APPENDIX A

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/85-14 License: DPR-40

Docket: 50-285

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

Facility Name: Fort Calhoun Station

Inspection At: Fort Calhoun Station, Blair, Nebraska

Inspection Conducted: June 1-30, 1985

Inspector: L A. Yandell 7/10/85
L. A. Yandell, Senior Resident Reactor Inspector Date

Approved: for M. E. Murphy 7/25/85
L. E. Martin, Section Chief, Project Section B, Date
Reactor Project Branch

Inspection Summary:

Inspection Conducted June 1-30, 1985 (50-285/85-14)

Areas Inspected: Routine, unannounced inspection of licensee action on operational safety verification, followup of IE Information Notices, spent fuel shipment, surveillance testing, maintenance activities, and followup of LERs. The inspection involved 85 inspector-hours onsite by one NRC inspector, of which 20 were offshift hours.

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

DETAILS

1. Persons Contacted

R. L. Andrews, Division Manager, Nuclear Production
*W. G. Gates, Manager, Fort Calhoun Station
R. L. Jaworski, Section Manager, Technical Services
J. K. Gasper, Manager, Administrative Services
T. J. McIvor, Manager, Supervisor, Technical
A. L. Richard, Corporate Quality Assurance
J. E. Lechner, Test Engineer
J. J. Fisicaro, Supervisor, Nuclear Regulatory and Industry Affairs
K. C. Hyde, Test Engineer
L. T. Kusek, Supervisor, Operations
M. E. Kallman, Supervisor, Administrative Services & Security
S. Gambir, Manager, Electrical Engineering
J. M. Mattice, Plant Health Physicist
A. D. Bilau, Radioactive Waste Coordinator
R. J. Mueller, Supervisor, I&C and Electrical Field Maintenance
G. J. Pelnar, Training Coordinator
D. L. Rollins, Outage Planner
J. J. Fluehr, Supervisor, Station Training
F. E. Swihel, Training Coordinator

*Denotes attendance at the exit interview.

The NRC inspector also talked with and interviewed other licensee employees during the inspection. These employees included licensed and unlicensed operators, craftsmen, engineers, and office personnel.

2. Operational Safety Verification

The NRC inspector performed activities as described below to ascertain that the facility is being maintained in conformance with regulatory requirements and that the licensee's management control system is effectively discharging its responsibilities during power operation.

a. The NRC inspector made several control room observations to verify proper shift manning, operator adherence to approved procedures, adherence to selected Technical Specifications, and operability of the reactor protective system and engineered safeguards equipment. Selected logs, records, recorder traces, annunciators, panel indications, and switch positions were reviewed to verify compliance with regulatory requirements. The licensee's equipment control was reviewed for proper implementation by reviewing maintenance order

status and the tag-out log, and by verifying selected safety-related tag-outs. The NRC inspector observed several shift turnovers.

b. The NRC inspector toured the plant at various times to assess plant and equipment conditions. The following items were observed during these tours:

- General plant conditions
- Vital area barriers not degraded or appropriately manned by security personnel
- Adherence to requirements of radiation work permits (RWPs)
- Proper use of protective clothing and respirators
- Plant housekeeping and cleanliness practices, including fire hazards and the control of combustible material
- Work activities being performed in accordance with approved procedures
- Physical security
- HP instrumentation is operable and calibrated

c. The NRC inspector verified operability of the following safety-related systems by performing a walkdown and switch verification of the accessible portions of the system:

- Plant Electrical Distribution (125 Volt DC system) per Checklist EE-3-CL-1
- Raw Water System (partial) per Checklist RW-1-CL-A
- Component Cooling System per Checklist CC-1-CL-A. Minor typographical errors and discrepancies with the latest P&IDs were identified by the NRC inspector and these comments will be provided to the licensee for their review and followup.

d. The NRC inspector observed Containment Purge 85027 being secured and noted that the appropriate charts were annotated, the discharge valves were closed, and the discharge permit was signed off as complete. The NRC inspector observed portions of Containment Purge 85028, reviewed the discharge permit and noted the following:

- The X/Q log was maintained, the readings were within limits, and the shift supervisor review was performed

- When the limiting X/Q was exceeded, the release was terminated and the applicable data recorded
- VIAS was tested using RM 061
- The stack dewpoint and annubar readings were taken
- The tritium sampler was in place and the sample was taken
- The recommended release rate was established, and the actual flow was lower than that authorized
- Radioactivity analyses were performed
- The required effluent monitors and recorders were operational
- The required auxiliary building exhaust fans were operating
- OI-VA-1, Section IV.G was attached to the permit
- The initial reading of the stack flow integrator was noted on the recorders
- The operations checklist to CMP 4.5 was complete and signed off by the shift supervisor
- The required approvals were obtained when the release was extended for 1 day
- The permit was reviewed and signed off properly, and the termination time was established

e. During the week of June 17, 1985, license examinations were administered to two SRO and four RO candidates by the Region IV staff. The licensee was informed at the exit interview that all six candidates had passed the "walk-through" portion of the examination.

f. The NRC inspector performed the followup to an allegation received by Region IV pertaining to the qualifications of a contract employee presently employed at the Fort Calhoun Station. Records were reviewed and discussions were held with OPPD management personnel by the NRC inspector to address the concerns raised. A summary of the information obtained was transmitted by memo to the files of the Region IV enforcement officer for disposition by him.

g. The NRC inspector attended the Raw Water System lecture (Item 9-6-56 in the Fort Calhoun Station Training Program). This lecture was presented by an OPPD training person and the NRC inspector noted that

a detailed lesson plan was used and that a comprehensive student handout was provided to each attendee. Minor errors and inconsistencies were identified but the quality of the lesson material has improved over that previously provided in the training package.

h. On June 11, 1985, Messrs. J. H. Sniezek, Director, Regional Operations and Generic Requirements Staff, E. L. Jordan, Director, Division of Emergency Preparedness and Engineering Response, and E. W. Brach, Executive Coordinator, Regional Operations, DEDROGR visited the site to interview the senior resident inspector and tour the plant.

No violations or deviations were identified.

3. Followup of IE Information Notices

The NRC inspector reviewed the licensee's actions taken in response to IE Information Notice 83-75, "Improper Control Rod Manipulation," issued November 3, 1983. This issue was reviewed in more detail in response to a request from the NRC Office of Inspection and Enforcement.

The NRC inspector determined the following:

. Operating Procedures OI-RR-1, "Reactor Regulating-Normal Operations," and OI-RR-2, "Dropped CEA Recovery," provide instructions for recovering from a mispositioned CEA and for verifying CEA position when one form of normal indication is lost.

. Operators are trained in the proper movement of CEAs, the consequences of improper movement, and the consequences of operating with a mispositioned CEA.

No violations or deviations were identified.

4. Spent Fuel Shipment

The NRC inspector observed the licensee's preparations for shipment of a spent fuel bundle to an offsite facility for test and evaluation in conjunction with a DOE funded program. Utilizing a modified checklist provided by the Radiological Protection Section in Region IV, the NRC inspector noted the following:

. The motor vehicle displayed the appropriate placards in accordance with 40 CFR 172.504.

. The "Radioactive Yellow III" labels were applied to the cask with the significant isotopes and the total curie content information filled in.

- Radiation/contamination surveys were performed. Appropriate decontamination procedures were utilized to bring contamination levels within the limits established by 40 CFR 173. The NRC inspector observed surveys being taken and reviewed several survey results. All radiation levels were within established limits and the NRC inspector performed independent measurements to confirm these levels.

- Loading and handling of the cask were performed in accordance with Procedure SP-SFS-1, "Shipment of Spent Fuel in NLI 1/2 Cask." On several occasions the NRC inspector observed work being done under this procedure and verfied that the proper approved revision was at the jobsite and being used, that the prerequisites were signed off, that QC hold points were observed, that the health physics requirements of the RWP were being followed, and that procedure step signoffs were maintained current.

A representative from DOE was onsite to witness the final surveys and installation to the personnel barrier after the cask was loaded onto the trailer. The NRC inspector verified that OPPD transferred title of the bundle to DOE prior to the shipment leaving Fort Calhoun Station.

No violations or deviations were identified.

5. Surveillance Testing

The NRC inspector witnessed portions of the following surveillance tests:

- ST-MTC-1, F.2 (performed within 7 E.F.P.D. after reaching a rated power equilibrium boron concentration of 300 ppm) Moderator Temperature Coefficient

- ST-ISI-CVCS-3, F.1 (Quarterly) CVCS Pump Test

- ST-ISI-CVCS-3, F.2 (Annual) CVCS Pump Test

- ST-ESF-6, F.2 (Monthly) Diesel Generator Check - Appendix F

No violations or deviations were identified.

6. Maintenance Activities

a. Maintenance Order (MO) 851993, "Reactor Protective System-Low Steam Generator Level Trip." A trip signal occurred on Channel "A" but the steam generator level (LI-904) was within operating levels and the voltage on Trip Unit No. 5 was normal. After approximately 5 minutes the trip cleared. This MO was issued to "perform appropriate calibration procedures following investigation and repair." The NRC

inspector reviewed the MO for approvals, applicable technical specification reference, and assignment to a qualified craftsman. It was noted that a separate PRC approved procedure was used to troubleshoot and repair the channel, that Calibration Procedures CP-RPS-2 and CP-A/904 were to be performed as required, and that the safety analysis was attached to the document. The NRC inspector observed part of the troubleshooting and testing performed, ensured that the test devices being used were in calibration, and verified that Surveillance Test ST-RPS-6, F.2, "Steam Generator Level Channels Test," was performed following repairs to confirm channel operability.

b. MO 855175, "Valve AC-107." While making his rounds the auxiliary building operator reported that AC-107 (Component Cooling Water Pump AC-3C discharge check valve) had developed "a sharp banging noise." The NRC inpsector reviewed the MO and the work package and noted the following:

- The MO was filled out properly with the appropriate information and approvals
- A PRC approved procedure was used to disassemble and inspect the valve
- The safety evaluation was attached
- QC hold points were observed including final closeout when the valve was reassembled
- Tag-Out 85-463 was assigned to this job and the tags were verified to be hung properly
- Qualified machinists were assigned to the job

The NRC inspector observed the craftsmen taking measurements on the disassembled valve, and the valve being reinstalled in the system. Surveillance Test ST-ISI-CC-3, F.1, "Component Cooling Water Pump Test," was performed to verify operability after completion of the work.

The NRC inspector later noted that this work had been started under MO 851981 but was stopped by plant QC personnel when disassembly of the valve was initiated without an approved PRC procedure. Operations Incident 2109 was processed and work was allowed to procede under the new MO 855175 that required proper "documentation to cover the work being done."

c. MO 852110, "Charging Pump CH-1B." The operators determined that CH-1B had developed a packing leak. The NRC inspector reviewed the MO for completeness and noted that the work was to be performed using Maintenance Procedure MP-CH-1, "Inspection and Repair of Charging Pumps." In reviewing the maintenance procedure it was verified that initial conditions were signed off, that RWP 174 was assigned to this work, that QC signoffs were present, that Tag-Out 85-476 was assigned to this activity, and that the verification (pink) copy of the tag-out sheet was signed off by the craftsman. Surveillance Test ST-ISI-CVCS-3, F.1 was performed to verify operability, and the NRC inspector verified that IRD data was taken using I&C Device 277 which was in calibration.

No violations or deviations were identified.

7. Followup of LERs

LER 84-013, "Spurious RPS Trip Signals." Tripping of the "A" and "C" Thermal Margin Low Pressure (TMLP) trip channels was initiated by noise spikes received by temperature loops feeding the TMLP calculators. These noise spikes occurred when the Pressurizer Quench Tank Vent Valve (HCV-155) was operated. To alleviate the noise spikes, the licensee: (1) placed noise suppressors across HCV-155 solenoid valve coil electrical leads and across the coil leads of a control relay associated with HCV-155, (2) instituted administrative controls restricting the operation of HCV-155, and (3) installed capacitors at selected locations in the RPS TMLP calculators under Modification Request MR-FC-84-139 to "eliminate any noise of the type received by cycling HCV-155 prior to affecting the TMLP calculator or TMLP setpoints." Since these repairs have been performed no further spurious trip signals have occurred. The corrective actions taken by the licensee appeared to be adequate.

8. Exit Interview

The NRC inspector met with the plant manager on June 28, 1985, to summarize the scope and findings of the inspection.