentation related to the basis of the conclusions stated in the evaluation. During this review, no problems were noted.

On January 20, 1988, the licensee issued Maintenance Order (MO) 880366 to pressurize Assembly F-11 to 20 psig and to verify the pressure in other assemblies was at least 20 psig. As a result, the pressure in Assemblies D-1 and D-7 was also increased to 20 psig. To ensure that the pressure in all assemblies is maintained at 20 psig, the licensee stated that a preventive maintenance (PM) procedure would be issued to check the pressure in each assemble every quarter. At the end of this inspection period, the PM procedure had not been issued.

This item remains open pending the issuance of a PM procedure to check the pressure in each assembly.

c. (Open) Open Item 285/8803-03: Adequacy of Abnormal Operating Procedure (AOP)-18.

This item is related to the apparent inadequacy of Procedure AOP-18, "Loss of Raw Water." During a review of Procedure AOP-18, it appeared that the licensee had implemented a procedure to describe the actions to be taken in the event all raw water flow was lost; however, it did not appear that the licensee had implemented a procedure for mitigation of the loss of raw water flow during flooding in the raw water pump cell.

In review of this apparent procedural inadequacy, the NRC inspector noted that the licensee had implemented a procedure to describe the actions to be taken to mitigate the loss of raw water due to flooding in the raw water pump cell. The instructions are provided in Procedure OP-10, "Annunciator Response Procedure." The NRC inspector reviewed the procedure and it appeared that adequate instructions had been provided by the licensee.

The NRC inspector also reviewed Section 9.8.6 of the Updated Safety Analysis Report (USAR). The NRC inspector noted that Section 9.8.6 discussed the existence of calculations that supported the statement that the plant could be placed in hot shutdown with a complete loss of raw water. The licensee could not locate the calculations in their historical files, so the licensee stated that the calculations would be reproduced in the near future. This item remains open pending completion of the calculations and a review of the adequacy of the calculations by the NRC inspector.

During a review of Section 9.8.6 of the USAR, the NRC inspector also noted that the discussion provided by the licensee was incomplete. The as-built configuration of the raw water system contains connections for cross-connecting the fire water system to the raw water system. The purpose of these connections is to allow the fire water system to supply cooling water to the raw water supplied components in the event the raw water pumps are lost. Section 9.8.6 does not provide a description of this system interface. In a review of this USAR inadequacy, the licensee located the fire water/raw water system interface description in the docketed plant information. The interface description had been supplied in response to a question from the NRC during the initial plant license review in 1973.

Even though the information had already been docketed, the licensee stated that Section 9.8.6 of the USAR would be updated during the next revision to the USAR, scheduled to be issued in July 1988. This item remains open pending issuance of a revision to the USAR to include a description of the fire water/raw water interface.

The NRC inspector reviewed the actions taken by the licensee as described above. Based on this review, it appeared that the licensee had provided a procedure for describing the actions to be taken to

mitigate the loss of raw water and that the licensee had provided an alternate means of placing the plant in the hot shutdown mode in the event that the raw water system was lost.

3. Operational Safety Verification

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 Technical Specifications (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
- MOs 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.

4. Plant Tours

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.

The NRC inspectors noted the following items during tours of the plant:

- On March 5, 1988, nonwork-related reading material (the local newspaper) was found in the desk adjacent to the alternate shutdown panel. The licensee had previously issued a policy statement that no nonwork-related material was allowed in the plant operating spaces. The NRC inspector could not establish whether or not the material was being read by a station watchstander. Upon notification of the location of the reading material by the NRC inspector, the licensee promptly removed the material.

- On March 10, 1988, the NRC inspector noted that both the open and closed indicating lights on the local breakers for safety-related valves were burnt out. The NRC inspector's concern was that certain emergency procedures require that the operator perform specific steps based on the local indication of valve status. The breaker indications identified by the NRC inspector were not related to the performance of an emergency procedure.

  The NRC inspector discussed the breaker indicator status with licensee personnel. The licensee stated that no documented program existed for routinely checking local breaker indications. However, the licensee stated that it was appropriate to establish a program to ensure that indications were available for operations personnel in the event that the indication was needed in an emergency situation.

  This item remains open pending the issuance of a program for routinely monitoring the status of local breaker indications. (285/8811-01)

- On March 17, 1988, the NRC inspector noted an excessive buildup of boric acid in the packing gland area of Boric Acid Pump CH-4B. By the end of this inspection period, the boric acid had not been removed. The licensee stated the boric acid would be removed in the near future.

- On March 24, 1988, the NRC inspector noted that considerable debris had collected around the spent fuel pool perimeter. In addition to being a housekeeping concern, the debris also presented a personnel tripping hazard. The licensee stated that the area would be cleaned up.

No violations or deviations were identified.

5. Safety-Related System Walkdowns

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

- Reactor Startup Locked Valves (Procedure OI-RC-2B, Checklist D, Revision 52)

- Containment Isolation Status (Procedure OI-CO-5, Checklist A, Revision 7)

During the walkdowns, the NRC inspector noted minor discrepancies of an editorial nature between the drawings, procedures, and plant as-built conditions for the selected areas checked. None of the conditions noted affected the operability or safe operation of the systems. Licensee personnel stated that the noted minor discrepancies would be corrected.

In discussions with licensee personnel, it was noted that walkdowns of all safety-related systems had been initiated by the licensee. The purpose of the walkdowns is to verify the accuracy of the piping and instrument diagrams and the system operating instructions.

No violations or deviations were identified.

6. Monthly Maintenance Observations

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:

- Repair of the fire detector for Zone 33 (MO 880599)

- Replace backflush solenoid valve of the raw water system strainer (MO 880737)

- Replace the filter in Toxic Gas Monitor YIT-6286A (MO 880612)

- Troubleshoot the low reactor coolant flow bistable (MO 880688)

- Repair the raw water inlet to Component Cooling Water Heat Exchanger Valve HCV-2881A (MO 880604)

- Pressurizing of Containment Penetration Assembly F-11 (MO 880366)

- Painting of the emergency feedwater storage tank (MO 872821)

During observation of the painting of the emergency feedwater storage tank (EFWST) on March 16, 1988, the NRC inspector noted that freestanding scaffolding had been erected immediately adjacent to the EFWST. The NRC inspector, in discussions with licensee personnel, established that the installation had not received prior review and approval before being erected to verify the scaffolding was seismically installed.

In NRC Inspection Report 50-285/87-24, the NRC inspector issued Violation 285/8724-05 that was related to the erection of nonseismic scaffolding. In response to the violation of February 24, 1988, the licensee stated that a memo was issued to stress to the plant staff the need for prior review and approval of scaffolding installed in safety-related areas for maintenance or any other activities. The purpose of the memorandum was to establish interim requirements for the installation of scaffolding in safety-related areas until a formal procedure could be issued and implemented.

The failure of the licensee to review and approve the scaffolding used for painting the EFWST, prior to installation, is an apparent deviation from commitments made to the NRC. (285/8811-02)

Upon notification by the NRC inspector, the licensee removed the scaffolding adjacent to the EFWST.

7. Monthly Surveillance Observations

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

- Quarterly testing of the hydrazine and ammonium detectors (ST-TGM-1)
- Weekly analysis of reactivity deviations (ST-RA-1)
- Monthly control room ventilation filter circuit operation (ST-CRV-1)
- Monthly station battery checks (ST-DC-1)
- Monthly containment pressure high signal channel check (ST-ESF-3)

On March 23, 1988, the licensee performed the regularly scheduled monthly test for EDG 1 in accordance with the instructions of Procedure ST-ESF-6, "Diesel Start and Diesel Fuel Oil Transfer Pump." During performance of the test, an error by the control room operator caused a reverse current trip on the output breaker. When the EDG 1 output breaker tripped open, EDG 2 automatically started. Both EDGs were subsequently shut down and returned to an automatic mode of operation. During the event, neither EDG was considered to be inoperable. The start of EDG 2 was not part of the preplanned testing of EDG 1 and does not normally occur when EDG 1 is tested.

Section 50.72(b) of 10 CFR Part 50 states that a 4-hour report shall be made to the NRC Headquarters duty officer whenever any event or condition that results in manual or automatic actuation of any engineered safety feature (ESF). Section 50.72(b)(2) also states that actuation of ESF that results from and is part of the preplanned sequence during testing or reactor operation need not be reported.

In followup on this event, the NRC inspector noted that the licensee failed to make a 4-hour report to the NRC, as required by 50.72(b)(2) for

actuation of an ESF that was not part of a preplanned test sequence. This is an apparent violation. (285/8811-03)

In discussions with licensee personnel, the NRC inspector established that the event was not reported because the starting of EDG 2 was not initiated by an ESF actuation signal. The signal that initiated the start was installed to ensure availability of emergency power and was not part of an ESF circuit. The NRC inspector noted to the licensee that the actuation of an ESF, when not part of a preplanned test, was reportable, independent of the source of the signal that initiated the start. This approach toward reportability was confirmed in discussions with NRC Headquarters personnel.

8. Security Observations

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.

9. Radiological Protection Observations

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.

No violations or deviations were identified.

10. In-Office Review of Periodic and Special Reports

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:

- Correspondence 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:

- February monthly operating report, dated March 15, 1988
- Monthly operations report for February 1988, undated
- Response to NRC Generic Letter 87-12 Items 5 and 9, dated March 15, 1988

In addition to the above, the NRC inspector reviewed the licensee's response to Violation 285/8724-04, dated February 24, 1988. The response was issued by the licensee to address the corrective actions to be taken for the control of gas cylinders in the auxiliary building. In the response, the licensee stated, "There have been no instances of improperly stored compressed gas cylinders since the time of this violation." This violation was identified during the inspection performed in September 1987.

During a plant tour on December 6, 1987, the NRC inspector identified an event where the licensee failed to properly store a compressed gas cylinder in the auxiliary building. On January 8, 1988, the exit interview was held for the inspection period of December 1987. At this meeting, the NRC inspector discussed the apparent inadequacy of the licensee's corrective action program for controlling gas cylinders.

Section 50.9 of 10 CFR Part 50 states that information provided to the Commission by a licensee shall be complete and accurate in all material aspects. In response to Violation 285/8724-04, the licensee provided inaccurate information related to the recurrence of problems associated with control of gas cylinders. This is an apparent violation. (285/8811-04)

Upon notification by the NRC inspector, the licensee immediately issued a revision to the response to Violation 285/8724-04. The revision eliminated the inaccurate statement.

Although the inaccurate statement did not affect the safe operation of the plant, the information led the reader to incorrectly believe that the licensee had established an effective corrective action program.

11. Followup on NRC Conformance Bulletin 87-01

On July 9, 1987, the NRC issued Conformance Bulletin (CB) 87-01, "Thinning of Pipe Walls at Nuclear Power Plants," to request that licensees submit information concerning their programs for monitoring the thickness of pipe walls in carbon-steel piping systems. On September 14, 1987, the licensee provided a response to CB 87-01 that detailed the program that had been implemented during the 1987 refueling outage, and also detailed the licensee's program for continued testing of pipe wall thickness.

The NRC inspector reviewed the implementation of the licensee's program to verify that the program contained the necessary elements to ensure that the monitoring of pipe wall thinning was adequate. The results of the review performed by the NRC inspector are detailed in NRC Inspection Reports 50-285/87-02 and 50-285/87-13.

On March 10, 1988, the Office of Nuclear Reactor Regulation issued a letter to the licensee stating that no further plant specific action was required.

Based on the above discussion, CB 87-01 is considered closed. No violations or deviations were identified.

12. Followup to a Fire Protection Enforcement Conference

On March 15, 1988, the NRC conducted an enforcement conference with the licensee, concerning an apparent violation documented in NRC Inspection Report 50-285/88-09 (EA 88-82). The apparent violation concerned the lack of internal fire seals in electrical conduits.

During the enforcement conference, the licensee committed to performing certain actions regarding the sealing of conduits. These commitments were documented in a letter, dated March 18, 1988, from the licensee to the NRC. The following commitments were made:

- Continue hourly fire watch patrols until the openings inside conduits, discovered during walkdowns, by licensee personnel are sealed in accordance with the draft criteria presented at the conference.

- Any openings inside conduits that are not sealed will be evaluated for adequacy by a fire protection engineer. These analyses will be maintained on file and will be completed by the end of May 1988.

- The licensee will update and clarify its commitments on this issue, including an association with the utility group currently addressing the issue of internal conduit seals. This will be submitted to the NRC for review by the end of April 1988.

When the issue of missing conduit seals was brought to the licensee's attention, the licensee promptly initiated hourly fire watch patrols and performed walkdowns to identify any conduits with missing seals. Based on these actions taken by the licensee, the commitments made to the NRC, and the lack of a clear regulatory commitment, it appears that the issuance of a violation is not warranted. However, the commitments made by the licensee, as described above, are considered to be an open item. (285/8811-05)

13. Followup on Plant Design Inadequacies

During this inspection period, three instances were noted where the licensee identified conditions that were outside the design basis of the plant. In each case, the licensee took actions to ensure that the identified conditions were adequately compensated for. A discussion of each item is provided below.

a. On March 8, 1988, the licensee submitted information to the NRC related to control room habitability. The information was related to the amount of inleakage of outside air into the control room. On March 14, 1988, a conference call was held between the NRC and the licensee to discuss the licensee's submittal. The main concern discussed during this conference was the relatively large amount of inleakage into the control room and what actions the licensee was taking to protect the control room operators in a postaccident situation. Of particular concern was how the licensee intended to protect the operators from the exposure to iodine that is present following a loss-of-coolant accident (LOCA).

During the conference call, the licensee stated the procedure changes would be made to require the control room operators to manually initiate the control room iodine monitor (RM-065) in the event an actual (i.e., except during routine surveillance testing) ventilation isolation actuation signal (VIAS) occurred. In addition, the licensee was to ensure that a sufficient number of self-contained breathing apparatus (SCBA) were available for all control room operators in the event an actual high iodine level was detected in the control room. These measures were to be taken as an interim measure until the next refueling outage, at which time a modification would be performed to automatically initiate RM-065 upon receipt of a VIAS.

The NRC inspector performed a followup to verify that the licensee had provided procedure changes to ensure the RM-065 was manually initiated on receipt of a VIAS. The licensee revised Procedure EOP-3, "Loss of Coolant Accident," to require manual initiation of RM-065 at the appropriate time during a LOCA. The NRC inspector also verified that a sufficient number of SCBAs were available for control room operators. Based on this review, it appeared that the licensee had taken adequate interim actions to protect the control room operators in the event of post-LOCA high iodine levels.

The licensee intends to modify actuation of RM-065 during the upcoming outage to automatically initiate the monitor in the event a VIAS is received. This item remains open pending the completion of the modification to RM-065 during next refueling outage. (285/8811-06)

b. On March 9, 1988, the licensee determined that a condition existing in the plant did not meet the design basis stated in USAR Section 7.2.9. This USAR section states that sensors are located such that a single event could not remove or incapacitate a protective function.

During reviews to reestablish the design basis for the Fort Calhoun Station, the licensee's contractor, Stone and Webster, noted a physical installation that did not comply with USAR Section 7.2.9. A

portion of the pressurizer spray line runs outside of the bioshield in containment and is located in the vicinity of pressurizer pressure transmitters for Channels A and D that generate reactor protective signals. If the pressurizer spray line failed, the steam from the line has the potential for spraying on the pressure transmitters causing loss or damage to the transmitters. If the transmitters were lost (i.e., electrical cables sheared or the housing physically ruptured), the pressure indication would fail low and initiate a reactor trip due to two signals in a 2-out-of-4 matrix. However, if the steam impinged on the transmitters causing the transmitter internals to heat up, no accurate prediction could be made as to whether the instruments would fail high or low. If one assumes that both instruments fail high and a third channel was removed from service for surveillance testing, then the reactor plant would not have low pressure protection.

The licensee reported that they were outside their design basis based on the discussion above. In accordance with Section 50(b)(ii)(B) of 10 CFR Part 50, the licensee notified the NRC duty officer via the ENS network. The licensee also notified the NRC resident inspector. The licensee intends to submit an LER within 30 days in accordance with 10 CFR Part 50.73.

The licensee performed an engineering evaluation and determined that continued plant operation was appropriate. The determination was made based on other indications available that would alert the control room operators to the potential loss of the pressurizer pressure transmitters. The indications included a containment temperature sensor in the immediate area of the transmitters display of all four pressure channels which will be monitored for any irregularities on Channels A and D, and monitoring the results of the daily reactor inventory calculations.

The licensee informed operations personnel of the existence of this condition via the training hot line system. The hot line issued to operations personnel informed each individual of the existence of the potential for the line break and detailed the control room indications that are available to indicate a break of the spray line in the area of the pressure transmitters.

The licensee intends to perform a plant modification to eliminate this potential problem or will perform a detailed engineering analysis to define why a modification is not necessary, during the upcoming refueling outage. This item remains open pending a review of what actions the licensee has taken to correct the condition described above. (285/8811-07)

c. On March 11, 1988, a licensee contractor, Stone and Webster, identified a problem with a containment isolation valve (PCV-1849) for the instrument air system during the performance of a system functional inspection. The system functional inspection was being

performed due to commitments made to the NRC by the licensee in response to an event where water entered the instrument air system. The details of the event are provided in NRC Inspection Report 50-285/87-27.

The licensee's contractor noted that containment integrity may not be established during all possible cases. Valve PCV-1849 is designed to shut on a containment high pressure concurrent with the loss of instrument air pressure. However, Valve PCV-1849 is an air-operated valve and is held shut by instrument air pressure. The contractor noted that Valve PCV-1849 could not be held shut if there was a loss of air pressure.

The licensee took interim measures to ensure that containment isolation would be maintained under all plant conditions. The measures included assigning an individual on each operating shift to shut the manual containment isolation valve (IA-509) in the event air pressure was lost when containment isolation was required. The licensee timed the travel of the individual from the control room to the valve to ensure that the operator could shut the valve in a timely manner. The licensee issued a revision to AOP-17, "Loss of Instrument Air," to include appropriate instructions on how to isolate containment.

The NRC inspector reviewed the actions taken by the licensee to establish interim measures for establishing containment integrity should it be required. Based on the review, it appeared that the actions taken were appropriate.

During the next refueling outage, the licensee plans on performing a modification to Valve PCV-1849 to ensure that the valve will shut and stay shut, when required. This item remains open pending the completion of the modification to Valve PCV-1849. (285/8811-08)

No violations or deviations were identified.

14. Followup on an Allegation (Reference 4-87-A-069)

The NRC inspector performed a followup inspection of various items identified by an alleger. Each item reviewed is discussed below.

a. The licensee's training department was not providing an instructor for presentation of training material for classes that were cancelled. The licensee's policy was that each individual should learn the training material through self-study.

When this concern was identified to the licensee's training department by the alleger, management personnel established a new policy where an instructor would be provided for cancelled classes in

lieu of self-study. In discussions with operations personnel, the NRC inspector noted that the training department has implemented this policy.

This allegation was substantiated; however, no violations or deviations of NRC requirements were identified. Although no violations or deviations were identified, the licensee should continue to establish measures, such as the one discussed above, to ensure that operations personnel are provided with the best training program possible.

b. The volume of training hotlines has overburdened the licensed operators with self-study material. The training hotlines are used by the training department to distribute material for review and substitutes for in-class presentation of the information.

At the time the allegation was made, it appeared that an excessive number of training hotlines were being issued by the training department. However, in the recent past, the number of training hotlines has decreased to what appears to be an acceptable level. It appears that the material that was routinely provided in the hotline approach to training is now being provided in classroom lectures, and hotlines are being used only as a method for distributing information judged to be important.

This allegation was substantiated; however, no violations or deviations of NRC regulations were identified. In discussions with licensee management, the NRC inspector noted that training hotlines issued to operations personnel will continue to be minimized, and classroom training of material will be maximized.

c. Senior reactor operators (SRO) are not being trained to perform the duties of the shift supervisor (SS) even though the NRC has stated that written and oral examinations will include questions on SS duties.

The NRC inspector reviewed the training material that was provided to SROs during the 1987 requalification cycle. The NRC inspector noted that classes were given that presented information related to the administrative duties of the SS in that the same information was provided to all SROs, whether the individual was a SS or a lead shift operator. In addition, the NRC inspector verified that each SRO was qualified as an emergency site director as required by emergency plan commitments.

Based on the review performed by the NRC inspector, this allegation could not be substantiated. No violations or deviations were identified.

d. The maintenance order system does not currently require a sign off for postmaintenance job cleanup. Consequently, plant areas are left messy after work activities have been completed.

The licensee has established a policy regarding the cleanup of work areas following maintenance work. Section 2.1 of Procedure SO-G-6, "Housekeeping," states, in part, that maintenance-order work is not complete until a proper work area cleanup has been performed. The immediate craft supervisor and the shift supervisor must insist on proper work area cleanup as a necessary requisite to maintenance order sign off.

During observation of routine maintenance activities over the past 3 months, the NRC inspectors verified that a proper postmaintenance cleanup was performed. The NRC inspectors did not identify any instances where cleanup was not properly performed. The NRC inspectors will continue to monitor for proper job cleanup during future observations of routine maintenance activities.

This allegation was not substantiated, nor were any violations or deviations identified.

e. A large amount of material has accumulated in the vicinity of the containment personnel airlock (PAL) and in Room 59.

The NRC inspectors have noted this same problem during previous inspections and documented the concerns in NRC inspection reports. In each case identified, no violations or deviations were cited as the amount of material stored in the areas did not exceed the fire loading for the areas. However, the lack of appropriate housekeeping attention is a reflection of management's attitude toward overall plant operation. In response to the concerns identified by the NRC inspector, the licensee removed the material from the PAL area and has satisfactorily maintained this area. Room 59 has received additional housekeeping attention; however, material still remains in the area. This condition was identified to licensee management.

This allegation was substantiated; however, no violations or deviations were identified.

f. Carbon filters are stored in Room 69, but the fire suppression system is inadequate.

The NRC inspectors toured Room 69 on several occasions and did not note any carbon filters stored in the area. The NRC inspectors also noted that Room 69 does not contain an automatic fire suppression system; however, Room 69 does contain manual fire suppression equipment, a fire detection system that would indicate the presence of a fire in Room 69. The NRC inspector reviewed the NRC-approved fire hazards analysis (issued as Amendment 40 to the TS) and noted no prohibitions against the storage of nonradiologically contaminated

carbon filters in the plant as long as the transient combustible limit for the specific area is not exceeded. The fire hazards analysis does require that radiologically contaminated filters be stored in drums.

During tours of other portions of the plant, the NRC inspector noted that four nonradiologically contaminated carbon filters were stored in Room 59. The presence of the carbon filters did not exceed the transient combustible loading for the Room 59 fire area.

This allegation was substantiated with respect to storage of carbon filters in Room 59; however, no instances were identified that violated or deviated from NRC requirements.

g. At times, fire barrier penetrations are inoperable but no one notifies the operations staff as to where the barriers are located. Without this type of information, the operations staff does not know where the weak fire barriers are located.

Procedure SO-O-38, "Fire Watch Duties and Turnover Procedures," requires that the shift supervisor be notified whenever a continuous fire watch is stationed and that an entry in the control room log be made to identify the fire barrier impairment and the individual assigned as fire watch. The NRC inspector performed a review to verify that compliance with Procedure SO-O-38 was being performed. No problems were identified during the review.

In addition to continuous fire watches, the licensee also maintains hourly fire watch patrols. The patrols are performed by security personnel and a log is maintained at the central alarm station, located in the control room, that identifies which fire barriers are degraded. This log is available for review by operations personnel at any time.

This allegation was not substantiated. No violations or deviations were identified.

h. The requirements for the TS fire brigade are met but the intent of the TS requirement is not. The intent is not met in that the security guards, which are assigned fire brigade duties, are available for only 30 minutes to fight a fire.

The NRC inspector performed a review of this allegation and noted that the TS requirements for manning of the fire brigade were not met. Consequently, Violation 285/8807-02 was issued to require the licensee to take corrective action to properly staff the fire brigade. The details of the followup on this allegation are provided in NRC Inspection Report 50-285/88-07.

This allegation was substantiated and a violation was issued.

i. The fire suppression system in the administration building and in the training trailers is inadequate.

The NRC inspector toured both areas and noted that the fire protection systems were inadequate; therefore, this allegation was substantiated. However, neither of the areas contained any safety-related equipment, and a fire in either area would not affect the safe operation of the plant.

No violations or deviations were identified.

j. The new fire alarm panel, XL-3, has had problems since January 1987 and the problems have not been fixed.

The NRC inspector examined XL-3 and verified that it was not functioning properly. However, alarm indications are available to operations personnel on Panel AI-54. The review performed by the NRC inspector also indicated that the plant fire detection and alarm system was operable due to the alarm capabilities on Panel XL-3 and the redundant capabilities on Panel AI-54. Upon notification of this concern by the NRC inspector to the licensee, Panel XL-3 was fully repaired to ensure that the redundant alarm capability was available.

This allegation was substantiated; however, no violations or deviations of NRC requirements were identified.

k. The chemical spill plan for the site is inadequate.

The NRC inspector performed a review of the chemical spill plans, "Spill Prevention Control and Countermeasure Plan," and "Hazardous Waste Management Plan." Based on the review, the plans appeared to be adequate based on the limited knowledge of the NRC inspector. The NRC inspector noted that both plans had been approved by a State of Nebraska registered professional engineer.

Since the NRC inspector has limited knowledge within the area addressed by this allegation, the alleger will be referred to the QA and Environmental Affairs Division of the State of Nebraska to have his concerns addressed.

Based on a limited review of this area, a decision could not be made on the appropriateness of this allegation. No violations or deviations were identified.

l. Operators often make suggestions for operations and plant safety improvements, but management does not respond to the suggestions. Licensee management recently instituted a program of small group meetings that are designed to allow all employees to meet with management representatives to discuss any suggestions, ideas or complaints that the employee may have. The structure of the meetings was established such that an answer to any question or concern

identified by an employee would be addressed by management within 24 hours of the meeting. The NRC inspector discussed the results of the meetings with various plant individuals and it appears that the small group meeting program is addressing individual concerns.

In addition, the licensee replaced the Supervisor, Operations with another individual in January 1988. Since the new individual has assumed the position, it appears that communications between the operations staff and this management position have increased and that concerns identified by individuals are receiving the appropriate level of attention. This conclusion was based on discussions with personnel on the operations staff.

Although the licensee has taken actions to increase communications between the staff and management, it appears that additional attention in this area is warranted. The recent improvements in this area should be continued to improve communications between the various organizations and management, and between the organizations themselves. This should increase overall plant effectiveness and provide a positive morale boost for all licensee employees.

This allegation was substantiated; however, the licensee has taken action to increase the communications between the plant staff and plant management. No violations or deviations were identified.

m. Operations personnel review procedures for the operating manual to determine if quality control, quality assurance, and radiological hold points should be included. Operations personnel are not qualified to perform this function.

Paragraph 5.2.15 of ANSI N18.7-1976 requires that plant procedures be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every 2 years to determine if changes are necessary or desirable. ANSI N18.7-1976 does not provide any guidance or definition as to what constitutes a knowledgeable individual.

The licensee has interpreted a knowledgeable person as an individual that has had training and experience in the area under consideration. Based on this approach, the review is assigned to an individual based on the main theme of the procedure. Licensee personnel stated that the person assigned the procedure review should contact a specialist if any questions regarding procedure adequacy arise that are outside the reviewers area of familiarity. The review program utilized by the licensee is described in Procedure SO-G-36, "Operating Manuals Review Documentation." Procedure SO-G-36 does not specifically state that the assigned reviewer should contact other individuals if questions arise not in the reviewer's areas of expertise. In order

to provide clear guidance for reviewers, licensee management stated that a revision to Procedure SO-G-36 would be issued to specify when reviewers should obtain assistance. This item remains open pending the issuance of a revision to Procedure SO-G-36. (285/8811-09)

This allegation was substantiated; however, it appears that the licensee was complying with the intent of ANSI N18.7-1976 in that reviews were being assigned to individuals most knowledgeable in the main theme of the procedure.

No violations or deviations were identified.

15. Exit Interview

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