

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20555-0001

October 19, 1993

Docket No. 50-285

Mr. Terry L. Patterson Division Manager - Nuclear Operations Omaha Public Power District 444 South 16th Street Mall Mail Stop 8E-EP4 Omaha, Nebraska 68102-2247

Dear Mr. Patterson:

SUBJECT: SPECIAL AUDIT OF CONTROL PROCESSES FOR COMMITMENTS AND CURRENT LICENSING BASIS, FORT CALHOUN STATION, UNIT 1 (TAC NO. M86011)

I am forwarding the results of the commitment management audit conducted by the Office of Nuclear Reactor Regulation at the Fort Calhoun Station on April 19-23, 1993. As you are aware, the staff conducted audits at a cross section of reactor plants to assess the processes used by licensees for controlling commitments that affect the plants' current licensing basis. Fort Calhoun was the third site visited by the staff, and our audit report is enclosed with this letter.

The team focused on three principal areas: (1) managing commitments made to the U.S. Nuclear Regulatory Commission (NRC), (2) reporting changes to commitments made to the NRC, and (3) maintaining and updating the final safety analysis report. In addition to reviewing the governing programs for these areas, the team reviewed the status of commitments made to the NRC in response to specific issues (in selected generic letters, bulletins, licensee event reports, and notices of violation and deviation) in order to examine the programs in actual practice.

In general, the team found that commitments affecting the plant's current licensing basis were being implemented and maintained. However, the team found that your current programs for commitment management were more thorough than the previous programs. Previous programs were effective in implementing commitments, but provided no positive controls to ensure that ongoing commitments were not inadvertently changed or deleted. Although the team identified several examples of inadvertently changed or deleted commitments, it found no safety-significant deficiencies. The team also found that you rely on the expertise and experience of your licensing personne? to determine the need for notifying the NRC of changes to commitments. Finally, the team found that the commitments it reviewed that affected the plant updated final safety analysis report (USAR) were captured by the USAR update process. The team did not identify any items of safety significance in its review of commitments made in response to the specific issues.

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Mr. Terry L. Patterson

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Although not a documented commitment, the team found that the plant staff had not considered the steam binding issue discussed in NRC Bulletin 85-01 when it installed its third auxiliary feedwater pump. The team believes that the issue should have been considered because the pump was installed to increase system reliability. It is my intent to work with the plant and NRC staff to resolve this issue.

- 2 -

The team thanks the plant staff for its candor and the excellent support it provided to the team under difficult circumstances. If you have any questions or comments concerning this report, please contact me or Eric Leeds at (301) 504-1133.

Sincerely,

ORIGINAL SIGNED BY: Steven D. Bloom, Project Manager Project Directorate IV-1 Office of Nuclear Reactor Regulation

Enclosure: Commitment Management Audit of the Fort Calhoun Station, April 19-23, 1993

cc w/enclosure: See next page

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The team thanks the plant staff for its candor and the excellent support it provided to the team under difficult circumstances. If you have any questions or comments concerning this report, please contact me at (301) 504-1313 or Eric Leeds at (301) 504-1133.

Sincerely,

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Steven D. Bloom, Project Manager Project Directorate IV-1 Office of Nuclear Reactor Regulation

Enclosure: Commitment Management Audit of the Fort Calhoun Station, April 19-23, 1993

cc w/enclosure: See next page Mr. Terry L. Patterson Omaha Public Power District

Fort Calhoun Station, Unit 1

CC:

Mr. Michael F. McBride, Esq. LeBoeuf, Lamb, Leiby & MacRae 1875 Connecticut Avenue, NW Washington, D.C. 20009-5728

Mr. Jack Jensen, Chairman Washington County Board of Supervisors Blair, Nebraska 68008

Mr. Raymond P. Mullikin, Resident Inspector U.S. Nuclear Regulatory Commission Post Office Box 309 Fort Calhoun, Nebraska 68023

Mr. Charles B. Brinkman, Manager Washington Nuclear Operations Combustion Engineering, Inc. 12300 Twinbrook Parkway, Suite 330 Rockville, MD 20852

Regional Administrator, Region IV U.S. Nuclear Regulatory Commission 611 Ryan Plaza Drive, Suite 1000 Arlington, Texas 76011

Harold Borchert, Director Division of Radiological Health Nebraska Department of Health 301 Centennial Mall, South Post Office Box 95007 Lincoln, Nebraska 68509

Mr. James W. Chase, Manager Fort Calhoun Station Post Office Box 399 Fort Calhoun, Nebraska 68023

COMMITMENT MANAGEMENT AUDIT OF THE FORT CALHOUN STATION APRIL 19-23, 1993

I. Scope and Participants

The purpose of the audit conducted at Fort Calhoun was to assess the effectiveness of the Omaha Public Power District's programs for identifying and controlling commitments that affect the facility's current licensing basis. The audit focused on three principal areas: (1) managing commitments made to the U.S. Nuclear Regulatory Commission (NRC), (2) reporting changes to commitments made to the NRC, and (3) maintaining and updating the final safety analysis report (FSAR). The team reviewed the licensee's administrative procedures involving commitment management; reporting; action tracking; control of design, configuration, tests, and experiments; and others. To examine the programs in actual practice, the team reviewed the status of commitments made by the licensee to the NRC in response to specific issues. Five of these issues were generic in nature and are addressed in the following:

- 10 CFR 50.62, "Requirements for Reduction of Risk From Anticipated Transients Without Scram (ATWS) of Events for Light-Water-Cooled Nuclear Power Plants"
- Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment"
- Generic Letter 88-14, "Instrument Air System Problems Affecting Safety-Related Equipment"
- Bulletin 85-01, "Steam Binding of Auxiliary Feedwater Pumps"
- NUREG-0737, Item I.C.5, "Procedures for Feedback of Operating Experience to Plant Staff"

The remaining issues were specific to Fort Calhoun, including commitments made in licensee event reports (LERs) and in responses to notices of violation and deviation. The team also reviewed the licensee's design basis reconstitution and documentation program to determine how a commitment from the program would be captured in the commitment management process.

The team relied on standard NRC inspection practices in conducting the review of specific commitments. The team performed system walkdowns, reviewed documentation (including design change packages, training records, and procedures), and interviewed plant staff. A detailed review for each issue specified above is contained in the appendix.

The audit team consisted of the following NRC personnel:

- Steven R. Stein, Team Leader
- Steven Bloom, NRR Project Manager
- · James E. Beall
- Anthony J. D'Angelo

II. Findings and Conclusions

The following are the team's findings and conclusions for the three major areas of focus: (1) commitment management, (2) reporting changes to commitments made to the NRC, and (3) updating the FSAR.

<u>Commitment Management</u>: In general, the team found that commitments affecting the plant's current licensing basis were being implemented and maintained. The licensee's current programs for managing new commitments were more thorough than the previous programs. Previous programs were effective in implementing commitments, but provided no positive controls to ensure that ongoing commitments were not inadvertently changed or deleted. At the time of the audit, the licensee was already aware of potential problems with historical commitments and was considering possible corrective actions. Although the team identified several examples of inadvertently changed or deleted commitments, it found no safety-significant deficiencies in identifying, tracking, completing, and maintaining licensee commitments for design, hardware, procedures, and programs.

The licensee's current requirements in its modification program were an example of the improvement in its programmatic controls for commitments. The program required the design engineers to conduct a specific search for previous commitments that might affect a planned change and suggested the use of the licensing group's commitment database for the search.

A potential weakness existed in the licensee's commitment management program in that the program would not identify existing activities as ongoing commitments if the existing activities were used to satisfy a new or existing regulatory requirement. An example of this practice was the licensee's response and actions pertaining to NRC Bulletin 85-01, "Steam Binding of Auxiliary Feedwater Pumps," which is discussed in more detail in the appendix of this report.

Reporting Changes to Commitments Made to the NRC: The licensee relied on the expertise and experience of its licensing personnel to determine the need for notifying the NRC of commitment changes and indicated that the type of notification would depend on the significance of the change. Although its procedures did not specifically address the reporting to the NRC of changes to commitments, procedural requirements included reporting to the licensing organization of changes to ongoing commitments. Changes in intent or significant schedule changes would be placed on the docket by a letter. Less significant changes might be discussed with the NRC resident inspector with the licensee documenting the discussion in a memo to file. The licensee provided the team with examples of letters to the NRC that documented changes to several commitments, including one made in an LER.

The team did not identify in the commitments it reviewed any significant changes that would have required notification of the NRC. It did note several letters from the licensee that provided additional information or clarification for commitments made in response to notices of violation.

<u>Maintaining and Updating The Updated Final Safety Analysis Report</u>: The team found the commitments it reviewed that affected the plant's updated final safety analysis report (USAR) were captured by the USAR update process. The team's review of several plant modifications to identify changes to plant systems and verify incorporation of the changes in the USAR showed that all affected text descriptions and system drawings in the USAR were properly revised to reflect the associated modifications. The USAR revision process was documented in procedures and included updating the USAR drawings on an ad hoc basis. In accordance with the Fort Calhoun modification control program, engineers annotated revisions to plant drawings and sent the revisions to the nuclear licensing group for inclusion in the annual update of the USAR. A similar method was used for revisions of USAR text.

III. Discussion

A. Commitment Management

In general, the team found that commitments affecting the plant's current licensing basis were being implemented and maintained. The current programs for managing new commitments were more thorough than the previous programs. Previous programs were effective in implementing commitments, but provided no positive controls to ensure that ongoing commitments were not inadvertently changed or deleted. At the time of the audit, the licensee was already aware of potential problems with historical commitments and was considering possible corrective actions.

The team identified commitments made in response to three LERs and one generic letter that had been inadvertently changed or deleted in procedures, although none of the changes or deletions had safety significance. The team found no safety-significant deficiencies in identifying, tracking, completing, and maintaining commitments for design, hardware, procedures, and programs.

Initially, the licensee's commitment action tracking system (CATS) was developed as one of the corrective actions following the 1985 NRC safety system outage modification inspections. The CATS was described in several docketed letters to the NRC and originally did not provide controls for the continued implementation of commitments by such measures as procedure notes denoting commitments. The CATS subsequently was upgraded to indicate those commitments that were ongoing. Procedure steps implementing commitments were identified as such, and the source documents were listed in the reference section of procedures. Not all historical commitments had been recaptured at the time of the audit, but the licensee was reviewing past correspondence to verify the identification of commitments and their classification as ongoing.

The licensee, in its modification process, separated its review for previous commitments from its review pursuant to 10 CFR 50.59. The licensee required, through an engineering instruction (GEI-3), a review for previously made commitments during the preparation of design change packages. Instruction GEI-3 contained a step specifying that the engineer was to determine if a planned change to plant equipment and procedures might be affected by commitments to the NRC that were not explicitly in the USAR. It also suggested using the CATS to identify existing commitments.

The team interviewed four design engineers and found that the engineers were conducting specific searches of the licensee's records for commitments previously made to the NRC, although the search methods differed among the engineers. Most of the engineers conducted their reviews for commitments by using the design-basis documents (DBDs) and did not always use the CATS, as suggested by Instruction GEI-3. The team also noted that the Fort Calhoun DBDs were detailed documents, which maintained system history by containing the description of modifications made to the system and identifying docketed correspondence between the NRC and the licensee in which commitments were made that affected the system. The team concluded that the program requirement to search for commitments and the engineers' practice of relying on the DBDs to identify previous commitments was a strength because of the licensee's current practice of updating the DBDs.

The team identified what it believes to be a potential weakness in the licensee's commitment management program. It found that the program would not identify as ongoing commitments existing activities, such as programs, procedures, or procedural requirements, if the existing activities were used to satisfy a new or existing regulatory requirement in a notice of violation, bulletin, or generic letter. An example of this practice was the licensee's response and actions pertaining to NRC Bulletin 85-01, "Steam Binding of Auxiliary Feedwater Pumps," which is discussed in more detail in the appendix of this report.

In a related issue, the team found that the licensee had not considered the steam binding issue discussed in NRC Bulletin 85-01 when it installed its third auxiliary feedwater pump. The issue should have been considered because the pump, although not classified as safety related, was installed to increase system reliability. The NRC project manager will follow this issue with the licensee.

B. <u>Reporting Changes to Commitments Made to the NRC</u>

Although the licensee's procedures did not specifically address the reporting to the NRC of changes made to commitments, the current Operations Department procedure for ongoing commitments included specific requirements for revising documents that implemented ongoing commitments. The requirements included informing the licensing organization of changes that affected any ongoing commitments. The licensee relied on the expertise and experience of its licensing personnel to determine the need for notifying the NRC of commitment changes and indicated that the type of notification would depend on the significance of the change. Changes in intent or significant schedule changes would be placed on the docket by a letter. Less significant changes might be discussed with the NRC resident inspector with the licensee documenting the discussion in a memo to file. The licensee provided the team with examples of letters to the NRC that documented changes to several commitments. One of the letters was a change to a commitment that had been made in an LER; the licensee indicated that it typically changed LER commitments by means of a letter.

The team did not identify in the commitments it reviewed any significant changes that would have required notification of the NRC. It did note several letters from the licensee that provided additional information or clarification for commitments made in response to notices of violation.

C. Maintaining and Updating the Updated Final Safety Analysis Report

The team found the commitments it reviewed that affected the plant's USAR were captured in the USAR update process. The USAR revision process was documented in procedures and included updating the USAR drawings on an ad hoc basis. In accordance with the Fort Calhoun modification control program, engineers annotated revisions to plant drawings and sent the revisions to the nuclear licensing group for inclusion in the annual update of the USAR; a similar method was used for revisions of USAR text. The licensee determined if changes to its USAR were necessary through its procedure for evaluations pursuant to 10 CFR 50.59. This procedure, NOD-QP-3, required the engineer preparing a design change package to (1) be a qualified reviewer in regard to 10 CFR 50.59; (2) determine if the systems, structures, and procedures described in the USAR would be changed by the proposed design change; and (3) prepare the necessary revisions to the affected documents. Engineering Instruction GEI-3, which controlled the preparation of DCPs, also required the engineer to evaluate the USAR text and figures that might require updating as a result of the proposed modification.

Site procedures required that major modifications be reviewed by the station modification acceptance and review team (SMART), a team of system engineers that included the engineer for the system being modified. The documented review was to assess system performance and operability, effect on technical specifications, and adherence to 10 CFR 50.59 requirements. The SMART review provided another opportunity for identifying commitments that might affect the modification or system design.

The team reviewed several plant modifications to identify changes to plant systems and verify incorporation of the changes in the USAR. The modifications reviewed included modifications for the diverse scram system (DSS), the diesel starting air system, the instrument air system, and the hydrogen purge filter in the combustible gas control system. The team found that all affected text descriptions and system drawings in the USAR were properly revised to reflect the associated modification. The DSS was a new system that was added to the USAR, and the text descriptions adequately described the system. The team concluded that the licensee's system for updating the USAR was effective in identifying and incorporating plant changes.

APPENDIX

SPECIFIC ISSUES REVIEWED AT FORT CALHOUN STATION

The audit team reviewed the status of commitments made by the licensee in response to the specific issues addressed in the following to examine the implementation of the licensee's commitment management and reporting programs:

- 10 CFR 50.62, "Requirements for Reduction of Risk From Anticipated Transients Without Scram (ATWS) Events"
- Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment"
- Generic Letter 88-14, "Instrument Air System Problems Affecting Safety-Related Equipment"
- Bulletin 85-01, "Steam Binding of Auxiliary Feedwater Pumps"
- NUREG-0737, I.C.5, "Procedures for Feedback of Operating Experience to Plant Staff"
- Notices of Violation, 91-23, 90-02 A, 89-01 A and B, 87-02 A
- Notices of Deviation, 90-02 A, 87-02 A
- Licensee Event Reports, 89-18, 88-18, 88-15, 88-11, 87-22, 87-10, 87-09, 87-08
- The design basis reconstitution and documentation program

10 CFR 50.62. Anticipated Transients Without Scram

The licensee added the diverse scram system (DSS) after the original plant license was issued to mitigate potential ATWS events at Fort Calhoun. The team found that the text and drawing descriptions of the DSS added to the updated safety analysis report (USAR) adequately described the system as installed in the plant.

The team verified the commitments the licensee made to the NRC in docketed correspondence for the DSS and found that the commitments had been incorporated in physical plant modifications and procedures. Hardware changes to the plant coincided with the commitments for separate and diverse scram components. The DSS method was different from the reactor protection scheme for removing power from the rod control system by opening contactors and was in agreement with licensee commitments for mitigating ATWS events.

The licensee conducted periodic testing as preventive maintenance instead of surveillance testing because the DSS was not described in the Fort Calhoun technical specifications. The team reviewed the preventive maintenance activities being conducted by the licensee and concluded the licensee was meeting its docketed commitments through its surveillance and maintenance procedures.

The maintenance procedures used to test the DSS incorporated the manufacturers' specific recommendations on the contactors and the molded-case circuit breakers, as committed to by the licensee in its November 16, 1984, response to a staff request for information. No major modifications had been made to the DSS since the system was installed.

The team concluded that the commitments made by the licensee regarding the DSS had been maintained.

Generic Letter 89-13. "Service Water System Problems Affecting Safety-Related Equipment"

The licensee documented actions taken to address GL 89-13 in its responses to the NRC dated January 26, 1990, and November 16, 1992. The team reviewed the status of the licensee's commitments and found that all commitments were being controlled and implemented. The actions included minor modifications, procedure revisions, and periodic tests. The installed modifications, procedures, and tests were implemented in accordance with the documented commitments.

The Fort Calhoun systems affected by GL 89-13 were noted to have significant design margin so that flows in many of the small branch lines were not credited in accident analyses. The effect of this margin was generally to limit GL 89-13 actions to those associated with the intake structure, the major heat exchangers, and large-bore piping. The team confirmed that the remaining actions involving commitments had been entered into the licensee's commitment action tracking system (CATS).

Generic Letter 88-14, "Instrument Air System Problems Affecting Safety-Related Equipment"

The licensee responded to GL 88-14 by letter dated February 21, 1989. It certified that it had completed all actions required by the GL in a letter dated February 14, 1991. The actions and programs for which the licensee took credit in its response to the generic letter were previous activities and commitments resulting from plant events and NRC inspections and violations for air system problems that predated the GL.

The team verified the current status of 14 actions discussed in the licensee's response to GL 88-14. These actions included program and procedure changes, updates to the USAR, and modifications to the plant's instrument air system. The team found that the actions had been implemented and identified no significant changes. The only changes in commitments identified by the team were two ongoing commitments in procedures that the licensee had rewritten or moved within the procedures because of subsequent extensive revisions to the procedures. These changes did not materially affect the two commitments.

The team concluded that the commitments were incorporated and were being controlled.

NUREG 0737. Item I.C.5. "Procedures for Feedback of Operating Experience to Plant Staff"

The licensee had adopted an operating experience review program that was designed to meet the commitments made by the licensee in response to the requirements of Item I.C.5. The program was well designed and implemented and ensured that all the operating experience information was analyzed to determine applicability to the plant and then distributed to the appropriate personnel by training, required readings, or any other method available to the licensee.

The team also reviewed the licensee's response to NRC Information Notice 92-36, "Intersystem LOCA [loss-of-coolant-accident] Outside Containment," to examine the licensee's implementation of its operating experience review program. The information notice had initially been reviewed by the operating experience review coordinator, who determined that further review was needed. This further review was done by the Nuclear Engineering Department. The licensee determined that this information notice was applicable to Fort Calhoun and follow-up actions were assigned to the Training, Design Engineering, and Operations Departments. These actions were reviewed by the Plant Review Committee. The team also reviewed an evaluation by the Nuclear Safety Review Group of the program's effectiveness.

The team concluded that all actions taken in regard to the information notice were performed in accordance with the procedure for the operating experience review program.

NRC Bulletin 85-01, "Steam Binding of Auxiliary Feedwater Pumps"

In response to Bulletin 85-01, the licensee stated that it had previously initiated actions for related industry and NRC issues, thus satisfying the requirements of the bulletin. The licensee's actions were (1) installing surface temperature instrumentation on the discharge piping of the auxiliary feedwater (AFW) pumps with the temperatures recorded every shift and (2) establishing procedures and training to identify and mitigate steam binding and, if a pump was steam bound, to recover the pump in accordance with Procedures OI-AFW-3 and AOP-28.

The team reviewed the licensee's actions in response to the bulletin and found weaknesses in the implementation and control of the actions. In implementing the actions, the licensee did not provide an acceptance value for the temperatures being recorded, temperature values in various revisions of the procedures differed, and the two procedures were not fully consistent.

The licensee had not included the actions in the CATS. It did not consider the actions "ongoing commitments" within the scope of its commitment management program because the actions were initiated before the bulletin was issued and were not implemented in response to the bulletin requirements. In addition, the licensee had not considered the applicability of Bulletin 85-01 to the third AFW pump, which although not safety related was installed because of reliability concerns. The team considers the omission of the actions from the CATS as a potential weakness in the licensee's commitment management program. The NRC project manager will follow up with the licensee the issue of omission of consideration of Bulletin 85-01 for the third AFW pump.

NOV 91-23. Insufficient EDG Fuel Oil Capacity

An NRC inspection report documented a noncited violation for a licenseeidentified condition regarding the amount of fuel oil available to the emergency diesel generators. In its response to the inspection report, the licensee discussed its interim action plan and the enhancements of that plan it intended to use as a permanent solution. The NRC had not yet approved the permanent solution at the time of the audit. The licensee included four separate items in its CATS to control the enhancements of the interim plan. The team verified the availability of equipment and the addition of emergency procedure requirements and found no significant differences. The licensee had not classified any of the commitments as ongoing because of the continuing discussions with the NRC.

NOV 90-02 A. Degradation of Check Valves: NOD 90-02 A. Cable Installations Not Meeting FSAR Commitments

In response to the NOV, the licensee committed to revise its procedure for the preparation of safety analyses for operations. The commitment was listed in the CATS and identified Procedure NOD-QP-22 as the affected document. The current revision of NOD-QP-22 included the associated guidance and referenced the licensee's letter in response to the NOV as the source of the commitment.

In response to the NOD, the licensee committed to conduct an analysis that would also be used as a basis for a USAR update and to revise the associated engineering instruction and construction procedure. The CATS included two commitments associated with the deviation, one of which referenced the engineering analysis. The team verified the existence and conclusions of the analysis and the incorporation in the USAR of the recommended change. The team also verified the changes made to the engineering instruction and construction procedure.

NOV 89-01 A. Unreviewed Safety-Related Modifications; NOV 89-01 B. Corrective Action Not Taken

The NRC had issued the first violation because the licensee had made changes to safety-related equipment, including a temporary change to both emergency diesel generators, without determining as required, that the changes did not constitute unreviewed safety questions. In its response to the NOV, the licensee committed to incorporate the temporary changes to the diesel generators in an existing permanent modification. The team found that the licensee had included the NRC inspection report number as a reference document in an existing commitment in the CATS for completing the permanent modification. The team reviewed the commitment had been completed as stated without any changes. The NRC had issued the second violation because the licensee had altered, through a maintenance work order, a lighting circuit that interfered with a plant modification and had not returned the lighting circuit to its original configuration. In its response to the NOV, the licensee discussed changes to two site procedures, Standing Orders SO-M-101 and SO-G-21, to better control maintenance work orders and modifications. The team found that the change to SO-M-101 still existed in the procedure, although the commitment was categorized as closed in the CATS. The team also noted that the commitment in the CATS was linked to the NRC inspection report that closed the violation. In addition, a similar change was made to an engineering instruction and the instruction listed the NOV response letter in its references/commitments section.

The change to SO-G-21 discussed in the response letter also existed in the revision of the procedure reviewed by the team. However, no ongoing commitment existed for the associated procedural requirement. The licensee explained that no commitment existed because the procedure change discussed in the response was not made to resolve the issues in the NOV and, therefore, did not meet its definition of "ongoing commitment." The team indicated to the licensee that their definition of ongoing commitment would not identify existing activities as commitments when the existing activities were used to satisfy a new or existing regulatory requirement. The team believed this to be a potential weakness in the licensee's commitment management program.

NOV 87-02 A. Use of Outdated Documents; NOD 87-02 A. Lack of Administrative Controls for Manual Isolation Valves

The NRC issued the violation when several outdated procedures and operator aids were discovered in the plant. In its response to the NOV, the licensee stated it had revised two documents. Procedure SO-O-41 was changed to provide space for the shift technical advisor to record the current revision of operator aids during his quarterly verification. The shift technical advisor's turnover log, FC-163, was changed to include a requirement to review daily the list of operator aids in SO-O-41 to a list of newly issued procedure revisions. The commitment to revise the two documents was listed in the CATS and appeared in the current revision of the documents, although the commitments were not annotated as commitments in the documents. Team discussions with a shift technical advisor indicated that the requirement was understood and was being implemented.

The NRC issued the NOD when manual isolation valves in system branch lines were found not to be administratively controlled, contrary to an FSAR commitment. In its response to the NOD, the licensee committed to lock or seal wire the manual valves and update operating instruction checklists and piping and instrumentation diagrams (P&IDs) to indicate the required status of the valves. The commitment to revise operating checklists and P&IDs was listed in the CATS, although the specific procedures were not listed. The team verified the locked condition of the valves and indication of the proper status on the P&IDs and in Surveillance Test OP-ST-CONT-0001, "Locked Closed Manual Containment Isolation Valve Alignment Check," and concluded that the commitments had been adequately implemented.

Licensee Event Reports (LERs)

The audit team reviewed the implementation of corrective action commitments contained in a sample consisting of the following LERs:

87-08 Loss of Off-Site Power

- 87-09 Loss of Off-Site AC Power due to Personnel Error
- 87-10 Valve Stroke Test Requirements
- 87-22 Defects in Tank Manufactured by Eaton Metal Products Corporation
- 88-11 Potential Failure to Maintain Containment Integrity When Required
- 88-15 Inadvertent Start of Stand-By Component Cooling Water Pump During Breaker Testing
- 88-18 Failure to Conduct Surveillance Test Within Prescribed Interval
- 89-18 Failure to Conduct Hourly Firewatch Patrol Due to Procedural Inadequacies

The sampled LERs contained commitments to a wide variety of corrective actions, including hardware modifications, procedure revisions, plant labels, performance studies, and technical reviews. The team did not identify any safety-significant deficiencies with the licensee's meeting and maintaining the commitments in the sampled LERs, although it did identify several examples of omitted commitments in three LERs.

In LER 87-09, the licensee committed to revise the associated maintenance procedure, listing which fuses to pull, to prevent a repeat occurrence of the wrong fuses being pulled. The affected procedure was correctly revised but later replaced with a different procedure, which did not list the fuses. Other corrective actions regarding LER 87-09 remained in place, including signs mounted on the electrical switchgear warning which electrical buses would be deenergized if fuses were removed. The safety significance of deleting the fuse list was mitigated by the local signs and the normal controls in the licensee's tagging program.

In LER 88-11, containment integrity was compromised when a Swagelok cap had not been reinstalled on a test tee following a surveillance test. The licensee committed to revise the associated surveillance test to include detailed drawings that showed all test tees. The affected procedure was correctly revised but later replaced with a different procedure, which showed on its drawings only the test tees being manipulated. Other LER 88-11 corrective actions were still in place, which mitigated the safety significance of the deletion of the test tees from the drawing. These actions included double, independent verification that caps had been reinstalled during the test and a separate double, independent verification of all caps before requiring containment integrity. The team confirmed that the latter verification list included the caps deleted from the test drawing. In LER 89-18, the licensee committed to revise a standing order, a procedure, and two forms to require the permission of the fire protection engineer (or control room shift supervisor in the absence of the engineer) to terminate an hourly firewatch. The affected documents were correctly revised, but were later deleted or revised extensively. The procedure and the remaining form no longer contained the requirement, and the standing order language was not completely clear. However, a new companion procedure used by the security force, which makes up most of the firewatches, did contain language similar to the LER 89-18 commitment.

With the exception of the items noted above, the commitments made in the sample of LERs remained in place. These commitments, made between 1987 and 1989, were not identified as commitments in the procedures but were entered in the CATS. The team noted that the procedures did contain specific references to other, more recent commitments such as those made in 1992 and later.

Design Basis Reconstitution and Documentation Program

The licensee initiated the design basis reconstitution and documentation program as one of the corrective actions following the NRC safety system outage modification inspections conducted in 1985. The program reviews included safety systems, major buildings, generic issues, key nonsafety systems, and other topics. About 1700 open items were generated and ranked in six priority groups. All the items in the two highest groups had been closed. About 700 items that were associated with safety-related systems remained open. The team noted that the licensee had procedures in place that controlled the evaluation of the open items for operability, reportability, and prioritization.

The design-basis documents (DBDs) identified the performance requirements associated with the topic reviewed by the licensee, and the DBDs were used extensively by the licensee's engineering staff. The apparent usefulness of the DBDs and the licensee's stated intention to keep the DBDs current provided good assurance that significant commitments regarding system and component performance will be maintained.