

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/86-02

License: DPR-40

Docket: 50-285

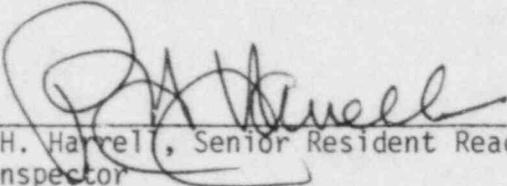
Licensee: Omaha Public Power District
1623 Harney Street
Omaha, Nebraska 68102

Facility Name: Fort Calhoun Station

Inspection At: Fort Calhoun Station, Blair, Nebraska

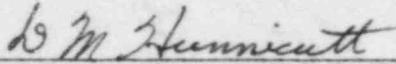
Inspection Conducted: January 1-31, 1986

Inspector:


P. H. Harrel, Senior Resident Reactor
Inspector

2-5-86
Date

Approved:


D. M. Hunnicutt, Chief, Project Section B,
Reactor Project Branch

2/11/86
Date

Inspection Summary

Inspection Conducted January 1-31, 1986 (Report 50-285/86-02)

Areas Inspected: Routine, unannounced inspection including operational safety verification, maintenance, surveillance, plant tours, safety-related system walkdowns, followup on IE Bulletin 79-01B, followup on a regional request for review of uranium hexafluoride cylinder storage, followup on a 10 CFR Part 21 report on Limiting valves, followup on previously identified items, cold weather preparations, and plant startup from refueling.

The inspection involved 96 inspector-hours (including 15 backshift hours) onsite by one NRC inspector.

Results: Within the 11 areas inspected, one violation (failure to follow procedure requirements for inspection of uranium hexafluoride storage cylinders, paragraph 5) was identified.

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DETAILS

1. Persons Contacted

- #*W. Gates, Plant Manager
 - A. Cattano, Quality Assurance Inspector
 - M. Core, Maintenance Supervisor
 - D. Dale, Quality Control Inspector
- #J. Fisicaro, Nuclear Regulatory and Industry Affairs Supervisor
 - J. Foley, I&C and Electrical Field Maintenance Supervisor
 - R. Jaworski, Technical Services Section Manager
 - R. Johansen, Test Engineer
 - M. Kallman, Security Supervisor
 - L. Kusek, Operations Supervisor
- #T. McIvor, Technical Supervisor
 - R. Mehaffey, I&C and Electrical Technical Services Supervisor
- #R. Mueller, Plant Engineer
 - C. Norris, Radiological Services Supervisor
 - T. Patterson, Technical Support Manager
 - G. Roach, Chemical and Radiation Protection Supervisor
 - J. Tesarek, Reactor Engineer
 - S. Willrett, Administration Services and Security Supervisor

*Denotes attendance at the monthly exit interview.

#Denotes attendance at the exit interview held on January 14, 1986, for the electrical equipment qualification portion of this inspection

The inspector also contacted other plant personnel, including operators, technicians, and administrative personnel.

2. Followup on Previously Identified Items

- (Closed) Unresolved Item 285/8117-01: Review of repeat radiography for auxiliary feedwater welds.

An NRC inspector reviewed the repeat radiographs for welds in the auxiliary feedwater system. The review found that the radiographs were satisfactory. For details of the reinspection of the radiographs, see NRC Inspection Report 50-285/81-31.

- (Closed) Unresolved Item 285/8410-04: Lubrication periodicity requirements for the hydrogen monitors.

The licensee has reviewed the manufacturer's recommendations regarding lubrication of the hydrogen monitors. Based on this review, the licensee has changed Procedure MP-H2-1, "Post LOCA

Containment Hydrogen Monitoring System Sample Pump Motor Lubrication," to require a 3-year interval instead of a 5-year interval. The licensee lubricated the sample pump motors in January 1986.

The NRC inspector reviewed this procedure along with other procedures for lubrication requirements. The details of the review are provided in paragraph 4 of this report.

- (Closed) Unresolved Item 285/8509-01: Equipment qualification maintenance program.

The licensee has completed the appropriate documentation reviews and performed the required maintenance activities. See paragraph 4 for a detailed discussion of this item.

- (Closed) Unresolved Item 285/8509-02: Postaccident monitoring instrument accuracy.

The licensee has performed an analysis to verify that the postaccident monitoring instrumentation accuracy is adequate. A detailed discussion of this item is provided in paragraph 4.

- (Closed) Unresolved Item 285/8509-04: Replacement of States Company terminal blocks.

The licensee has replaced the unqualified States Company terminal blocks with nuclear-qualified Raychem splice kits. The details of this item are provided in paragraph 4.

- (Closed) Unresolved Item 285/8509-05: Aging analysis of Rockbestos Pyrotol III cable.

The licensee had completed the aging analysis for the cable. This item is discussed in detail in paragraph 4.

- (Closed) Severity Level IV Violation 285/8515-02: Combustible material stored inside the uranium hexafluoride (UF6) storage area.

The NRC inspector toured the UF6 storage area to verify that no combustible materials were stored inside the area and no flammable material was stored within 100 feet of the area.

The NRC inspector noted no flammable or combustible material in the area. The licensee has placed signs on all four sides of the UF6 storage area to warn personnel that combustible materials are not to be stored within the area and no flammable liquids are to be stored within 100 feet of the fenced area.

3. Licensee Event Report (LER) Followup

Through direct observation, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence has been accomplished in accordance with Technical Specifications.

The LERs listed below were reviewed and are considered closed. All the LERs reported an initiation of the ventilation isolation actuation system (VIAS) due to different causes.

84-005	84-018
84-006	84-024
84-007	85-004
84-014	85-005

LER 84-005 reported 14 unplanned actuations of the VIAS between January 1 and May 2, 1984. The LER was submitted based on the LER rule changes that became effective on January 1, 1984. The rule changes required that actuation of any engineered safeguards features equipment be reported by an LER. Of the 14 actuations identified, none were due to an actual release problem. Each actuation was due to a spurious trip.

LERs 84-006, 84-014, and 84-018 reported the initiation of the VIAS during the replacement of an iodine-collector cartridge in radiation monitor RM-060. In each case, the chemistry technicians failed to notify the control room operator prior to cartridge replacement so the operator could take RM-060 out-of-service. The VIAS initiation was due to background radiation exposure to the RM-060 detector. A check was performed to verify the iodine accumulation and gaseous contamination concentrations were less than minimum detectable. To prevent recurrence, the licensee has issued a revision to Procedure OI-RM-1, "Radiation Monitors - Normal and Accident Operations," to require that RM-060 be taken out-of-service during cartridge changeout. The licensee has subsequently performed filter changeouts without initiation of the VIAS.

LER 84-007 reported the initiation of the VIAS due to high containment airborne activity resulting from lifting of the reactor coolant drain tank relief valve. The relief valve lifted as a result of back leakage past one or more of the reactor coolant system/safety injection system interface check valves while increasing reactor coolant system (RCS) pressure. No radioactive release to the environment occurred. To prevent recurrence, the licensee has issued a revision to Procedure OI-RC-2B, "Reactor Coolant Vent and Leak Test Instructions," to provide additional instructions to the operator about minimizing the interface check valve leakage during RCS pressurization. The licensee recently pressurized the RCS at the end of a refueling outage and did not experience a similar problem.

LERs 84-024, 85-004, and 85-005 reported VIAS initiations due to operator error. Whenever a setpoint change or calibration verification activity is performed, the operator should depress and hold the reset button to prevent VIAS actuation. In these cases, the operator either failed to depress the reset button or released the button before the alarm setpoint cleared. To prevent recurrence, the licensee has discussed the importance of proper use of the reset button during calibration and setpoint adjustment with the I&C technicians and the operators. The licensee has also issued a revision to Procedure OI-RM-1 to provide clarification for the radiation monitor operating instructions. No VIAS initiations due to reset button operation have occurred recently.

No violations or deviations were identified.

4. Followup on IE Bulletin

IE Bulletin 79-01B, "Environmental Qualifications of Class 1E Equipment," required each licensee to perform a detailed review of the environmental qualification of Class 1E electrical equipment. The licensee was to perform this review to verify that the equipment will function under postulated accident conditions. The results of the review were submitted by OPPD to the NRC.

A special team inspection was performed at the licensee's facilities on April 29-May 3, 1985, to verify that the licensee had implemented an electrical equipment qualification (EEQ) program that complies with 10 CFR Part 50.49, the licensee's response to IE Bulletin 79-01B, and implementation of deficiencies identified in the Safety Evaluation Report issued by NRR. The results of the inspection are discussed in NRC Inspection Report 50-285/85-09.

During this special inspection, six potential enforcement/unresolved items and two open items were identified. Region IV personnel performed a followup inspection on November 18-22, 1985, to verify the items identified in NRC Inspection Report 50-285/85-09 had been satisfactorily completed. The details of the followup inspection are provided in NRC Inspection Report 50-285/85-26.

During the followup inspection, it was noted that the licensee had failed to fully implement corrective actions for four of the eight discrepancies noted in NRC Inspection Report 50-285/85-09. Based on this failure to fully implement corrective actions for the noted discrepancies, a management meeting was held between Region IV and OPPD personnel on December 13, 1985. The purpose of the meeting was to discuss what corrective actions were to be taken by OPPD to correct the discrepancies noted in the Region IV followup inspection. Based on this meeting, Region IV issued a Confirmatory Action Letter (CAL), dated December 20, 1985, to document the commitments made by OPPD management to Region IV management.

The CAL contained four items that required followup. The following discussion provides the details of the followup and closeout of the four items.

a. Equipment qualification of motors. (Unresolved Item 285/8509-01)

- (1) The licensee was to verify that the ventilation grills for the Allis-Chalmers component cooling water (CCW) pump motors were in place and secure, and procedures have been issued to require a frequency of 3 months for intake grill inspection and maintenance.

The licensee has issued a preventive maintenance (PM) card to require a quarterly inspection of the grills. The PM card requires that the grills be inspected and cleaned on all three of the CCW pumps. The licensee completed the requirements of the PM card on January 6, 1986.

The NRC inspector reviewed the completed PM card to verify the requirements for inspection had been completed and that the specified frequency was quarterly. The inspector also inspected the grills on the three CCW pumps to verify the grills were clean and securely in place. No problems were noted.

- (2) The licensee was also required to review maintenance procedures for all other EEQ motors and to verify the procedures were adequate and implemented. If found inadequate, the licensee was required to perform the necessary maintenance.

The licensee obtained an independent third-party review of the manufacturer's maintenance requirements and the licensee's maintenance procedures from Sargent and Lundy (S&L). The review was performed to verify that the procedures included the appropriate maintenance activities specified by the manufacturer and requirements provided in the EEQ package for maintaining equipment in a qualified status. The results of the review are provided below:

The review found that the maintenance procedure used for the safety injection pump motors (i.e., high-pressure, low-pressure, and containment spray) was adequate. However, S&L recommended that the instructions for draining of the oil be included in the procedure instead of a reference made to the manufacturer's instructions. S&L also recommended that the procedure be changed to include an inspection of the motor leads and splices for cracks, discoloration, and other signs of physical damage. Although not required by the current procedure, the licensee performed an inspection and resplicing of the motor leads during the 1984 refueling outage.

The licensee has agreed to include both recommendations in the maintenance procedure during a future revision. This is an open item pending completion of the procedure revision for inclusion of the recommendations. (285/8602-01)

The NRC inspector reviewed Procedure MP-EE-8, "GE 8000 Series Horizontal Induction Motors," Revision 2, and noted that all the required maintenance recommendations were included. The inspector also reviewed completed PM documentation and verified that the required maintenance had been completed at the proper frequency. No problems were noted during the review.

The S&L review determined that the motor bearings for the containment vent fan motors should be lubricated every 2 years with Aeroshell No. 5 or Chevron BRB No. 2. The licensee currently lubricates the motors every 6 months using Chevron SRI No. 2. The licensee has obtained a letter from the grease manufacturer stating that Chevron SRI No. 2 is equal to or better than Chevron BRB No. 2 based on lubrication requirements for the motor. The letter also stated that the Chevron SRI No. 2 will provide adequate postaccident lubrication.

S&L also recommended that the motor bearings be changed out every 100,000 hours of continuous operation. The licensee estimates that the 100,000 hours of operation would end in approximately 1995. The licensee stated this recommendation would be added to the appropriate documentation in the near future. This is an open item pending revision of the documentation to include the recommendation. (285/8602-02)

The NRC inspector reviewed Procedure PM-EE-12, "Vent Air Fan Motors VA-3A, 3B, 7C, 7D, 2A, 2B, 12A, and 12B," Revision 2, and verified that the procedure contains the manufacturer's recommended maintenance activities. The inspector also verified that Procedure PM-EE-12 has been performed at the required frequency. No problems were noted.

S&L recommendations for the hydrogen monitors (VA-81A and VA-81B) were reviewed against the current procedure requirements. No changes to the current procedures were required based on the review.

The NRC inspector reviewed Procedures MP-H2-1, "Post LOCA Containment Hydrogen Monitoring System Sample Pump Motor Lubrication," Revision 2; MP-H2-2, "Post LOCA Containment Hydrogen Monitoring System Terminal Strip and Hoke Valve

Refurbishment," Revision 0; and MP-H2-3, "Post LOCA Containment Hydrogen Monitoring System Sample Pump Rebuild," Revision 0. No problems were noted.

The NRC inspector also reviewed Procedure MP-VA-81, "Hydrogen Monitors," Revision 0, and noted that this maintenance procedure allowed the use of three different greases; Chevron SRI No. 2, Shell Oil Dolium R, and Texaco Premium RB. The only currently acceptable grease that can be used to maintain the equipment qualified is Chevron SRI No. 2. The licensee has agreed to revise Procedure MP-VA-81 to eliminate the option of using the other two greases to prevent inadvertent use of unqualified material or establish an equivalency with the grease manufacturers. The NRC inspector also noted that Procedure MP-VA-81 required that the craftsperson use 0.75 cubic inches of grease when lubricating the motor. The manufacturer recommends that a volume of 1.0 cubic inches be used. This is an open item pending revision of the procedure to provide the correct grease type and volume. (285/8602-03)

The NRC inspector reviewed documentation to verify that maintenance had been performed and was done at the required frequency. The inspector noted, during a review of Procedure MP-H2-1, that the procedure was changed on April 30, 1985, to require a lubrication frequency of every 3 years. The procedure previously stated that the frequency was 5 years. The motors should have been lubricated when the procedure change was completed because the 3-year period had already expired. The licensee inadvertently overlooked the requirement and did not grease the motors until January 1986. No other problems were noted.

b. Accuracy of the postaccident monitoring (PAM) instrumentation.
(Unresolved Item 285/8509-02)

- (1) The licensee was required to determine the loop uncertainties associated with the PAM instrumentation.

The licensee has completed this effort using an independent third-party verified methodology that establishes the uncertainty for each instrument loop. The methodology used included the uncertainty associated with the sensor, indicator, and allowable calibration error stated in the calibration procedure. The results of the review are documented in Operations Support Analysis Report (OSAR) 85-94.

The NRC inspector reviewed the methodology used and the results obtained from the calculations. No problems were noted.

- (2) The licensee was required to compare the established uncertainties with the uncertainties allowed by the recently published emergency operating procedures (EOP).

The licensee determined which instrumentation loop affected the action statements contained in each EOP. From this determination, a comparison was made between the established loop uncertainties and the parameters monitored in the EOP. Based on a comparison of what is required by the EOP and what is provided by the instrumentation loop, no instances were noted where the established uncertainty would not provide the instrument accuracy required by the EOPs. The results of the applied comparisons are provided in OSAR 86-1.

The NRC inspector reviewed the appropriate documentation and noted no problems with the method used and the results obtained.

- (3) The licensee was required to revise Table 1 of the EEQ manual to include the values of the uncertainties of instrumentation loops obtained in paragraph b.(1) above.

The licensee has completed the table, but has not formally issued the table to be included in the EEQ manual. The licensee stated that the EEQ manual would be updated in the near future. This is an open item pending formal issuance of the table to be included in the EEQ manual. (285/8602-04)

The NRC inspector reviewed the completed table and noted no problems.

- (4) The licensee was required to review calibration procedures for adequacy based on the results of the PAM instrument loop uncertainties.

The licensee included the value of the calibration procedure uncertainty in the calculation for the overall loop uncertainty as discussed in paragraph b.(1) above. Therefore, the uncertainty values used for comparison to the EOP requirements included the uncertainty allowed by the calibration procedure.

As stated above, the NRC inspector noted no problems.

c. Replacement of States Company terminal blocks. (Unresolved Item 285/8509-04)

- (1) The licensee was required to replace terminal blocks associated with the eight transmitter circuits with nuclear-qualified Raychem splices.

The eight transmitter circuits referred to in the CAL were identified in the licensee's response, dated October 11, 1985, to Report 285/85-09. The instruments were PT-103X, PT-103Y, FT-313, FT-316, FT-319, and FT-322. In the NRC followup inspection performed November 18-22, 1985, the region-based inspector also identified in Report 285/85-26 that two of the four PT-102 instrument circuits contained terminal blocks that required replacement. The terminal block locations listed above were identified by the use of plant drawings.

The licensee performed a walkdown of instrumentation circuits to verify which circuits contained terminal blocks. As a result of the walkdown, the licensee identified eight transmitter circuits with terminal blocks. The eight identified by the licensee were not the same that had been previously identified by the use of plant drawings. The eight instrument circuits were FT-313, FT-319, FT-322, FT-332, FT-334, LT-101Y, PT-115, and C/PT-902. Due to the difference between the plant drawings and the actual as-built circuit configuration, the licensee stated that the appropriate drawings would be revised in the near future to correctly indicate whether or not a terminal block is located in the circuit. This item will remain open pending revision of the affected drawings. (285/8602-05)

The licensee has reviewed all instrumentation circuits and has installed qualified Raychem splices to eliminate the terminal blocks, as appropriate. The block replacement activities were performed in accordance with MR-FC-85-177.

The NRC inspector reviewed MR-FC-85-177 and other associated documentation to verify that splices had been installed as needed. No problems were noted with the actions taken by the licensee.

- (2) The licensee was required to identify areas where the RTV barrier on terminal blocks had been damaged and to repair any damaged barriers using a special process procedure.

The licensee inspected all the appropriate terminal blocks to determine which blocks required repair. The blocks requiring repair were repaired in accordance with a plant review committee approved procedure attached to Maintenance Order (MO) 857481.

The NRC inspector reviewed the MO and attached documentation. No problems were noted. The inspector did note that the licensee had not taken any action to ensure that the RTV seal is replaced if disturbed during future maintenance or modification work. This item will remain open pending a change to the appropriate procedure to include an RTV repair requirement. (285/8602-06)

- d. Rockbestos Pyrotrol III cable qualification. (Unresolved Item 285/8509-05)

The licensee was required to formalize aging analyses for heat rise factors for the cables to the vent fan motors and include the analyses in the EEQ file.

The licensee has performed an analyses on the Rockbestos cable. The analyses indicate that the cable is qualified for the life of the plant when the heat rise factors are included. The analyses were independently reviewed by S&L and determined to be adequate. The results of the aging analyses are documented in OSAR 85-93.

The NRC inspector reviewed the analyses. No problems were noted.

Although there has been six new open items identified during this inspection, the items do not affect the current qualification of the equipment. The open items designate actions that must be completed by the licensee to ensure that all the supporting documentation has been completed and actions to ensure that the equipment remains qualified in the future have been taken.

Based on the documentation reviewed and discussions with plant and engineering personnel, it appears that the equipment has been satisfactorily qualified for service in harsh environments. IE Bulletin 79-01B is considered closed.

No violations or deviations were identified.

5. Followup on a Regional Request

Based on a request from Region IV, the NRC inspector reviewed the licensee's activities associated with the onsite storage of UF6.

The UF6 cylinders were received in October 1982, and stored in a remote, onsite location approximately 700 feet, west-northwest of the plant control room. The cylinders are located inside a locked, fenced storage area. The storage area contains 52 cylinders, each containing approximately 21,000 pounds of UF6. The area is appropriately marked with limited access and radiological control signs. Access to the area is controlled by site security personnel. No other materials are stored or other activities performed within 100 feet of the UF6 storage area.

The requirements for storage and maintenance of the UF6 cylinders are provided in Materials License SMC-1420, issued September 3, 1982. The NRC inspector reviewed the license requirements to determine what actions are required to be performed by the licensee. After determination of the license requirements, the NRC inspector reviewed the licensee's procedures to verify that the requirements have been implemented. The procedures reviewed included Special Procedure SP-UF6-1, "Uranium Hexafluoride Storage Cylinder External Visual Inspection," Revision 1; Abnormal Operating Procedure AOP-28, "Uranium Hexafluoride Incident," Revision 5; and Security Procedure SCP-14, "Patrol Procedures," Revision 5. Based on the review of the above procedures, it appears that the licensee has implemented the requirements contained in the materials license.

The NRC inspector reviewed licensee documentation and performed area 'walk throughs' to verify that the licensee is performing the requirements stated in Procedures SP-UF6-1, AOP-28, and SCP-14. The NRC inspector performed the following:

- . Toured the storage area and verified no combustibles were stored inside the area, no flammable liquids were stored within 100 feet of the area, and no vegetation was growing in the area.
- . Inventoried the UF6 emergency kit to verify the kit contained all the items required by the materials license (i.e., rubber gloves, head covering, wooden pegs, an extra fill valve, blanket, and a self-contained breathing apparatus).
- . Reviewed Detex clock records for the Detex clock station located at the storage area gate to verify security personnel observed the area at least once per shift.
- . Verified that a 'walk-through' inspection had been performed every 6 months and that noted abnormalities were corrected.
- . Verified that radiation surveys of the area were performed at least biennially and that records of the surveys had been retained.
- . Verified that a detailed cylinder inspection had been performed biennially and that records of the inspection had been retained.
- . Verified that cylinder inspection data sheets had been completed for the inspection performed biennially.
- . Verified that a procedure had been issued for emergency response to a cylinder rupture accident.
- . Verified that training had been given to station personnel required to respond to a UF6 cylinder leak.

The NRC inspector found all of the above items to be satisfactory, except for the items listed below:

The NRC inspector requested to see documentation of the results of the 6-month, 'walk-through' inspections. The licensee could not find documentation to indicate that the 6-month inspection due in April 1985, had been performed. The licensee discussed the inspection with licensee personnel involved in UF6 inspection activities and could not locate an individual that had performed the inspection. Based on the lack of documentation and the inability to locate an individual that may have performed the inspection, it appears the 6-month inspection was not performed. This is an apparent violation.

During a review of the documentation for the 6-month, 'walk-through' inspection performed in October 1985, the NRC inspector noted that the completed procedure stated that the individual performing the inspection had not entered the fenced storage area to perform the 'walk-through' inspection. The 6-month inspection requires, in part, that the cylinders be checked for new gouges, dents, or cracks in the walls, heads, skirts, and stiffening rings, and that the end-plug lead seal wires are intact. Based on a review of the area by the NRC inspector, it is apparent that all cylinders cannot be checked for the above conditions without entering the storage area. The NRC inspector also noted that the completed procedure was reviewed and approved by the same individual that performed the inspection. The failure to perform all the steps required by a procedure is an apparent violation.

The NRC inspector reviewed the biennial inspection documentation for the inspection performed in October 1982. During this review, the NRC inspector noted that the procedure had not been completed, but referenced a surveillance plan completed by quality assurance (QA). The NRC inspector reviewed the QA surveillance plan and noted that it was not obvious that the plan included all the attributes required by the biennial inspection procedure because the plan was in a checklist form instead of the step-by-step instruction form used by the procedure. The NRC inspector discussed exactly which steps in the inspection procedure had been completed with the QA inspector that performed the surveillance. Through discussions with the individual, the NRC inspector established that all inspection requirements had been performed except the QA inspector did not inspect the valve ports for possible plugging with UF6 or contamination from other uranium salts or foreign material, nor did the QA inspector complete the inspection data sheets for each cylinder. This is an apparent violation.

The three discussions provided above are examples of a failure to follow procedures and constitute an apparent violation. (285/8602-07)

Based on the results of the documentation review performed by the NRC inspector, the licensee decided to perform a detailed inspection of the cylinders and the storage area in accordance with the requirements provided in Procedure SP-UF6-1 for a biennial review. The inspection was performed on January 15 and 17, 1986. The NRC inspector accompanied licensee personnel on the inspection to observe the inspection performance and to inspect the cylinders. During the inspection, the licensee found three discrepancies. The three items are discussed below:

- . Each cylinder is supported by three cradles constructed from railroad ties to prevent the cylinder from touching the ground. On one of the cylinders, one of the railroad ties supporting one end of the cylinder has decayed and is being crushed by the weight of the cylinder. The cylinder is not yet touching the ground. The licensee has issued a maintenance order (MO) to replace the decayed railroad tie. This item remains open pending replacement of the tie. (285/8602-08)
- . The acceptance criteria for the cylinders states that the threaded plug on one end of the cylinder should have at least one but not more than five threads showing. The plug on one cylinder had six threads showing. The licensee contacted the vendor and the vendor stated that a plug with six threads showing was acceptable.
- . Dead vegetation in the storage area was beginning to accumulate and will need to be removed in the near future. The licensee has issued an MO for removal of the vegetation. This item will remain open pending removal of the vegetation in and around the storage area. (285/8602-09)

Although various discrepancies were noted during this inspection, it does not appear that any of the discrepancies affect the structural integrity of any cylinder, nor do the discrepancies pose any potential hazards to the health and safety of the public that have not been previously addressed in the Safety Evaluation Report issued by NRR.

6. Followup on a 10 CFR Part 21 Report

In December 1985, Commonwealth Edison submitted a 10 CFR Part 21 report to the NRC regarding the electrical equipment qualification of the internal wiring for Limitorque valves. The problem concerned inadequate documentation of the qualification of wiring for the valve torque and limit switches. Without the proper documentation, it could not be substantiated that the valves were qualified for operation in a harsh environment. Region IV management notified the licensee of the Part 21 report on December 24, 1985.

The licensee immediately started a review of all Limitorque valves in the plant to determine which ones would be affected by the identified discrepancy. Out of the total of 33 Limitorque valves installed in the plant, the licensee identified 28 that were required to operate in a harsh environment. The licensee issued Procedure MR-FC-85-220 to provide instructions for the inspection and replacement, as appropriate, of all internal wiring in the Limitorque valves.

The licensee inspected the valve wiring to determine which wires were not considered qualified. The determination of qualification was based on being able to identify the source of the wire used. If the wire was labeled Raychem Flamtrol or Rockbestos Firewall, it was considered qualified. If the wire had no label or was made by a different manufacturer, the wire was replaced.

The licensee completed the inspection and replacement of wiring in all 28 Limitorque valves prior to exceeding 2 percent power. In one of the valves, the licensee replaced the motor leads as it could not be determined that the installed wiring was qualified. The licensee inspected the wiring that was replaced and noted no problems that would have caused the valve not to operate in an accident condition. The wiring contained no cracks, breaks, discoloration, or other physical damage.

The NRC inspector reviewed the completed procedure and also observed the inspection and replacement of wiring in a valve.

No violations or deviations were identified.

7. Cold Weather Preparations

During plant tours, the NRC inspector observed plant systems susceptible to extreme cold weather to verify the systems were operating properly.

The licensee has had problems in the past with the condensate storage tank indication freezing up. Additional heat tracing was provided and no additional problems have occurred. The licensee has also had problems with the sprinkler piping in the emergency diesel generator room freezing. The licensee has made modifications and has not experienced additional problems.

The NRC inspector did not identify any problems from the effects of the cold weather on any safety-related systems.

No violations or deviations were identified.

8. Plant Startup from Refueling

The NRC inspector reviewed and observed licensee activities associated with plant startup from a refueling outage that commenced on September 27, 1985. During this review, the NRC inspector:

- . Performed a walkdown of selected safety-related systems to verify proper valve and switch lineup
- . Periodically observed activities associated with boron dilution for attaining criticality
- . Periodically observed performance of core physics tests
- . Reviewed completed procedures for core physics tests
- . Verified the activities listed above were performed in accordance with approved procedures and regulatory requirements

No violations or deviations were identified.

9. Operational Safety Verification

The NRC inspector conducted the reviews and observations described below to verify that facility operations were performed in conformance with the requirements established under 10 CFR, administrative procedures, and the Technical Specifications. The NRC inspector made several control room observations to verify:

- . Proper shift manning
- . Operator adherence to approved procedures and Technical Specifications
- . Operability of reactor protective system and engineered safeguards equipment
- . Logs, records, recorder traces, annunciators, panel indications, and switch positions complied with the appropriate requirements
- . Proper return to service of components
- . Maintenance orders had been initiated for equipment in need of maintenance
- . Appropriate conduct of control room and other licensed operators

No violations or deviations were noted.

10. Plant Tours

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

- . General plant conditions
- . Equipment conditions including fluid leaks and excessive vibration
- . Plant housekeeping and cleanliness practices including fire hazards and control of combustible material
- . The physical security plan was being implemented in accordance with the station security plan
- . Adherence to the requirements of radiation work permits
- . Work activities being performed in accordance with approved procedures

No violations or deviations were identified.

11. Safety-Related System Walkdowns

The NRC inspector walked down accessible portions of the following safety-related systems to verify system operability. Operability was determined by verification of valve and switch positions. The systems were walked down using the drawings and procedures noted:

- . High pressure safety injection (Procedure OI-SI-1, Revision 33, and Drawing E-2866-210-130, Revision 32)
- . Low pressure safety injection (Procedure OI-SI-1, Revision 33, and Drawing E-2866-210-130, Revision 32)

During the walkdowns, the NRC inspector noted minor discrepancies of an editorial nature between the drawings, procedures, and plant as-built conditions. None of the conditions noted affected the operability or safe operation of the system. Licensee personnel stated that the noted minor discrepancies would be corrected.

No violations or deviations were identified.

12. Monthly Maintenance Observation

The NRC inspector reviewed station maintenance activities of safety-related systems and components to verify that maintenance was conducted in accordance with approved procedures, regulatory requirements, and the Technical Specifications. The following items were considered during the reviews:

- . The limiting conditions for operation were met while systems or components were removed from service
- . Approvals were obtained prior to initiating the work
- . Activities were accomplished using approved MOs and were inspected, as applicable
- . Functional testing and/or calibrations were performed prior to returning components or systems to service
- . Quality control records were maintained
- . Activities were accomplished by qualified personnel
- . Parts and materials used were properly certified
- . Radiological and fire prevention controls were implemented

The NRC inspector reviewed the following maintenance activities:

- . Inspection of Foxboro transmitters for junction boxes and terminal blocks (MO 857359)
- . Changeout of motor leads for valve HCV-1042C (MO 860097)
- . Inspection of RTV barrier on terminal blocks (MO 857481)

No violations or deviations were noted.

13. Monthly Surveillance Observation

The NRC inspector observed the Technical Specification required surveillance testing on safety-related systems and components. The NRC inspector verified the following items during the testing:

- . Testing was performed using approved procedures
- . Test instrumentation was calibrated
- . Limiting conditions for operation were met
- . Removal and restoration of the affected system and/or component were accomplished
- . Test results conformed with Technical Specification and procedure requirements

- . Test results were reviewed by personnel other than the individual directing the test
- . Deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel

The NRC inspector witnessed the following surveillance test activities. The procedures used for the test activities are noted.

- . Emergency diesel generator monthly test (Procedure ST-ESF-6-F.2)
- . Auxiliary feedwater pump and remotely-operated valve monthly check (Procedure ST-FW-1-F.2)

No violations or deviations were identified.

14. Exit Interview

The NRC inspector met with Mr. W. G. Gates (Station Manager) at the end of this inspection. At this meeting, the inspector summarized the scope of the inspection and the findings. The NRC inspector also met with OPPD personnel on January 14, 1986, to provide the results of the EEQ portion of this inspection. See paragraph 1 for a list of attendees.