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THRU: Ashok C. Thadani, Director
PWR Project Directorate #8
Division of PWR Licensing-B

FROM: Donald E. Selis, Project Manager
PWR Project Directorate #8
Division of POWR Licensing-B

SUBJECT: DRAFT NRR SALP INPUT FOR FORT CALHOUN STATION, UNIT NO. 1

Enclosed is a draft of the NRR input to the SALP review for Fort Calhoun Station. The draft report is based partly upon input from selected staff personnel who have had substantial contact and involvement with Fort Calhoun Station licensing material. Please review the draft evaluation and provide any comments you feel appropriate.

All comments received by October 10, 1986 will be considered in the final report. Your comments may be provided verbally due to the short turn-around time. Please note that the licensee overall evaluation for "Licensing Activities" is a Category 1.

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Donald E. Selis, Project Manager
PWR Project Directorate #8
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Enclosure:
As stated

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Detailed Review - Licensing Activities

Facility Name: Fort Calhoun Station, Unit No. 1
Licensee: Omaha Public Power District
Evaluation Period: March 1, 1985 through September 30, 1986
NRR Project
Managers: E. Tourigny/D. Sells

I. INTRODUCTION

This report represents the results of an evaluation of the licensee in the functional area of "Licensing Activities." It is intended to provide NRR's input to the SALP review process as described in NRR Office Letter No. 44 dated January 3, 1984, and NRC Manual Chapter 0516.

II. SUMMARY OF RESULTS

NRC Manual Chapter 0516 specifies that each functional area evaluated will be assigned a performance Category (Category 1, 2 or 3) based on a composite of a number of attributes. The performance of Omaha Public Power District in the functional area of "Licensing Activities", is rated Category 1.

III. CRITERIA

The evaluation criteria used in this assessment are given in NRC Manual Chapter 0516 Appendix, Table 1, Evaluation Criteria with Attributes for Assessment of Licensee Performance.

IV. METHODOLOGY

This evaluation represents the integrated inputs of the Project Managers (PM) and those technical reviewers who expended significant amounts of effort on Fort Calhoun Station, Unit No. 1, licensing actions during the current rating period. Using the guidelines of NRC Manual Chapter 0516, the PM and each reviewer applied specific evaluations to the relevant licensee performance criteria, as delineated in Chapter 0516, and assigned an overall rating Category (1, 2, or 3) to each criterion. The reviewers included this information as part of each Safety Evaluation prepared for the Fort Calhoun Station. The PM, after reviewing inputs of the technical reviewers, combined this information with his own assessment of the licensee performance, using appropriate weighting factors, arrived at a composite rating for the licensee. This rating also reflected the comments of the NRR Senior Executive assigned to the Fort Calhoun Station SALP assessment. A written evaluation was then prepared by the PM and circulated to NRR management for comments.

The basis for this appraisal was the licensee's performance in support of licensing actions that were completed during the current rating period. These actions consisted of amendment requests, exemption requests, responses to generic letters, TMI items, and other actions, as shown in Table 1 below and in Enclosure 2.

Table 1

Licensing Activities Completed During the SALP Period
(See Enclosure 2 for Amendments, Relief, Exemptions)

<u>Issue</u>	<u>Completion Date</u>
Special Steam Generator Tube Inspection	03/08/85
Reevaluation of AFWS Technical Specifications	04/24/85
ECCS Error and Core Height	06/13/85
Reactor Vessel to Nozzle Welds	06/19/85
Control of Heavy Loads Phase II	06/28/85
SB LOCA Analysis	07/01/85
Compliance with 10 CFR 50.46	07/01/85
Core Load Methodology Changes for Cycle 10	08/26/85
Alternate Shutdown Capability	11/04/85
Steam Generator Tube Integrity	12/11/85
Control Room Habitability	12/27/85
Validation of Mini-CECOR/BASS System	03/10/86
ISI Relief for Recirculation Pipe	06/24/86
Clarification of Fire Protection Modifications	07/01/86
GL 83-28, Salem ATWS Item 3.2	07/03/86
GL 83-28, Salem ATWS Item 4.5.1	07/10/86

V. ASSESSMENT OF PERFORMANCE ATTRIBUTES

The licensee's performance evaluation is based on a consideration of the seven criteria specified in NRC Manual Chapter 0516. These are:

- Management Involvement and Control in Assuring Quality
- Approach to Resolution of Technical Issues from a Safety Standpoint
- Responsiveness to NRC Initiatives
- Enforcement History
- Reporting and Analysis of Operational Events
- Staffing (Including Management)
- Training and Qualification Effectiveness

In addition to the above, Housekeeping and Control Room Behavior is discussed. A summary of the SALP ratings in each area is shown in Table 2 below.

Table 2
Summary of SALP Ratings

<u>Criterion</u>	<u>Rating</u>
Management Involvement and Control in Assuring Quality	1
Approach to Resolution of Technical Issues	1
Responsiveness to NRC Initiatives	1
Enforcement History	2
Operational Events	1
Staffing	1
Training	1
Housekeeping and Control Room Behavior	1
Composite Rating	1

A. Management Involvement and Control in Assuring Quality

During the SALP evaluation period, the licensee continued to show good management overview in the areas of licensing activities. The licensee consistently balances the desire to maintain or improve plant productivity with the need to protect the health and safety of the public. The majority of the licensing actions completed during this SALP period were resolved by the licensing group. This is accomplished by closely coordinating the technical efforts of the OPPD staff, consultants, contractors, and suppliers. In instances where matters need to be referred to upper management, the individuals involved proved to be well informed and helpful in resolving questions. Upper management is actively involved in resolving problems and is well informed of conditions that need their attention. Upper management is also deeply involved in maintaining and improving the quality of work done at the Station by actively participating in the development of quality improvement programs that includes the initiating of planning to develop an Integrated Living Schedule. During this period, errors were found in the codes used in the core physics analysis. The licensee's management took aggressive action to ensure an early and satisfactory resolution of this issue. The licensee's management has continued to pursue a program that is aimed at improving and increasing the technical capability of the staff, including the approval to purchase and install a training simulator at the Station and initiating a construction program to improve the security and staff facilities at the Station. During the rating period, an extensive safety system outage modification inspection was conducted. The licensee's management has been very active in addressing the issues raised by this inspection.

The licensee's submittals are most often timely and of high quality. In particular, the licensee's treatment of the no-significant-hazards standards of 10 CFR 50.92 have shown a steady and marked improvement during the rating period.

Based upon the uniform and consistent performance of the Fort Calhoun licensing group and the willingness of a knowledgeable upper management to get involved, as needed, a SALP rating of Category 1 is assigned to this criterion.

B. Approach to Resolution of Technical Issues from a Safety Standpoint

The licensee continues to maintain a significant technical capability in almost all engineering and scientific disciplines necessary to resolve items of concern to the NRC and the licensee. During the report period, the licensee has expanded his staff at the Station as well as in the support staff located at the main office in Omaha. Further staff expansion is planned in the future. In addition, the licensee continues to utilize the services of Combustion Engineering and other nuclear support groups to assist in the resolution of technical problems or to develop improvements that will enhance the operation and safety of the Station. The licensee is currently completing the review of analytical models to be submitted to the NRC for approval for use in the spring 1987 refueling outage.

The licensee's extensive and improving technical capability is reflected in the submittals made in support of or in response to licensee or NRC initiated actions. With few exceptions, the technical content of these submittals is complete and thorough. Where additional information has been needed, it has been of a clarifying nature for the most part and in many cases handled by a phone call with a follow-up letter to confirm the verbal conversations. Few, if any, licensee responses to NRC requests for additional information require subsequent questions.

The licensee applied probabilistic risk assessment techniques in the analysis of the Station AFWS system. The analysis was used to support the continued operation of the two AFW pump system at Fort Calhoun. Although this issue has not been resolved, the results of the analysis performed by the licensee were presented to the staff in November 1985 and provided the basis for continued use of the existing system.

Based upon the licensee's extensive technical capability and effective use of resources, a SALP rating of Category 1 is assigned to this criterion.

C. Responsiveness to NRC Initiatives

The licensee continues to respond promptly to all NRC staff initiatives. During the period, the licensee worked with the NRC in resolving multiplant and TMI action items. In each case, the licensee carefully evaluated the action in question and provided meaningful input to the NRC staff. Particularly noteworthy is the support provided to the NRC's control room habitability study. A visit to the Station is being scheduled to collect data in support of the NRC study. The licensee has also provided the necessary support to bring TMI action items dealing with the Emergency Response Facilities and the Safety Parameter Display System to a point where final NRC closeout can be expected very early in the next reporting period. Where differences have occurred, the licensee has negotiated changes to insure that the results adequately reflect safety considerations and incorporate the staff's positions and licensee desires.

This occurred in the development of the Technical Specification changes made to incorporate the requirements of 10 CFR 50.72 and 50.73 and has led to the resolution of the Technical Specifications changes that will incorporate the Inadequate Core Cooling Instrumentation system. Based upon the willingness of the licensee to resolve conflicts in an orderly manner and a willingness to accept the results of these negotiated positions, a SALP rating of Category 1 is assigned to this criterion.

D. Enforcement History

During the SALP rating period, two enforcement conferences and two significant licensee meetings were held. The first enforcement meeting was held on April 11, 1986. This conference dealt with violations in the health physics area and

is identified in Inspection Report 86-01. As a result of the conference, two of the violations were cited as Severity Level III problems, but no civil penalty was imposed. Another Level III action occurred in conjunction with a violation contained in Inspection Report 85-09 dealing with Equipment Qualification. There was no Enforcement Conference or Civil Penalty associated with this violation. The second enforcement conference was held on August 22, 1986. This conference dealt with violations in the security area. A final determination on Security Level and imposition of civil penalty had not yet been made at the time this report was prepared. As a result of the Safety System Outage Modification inspection (Inspection Reports 85-22 and 85-29) significant licensee meetings were held on July 10, 1986 and August 7, 1986. The final determination of actions to be taken on the findings is still to be determined.

During the report period, in addition to the violation mentioned above, the licensee was cited for over 40 other violations (Level IV and V).

Based upon the fact that only two, and possibly three, of the violations given were assessed at Level III, it would appear that the licensee is performing in a satisfactory manner. On the other hand, the large number of violations during the reporting period indicates that better performance should be possible. For this reason a SALP rating of Category 2 is assigned to this criterion.

E. Reporting and Analysis of Operational Events

During the 19 month SALP period, 50 reports were submitted as 10 CFR 50.72 reports by the licensee. Thirteen of these were followed up with a Licensee Event Report (LER). Of the remainder, 35 were security events, 1 related to a chlorine gas release, and 1 advised of loss of emergency communications capability.

A total of 16 LER reports were filed. Two of the LER events were reactor trips. Eight of the LER events were ESF actuations without trips. Of the remaining six LER events, two reported the discovery of equipment malfunctions during testing; two reported violations of plant Technical Specifications due to personnel errors; one reported potential operation outside the design basis; and one reported a radioactive gaseous release.

Review of the data for this reporting period indicates that automatic actuation of the Reactor Protection System and manual SCRAM resulted in 0.32 trips per 1,000 critical hours. A recent study conducted by ORAS has indicated an industry average 1985 total SCRAM rate of approximately 1.7 per 1,000 critical hours. Therefore, the operational experience indicates Fort Calhoun to be performing significantly better than the 1985 industry average for this criterion.

Events at Fort Calhoun are generally reported within the required time period following the occurrence. Reporting usually appears to be accurate and complete. However, one LER (85-009) was reported 6 months after the initial event. This same event, an event that could have led to operation outside the design basis of the plant, apparently was not reported as required by 10 CFR 50.72(b)(2)(i) (i.e., an event found while the reactor was shut down, that, had it been found while the reactor was in operation, would have resulted in the nuclear power plant being in an unanalyzed condition). Also, 50.72 and 50.73 (LER) Reports were not submitted for an event or condition that alone could have prevented the fulfillment of the safety function needed to shut down the reactor and maintain it in a safe shutdown condition as required by 50.72(b)(2)(iii), and 50.73(a)(2)(v). This condition involved a compromise of the alternate shutdown capability for the control room/cable spreading room as documented in the NRR Daily Highlight, dated February 11, 1986, from E.G. Tourigny to Ashok C. Thadani, and Region IV Morning Report, dated February 12, 1986.

None of the reported events were considered significant enough to warrant presentation at the NRR Operating Events Briefings.

Monthly operating reports are available for only the first 18 months of the 11 month SALP period. During those 18 months, the unit was critical 10,606 hours, or about 81% of the period. This interval included a scheduled refueling and maintenance outage which was planned for 75 days but extended to 104 days. The unit was critical about 98% of the time outside of the 104 day outage.

The net electrical generation at Fort Calhoun during the first 18 months of the SALP period was 4,574,679 MWH. This is 73% of the Net Maximum Dependable generation with no outages. If the hours for the refueling and maintenance outage were not included, the net generation would be 89% of the potential Net Maximum Dependable generation.

The industry-wide average capacity factor is about 61%. The Fort Calhoun Cumulative Unit Capacity Factor is about 66%.

The weaknesses in the area of reporting indicate the need for continued NRC and licensee management attention. In consideration of the above, a SALP rating of Category 1 is assigned to this criterion.

F. Staffing (Including Management)

The licensee has shown continued interest in improving the staffing of the nuclear program within OPPD. The improvements have been in both the area of increased numbers of qualified personnel and realignment of responsibilities to better utilize the people that support Fort Calhoun operation. For example, 10 additional operators have been added to the staff during the report period to help ease staffing problems that occurred due to intensified training requirements; another licensed Senior Reactor Operator was added to the Station operations staff to aid in coordination and trouble shooting; a former shift

supervisor now serves as a coordinator between operations and maintenance; Fire Brigade Leader responsibilities have been shifted away from the Shift Supervisor to allow the Shift Supervisor to maintain a better view of overall plant conditions if a fire should occur; and the licensee has increased the technical support staff in Plant Engineering. In addition, the licensee has taken steps to establish a position that will focus on outage planning on a full time basis. The licensee is also developing plans to further increase the staffing both at the Station and at the Omaha office to allow for further licensee analysis in support of Station activities. There is a relatively low and slow turn-over rate in the Fort Calhoun staff. This is an indicator of good morale and job satisfaction. The licensee staff has exhibited a very high degree of cooperation with the NRC staff.

Based on the excellence of the licensee's staff and the continued efforts to improve the quality and size of the staff, a SALP rating of Category 1 is given to this criterion.

G. Training and Qualification Effectiveness

In the previous SALP period, this area received a Category 3 rating in the report submitted by the NRR licensing staff. During the current rating period, considerable improvement has been noted in the success rate of licensee examinations. In addition to intensified training that has been made possible by the increase in reactor operators, the licensee has initiated action to obtain a training simulator and has begun implementation of a technical training program for engineers to enhance the level of support for operations and maintenance.

Based on the continued and significant improvement and future plans in the training area, a SALP rating of Category 1 is assigned to this criterion.

H. Housekeeping and Control Room Behavior

The licensee has maintained a clean and efficient plant. Continuing emphasis has been placed on plant cleanliness and a continuous effort to maintain the overall appearance of the plant is evident throughout the facility. Policing of the plant has been observed to be excellent during the site visits made by the NRR project managers, even during the refueling outage when a high level of activity and increased numbers of personnel are present.

The licensee maintains a very professional atmosphere in the control room. During a number of observations, the control room was clean and quiet with no unnecessary personnel present. Even during the outage, the high standards of housekeeping, conduct, and professionalism were maintained in the control room. The operating staff and shift crews have always been observed to be professional and helpful.

Based on the continued high state of housekeeping and professionalism exhibited at the Station, a SALP rating of Category 1 is assigned to this area of NRC management interest.

IV. CONCLUSIONS

The licensee's licensing activities are conducted by a well staffed and well trained group resulting in an overall efficient operation. Management overview is evident in that the licensing effort, for the most part, is well integrated into other plant and licensing activities as reflected in a uniform approach. Upper management does become involved in licensing actions, when necessary, to assist in resolving potential deadlocks. The licensee is to be commended for the diligent way in which licensing actions are resolved and the willingness to compromise to achieve agreement with NRC staff positions. Direct observation at the Station during the SALP period indicates that the Station is well maintained and the operating personnel are professional in appearance and demeanor.

The licensee's greatest strengths appear to be in the following areas:

- ° Management Involvement and Control in Assuring Quality - The licensee's submittals continue to be of high quality and management actively participates in resolving issues that arise. The improvements in all aspects of Station operation and support are also indicative of a high level of management involvement.
- ° Operations - The long run without an automatic trip, which was the subject of a letter from the Director, ONRR, to OPPD is worthy of note. The excellent availability factor during the period is also a measure of the excellence of the operating staff and the maintenance program.
- ° Staffing - The continued improvements in staffing, both at the site and the Omaha support offices, is an excellent indication of the licensee's efforts to upgrade the experience, capability and effectiveness of the licensing group and the supporting technical and administrative personnel to operate a top flight facility.
- ° Training - The acquisition of a training simulator displays a sincere effort on the part of the licensee to continue its efforts to maintain and improve the quality of the Fort Calhoun operating and support staff.

The following areas need additional attention:

- ° Training - Although marked improvements has been noted over the previous SALP rating, the licensee should continue to monitor closely his progress in this very important area.
- ° Operations - Security continues to warrant special attention by the licensee.
- ° Enforcement History - The licensee needs to place additional effort on his attempts to reduce the number of violations that have occurred at Fort Calhoun.

- Reporting and Analysis of Operating Events - The licensee needs to continue to closely monitor his performance in filing reports under the provisions of 10 CFR 50.72 and 50.73.

Based upon the evaluation of Performance Attributes discussed above, an overall SALP rating of Category 1 for the area of "Licensing Activities" is assigned.

SALP Evaluation for Fort Calhoun Station, Unit No. 1
Supporting Data and Summaries

1. NRR - Licensee Meetings

November 8, 1985 Reliability of Auxiliary Feedwater System

2. NRR Site Visits

May 1, 1985 to Participate in EQ Inspection
 May 3, 1985

July 17, 1985 to Tour Plant, Discuss Licensing Actions, Review
 July 19, 1985 Plant Modifications

October 17, 1985 to Tour Plant, Meet new SRI, Discuss Licensing
 October 18, 1985 Actions

December 17, 1985 to Participate in IE Outage Inspection Exit
 December 18, 1985 Meeting

January 29, 1986 to Walkdown Plant Modifications Made During
 January 31, 1986 Refueling Outage

February 25, 1986 Discuss Analysis and Disposition of HEDs/SPDS
 February 27, 1986

April 30, 1986 RER Inspection Exit Meeting and New PM
 May 5, 1986 Orientation

July 8, 1986 to ERF Appraisal Exit Meeting
 July 11, 1986

3. Commission Briefings

None

4. Schedular Extensions Granted

March 29, 1985 EQ Deadline Additional Extension

5. Reliefs Granted

None

6. Exemptions Granted

July 3, 1985 Appendix R to 10 CFR Part 50 - Fire Protection

January 10, 1986 Appendix J to 10 CFR Part 50 - Containment
 Leakage

7. License Amendments Issued

Amendment No. 86	April 3, 1985	Incorporates Requirements of Appendix I
Amendment No. 87	April 29, 1985	Toxic Gas Monitoring
Amendment No. 88	May 9, 1985	RPS/ESFAS Bypassing/Tripping
Amendment No. 89	May 24, 1985	Post Accident Sampling
Amendment No. 90	August 19, 1985	Testing Frequency of AFW Pumps
Amendment No. 91	August 22, 1985	PCP Surveillance Requirements
Amendment No. 92	November 29, 1985	Cycle 10 Power Operation
Amendment No. 93	December 6, 1985	Administrative Changes
Amendment No. 94	January 10, 1986	Capsule Removal Schedule
Amendment No. 95	February 3, 1986	Leak Rate Testing Surveillance
Amendment No. 96	April 24, 1986	Updated Snubber Tables
Amendment No. 97	June 3, 1986	Recirculation Heat Removal
Amendment No. 98	July 1, 1986	Fire Suppression Equipment
Amendment No. 99	August 13, 1986	50.72 and 50.73 Requirements
Amendment No. 100	September 8, 1986	Heatup and Cooldown Curves

8. Emergency Technical Specifications Issued

None

9. Orders Issued

January 9, 1986 Modification of Commission Order dated February 22, 1984

10. Status of Licensing Backlog

At the conclusion of the SALP period, the licensing backlog consisted of the following items:

- o TMI Related 11
- o MPA 9*
- o Plant Specific 9

*G-01 is TMI Related