

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/85-18

License: DPR-40

Docket: 50-285

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

Facility Name: Fort Calhoun Station (FCS)

Inspection At: FCS Site, Blair Nebraska

Inspection Conducted: August 26-30, 1985

Inspector:

R. E. Baer
R. E. Baer, Radiation Specialist, Facilities
Radiological Protection Section

10/8/85
Date

Approved:

Blaine Murray
Blaine Murray, Chief, Facilities Radiological
Protection Section

10/8/85
Date

Inspection Summary

Inspection Conducted August 26-30, 1985 (Report 50-285/85-18)

Areas Inspected: Routine, unannounced inspection of the licensee's radiation protection program including organization and management controls, training and qualifications, and the ALARA program. The inspection involved 35 inspector-hours onsite by one NRC inspector and four inspector hours at the corporate offices.

Results: Within the areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

OPPD

- *R. L. Andrews, Division Manager, Nuclear Production
- C. L. Brunnert, Supervisor Operations Quality Assurance (QA)
- A. G. Christensen, Chemistry and Radiation Protection (C/RP) Technician
- *M. R. Christensen, Training Instructor
- R. A. Cords, C/RP Senior Technician
- *F. F. Franco, Manager Radiological Health and Emergency Planning
- *J. K. Gasper, Manager Administrative Services
- D. A. Jacobson, Training Instructor
- *R. L. Jaworski, Manager Technical Services
- *L. T. Kusek, Supervisor Operations (Acting Plant Manager)
- *D. J. Munderloh, Licensing Engineer
- A. W. Richards, Supervisor QA
- *G. L. Roach, Supervisor C/RP
- *F. A. Thurtell, Division Manager, QA
- *C. F. Vanecek, Shift Supervisor

Others

- G. O. Maloy, Contractor Training Instructor
- *L. A. Yandell, NRC Senior Resident Inspector

The NRC inspector also interviewed other licensee and contractor employees including C/RP, administrative, maintenance and construction personnel.

*Denotes those individuals present during the exit interview on August 30, 1985.

2. Inspector Observations

The following are observations the NRC inspector called to the licensee's attention. These observations are neither violations nor unresolved items. These items were recommended for licensee consideration for program improvement, but they have no specific regulatory requirement. The licensee indicated that these items would be reviewed.

- Radiation Protection Manual - Section 1.0 is not consistent with the current plant organization and operation.
- Radiation Protection Program Policy Statement - The licensee does not have a corporate policy statement, as recommended in NUREG-0761, nor is it addressed whether the station radiation protection manager has access to corporate management to discuss radiological safety problems.
- Training Manual - Section 6.1.2.4 is not consistent with the classification for C/RP technicians and specialists used by the

licensee, and Section 6.2 does not specify a definite retraining interval for C/RP personnel.

- Training Instructor Qualification - Contractor training instructors are not required to have formal training in classroom management, presentation methods, or any instructional teaching methods.
- System Training for ANSI Qualified Technicians - The licensee does not provide C/RP-technicians, considered qualified to ANSI N18.1-1971 criteria, with a plant systems training course.
- General Employee Training - The method and sequence for the removal of protective clothing being taught by the contractor instructor was not consistent with good working practices or as recommended in the "General Employee Training Radiation Protection Manual" student handout provided by the licensee.
- Respirator Training - The licensee had not maintained records to verify respirator fit test and percentage of penetration results. This item had also been previously identified in NRC Inspection Report 50-285/84-02.
- ALARA - Organization and program appears weak in the areas of: procedures, defined responsibilities, assigned duties, authority, and management commitment.

3. Organization and Management Controls

The NRC inspector reviewed the licensee's C/RP organization and management controls to determine compliance with FCS Technical Specifications (TS) Section 5.2 requirements and commitments in the updated Safety Analysis Report (USAR) Sections 12.1, 12.3, and 12.5.

The NRC inspector verified that the organization chart contained in the TS agreed with Figure 12.1-1, dated July 1985, of the USAR. The NRC inspector observed that the licensee's Radiation Protection Manual, which includes the organization and management controls for the C/RP Group in Section 1.0, was not in agreement with the current TS, USAR, or position descriptions for C/RP first line supervisors. This was brought to the attention of licensee representatives who stated that Section 1.0 of the Radiation Protection Manual would be revised.

The NRC inspector discussed with licensee representatives lines of access for the Radiation Protection Manager (RPM) to corporate management in order to discuss radiation safety problems that might not be adequately resolved at the plant level. The licensee stated that a means of communication exist between the RPM and corporate management, but that it is not formally designated in writing. The plant organizational chart shows the RPM reporting directly to the plant manager. The inspector also discussed the lack of a written management policy statement to support the radiation protection program as recommended in NUREG-0761. The NRC inspector discussed with licensee representatives the availability of a backup to

the RPM. The licensee stated that, at present, onsite individuals available to backup or replace the RP do not meet published RPM qualification criteria. However, corporate level personnel are available who are RPM qualified.

The NRC inspector verified that position descriptions adequately defined the responsibilities and authority for the C/RP staff. There had been less than ten percent turnover in Radiation Protection personnel during the past 12-months. There appeared to be a sufficient number of health physics personnel, nineteen including one contractor technician, to carry out the Radiation Protection Program.

The NRC inspector reviewed Safety Audit Review Committee (SARC) Audit No.6-84 conducted during the period December 19-29, 1984, on the Chemistry and Radiation Protection Program. This audit included chemistry, radiation protection, and environmental elements of the licensee's program. Audit findings were responded to in a timely manner.

The NRC inspector reviewed those procedures listed in Attachment 1 which had been issued or changed since the previous radiation protection inspection.

No violations or deviations were identified.

4. Training and Qualifications

The NRC inspector reviewed the licensee's training program to determine compliance with 10 CFR Part 19.12, TS-Section 5.4, and commitments in Section 12.2.2 of the USAR.

a. General Employee Training

The NRC inspector reviewed lesson plans for general employee training and discussed training objectives with licensee representatives to determine agreement with FCS Training Manual, Section 2.0 "General Employee Training", Revision 12, February 4, 1985. The NRC inspector also observed selected portions of the training conducted by a contractor instructor. The NRC inspector noted that the method of taping clothing seams and the sequence for removal of protective clothing was not consistent with acceptable working practices or those recommended by the licensee in their "General Employee Training Radiation Protection Manual" which is distributed to each student. The NRC inspector discussed this inconsistency with the instructor and licensee representatives. The NRC inspector also noted that the licensee had not documented the percentage of leakage experienced during the respirator fit testing. This item had also been previously identified in NRC Inspection Report 50-285/85-02. The licensee stated that they had experienced difficulty in the operability of the respirator fit testing recorder and that a new test booth with the associated electronic hardware was on order.

b. Radiation Protection Staff Training

The NRC inspector reviewed the C/RP Group Training Program and discussed training objectives with licensee representatives to determine compliance with Section 6 of the FCS Training Manual.

The NRC inspector determined that: (1) Section 6.1.2.4 does not address those classifications for technicians the licensee presently employs, (2) Section 6.2 does not address a frequency for retraining, and (3) Section 6.2.2 does not address new procedures or changes to existing procedures.

The NRC inspector noted that the initial C/RP Training Program for new employees was a comprehensive course which included reactor systems training; however, there is no reactor system training made available for experienced personnel who are considered ANSI N18.1-1971 qualified.

The NRC inspector reviewed SARC Audit Number 7.84, "Performance, Training, and Qualification," conducted during the period November 13-15, 1984. It was noted that the personnel conducting this audit also had difficulty retrieving information regarding C/RP personnel.

The NRC inspector discussed with licensee representatives the qualifications of training instructors. Personnel on the FCS training staff received specialized training on methods of instruction and presentation, but contractor personnel are not required to attend or have attended any formal classes on these subjects. The NRC inspector noted that a contractor instructor had difficulty in presenting his assigned lecture in an effective manner to new personnel.

No violations or deviations were identified.

5. Maintaining Occupational Exposures ALARA

The NRC inspector reviewed the licensee's ALARA Program, selected ALARA activities reports, and audit reports.

The NRC inspector verified that the ALARA Program was defined in Section 7, "Operational ALARA Program," of the Radiation Protection Manual and incorporated the charter for the "Operational ALARA Committee," which included the major topics of committee function, composition, meeting frequency, responsibilities, authority, and records. Other supporting documents of the ALARA Program are standing order G-50 "ALARA Radiation Exposure Program" and Corporate Policy Number 9.03, "Occupational Radiation Exposure ALARA." The NRC inspector noted that the ALARA committee was composed primarily of first-line supervisors and could not resolve ALARA issues, but only make recommendations to the Plant Review Committee (PRC).

The NRC inspector determined that for jobs requiring the expenditure of greater than 10 man rem exposure, Section 7.5.2.4, requires that "previous ALARA techniques used in similar work and an evaluation of the effectiveness" be utilized. There is no method to effectively document previous similar work experience that has taken place prior to the implementation of the present ALARA Program or to canvas other licensee ALARA coordinators to utilize their experiences.

The NRC inspector followed the ALARA committee's attempt to reduce entries into the containment building under reactor power conditions. The practice of routine entries to perform unnecessary work or verify that certain abnormal indications were not due to equipment in the containment building were documented in November 1984. The ALARA committee determined they needed to reduce the incidents of entries at power. A draft standing order G-59, "Operational Containment Entry Evaluation" which requires an adequate evaluation of the condition prior to entry into the containment building was prepared and submitted to the PRC for approval in April 1985. At the time of this inspection the PRC had not taken any action to either approve or disapprove this draft standing order.

The ALARA program appears to be weak in the verification of detailed ALARA reviews of proposed design changes and station modifications. The FCS ALARA committee does not initiate or verify that adequate reviews have been performed. The committee does not appear to be involved in ongoing methods to prevent the buildup of reduction of crude concentrations within primary systems and the defining of station and corporate involvement in the ALARA program lacks guidance.

The NRC inspector noted that the licensee had reported 10 CFR Part 20.407 radiation exposures for the year 1984 based on direct reading dosimeter data as 544.57 man-rem, but that the thermoluminescent dosimeter value, which is the value of record, was 499.4 man-rem. Attachment 2, lists work activities which involved greater than 5 man-rem exposures.

The NRC inspector reviewed audit report Number 59, "ALARA Program" conducted during the period January 29-31, 1985. Three audit findings were identified, one pertaining to the RWP ALARA work sheets not being completely filled out, two relating to whole body counting and one relating to the processing of dosimeter badges. The licensee responded to the audit findings in a timely manner.

No violations or deviations were identified.

6. Exit Interview

The NRC inspector met with the FCS NRC senior resident inspector and licensee representatives denoted in paragraph 1 at the conclusion of the inspection on August 30, 1985. The NRC inspector summarized the scope and findings of the inspection including the observations expressed in Paragraph 2 of this report. The licensee stated that the observations would be reviewed.

ATTACHMENT 1

Procedures Reviewed

RPP-2, Radiation Protection Procedure for Control Area Injury, Revision 7,
December 14, 1984

RPP-6, Radiation Protection Procedures for Protective Clothing and
Respiratory Equipment Cleaning, Revision 10, June 13, 1985

RPP-8, Small Equipment Decontamination, Revision 8, June 13, 1985

RPP-14 In-Plant Collection and Disposal of Radioactive Waste, Revision 2,
June 18, 1985

RPP-17, Radwaste Source Log Maintenance Use, Revision 2, May 13, 1985

RPP-20, Radiation Work Permits (RWP), Revision 3, February 12, 1985

HP-1, Whole Body Counting, Revision 6, June 19, 1985

HP-8 Labeling and Bagging of Radioactive Materials, Revision 3,
May 28, 1985

HP-12 Outside Storage and Movement of Radioactive Waste, Revision 1,
May 7, 1985

HP-18 Personnel Decontamination, Revision 1, July 1, 1985

ATTACHMENT 2

JOBS INVOLVING GREATER THAN 5 MAN-REM EXPOSURE IN 1984

<u>AFC</u>	<u>JOB DESCRIPTION</u>	<u>MAN-REM EXPOSURE</u>
83-83	Replace Spent Fuel Pool Racks	8.258
013-84	Refueling Head Work	5.424
016-84	Reactor Coolant Pump Motor Coupling	6.026
024-84	Replace Excore Cables	6.431
033-84	Inservice Inspection WSLD Inspection	12.908
034-84	Steam Generator Eddy Current Testing	5.446
056-84	Steam Generator Rim Cut Work	8.510
066-84	Remove Reactor Vessel STUD Plugs	7.304
062-84	Install/Remove Steam Generator Eddy Current Test Equipment	5.993
076-84	Steam Generator Eddy Current Testing	8.260
076-84	Steam Generator Leak Inspection	7.896
086-84	Furmanite PCV103-1	8.734
087-84	Furmanite PCV103-1	6.088
018-84	Reactor Coolant Pump seal and Gasket Replacement	21.499
034-84	Steam Generator Eddy Current Testing	10.297
056-84	Steam Generator Rim Cut Work	32.722
087-84	"A" Steam Generator Tube Removal	17.478
089-84	Repair PCV 103-1 and 2	10.147
149	QC Inspection and Testing	17.046