

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION

REGION IV

Report: 50-285/82-02

Docket: 50-285

License: DPR-40

Facility Name: Fort Calhoun Station, Unit 1

Inspection at: Fort Calhoun Station, Blair, Nebraska

Inspection Conducted: February 22-26, 1982

Inspectors: J. P. Jaudon 3/18/82
J. P. Jaudon, Reactor Inspector, Reactor Project
Section C (Paragraphs 1, 2, 3, 5, & 6) Date

E. H. Johnson 3/18/82
E. H. Johnson, Reactor Inspector, Reactor Project
Section A (Paragraphs 1, 4, 5, & 6) Date

Other
Accompanying
Personnel: R. E. Hall, Chief, Reactor Project Section C
(February 26, 1982)

Reviewed: T. F. Westerman 3/18/82
FOR T. F. Westerman, Chief, Reactor Project Section A Date

Approved: R. E. Hall 3/18/82
R. E. Hall, Chief, Reactor Project Section C Date

Inspection Summary

Inspection Conducted February 22-26, 1982 (Report 50-285/82-02)

Areas Inspected: Routine, unannounced inspection of licensee action on previously identified items, requalification training, and fire prevention/protection. The inspection involved 70 inspector-hours by two NRC inspectors.

Results: Within the three areas inspected, two apparent violations were identified (violations - failure to conduct requalification lectures and examination - paragraph 3; and failure to follow procedures regarding fire brigade training - paragraph 4).

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DETAILS

1. Persons Contacted

Omaha Public Power District

R. Andrews, Section Manager, Production Operations
J. Fisicario, Supervisor, Administrative Services
J. Gass, Training Supervisor
G. Gates, Operations Supervisor
*R. Jaworski, Section Manager, Technical Services
*W. Jones, Division Manager, Production Operations
L. Kusek, Technical Supervisor
J. Lechner, Engineer
*K. Morris, Manager, Administrative Services
G. Peterson, Maintenance Supervisor
C. Rennerfeldt, Training Coordinator
*R. Short, Licensing Engineer
*S. Stevens, Manager, Fort Calhoun Station
F. Swihel, Training Coordinator

The NRC inspectors also contacted other plant personnel including administrative, clerical, engineering, and operations personnel.

*Denotes presence at the exit interview conducted February 26, 1982.

2. Licensee Action on Previous Inspection Findings

(Closed) Violation (8102-03): This violation resulted from the failure to include all subjects listed in 10 CFR 55, Appendix A, paragraph 2 in the annual operator requalification program. The NRC inspector reviewed operator requalification examinations given at two different times. The first of these had been given in the spring of 1981. The NRC inspector concluded that the licensee's corrective action, based on review of the first examination, was not complete. For example, some of the questions on this examination could be related to the facility's Technical Specifications, but only one of the questions required operators to demonstrate knowledge of a "limiting condition of operation (LCO)." The NRC inspector found that operators who did not refer to the LCO in answering this question were not marked off in the grading. The NRC inspector noted that the licensee was in the process of administering a second annual operator requalification examination. This latter examination did appear to include all the subjects required by 10 CFR 55, Appendix A. Based on the content of the second examination, the NRC inspector concluded that licensee's corrective action was satisfactory. The NRC inspector noted that the licensee's Quality Assurance Audit No. 23-81 of July 1981 had examined this area and found it satisfactory at that time.

This item is closed.

(Closed) Unresolved Item (8102-04): This item was unresolved because of inconsistencies noted in the grading of annual examinations for operator requalification. The NRC inspector reviewed the results of examinations given during the spring of 1981. It was found that there were numerous grading inconsistencies. The NRC inspector concluded that, for those examinations reviewed, the grading inconsistencies noted would not have materially changed the results of the examination. The NRC inspector noted that this examination had been given over a 4-month period; licensee representatives stated that individual papers were graded as completed. This may have contributed to the inconsistencies found. The NRC inspector also reviewed the partial results of the requalification examination which was currently being given. The status of this examination was that it had been completed by all licensed personnel who normally stand shift watch, but not by other licensed personnel. It was found that the examination was being graded one question at a time and that the previously noted inconsistencies were no longer apparent.

This item is closed.

(Open) Open Item (8102-05): This item was open because it had been noted that the 1980 operator requalification examination had been a single version test given over approximately 12 weeks without regard for the potential of compromise. The NRC inspector found that the licensee had given two operator requalification examinations in 1981. In both instances, a single version test was used. The first examination covered approximately 17 weeks, and the second examination, which had not been completed on February 26, 1982, had already been in use for 14 weeks. The NRC inspector found no specific evidence of compromise in either case, but expressed concern to licensee management that there had been no measures taken to preclude compromise. Although there is no specific regulatory requirement for licensees to safeguard operator requalification examination material, it is self-evident that the requirement of 10 CFR 50.54 to conduct an operator requalification training program includes the responsibility to conduct required testing under conditions which maintain the credibility and integrity of this testing.

This item remains open.

(Open) Violation (8102-06): This violation resulted from the failure to conduct systematic observation and evaluation of the performance of licensed operators and senior operators by supervisors and/or training staff. The specific problems noted had been with the failure to get individual evaluations from simulator training and with record problems in shift drill evaluations. The licensee had committed to maintain both of these types of records. The NRC inspector found that the licensee was maintaining records as committed, but it was also found that there was some question as to whether or not the licensee was using these evaluation records as directed by 10 CFR 55, Appendix A. For example, the records of evaluation of each individual at the simulator were on file. In one case, an individual had been identified by simulator

instructors as having an attitude problem with training. The NRC inspector found that licensee management had taken action in this case. On the other hand, simulator evaluations of five individuals were reviewed which identified these five as having a specific weakness in the understanding of heat transfer. The NRC inspector could find no evidence, by interview or in records, that any remedial action had been taken or was contemplated.

This item remains open pending additional review of the licensee's compliance with 10 CFR 55, Appendix A, paragraph 4.

3. Licensed Operator Requalification Training

The purpose of this inspection was to verify that the licensed operator requalification training was conducted so that it met the requirements of the Technical Specifications, Chapter 5 and the licensee's approved requalification training plan.

The NRC inspector reviewed the licensee's approved requalification training plan, licensee Procedure G-27, Revision 3 (7/14/81), "Training," and the Fort Calhoun Training Manual. Licensee Procedure G-27 refers to the Training Manual for the description of all training to be conducted.

The licensee's approved requalification training plan commits, in paragraph G.3, to approximately 84 hours of lectures annually for licensed operators. The NRC inspector found that the licensee had carried out a vigorous training program in 1981 and each licensed operator had received well in excess of 100 hours of lectures. During 1981, the licensee had administered an "annual" examination in the spring and started a second annual examination in late autumn. Licensee representatives stated that the purpose of conducting two "annual" examinations in 1981 was to adjust the time of the year when the examination was given to near the end of the calendar year.

As a result of the spring examination, four licensed personnel were identified as having weak areas of knowledge (i.e., examination scores between 70 and 80 in specific categories). 10 CFR 55, Appendix A requires that licensed operators be given lectures in those areas which were determined to be weak as a result of the annual examination. The licensee's approved training plan defines (in paragraph I-1) that a weak area is one in which the operator scores between 70 and 80. The licensee's Training Manual also reflects this requirement in paragraph 3.2.2.2.c. 10 CFR 55, Appendix A also requires that there be written examinations be given which determine knowledge of subjects covered in the requalification program. This requirement is implemented in paragraph I.2 of the licensee's approved training program. The NRC inspector found that the four licensed operators with specific weaknesses identified on the annual examination were neither given specific training nor lectures in their respective areas of weakness nor were they re-examined in these areas. This is an apparent violation of 10 CFR 55, Appendix A (8202-01). It is also similar to a violation reported in last year's inspection of this area.

In a related issue, the NRC inspector noted that the licensee's Training Manual states, in paragraph 3.2.2.2.h, "Although not required, a quiz may be administered at the end of the presentation" This wording appears to be an unauthorized lessening of requirements of the approved requalification training plan and, therefore, contrary to the requirements of 10 CFR 50.54, subparagraph i-1. Since this report already includes an apparent violation which encompasses the failure to give written examinations on requalification lectures, this aspect of the licensee's requalification program has not been cited as a separate violation in this inspection; however, it will be checked at a future inspection to assure that it has been corrected as part of the action to rectify the violation for failure to give examinations as part of the requalification lecture series. It is an open item. (8202-03)

The NRC inspector noted that the licensee was maintaining records related to operator requalification lectures (and other individual training) in a computer format. Licensee representatives indicated that this method of recordkeeping was still being developed. The licensee's ability to conduct various data base searches was not fully operational. For example, the licensee had internally tasked the training department to complete the entire biannual review of emergency procedures during 1981. The licensee's record system was apparently not capable of making an automatic data search to assure that this training had been completed. The NRC inspector reviewed the records of 28 licensed operators and noted that only 15 of them had actually completed the 6 lesson modules required. Licensee representatives appeared mildly surprised at this result and apparently had not been aware of how many operators had not completed this training in 1981. It was also noted that the licensee's Training Manual still indicated that individual training records were kept manually. Update of the Training Manual to reflect the licensee's current practice will be checked on a future inspection. This is an open item. (8202-04)

The licensee's approved training plan states, in paragraph 14.1, "Every reasonable effort will be made to have each licensed operator perform a combination of control manipulations through at least ten (10) reactivity changes during any two year requalification program" This paragraph further states, "If this is not possible, a nuclear power plant simulator will be used to ensure compliance" Paragraph H.2 states, "Figure 2 (Experience Factor Record) provides for the documentation and evaluations of Reactivity Manipulations." Paragraph J.1 states, "that the following records will be maintained to document each licensed operator's and senior operator's participation in the requalification program . . .

". . . c. Completed copies of Figure 2 (Experience Factor Record) so that satisfactory performance of ten reactivity manipulations in a two year requalification program can be demonstrated."

The NRC inspector found that the licensee was only maintaining records of reactivity manipulations conducted at the simulator, which licensed operators were attending approximately annually. The NRC inspector noted that the

last records of reactivity manipulations on file in operator records were from May 1980. These individual training files also showed that each operator had attended simulator in the March-April 1981 timeframe, but the records of reactivity manipulations for these simulator visits were not yet on file. The NRC inspector pointed out to licensee management that, as a result of their decision to rely only on simulator records (despite what had been implied in the approved training plan) and because their records of reactivity manipulations from the 1981 simulator training were not yet complete, the current records of reactivity manipulations would expire in May 1982.

The NRC inspector noted that, in addition to the computer data base of individual training, the licensee maintained a hard copy of the input documents to the data base. The licensee also maintained individual training record files for each licensed operator. These files contained completed annual examinations, records of reactivity manipulations, and evaluations of performance at the simulator. Review of the individual records revealed minor discrepancies. For example, 1981 reactivity manipulation records from the simulator were not yet complete as discussed above; also, the spring 1981 operator requalification examinations were not filed in individual records until after the NRC inspector asked where they were. The NRC inspector concluded that the licensee was not paying close attention to detail in keeping these records. It was noted that the licensee had made provision in paragraph 3.2.4.1 of his Training Manual to have the Station Manager review these records; however, this was a new requirement, and no such review had yet been conducted. Licensee representatives stated that consideration was being given to changing this requirement. Considering the state of these records and the other training problems noted, the proposed relaxation would not appear appropriate at this time in the NRC inspector's judgement.

The NRC inspector had no further questions in the area of licensed operator requalification training.

4. Fire Protection/Prevention Program Implementation

The objective of this inspection effort was to ascertain whether the licensee is implementing a program for fire protection and prevention that is in conformance with regulatory requirements, commitments in the fire protection plan, and industry guides and standards.

The following elements of the Fort Calhoun Nuclear Power Station (FCNPS) fire protection/prevention program were included in this inspection effort:

- a. control of combustibles in safety-related areas
- b. general station housekeeping and housekeeping during maintenance and modification
- c. fire brigade and fire protection equipment, functional, and properly maintained

- d. surveillance testing of the fire protection system
- e. fire brigade training and fire drills

Technical Specification 5.2.2.g requires the licensee to maintain a five man fire brigade on site at all times. Standing Order G-28, "Station Fire Protection Plan," dated August 11, 1981, indicates that the fire brigade leader is the Shift Supervisor, while other fire brigade members are the equipment operators and auxiliary operators. Two members of the on-shift security force provide the back-up fire brigade members. Specific fire fighting responsibilities for each fire brigade member are outlined in this procedure. The Shift Supervisor is directed by this procedure to the scene of the fire to take charge of all fire fighting activities.

The NRC inspector questioned whether it was appropriate to assign fire fighting responsibilities to the Shift Supervisor, especially where these responsibilities (i.e., fire brigade leader) would require him to leave the control room and could distract him from his primary duties of the safe operation of the plant. The NRC inspector pointed out that following the Three Mile Island accident, a careful review of the ancillary duties and responsibilities assigned to watchstanders had been made and it was clearly recognized that great care should be exercised to ensure that peripheral duties did not conflict with primary watchstanding responsibilities. The NRC inspector further pointed out that this issue is currently clearly recognized in Appendix R to 10 CFR 50 inasmuch as the Shift Supervisor is specifically prohibited from membership on the fire brigade.

The NRC inspector indicated that such a prohibition did not preclude the Shift Supervisor from visiting the scene of a fire in order to assess the situation. Further, it is recognized, in Appendix R to 10 CFR 50, that an important function of the fire brigade leader is to assess the potential safety consequences of a fire. This requires that the brigade leader be a licensed operator or have an equivalent level of training.

The Station Manager indicated that the Shift Supervisor had been designated fire brigade leader since he was the senior watchstander. He felt that this particular item had been the subject of NRR review during the fire protection review; however, correspondence on this point could not be located during the limited time of the inspection. The NRC inspector indicated that the current practice was in deviation with 10 CFR 50, Appendix R, but lacking information that could be pertinent to the subject, he would identify this item as unresolved. (8202-05)

The NRC inspector reviewed the licensee's fire brigade training program. This program is described in the Fort Calhoun Training Manual and consists of initial classroom training followed by participation in the periodically scheduled field training for all fire brigade members. The NRC inspector determined from training records for three different groups of recently hired employees that the length of initial training was respectively 1, 2, and 3 hours for the three groups. Training staff members indicated that

the initial training program consists of 4 hours of videotapes, a classroom session, and a plant walk-through. The extent of this training was not, however, supported by the training records since lesson plans or a curriculum outline for this program were not available. The licensee explained the apparent inconsistency in the length of initial training for the three groups mentioned above by differences in their previous experience in fire fighting.

The continuing fire brigade training program consists of eight quarterly training sessions covering fire fighting fundamentals and actual practice sessions. The participation of fire brigade members in these training sessions is tracked through a computerized system. Although the records did match the information obtained from the tracking system, the NRC inspector could not determine the extent and depth of the training because of the lack of lesson plans or lesson outlines.

The NRC inspector noted that the licensee's QA staff had audited the fire brigade training program during 1981. The results of this audit were contained in Audit Report 13-81. One of the findings was that lesson plans were not available for initial fire brigade training. The Training Supervisor indicated that this deficiency was of concern to the training department, however, it had not yet been corrected since the department had taken as its first priority to structure the operator training program. The NRC inspector noted that detailed lesson plans for several hundred operator training topics identified in the computerized tracking were available, and if the fire brigade training programs were similarly structured, the concerns he had for consistent, effective fire brigade training would be satisfied. The NRC inspector indicated during the exit interview that this item would remain open for review during a subsequent inspection. (8202-06)

The NRC inspector then reviewed the licensee's program for periodic fire brigade drills. Amendment 40 to the Fort Calhoun Technical Specifications includes the Safety Evaluation Report for the fire protection program review conducted by the NRC. Section 6.2 of this SER sets out the licensee's commitments to fire brigade training. This section states, "fire brigade drills will be accomplished quarterly. All members of each fire brigade will participate in drills at least every two years."

Guidance as to the staff's position on fire brigade training had been published in Appendix A to Branch Technical Position APSCB 9.5-1 and more recently have been incorporated in Appendix R to 10 CFR 50. This position requires that a fire brigade drill be performed each quarter for each shift fire brigade. One drill each year shall be performed as an unannounced drill and one drill each year shall be performed on a backshift.

The licensee indicated that based on Section 6.2. of the fire protection SER, the commitment to fire brigade drills had been interpreted as requiring only one fire brigade drill each quarter. Plant training records showed this to be the case. The NRC inspector indicated that this interpretation was at odds with the NRC staff position that had been used as guidance in the fire protection program review. Fire brigade drills, he indicated, could be combined with the quarterly training sessions required for each fire brigade.

This item was discussed at the exit interview where the licensee's staff reiterated their interpretation of their commitment. The NRC inspector indicated that this area would require the review of NRR and, hence, would be identified as unresolved. (8202-07)

Following the inspection, a licensee representative called the NRC inspector and indicated that they had reviewed this item, and although they felt that their past interpretation had been correct, it was clear that a stronger, more effective training program would result by performing more fire brigade team training. Starting July 1, 1982, they were going to put into place a drill program for fire brigades which would exercise each shift fire brigade with a drill each quarter. The NRC inspector acknowledged this information and requested that it be included in a letter to the Region IV office. This, he said, would probably resolve this item. The licensee agreed to provide this information in writing.

The second element of the licensee's commitment to fire brigade training - that each fire brigade member participate in a fire brigade drill each 2 years - is incorporated in the Section 8.2.2.2.c of the Fort Calhoun Training Manual (Revision 3). This section states that, "each member of the fire brigade will maintain his preparedness for fighting fires by participating in a drill at least every 2 years." The NRC inspector examined compliance to this requirement by reviewing the records of fire drills conducted during 1980 and 1981. The NRC inspector discovered that five operators and thirteen security guards employed prior to 1981 had not participated in a fire drill during the 2-year period ending December 31, 1981. The failure to observe the training manual requirements for fire drill participation by brigade members is an apparent violation. (8202-02)

In addition to the training requirements for the fire brigade, the Training Manual, Section 8.1.2.2.b requires that brigade members be qualified by completion of the "Fire Brigade Team Training." This section further states that "qualification will be certified by the Training Department." The NRC inspector determined that the licensee did not have any means for certifying fire brigade member qualification. The lack of certification for fire brigade members is an additional example of a failure to follow training manual requirements. (8202-02)

The NRC inspector examined the licensee's compliance to Technical Specifications governing the operability and testing of fire protection equipment. The NRC inspector reviewed 30 completed surveillance tests covering 10 separate Technical Specification requirements. No violations were noted. The NRC inspector then inventoried the station surveillance procedures against the Technical Specifications (Section 3.15) to determine that all surveillance requirements were covered by appropriate procedures. One discrepancy, discussed below, was noted in this review.

Technical Specification 3.15(2)c requires that the operability of the fire suppression water system be demonstrated once per 12 months by cycling each testable valve in the flow path through its complete cycle. The specification indicates that a testable valve is one that can be cycled without endangering equipment safety. At present the licensee is only performing this cycling test on those automatic valves associated with the various deluge systems and performs no periodic operability surveillance on manual valves in the fire suppression system. The NRC inspector pointed out that the Technical Specification requirement derives from NFPA 11 and demonstrates that system valves are capable of being shut in order to isolate sections of the fire loop in case of problem, without impairment to the system's overall availability, and thus should apply to manual valves as well.

This item was discussed at the exit interview where the licensee's representatives indicated that they had heretofore interpreted "testable" valves as those automatic valves associated with the deluge systems. This interpretation had been previously discussed with their insurance company. Because of the scope of existing surveillance procedures and the recent maintenance and modifications conducted on the fire water suppression system, they felt confident that the fire loop valves had been exercised; nevertheless, a review of this Technical Specification was in order to determine what changes might be necessary to the surveillance procedures. The NRC inspector acknowledged this position and indicated that it was appropriate to identify this as an unresolved item pending the results of the licensee's review. (8202-08).

The NRC inspector toured accessible areas of the plant to inspect fire protection systems, valving, hose stations, equipment lockers, and unidentified fire hazards including general housekeeping. No violations or deviations were noted in this area of the inspection. The NRC inspector noted, however, that due to a leak on the diesel driven fire pump gland, the pump discharge valve was closed. Technical Specification 2.19(4) requires each fire pump to be operable with its discharge aligned to the fire suppression water system. The NRC inspector questioned the Operations Supervisor about this and learned that the pump discharge valve had been shut at 1000 on February 22, 1982, and the pump declared inoperable for the purpose of Technical Specifications. Operations personnel had been informed of this and were instructed to reopen the discharge valve in the event of a fire. The NRC inspector noted that the pump gland was repaired by Friday, February 26, and the pump had been returned to a normal lineup within the Technical Specification allowance for outage of this pump.

5. Unresolved Items

An unresolved item is a matter about which more information is required in order to ascertain whether it is an acceptable item, a violation, or a deviation. Unresolved items discussed in this report are:

<u>Item</u>	<u>Paragraph</u>	<u>Description</u>
8202-05	4	Use of Shift Supervisor on Fire Brigade
8202-07	4	Frequency of Fire Brigade Drills
8202-08	4	Cycling of Manual Fire Valves

6. Exit Interview

An exit interview was conducted February 26, 1982, with those personnel denoted in paragraph 1 of this report. At this exit interview, the NRC inspectors summarized the scope and findings of this inspection.