

APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-285/88-25

Operating License: DPR-40

Docket: 50-285

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


Facility Name: Fort Calhoun Station (FCS)

Inspection At: FCS, Blair, Nebraska

Inspection Conducted: August 8-19, 1988

Inspectors: W. C. Seidle, Chief, Test Programs Section
(Inspection Team Leader)
J. R. Boardman, Reactor Inspector
W. M. McNeill, Reactor Inspector
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Approved:



W. C. Seidle, Chief, Test Programs Section
Division of Reactor Safety

9/19/88
Date

Inspection Summary

Inspection Conducted August 8-19, 1988 (Report 50-285/88-25)

Areas Inspected: Announced special inspection of the licensee's followup to previous inspection findings, followup to licensee event reports (LERs), temporary instructions, 10 CFR Part 21 reports, bulletins, and the safety systems outage modification inspection (SSOMI).

Results: Within the six areas inspected, one violation was identified (failure to maintain records, paragraphs 7.0.6).

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DETAILS1.0 Persons ContactedLicensee

*W. G. Gates, Plant Manager
 *S. K. Gambhir, Division Manager, Production Engineering
 *T. L. Patterson, Assistant Manager, FCS
 *A. W. Richard, Manager - Quality Assurance/Quality Control
 *B. Livingston, Manager, Engineering Services
 *T. J. McIvor, Manager, Nuclear Projects
 *S. Willutt, Manager, Administrative Services
 *J. K. Gasper, Manager, Training
 *H. M. Tackett, Consultant
 *M. D. Matheson, Consultant
 *C. F. Simmons, Onsite Licensing Engineer
 J. E. McKinley, Supervisor, Electrical Projects Control Maintenance
 *J. A. Drahota, Supervisor, Maintenance Support
 *J. J. Fiscaro, Manager, Nuclear Licensing and Regulatory Affairs
 *L. L. Gundrum, Nuclear Licensing Engineer
 A. J. Stepanek, Consultant
 J. L. Dyer, Senior Quality Control Inspector
 D. W. Dale, Supervisor, Quality Control
 C. N. Bloyd, Lead Special Services Engineer
 J. L. Kyle, Senior Production Planner
 H. Faulhobs, Manager, Electrical Engineering
 C. Brunnert, Supervisor, Operations Quality Assurance, OPPD
 R. Hyde, Supervisor, Maintenance Training
 J. Fluehr, Supervisor, Training

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P. A. Nelson, Engineering Assurance Engineer
 B. B. Barta, Licensing Engineer
 J. J. Purcell, Project Engineer
 D. R. Beach, Assistant Project Manager
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NRC

*P. H. Harrell, Senior Resident Inspector, FCS
 *T. Reis, Resident Inspector, FCS

*Denotes those personnel attending the exit interview.

2.0 Followup on Previously Identified Inspection Items

2.1 Violations

- 2.1.1 (Closed) Violation 285/8503-02: Failure to retrieve records of thermal stress analysis for thermally-stressed safety-related pipe below 2 1/2 inch diameter. This violation was based on the fact that FCS stress analysis records were missing for thermally-stressed safety-related piping in the size range that included the critical small break loss of coolant accident (SBLOCA) for combustion engineering reactor plants.

This violation is closed based on the licensee's planned review of the subject pipe for thermal stresses as part of the FCS design base reconstitution (DBR) program.

- 2.1.2 (Closed) Violation 285/8705-01: Failure to assure proper tensioning (stressing) of main steam safety relief valve (MSSRV) inlet line flange bolting. This violation dealt with two concerns as follows:

- ° Failure to document a design basis for the torque specified for bolt tightening
- ° Failure to use the specified torque (a "slugging wrench" was used)

In response to the specific concerns, the joints were reworked to verified, controlled procedures.

The generic corrective action is contained in licensee program Project 1991, which closes this violation. This program is structured to: (1) assure that safety-related, as well as other controlled joints are properly made and (2) assure the specification and use of the correct fastener tension values. The NRC inspector reviewed the licensee's Maintenance Procedure MP-BOLT-1 on bolting, Revision 0, dated June 2, 1988. The NRC inspector discussed the torquing program with licensee personnel and reviewed licensee Memorandum FC-795-87, "Guidelines for Torquing Reviews," dated May 17, 1987. Generic inclusion of required tensioning criteria will be implemented by the OPPD FCS Project 1991, by licensee response to NRC Generic Letter (GL) 83-28, "Required Actions Based on Generic Implementation of Salem ATWS Events," and by the licensee's FCS DBR program.

- 2.1.3 (Closed) Violation 285/8705-02: Failure to have procedures for properly tensioning bolts, for assuring the accuracy of calibration, and for controlling the meggering of electrical circuits and components.

This violation involved the adequacy of maintenance procedures. Tensioning is covered in the response to Violation 285/8705-01. New procedures for meggering had been issued by the licensee, such as FCS Special Procedure SP-EE-MEGGER, Revision 0, dated May 13, 1987. The accuracy of calibration and the precision of calibrated metrology requirements has been covered by revisions to the following procedures:

- ° Standing Order (SO) No. M-28, "Calibration of Test Equipment and Plant Process Equipment Used to Support the In-Service Inspection of Nuclear Plant Components Program," Revision 28, dated July 25, 1988
- ° SO No. M-26, "Calibration Procedures," Revision 13, dated July 25, 1988

2.1.4 (Closed) Violation 285/8705-04: This violation, which also dealt with tightening of the MSR line flange bolts, became part of Violation 285/8705-01 when the Notice of Violation was subsequently issued. This item is closed with Violation 285/8705-01.

2.1.5 (Closed) Violation 285/6724-06: 10 CFR Part 21 information not posted. This violation concerned the failure to post the latest revision to the 10 CFR Part 21 regulations, the licensee's implementing procedure, and the failure to post Section 206 of the Energy Reorganization Act (ERA) of 1974 in the generating station engineering offices located in the Brandeis building in downtown Omaha.

In response to this violation, the latest revision to 10 CFR Part 21 regulations has been posted on bulletin boards on the sixth floor of the Brandeis building along with Section 206 of the ERA and the licensee's implementing procedure, "Nuclear Production Policy Procedure QP-12." The postings were verified by B. Livingston, Manager, Engineering Services, and reported to the NRC inspector by a telephone call on August 11, 1988.

The licensee issued a new procedure, NPD-QP-17-1, Revision 0, "Posting of NRC Required Documents," on April 18, 1988. The NRC inspector reviewed the procedure and found that the required documents to be posted and those responsible for posting these documents in specified locations are clearly identified.

2.1.6 (Open) Violation 285/8802-01: Failure to document the use of material as specified in the design. This violation identified that during November 1985, spray paint used on containment ventilation duct supports was not listed in the design package.

The licensee established the cause of this violation to be that personnel failed to list sufficient information in the design package beyond the words "galvanized paint" because of insufficient guidance. The licensee attempted to identify the coating material and evaluate it. During the 1988 outage, the licensee committed to further evaluate the coating material. As corrective action, the licensee has revised the design control procedures, "Preparation of Design Packages," GEG-3; "Station Modification Control," SO No. G-21; and Technical Specification (TS), "Selecting, Specifying, Applying, and Inspection Paint and Coatings," No. CTS-3. These measures should assure that this type of problem does not occur in the future. The NRC inspector verified that the above revisions were made and implemented (see the comments below on corrective action in paragraph 7.0.5).

- 2.1.7 (Open) Violation 285/8810-01: Failure to promptly resolve test deficiencies. This violation involved the failure to evaluate anomalies or deficiencies related to Surveillance Test ST-NZ-1 completed on May 8, 1987.

During the followup inspection, the NRC inspector verified that the licensee was in the process of obtaining an accident analysis based upon operation of the containment spray system in a degraded condition (i.e. 12 inoperable spray valves). Contingent upon the results of the analysis, a TS amendment may or may not be submitted. Furthermore, the licensee has committed to reviewing a sampling of previous surveillance tests. The licensee's present records relating to LER 88-008 indicate that performance of Surveillance Test ST-NZ-1 is not planned for the 1988 refueling outage. LER 88-008 states that by the end of the 1988 refueling outage either the 12 spray heads will be tested or based upon the requested analysis, a change request to the TS shall be submitted. Since the licensee has not scheduled the test for the 1988 outage, it follows that future action will be based upon the analysis findings. This violation shall remain open pending review of the licensee's final actions.

- 2.1.8 (Closed) Violation 285/8810-02: Failure to use correct qualification level of examiner for surveillance test evaluation. This violation involved the surveillance test results evaluation of Surveillance Test ST-RLT-1.F.1 (leak test) conducted on May 29, 1987, by an individual qualified to a lower certification than required by ASME Section XI, IMA-2000.

In response to the violation, the licensee denied this violation in that the test results had been evaluated by properly qualified examiners and documented on quality control log sheets as required by FCS SO No. G-26A, Appendix G, Paragraph 8.3.2. During the followup inspection, the NRC inspector reviewed Surveillance Test Procedure ST-RLT-1, F.1, dated May 29, 1987, SO No. G-26A, and

Quality Control Log Nos. 3542, 3543, 3544, and 3547, dated May 29, 1987. The NRC inspector determined that, in fact, the licensee had apparently violated regulations. In particular, the licensee had apparently violated 10 CFR 50 Appendix B, Criterion V, and licensee procedures in that surveillance test procedures did not contain QC signoffs. The failure to have QC signoffs in the testing procedure is incongruent with licensee requirements in SO No. G-26A, paragraph 6.6.

The NRC inspector reviewed the licensee's corrective actions to resolve the above violation and implement actions to obviate future similar recurrences. The licensee had implemented Revision 9 to Surveillance Test ST-RLT-1-1 on July 18, 1988, to incorporate QC signoffs in the surveillance procedure. Furthermore, the licensee conducted refresher training of key personnel on the administrative requirements of SO No. G-26A. The NRC considers the licensee's corrective actions in this matter to be responsive and comprehensive. No further written response by the licensee is required.

- 2.1.9 (Closed) Violation 285/8811-04: Inaccurate information provided in violation response. This violation concerned the licensee's response to Violation 285/8724-04, dated February 24, 1988, which contained inaccurate information. The response stated that no instances of the failure to control gas cylinders had been noted since September 1987 when, in fact, an instance occurred in December 1987.

In response to this violation, the licensee issued a prompt revision to its February 24, 1988, response to eliminate the inaccurate statement. The licensee has developed an administrative process whereby the plant manager, or his designated alternate, assigns responsibility for drafting responses to NRC violations and deviations. These assignments, which are made immediately after an exit meeting, are included in the integrated regulatory requirements log (RRL) to assure tracking of these items until the NRC inspection report is received. By adopting this process, the responsible individual now has time to draft the response because the responsibility has been clearly and promptly defined. A change has been made to NPD Procedure G-2, "Regulatory Requirements Log (RRL)," to require that Form No. FC-1077, "Certification of Accuracy," be included with the draft response package. This effort should provide additional assurance that the individuals responsible for drafting responses will not only have adequate time to prepare the response package but they will also provide accurate information. The NRC inspector, in a discussion with the plant manager, confirmed that the administrative process described above is being implemented. The NRC inspector reviewed NPD Policy/Procedure No. G-2 and verified that the procedure requires the assignee to sign Form No. FC-1077, "Certification of Accuracy," which is provided with the regulatory requirement document (Ref: paragraph 6.9.3). The NRC inspector also confirmed that violations/deviations identified in NRC Inspection

Reports 50-285/88-10, 88-12, and 88-21, which were selected at random, could be traced back to their respective RRL sheets. The NRC inspector also verified that Form No. FC-1077 was included in a response package being prepared for a violation identified in NRC Inspection Report 50-285/98-21.

- 2.1.10 (Closed) Violation 285/8812-01: Unqualified senior reactor operator (SRO) standing shift supervisor duties. This violation involved a licensee's licensed operator performing duties with questionable qualification in that the operator failed to attend a majority of preplanned lectures.

During the followup inspection, the NRC inspector verified through a review of training records that the cited reactor operator was attending a majority of training sessions since the violation period. Furthermore, corrective actions had been taken to revise Training Procedure TAP-13 to require reactor operators to attend a minimum of 75 percent ratio of preplanned lectures.

2.2 Deviations

- 2.2.1 (Closed) Deviation 285/8810-03: Failure to continue implementation of corrective actions. This deviation involved a failure to account for surveillance tests as committed to by the licensee in response to Violation 285/8811-01.

During the followup inspection, the NRC inspector reviewed the licensee's response to Deviation 285/8810-03 and verified the licensee's implementation of stated corrective actions. The NRC inspector verified the implementation of a new surveillance test tracking program to ensure that surveillance tests are completed on time. Furthermore, the NRC inspector confirmed that the licensee has made a concerted effort to eliminate the backlog of delinquent surveillance test reviews and that timely review of surveillance tests are being accomplished by the responsible craft supervisors.

- 2.2.2 (Closed) Deviation 285/8715-01: The Deviation consisted of the failure to revise a surveillance procedure as stated in a licensee event report (LER). On February 7, 1987, LER 87-001 was issued by the licensee, which described an event where a TS limiting condition for operation was entered when safety-related equipment in redundant trains was concurrently out of service. The equipment was removed from service during the performance of Surveillance Test Procedure ST-ESF-2. In LER 87-001, the licensee stated that Procedure ST-ESF-2 had been revised to designate the responsibility for ensuring that no equipment was inoperable to the shift supervisor prior to performing the surveillance test. The licensee, in fact, did not revise ST-ESF-2 until March 20, 1987.

The NRC inspector reviewed the licensee's response to the above deviation. The licensee identified the organizational and procedural weaknesses, which contributed to the above deviation. The licensee's corrective actions reviewed included the following: LERs are currently being written within one group, the shift technical advisor group; certification of the accuracy of operations incidents information is required by SO No. R-4, "Operating Incident Reports," Step 6.5.3, Form FC-1077, and licensee internal memorandum dated December 31, 1987, (R. L. Andrews) with the attached Policy/Procedure No. G-2 Regulatory Requirements Log (RRL). No problems were noted.

2.3 Unresolved Items

- 2.3.1 (Closed) Unresolved Item 285/8503-01: Apparent inability to identify construction records verifying as-built plant compliance with its licensed design bases. A specific example was documentation of the pump curves to demonstrate operability of safety injection (SI) pumps as specified in PSAR Section 6.2. During this inspection, the NRC inspector again requested the data necessary to prove adequate design flow of the SI pumps. The licensee was unable to retrieve this data. This item is closed based on the presently identified design base reconstitution (DBR) program for FCS. Presentations of the scope and schedule of this program have been made to the NRC.
- 2.3.2 (Closed) Unresolved Item 285/8503-03: Design of pipe supports for thermally-stressed safety-related pipe below 2 1/2 inch diameter. The concern for proper support of thermally-stressed pipe of this size range is discussed in the closure of Violation 285/8503-02. This unresolved item is closed based on review of the subject hangers as part of the FCS DBR program.
- 2.3.3 (Closed) Unresolved Item 285/8523-01: Apparent lack of document controls to assure that calculations of seismic loads for safety-related conduit supports used in station modification.

The licensee response, which closes this unresolved item, is contained in licensee internal memorandum from S. K. Gambhir to J. J. Fisicaro, PED-FC-88-287, dated August 5, 1988. This memorandum was provided to the NRC inspector by OPPD licensing personnel. The memorandum stated that it is to provide a response to Unresolved Item 285/8523-01. The subject of this memorandum is seismic adequacy of mechanical and electrical equipment (USI-A46), specifically, conduit supports. Its content is as follows:

"OPPD's Production Engineering Department (PED) has calculations and analyses for all seismic conduit supports installed during the 1985 outage and any supports installed since then. Licensee Procedure GSEE-0516 and superseding licensee Standard CTS-1 were

subsequently developed and approved for use to address standard conduit supports and support spacing criteria. For supports installed prior to the 1985 outage, PED is committed to implement a verification program to ensure adequacy of the supports.

"On July 29, 1988, the NRC issued a Generic Safety Evaluation Report (SER) that endorses the parts of the Generic Implementation Procedure (GIP) submitted by the Seismic Qualification Utility Group (SQUG), which have been accepted for the implementation of USI-A46. As required by the cover letter, the NRC commits to establishing a schedule for implementation of the SQUG verification program by October 1, 1988."

- 2.3.4 (Closed) Unresolved Item 285/87-03: Applicable code and specification revisions for piping system design. The concern was the apparent lack of document control of revisions of the design codes used by OPPD for safety-related modifications and maintenance at FCS.

Licensee Memorandum PED-FC-88-285, dated August 5, 1988, responds to, and closes, this concern as follows:

"The State of Nebraska has endorsed ASME Sections I, III, IV, and VIII as acceptable to the Nebraska Code. However, it is the NRC's understanding that the State has not taken a position on nuclear repair programs and based on the above, has allowed the use of ASME Section III on new systems. Therefore, the following requirements are imposed on modifications to existing and new nuclear piping systems which OPPD is committed to by law:

"10 CFR 50.55a requires licensees to develop an Inservice Inspection Program in accordance with ASME Section XI. 10 CFR 50.55a also establishes the NRC acceptable Edition and Addenda of the Codes (Section III and XI) for use by licensees. Safety-related modifications to existing piping systems would be subjected either to ASME Section XI Repair or Replacement rules, as applicable (e.g., Articles IWA 4000 and IWA 7000 of ASME Section XI, respectively). These articles allow modifications to piping systems to either use the original Construction Code (B31.1/B31.7), in whole or in part, later editions/addenda of the same or ASME Section III (reference IWA 4120, IWA 7210, ASME Section XI, 1986 Edition). When later editions/addenda of the Construction Code or ASME Section III are used for ASME Section XI replacements, reconciliation is required between the original construction code and the code selected for the modification.

"Section XI of the ASME code does not apply to the installation of complete new nuclear piping systems as delineated in ASME Section XI, IWA 1200. These systems, which would not modify any existing safety-related system, would be designed and installed in accordance with ASME Section III. The Edition and Addenda used in the installation of new nuclear safety-related piping systems would be those acceptable to the NRC, as delineated in 10 CFR 50.55a.

"PED had documented in GEI-3, Preparation of Design Packages, the ASME Codes (Sections III and XI) Edition and Addenda, which are acceptable to the NRC. These could be used in existing nuclear piping systems modification work and could be used for the design and installation of new nuclear safety-related piping systems. It should be noted that NRC acceptable code editions change periodically. For example, 10 CFR 50.55a was updated in May 1988, and now approves portions of the 1986 Edition and Addenda of the 1986 ASME Sections III and XI Codes. Additionally, PED is in the process of developing a General Engineering Instruction, ASME Section XI, Repair/Replacement Program, to provide additional guidance to PED personnel in preparing ASME Section XI Repairs and Replacement modifications. This instruction is scheduled for issuance October 31, 1988.

"In summary the following construction codes are applicable to the Fort Calhoun Station, which is consistent with both federal and state requirements:

- ° For safety-related modification work, the original construction code, later editions/addenda thereto, or ASME III, provided the requirements to IWA 7210 are met.
- ° For new safety-related systems, ASME Section III approved revision per 10 CFR 50.55a.

Previously performed modifications will be reviewed as part of the FCS DBR program."

- 2.3.5 (Closed) Unresolved Item 285/8705-05: Weaknesses in the licensee program for review of vendor technical manuals. This item dealt with the adequacy of the licensee's response to NRC GL 83-28, Section 2.22, Review of Vendor Technical Information (VTI).

This item is closed based on an enhanced technical manual review program included in OPPD FCS Project 1991. This review program was identified to the NRC in OPPD Letter LIC-88-043, dated March 8, 1988, NRC GL 83-28, Item 2.2.2, "Review of Safety Related Vendor Manuals Received Prior to June 1985."

2.3.6 (Closed) Unresolved Item 285/8705-06: Weaknesses in the licensee program for review of vendor technical manuals. This item is similar to Unresolved Item 285/8705-05 and is closed with that item.

2.3.7 (Closed) Unresolved Item 285/8705-07: Lack of a documented licensee program to upgrade maintenance procedures. This concern resulted from the failure of the licensee to have a program to incorporate either appropriate vendor recommended maintenance in response to NRC GL 83-28, or identifiable requirements for replacement of subcomponent units, such as antifriction bearings having a design life less than plant life, as required to maintain safety-related design bases.

This concern has been incorporated into OPPD FCS Project 1991.

2.3.8 (Closed) Unresolved Item 285/8705-09: Training of plant personnel in electrical equipment qualification. Licensee Lesson Plans 12-81-05, Revision 0, dated October 28, 1987, and 12-61-03, Revision 0, dated January 13, 1988, now include craft training in electrical equipment qualification requirements.

2.3.9 (Closed) Unresolved Item 285/8705-10: Control of safety-related (CQE) parts. This item dealt with maintenance department control of material after material issue from the store room.

Maintenance Training Lesson Plans 12-81-03 (May 12, 1988) and 12-19-0 (undated) now contain data on control of CQE material by maintenance personnel. The FCS material program is also included in OPPD FCS Project 1991.

2.3.10 (Closed) Unresolved Item 285/8705-11: Control of vendor technical manuals. This item dealt with technical review of technical manuals for component specific applicability.

This item is considered closed based on the licensee response to GL 83-28, Section 2.2.2, and OPPD FCS Project 1991.

2.3.11 (Closed) Unresolved Item 285/8705-13: Periodicity of lubrication of containment cooling fan motors. The concern was that required periodicity would not include allowable operating hours plus the time for required Post-LOCA fan operation.

Licensee Memorandum PED-FC-296, dated August 8, 1988, responds to, and closes, this concern as follows:

"Production Engineering Department (PED) reviewed the lubrication frequency issue relative to containment cooling fans VA-3A/B and VA-7C/D. Based on the operating items of the equipment and the containment operating environment, the required lubrication frequency has been established for VA-3A/B and VA-7C/D as 9 and 18 months respectively. These values are documented in calculation FC-04026, "FEG-H-08 Containment Vent Fan Qualification.

"To resolve this item, plant documents, including the Preventative Maintenance Procedure PM-EE-12, must be updated to the new lubrication frequency for VA-3A/B. In addition, an engineering evaluation must be conducted to establish the acceptability of the bearings which were lubricated on a frequency outside the established parameters."

The NRC inspector was informed by licensee personnel that the subject fans would be returned to the manufacturer for overhaul during the upcoming outage.

- 2.3.12 (Closed) Unresolved Item 285/8723-01: Inspector qualifications. This item deals with documentation of the verification of an inspector's employment and education.

The licensee has obtained records that show the verification of the inspector's employment and education that were used by Ebasco during the 1985 outage. The NRC inspectors reviewed these records and found no problems.

- 2.3.13 (Closed) Unresolved Item 285/8724-03: Cable tray support required. This item deals with an observation that a cable tray support in Room No. 81 was not attached to its structural member.

The licensee found, after analysis, that the support in question was not necessary. The support, nevertheless, was reattached to its structural member. The NRC inspector reviewed Calculation No. 5100001-01-001 and the maintenance order for the reattachment (874569). The NRC inspector also found that the generic issue of electrical supports will be addressed by the licensee under the Seismic Qualification Utility Group's Generic Implementation Procedure, which has been approved by a NRC safety evaluation report.

2.4 Open items

- 2.4.1 (Closed) Open Item 285/8523-02: Licensee control of limited life electrolytic capacitors for safety-related functions. This item related to electrolytic capacitors having a total design-life of 5 to 15 years. Nonconservative failures of these capacitors might affect reactor safety.

The licensee had instituted a study of design life for site-specific electrolytic capacitors. This study is in conjunction with OPPD FCS Project 1991, Volume III, Preventative Maintenance.

- 2.4.2 (Closed) Open Item 285/8705-12: Replacement of safety-related Agastat electrical relays. This open item related to the lack of a program to replace commercial grade Agastat relays used in safety-related applications, including the emergency diesel load sequencing panels for engineered safeguards features' (ESF) actuations.

Subsequent to this open item, NRC Information Notice 87-56 was issued. This notice identified a generic concern relative to commercial grade components being used beyond their design life. The specific components used as an example in the notice were "7000 series" Agastat commercial grade relays having a projected 2-year qualified life. The "7000 series" relays are a one-for-one replacement for the Agastat "2400 series." The "2400 series" was discontinued between 1972 and 1974. The FCS Agastat "2452" relays of concern were apparently manufactured in or about 1968. The licensee committed to complete a review of this concern by August 31, 1988.

Implementation of the licensee program for updating and incorporating VTI into maintenance procedures in response to NRC GL 83-28, as contained in OPPD FCS Project 1991, is the basis for closure of this item.

- 2.4.3 (Closed) Open Item 285/8713-04: Review actions taken by the QA department in the close out of FCS Deficiency Report DR-FC-1-87-056 concerning the failure to follow procedures for making changes to a design installation package. This item related to an improper change made by an engineer to a design installation package (MR-FC-83-05) on a containment storage platform and a discrepancy between installation drawing requirements and installation procedure instructions concerning the appropriate welding codes to be used.

The NRC inspector reviewed the licensee's closeout package for this item and noted the following:

- The licensee performed an engineering calculation to verify the acceptability of the use of nonquality (non-CQE) material to plug abandoned bolt holes in the platform base plates. (May 27, 1987)
- The licensee performed a 10 CFR 50.59 evaluation, which concluded that an unreviewed safety question did not exist. (June 4, 1987)
- The licensee changed the design drawings to reflect the actual material used to plug platform holes.

- The licensee had implemented a revised welding program effective January 1988, which included improved methods for documentation of weld design, installation, and QC inspection.
- The QA department closed DR-FC-1-87-056 based on the completion of the above on October 8, 1987. No problems were noted.

2.4.4 (Closed) Open Item 285/8812-02: Revision to requalification program required in TAP-13. This open item involved the licensee's planned revision to Training Procedure TAP-13 to change the required training makeup period from 18 weeks to 6 weeks.

The NRC inspector verified that the licensee had revised TAP-13 effective August 3, 1988, to incorporate the planned change.

2.4.5 (Closed) Open Item 285/8812-03: Use of contract personnel as training instructors. This open item involved the licensee's extensive usage of contract personnel as training instructors.

During the followup inspection, the NRC inspector conducted discussions with key training supervisors and reviewed training records. In spite of a high number of contract personnel acting as training instructors, an ongoing effort is being made to add senior licensed individuals to the training staff.

2.4.6 (Closed) Open Item 285/8812-04: Need to formalize training requirements for contract instructors.

During the followup inspection, the NRC inspector verified that the licensee had formalized requirements for training staff members. It was verified that Training Procedure TAP-1-CRPI, Revision 3, dated July 1, 1988, requiring staff members to receive 12 days in-the-plant familiarization had been implemented.

2.4.7 (Closed) Open Item 285/8812-05: Lesson plans are not being maintained up-to-date.

During the followup inspection, the NRC inspector reviewed training records, which stated lesson plans. The NRC inspector noted that the licensee was implementing revisions to lesson plans in a timely manner.

2.5 Review of Design Base Inadequacies

The NRC inspectors reviewed the Design Base Reconstitution (DBR) System Design Base Document (SDBD)-DG-112-0, covering the FCS emergency diesel generators and associated systems. Attachment 22, Open Item 8, SDBD-DG-112-0, stated that, "the diesel generator (E) full load fuel consumption must be determined to verify that sufficient fuel is available on site." Site storage of EDG fuel is an operability concern. In this instance, Technical Specifications address fuel oil capacity.

The NRC inspector was told, that there were no OPPD procedures or SWEC procedures that required review of identified inadequate or incorrect design base data for reportability. By contract, the delay could be 18 months. This item is considered unresolved pending development by the licensee of procedures for review of DBR documents for operability and reportability considerations (285/8825-02).

3.0 Followup to Licensee Event Reports (LERs)

- 3.0.1 (Open) LER 88-006: Surveillance Test ST-DC-1 F.1, not performed during January 1988. This event involved a failure by the licensee to perform Surveillance Test ST-DC-1 F.1, "Station Batteries" during January 1988. The licensee stated that the reasons for missing the surveillance test were due to problems in the surveillance tracking system.

During the followup inspection, the NRC inspectors verified that the licensee had implemented a new surveillance test tracking system and no surveillance test appeared to be delinquent. The licensee had furthermore committed to review past surveillance tests without the 25 percent extension allowance and submit the results of the review to the NRC via a LER supplement. In addition, the licensee has submitted a TS amendment requesting a 25 percent extension for all surveillance test intervals not presently covered under this extension. As of the followup inspection, neither the LER supplement had been submitted nor the approval of the TS amendment been received.

- 3.0.2 (Closed) LER 88-007: Inadvertent start of Emergency Diesel Generator D-1 as the result of surveillance test error. This event resulted from operator error in that the operator while unloading the EDG allowed the load to drop too low before opening the breaker. This resulted in a reverse current condition. The EDG D-2 lock-out relay tripped and EDG D-1 auto-started.

During the followup inspection, the NRC inspector verified the licensee's corrective actions. The licensee stated that planned corrective actions included a revision to the Updated Safety Analysis Report (USAR) and the Surveillance Test Procedure ST-ESF-6. The NRC inspector verified that the licensee had revised the USAR to identify the EDGs as engineered safeguards components and revised the surveillance test to incorporate instructions and signoffs for unloading the EDG.

- 3.0.3 (Open) LER 88-008: Failure to conduct Surveillance Test ST-NZ-1 within required interval. This event involved the licensee's failure to conduct the required surveillance testing on twelve of the containment spray nozzles due to inaccessibility.

The licensee has obtained the service of a consultant to perform an accident analysis based upon a degraded containment spray system. Based upon the analysis a TS amendment may be made. As of the followup inspection, the licensee had not received the results of the analysis, taken actions to amend the TS or scheduled testing of the remaining nozzles during the 1988 refueling outage. This LER will remain open pending review of the licensee's final corrective actions.

- 3.0.4 (Closed) LER 88-014: Inadvertent start of Emergency Diesel Generator D-1 during performance of surveillance test. This LER involved the inadvertent starting of Emergency Diesel Generator (EDG) D-1 during performance of the monthly Surveillance Test ST-ESF-6 F.2, Appendix E (EDG D-2).

During the postevent investigation, the licensee determined that the EDG D-2 Lock-Out Relay 86/D2 tripped due to a reverse current flow across the output breaker. The licensee could not find any root cause for the event other than a possible spurious voltage spike. Subsequent to the event, the licensee repeated the surveillance test and verified EDG D-2 operated properly. The Lock-out Relays 86/D-2 and 86/D-1 are designed to trip the EDG on overcurrent, phase differential, and reverse power across the breaker. The NRC inspectors concluded the relays performed their intended design function and no damage occurred to the EDG D-2. The licensee's actions appeared to be both complete and comprehensive.

- 3.0.5 (Closed) LER 88-015: Inadvertent start of the standby component cooling water (CCW) pump during breaker testing. This event involved the inadvertent starting of the standby CCW pump during performance of Procedure CP-AC-3B BKR. An expected breaker mismatch occurred on the AC-3B breaker, which resulted in an auto-start of the AC-3B component cooling water pump.

During the followup inspection, the NRC inspectors reviewed the licensee's corrective actions. The licensee had modified the test procedure to add a step requiring the operations department to signoff the action of placing the nonrunning redundant CCW pump, not tested in the pull-to-lock position and actions requiring the pump to be returned to service after testing.

- 3.0.6 (Closed) LER 87-17: Failure to inspect emergency diesel generators. This event involved the failure of the licensee to perform the annual inspection of the emergency diesel generators within the required surveillance period.

During the followup inspection, the NRC inspector reviewed the licensee's actions in researching this event. Furthermore, the NRC inspector reviewed the licensee's surveillance tracking system and verified that surveillance testing was being conducted on schedule.

The licensee had also submitted and received NRC approval via TS Amendment 112, dated April 19, 1988, to extend the annual EDG inspection to each refueling period.

- 3.0.7 (Open) LER 87-29: Failure to conduct Surveillance Test ST-DC-4 Section F.3. This event involved the failure of the licensee to conduct surveillance testing of the containment emergency lighting system within the once a year TS requirement.

During the followup inspection, the NRC inspector verified the licensee's implementation of actions directed toward the generic problem of surveillance tests not being conducted when scheduled. It was further verified that Surveillance Test St-DC-4 F.3 is scheduled to be conducted during the 1988 refueling outage. The NRC inspector noted that the licensee had committed to reviewing past surveillance tests to ensure compliance with planned scheduling. The licensee had committed to submit the review results to the NRC. Furthermore, the licensee has proposed to amend the TS to change the surveillance period to each refueling outage versus annually. As of the followup inspection, the licensee had neither submitted the results of the sampling review nor submitted a TS amendment. This LER shall remain open pending completion of the licensee's stated commitments.

- 3.0.8 (Closed) LER 87-037: Diesel generator surveillance test not in conformance with TS. This event involved the licensee's failure to perform the emergency diesel generator (EDG) surveillance test on November 11, 1987, in accordance with the TS Amendment 111, requirement 3.7(1)a(ii). This requirement stated that the EDGs shall be tested at the continuous KW rating for 60 minutes. When the surveillance test was performed on November 11, 1987, the licensee had not incorporated the TS Amendment 111 requirements into the surveillance procedures to ensure adequacy and timely completion.

During the followup inspection, the NRC inspector verified that the surveillance test had been revised to incorporate TS Amendment 111 requirements. Further, it was verified that the licensee is pursuing a comprehensive and continuing review of surveillance procedures to ensure adequacy and timely completion.

- 3.0.9 (Closed) LER 84-15R1: Load over the reactor coolant system (RCS). The polar crane was loaded with a load of 250 pounds suspended over the RCS with the pressurizer temperature greater than 250° F and 220 psia, violating TS 2.11(1).

The NRC inspector reviewed the licensee's Procedures OI-RC-2B, "Reactor Coolant Vent and Leak Test Instruction" and MP-HE-1, "Polar Crane Annually or at Refueling Inspection." The NRC inspector verified that the licensee had revised the two procedures to add steps and precautions to prevent the movement of the polar crane over the RCS when pressurizer pressure is greater than 225° F. No problems were noted.

4.0 Followup to NRC Inspection and Enforcement Bulletins

4.0.1 (Open) IEB 88-04: Adequacy of SI pump recirculation line.

This NRC Bulletin involved the problem of hydraulic instability or impeller recirculation due to miniflow recirculation operation with parallel pump operation through a common recirculation line. Evidence suggests that operation of pumps at some point below the best efficiency point can result in pump damage due to vibration, excessive forces on the impeller, and cavitation.

As of the followup inspection, the licensee had responded to IEB 88-04 but had requested an extension in order to compile the requested calculations and information. This item shall remain open pending review of the licensee's final response.

5.0 Followup to 10 CFR Part 21 Reports

5.0.1 (Closed) Evaluation of licensee's reponse to 10 CFR Part 21 reports: 87-11; 87-12; 87-13, 87-14; 87-15; 87-32; 87-33; 87-35; 87-41; 88-05; 88-06; 88-34; and 88-0155. The NRC inspector's review was a continuation of the review documented in NRC Inspection Reports 50-285/87-25 and 50-285/87-33.

The NRC inspector reviewed a selected sample of the available documentation for evaluations performed by the licensee for 10 CFR Part 21 reports made by other users (licensees) and equipment suppliers and vendors. The evaluations were performed to determine the applicability of the identified problem to the safe operation of the FCS facility. Based on this review, it appeared that the licensee was performing an adequate review.

The evaluations reviewed by the NRC inspector are listed below:

<u>Licensee Identification</u>	<u>User, Vendor, or Supplier</u>	<u>Subject</u>
10 CFR Part 21 87-11	Indiana Electric/Terry	Improperly Corp. machined part for AFW turbine speed controller
10 CFR Part 21 87-12	Virginia Electric/	Defective steel Rockwell/Inland Steel with laminations in web
10 CFR Part 21 87-13		Morrison-Knudsen/ Residual Magnetism Square D causes 125 volt relays to fail (remain energized)

10 CFR Part 21 87-14	SMUD/Limitorque	Warped limit switch rotors
10 CFR Part 21 87-15	Foxboro	High humidity effects on SPEC 200 I/V cards
10 CFR Part 21 87-32	General Electric	HFA Armature binding due to incorrect location of stop tabs
10 CFR Part 21 87-33	Niagara Mohawk/Agostat	GP Series relays improper seating
10 CFR Part 21 87-35	Toledo Edison/Limitorque	Inadequate instruction to maintain torque switch balance
10 CFR Part 21 87-41	Technology for Energy (TEC)	Model 914-1 valve flow monitor module fails to reset
MAL 88-05	Exo-Sensor	Containment Hydrogen Analyzer Excessive Calibration Gas Leakage
MAL 88-06	Arizona Power & Light/Borg-Warner	Fasteners on MOV not in accordance with design requirements
MAL 88-34	Nothern States Power/Limitorque	Insulation Damage on motor lead wires
RRD 88-0155	General Electric	HFA Relays Latch Engagement Less than minimum requirement

6.0 Followup to Temporary Instructions

6.0.1 (Closed) TI 2518/64R1, Items 3.1.3, 3.2, 4.2.1, 4.2.2, 4.5.1; GL 83-28 followup.

During the followup inspection, the NRC inspector verified that the licensee had responded, as required by GL 83-28, and that the NRC had reviewed and accepted the responses cited above. GL 83-28 Items 2.1, 4.5.2, and 4.5.3 remain open pending receipt of the NRR Safety Evaluation Report and NRC inspector review.

6.0.2 (Closed) TI 2515/91 Item 4.1: Reactor Trip System Reliability.

The NRC inspector reviewed the licensee response, the NRC's review, and acceptance via safety evaluation report dated January 6, 1986. No further action on this item is required.

7.0 Followup to Safety Systems Outage Modifications Inspection (SSOMI)

7.0.1 During the SSOMI, the NRC inspector identified numerous observations. These observations represent cases where it is considered appropriate to call attention to matters that are not deficiencies or unresolved items. As such, observations include items recommended for licensee consideration but for which there is no specific regulatory requirement. The below listed SSOMI observations are hereby closed administratively.

8529/2.3-1	8529/2.8-1
8529/2.3-2	8529/2.8-2
8529/2.3-3	8529/2.10-1
8529/2.4-1	8529/2.11-1
8529/2.4-2	8529/2.12-1
8529/2.4-3	
8529/2.5-1	
8529/2.5-2	
8529/2.5-3	
8529/2.6-1	
8529/2.7-1	

7.0.2 (Open) Deficiency (285/8529/2.5-3): Inadequate support of seismic instrumentation tubing near air regulators. This SSOMI deficiency noted that seismic supports were not installed as required by guidelines in that the allowable span was exceeded.

The licensee found that the guidelines were not followed by its personnel. The particular configuration was analyzed and the excessive span was found to be acceptable. The NRC inspector reviewed Calculation No. FC-83-158. The licensee also conducted training of its personnel in regard to span requirements. The records of the training were reviewed by the NRC inspector. (See the comments below on corrective action in paragraph 7.0.5)

7.0.3 (Open) Violation (285/8529-II.F.2.g (Deficiency 8529/2.5-4)): Discrepancies were found with the installation of safety injection tank relief valves. The SSOMI team found that relief valves were interchanged between two tanks and, as a result, the valve tags were not correct. The weld of the lower pipe on Tank B had a crater pit, and the tail piece pipes for Tanks B and D had surface discontinuities.

The licensee found that the valves in question were identical and indeed switched during installation because of the lack of attention to detail by personnel. The applicable Process and Instrument Diagram (P&ID) No. E-23866-210-130, was revised to show the as-built configuration. The NRC inspector verified the drawing change (Revision 36). The licensee did analyze the surface discontinuities and found the condition acceptable. The NRC inspector reviewed Calculation No. FC-84-61. The licensee also conducted training of its maintenance personnel in regard to the above problems. The NRC inspector reviewed these training records (FC-7-361-87). The welding problem is discussed in this report in paragraph 7.0.4. (See the comments below on corrective actions in paragraph 7.0.5)

- 7.0.4 (Open) Violation 285/8529-II.H (Deficiency 8529/2.6-1): The controls of welding and nondestructive examination were inadequate. This SSOMI finding detailed that a previously accepted weld on Safety Injection Tank B had an unacceptable crater pit, a previously accepted socket weld on Valve No. MS-100 was found unacceptable and had to be repaired, and the dye penetrant inspection performed on the component cooling water flow element was accomplished below the temperature limits allowed by procedures.

In regard to the Safety Injection Tank B union weld, the licensee determined that the crater pit was not sufficient to reject the weld. A penetrant examination, which accepted the weld after the area in question was ground, dated May 21, 1987, was reviewed by the NRC inspector. There appears to have been confusion about the inspection of this weld by OPPD at the request of the SSOMI team on December 16, 1985. The SSOMI team understood that a penetrant exam had been requested and OPPD reportedly performed a visual exam. The NRC inspector found that there were no records of either type of exam. (See violation below on records in paragraph 7.0.6.)

In regard to the MS-100 socket weld, the licensee found that a highly qualified contract inspector missed the crater pit in this weld. After reinspection, OPPD concluded the weld was unacceptable and repaired the weld. Maintenance Order No. 857783 to repair the weld and the report of final acceptance after repair, were reviewed by the NRC inspector. The training and certification records of inspection personnel were reviewed by the NRC inspector. The training was both generalized and also specific in regard to this problem.

In regard to the component cooling water penetrant examination, the licensee found that, indeed, procedure requirements were violated by inspection personnel. A second penetrant examination found unacceptable indications. A maintenance order was opened, which had the weld in question filed to remove rust before a third examination. The third examination found the weld to have no apparent indications.

A concern of the NRC inspector is the logic used to resolve questions of weld quality by filing or grinding before penetrant examinations, as was the case on both the Safety Injection Tank B and component cooling water welds. The licensee now requires the recording of the temperature of the examined hardware on the inspection report. The licensee's response letter indicated that the temperature limits would be on the form. This will be clarified with another revision to the response letter to delete reference to the form in that the limits are in the procedure. (See comments below on corrective action in paragraph 7.0.5.)

- 7.0.5 (Open) Violation 285/8529-II.H.2 (Deficiency 8529/2.5-1): Inadequate welding, preparation, and inspection associated with the replacement of Valve No. MS-100. As noted earlier (7.0.4), the replacement of Valve No. MS-100 was unacceptable. In addition, during the repair the wall thickness was violated.

The licensee found that tightly adhered slag in the crater masked the crater pit. During the repair, the craftsman became overly aggressive and removed too much wall. The thinned wall condition was evaluated. The NRC inspector reviewed the calculations of that evaluation. As noted earlier, the weld in question was successfully repaired and finally accepted. The licensee has also established a program to control welding. Specification No. CTS-4 and SO Nos. 72, 72A, and 72B have been implemented to provide further controls of the welding process. The NRC inspector reviewed this current program. (See comments below on corrective action.)

The licensee's quality assurance program description states that, a "thorough investigation and documentation of significant conditions adverse to quality" will be required. In review of the above items, it was noted that the corrective actions taken to date failed to address the potential for previous events of a similar nature. Because of this lack of generic corrective action, the items in paragraphs 2.1.6, 7.0.2, 7.0.3, 7.0.4, and 7.0.5 cannot be closed. These items will remain open until corrective action is taken in regard to the potential for previous events. In particular, at a minimum, the enumerated questions related to the following areas should be considered:

- ° Design Modification Package No. MR 84-162 failed to provide sufficient detail in regard to coatings because personnel failed to follow procedures.

Corrective actions to consider: (1) Are there other modifications that have been completed where the packages had insufficient information on coating materials and the impact of such? (2) Is this problem limited to only coating information

in modification packages and not other information? (3) Has the person involved failed to identify sufficient information in other modification packages he worked on? (4) Is there a problem with the review process of packages?

- Seismic supports for Valves YCV-1045 A and B, installed by Modification Package MR 81-158, exceed span requirements and the design had to be reanalyzed because tubing support guidelines were not followed.

Corrective actions to consider: (1) Are there other modification installations of air supply tubing where span requirements may have been violated? (2) Are there any other seismic requirements that were not followed? (3) Have the personnel in question installed other tubing without sufficient supports? (4) Is there an inspection problem with verifying other requirements?

- A change had to be made to P&ID No. E-23866-210-130 because Valve Nos. SI 221 and SI 217 were interchanged because of lack of attention to detail upon installation under Modification Package No. MR 84-64.

Corrective actions to consider: (1) Could the installation crew have failed to attend to other details? (2) Has the crew installed other modifications and erred in the same way? (3) Do other P&IDs have incorrect identification information? (4) Why wasn't this identified by QC?

- A weld on Valve No. MS-100 installed by Modification Package No. MR 85-042 had to be repaired after a highly qualified inspector missed a crater pit in the original examination.

Corrective actions to consider: (1) What other modifications were done where inspections were performed by the same personnel and are these welds acceptable? (2) What other modifications were done where the same welding procedure and/or personnel were used and are these welds acceptable?

- A penetrant examination on the component cooling water flow transmitter installed by Modification Package No. MR 85-062 was performed a second time because the personnel failed to follow temperature limits.

Corrective actions to consider: (1) Are there other modifications in which penetrant test limits could have been violated? (2) Are there other welds inspected by the same personnel where procedure requirements were not followed?

- 7.0.6 (Closed) Violation 285/8529-II.F.2.m (Deficiency 8529/2.5-7): Weld inspections were not accomplished as required. This SSOMI deficiency noted that the welds of the transformer base to embedment, controlled by Modification Package No. MR84-105, had not been performed.

The licensee found that the planner and craftsman were not fully aware of the inspection requirements for welding of seismic supports. The NRC inspector found that, indeed, the "weld and test control record" and the associated form were signed off for all six weldments. However, there were no visual examination reports for all six weldments. The inspection log book indicated that the inspections of Transformer Nos. TIB 3B and 3C were performed on December 18, 1985. These inspections were not documented as required by procedures. The licensee did revise its Specification No. CTS-2 and Procedure No. SO 72A. Training was administered on this problem. The NRC inspector reviewed the revised specification and procedure as well as the training records to these revised documents.

In review of the above and the item in paragraph 7.0.4, the NRC inspector found that inspection records of SSOMI followup were not maintained on Visual Inspection Form FC-182. In particular: (1) the inspection of the Safety Injection Tank B union weld that took place on or about December 16, 1985; and (2) the inspection of Transformers Nos. TIB 3B and 3C base welds that took place on December 18, 1985. As such, the licensee's failure to follow procedures is an apparent violation of SO No. 26, Appendix G, Revision 26, dated August 7, 1988 (285/8825-01).

- 7.0.7 (Closed) Violation 285/8529-II.F.1.j (Deficiency 8529/2.5-6): Procedures did not provide instructions for a flanged joint. This SSOMI deficiency identified that a flanged joint was leaking and found to be out of parallel by .030 inch.

The licensee believed that the leakage occurred some time after the joint was made up. The joint was retightened under Maintenance Order No. 857887 to 50 foot-pounds. The leakage stopped. The torque requirements were based on vendor data. It should be noted that prior to the SSOMI observation, the system had been pressure tested at 188 psi on November 11, 1985. The NRC inspector reviewed the above maintenance order and the original Modification Package No. MR 85-62.

- 7.0.8 (Closed) Unresolved Item (8529/D2.3-2): Lack of calibration record for a pressure source used for safety-related channel calibration. This unresolved item involved the lack of evidence that the calibration records existed for a pressure source used in the loop calibration procedures for CP-D/102-2 (pressurizer pressure).

During the followup inspection, the NRC inspector reviewed the licensee's response to the SSOMI item and Operations Incident Report 2225, dated November 29, 1985. The licensee's records indicated that the pressure transmitters were calibrated using both Pressure Source Nos. 238 and 246. However, Operations Incident Report No. 2225 discovered that even though Pressure Source No. 246 had been calibrated prior to usage, the QC verification was not accomplished prior to usage. Failure of QC to verify the calibration of Pressure Source No. 246 is an apparent violation of NRC Regulations and SO No. M-26. The NRC inspector reviewed the licensee's followup and corrective actions taken. The NRC inspector verified that the licensee had reviewed their records and QC accomplished an after-the-fact verification on November 29, 1985, and found the calibration to be valid.

Furthermore, the licensee implemented measures for key supervisors to conduct refresher training of I&C technicians. The training was conducted to ensure test equipment is calibrated before and after usage. Also, the training was conducted to ensure test equipment identity is properly recorded on the calibration form at the time the procedure is performed. It is concluded that, in fact, the licensee failed to follow SO No. M-26, Section 3.3.3 in that QC verification signoff of the Pressure Source No. 246 calibration was not accomplished prior to usage. However, the licensee had performed effective and comprehensive corrective actions to resolve the cited condition and preclude future recurrence.

- 7.0.9 (Closed) Violation 285/8529-II.F.1.c (Deficiency 8529/2.8-2):
 Test procedure did not verify design concept under accident conditions. This deficiency involved the inadequacy of the licensee's test procedure to verify Modification Installation No. MR 84-74A, fuse protection for limit switches satisfied the intended design concept under accident conditions.

During the followup inspection, the NRC inspector verified that the licensee had revised the procedure for functionally testing Modification No. MR-FC-84-74A. The revised procedure functionally tested the applicable protective fuse in a configuration which verified the system under accident condition. This testing was successfully completed on December 20, 1985, in accordance with Maintenance Order No. 857847.

- 7.0.10 (Closed) Violation 285/8529-II.G.4 (Deficiency 8529/2.3-6):
 Calibration procedure changes without approved field changes. This deficiency involved the licensee's failure to follow procedures in that numerous instances were found in calibration procedures for CP-X/905 and CP-X/902 where revisions were not made in accordance with FCS SO No. G-30.

During the followup inspection, the NRC inspector reviewed the applicable calibration procedures and records and verified that the records had been properly annotated. Furthermore, discussions with the licensee showed that a substantive effort is being made to conduct initial training of personnel and conduct a continuous 2-year refresher training for personnel in each craft area. This refresher training covers standing orders and their applicability to the specific crafts. In addition, the licensee had initiated a program to provide both contract and licensee personnel with an information reference booklet, which references some 30 different standing orders and the proper procedures to address.

- 7.0.11 (Open) Violation on 285/8529-II.F.1.k; II.H.5 (Deficiency 8529/2.5-6): Installation discrepancies found in installation of New Delta T power process loop instrumentation. This item related to discrepancies found in wiring installation and seismic support installation with Modification Request Package 84-140.

During the following inspection, the NRC inspector reviewed documentation that indicated previously identified installation discrepancies had been corrected. However, due to the operating status of the plant (100 percent power level), a walkdown inspection of the instrumentation cabinets to verify the corrected conditions was not performed. This violation shall remain open pending a walkdown inspection of the corrected condition.

- 7.0.12 (Closed) Violation 285/8529-II.F.2.h (Deficiency 8529/2.3-4): Training not done prior to approval of procedure change. This violation involved the failure of the licensee to complete required training prior to the issuance of Procedure Change 13494 to OI-FW-3. This was contrary to the requirements of Step 3.6.1(d) of SO No. G-30.

The licensee has emphasized the importance of ensuring that necessary training is accomplished prior to implementing a procedure change, in accordance with SO No. G-30, with both training department personnel and members of the plant review committee. The licensee conducted a review in 1986, and identified 2 other instances in which a procedure change requiring pre-approval training was implemented before the training was completed. No problems were noted.

- 7.0.13 (Closed) Violation 285/8529-II.I.1; II.I.2 (Deficiency 8529/2.9-2): Inadequate warehouse storage of safety-related material. This violation was related to material tags that did not agree with material markings and documentation, critical quality element (CQE) material that was stored in Level C areas rather than the required Level B areas, and incomplete material certifications for 1 3/8" by 8 nuts.

In response to this violation, the licensee has taken several corrective actions. On July 18, 1988, the licensee revised SO No. G-22, "Storage of Critical Elements and Radioactive Material Packaging, Fire Protection Material, and Calibration Equipment." This revised procedure along with Quality Assurance Department Procedure QADP-12, "Material/Service Acceptance and Receipt Inspection," which was revised on May 18, 1988, adequately addressed the identified deficiencies. (The NRC inspector indicated the licensee should consider including QADP-12 under "References" in Section 1.3 of SO No. G-22.)

A material verification team made up of four full-time members was established in July 1988 to verify the information entered on tags for 4200 CQE items. The team, led by a licensee QA inspector, had reviewed about 80 percent of the CQE items; almost 300 discrepancies had been found. According to the operations quality assurance supervisor, the team will complete its review on or about September 1, 1988.

On August 12, 1988, the licensee took possession of a recently constructed 40,000 ft² warehouse. About one-half of the warehouse will be dedicated to storage. Storage racks were being installed to increase the storage area to about 60,000 ft². The warehouse was incorporated into the protected area on August 15, 1988. The licensee plans to complete the transfer of items from the old warehouse to the new one by mid-September 1988.

The licensee recently hired a material control supervisor, who brings to the job 12 years of material control experience in the nuclear field.

8.0 Unresolved Item

Unresolved items are matters about which more information is required in order to ascertain whether or not the items are acceptable, violations, or deviations. The following unresolved item was discussed in this report:

<u>Paragraph</u>	<u>Item</u>	<u>Subject</u>
2.5	285/8825-02	Reportability of design base inadequacies

9.0 Exit Interview

An exit interview was conducted with FCS personnel on August 12, 1988, at the conclusion of the onsite inspection, during which the inspection findings were summarized. The licensee did not identify as proprietary any of the materials provided to, or reviewed by, the NRC inspectors during the inspection.

INSPECTOR'S REPORT
Office of Inspection and Enforcement

REVIEWER

INSPECTORS

J. Decker
J. O. McNeill

Wm. McNeill
J. O. McNeill

LICENSEE/VENDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (8 BY PRODUCT) (13 digits)	REPORT NO.	SEQ.	NEXT INSP. DATE	
CPFD RT Colburn Station	<input checked="" type="checkbox"/> I - INSERT <input type="checkbox"/> M - MODIFY <input type="checkbox"/> D - DELETE <input type="checkbox"/> R - REPLACE	1500255	25	A	MO	YR

PERIOD OF INVESTIGATION - INSPECTION		INSPECTION PERFORMED BY		ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See EMO 0530 Manpower Reporting - Weekly Manpower Reporting for code)		
FROM: MO DAY YR 09 18 88		TO: MO DAY YR 09 29 88		<input checked="" type="checkbox"/> 1 - REGIONAL OFFICE STAFF <input type="checkbox"/> 2 - RESIDENT INSPECTOR <input type="checkbox"/> 3 - PERFORMANCE APPRAISAL TEAM		OTHER
				REGION DIVISION BRANCH 4 6 1		

REGIONAL ACTION (Check one box only)		TYPE OF ACTIVITY CONDUCTED (Check one box only)			
<input checked="" type="checkbox"/> 1 - NRC FORM 591	<input type="checkbox"/> 2 - REGIONAL OFFICE LETTER	<input checked="" type="checkbox"/> 02 - SAFETY	<input type="checkbox"/> 03 - INCIDENT	<input type="checkbox"/> 04 - ENFORCEMENT	<input type="checkbox"/> 05 - MGMT. AUDIT
		<input type="checkbox"/> 06 - MGMT VISIT	<input type="checkbox"/> 07 - SPECIAL	<input type="checkbox"/> 08 - VENDOR	<input type="checkbox"/> 09 - MAT ACCT
		<input type="checkbox"/> 10 - PLANT SEC	<input type="checkbox"/> 11 - INVENT VER	<input type="checkbox"/> 12 - SHIPMENT EXPORT	<input type="checkbox"/> 13 - IMPORT
		<input type="checkbox"/> 14 - INQUIRY	<input type="checkbox"/> 15 - INVESTIGATION		

INSPECTION INVESTIGATION FINDINGS (Check one box only)				TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS	ENFORCEMENT CONFERENCE HELD	REPORT CONTAINS 2790 INFORMATION	LETTER OR REPORT TRANSMITTAL DATE
<input checked="" type="checkbox"/> 1 - CLEAR	<input type="checkbox"/> 2 - VIOLATION	<input type="checkbox"/> 3 - DEVIATION	<input type="checkbox"/> 4 - VIOLATION & DEVIATION	A B C D	A B C D	A B C D	NRC FORM 591 OR REG LETTER ISSUED SEP 19 1988
				03	1 - YES	1 - YES	MO DAY YR

MODULE INFORMATION											MODULE INFORMATION										
REC ORD	MODULE NUMBER INSP			PRIORITY	DIRECT INSPEC. TIME REPORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ FOLLOWUP			REC ORD	MODULE NUMBER INSP			PRIORITY	DIRECT INSPEC. TIME REPORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ FOLLOWUP		
TYPE	NUMBER	PHASE	MANUAL CHAPTER					PROCEDURE NUMBER	LEVEL	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	TYPE					NUMBER	PHASE	MANUAL CHAPTER
	1530703	A			0/10																
	ENT/EXIT																				
	3592701	A			170		537700														
	Follows to previous inspection findings						538701														
							541400														
							542700														
							555050														
							561725														
							570370														
							592720														
							536100														
	9						592703														

* CROSS SEQUENCE IF VIOLATION OR DEVIATION

INSPECTOR'S REPORT (Continuation)

Office of Inspection and Enforcement

DOCKET NO. (8 digits) OR LICENSE
NO. (BY PRODUCT) (13 digits)

05000265

REPORT

NO

SEC

MODULE NUMBER

5727011

VIOLATION SEVERITY

OR DEVIATION

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SITE

RELATED

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SUPPL.

VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 50 characters each.)

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DOCKET NO. (8 digits) OR LICENSE
 NO. (BY PRODUCT) (13 digits)

REPORT

MODULE NUMBER

NO

SEQ

5927011

**INSPECTOR'S REPORT
 (Continuation)**

Office of Inspection and Enforcement

										VIOLATION SEVERITY OR DEVIATION						SITE RELATED		SUPP.																												
										A	B	C	D	E	F	G	H	I	J	K																										
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VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 50 characters each.)

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NRC FORM 786-A E MC 0635 INSPECTOR'S REPORT (Continuation) Office of Inspection and Enforcement	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)		REPORT		MODULE NUMBER	SITE RELATED	SUPP.
	05000235		NO	SEC	5927011		
				A	VIOLATION SEVERITY OR DEVIATION		
				B	1 2 3 4 5 6 D		
			C			A C	
			D			B D	

VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 50 characters each.)

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Failure to Maintain Records

Criterion V of Appendix B to 10 CFR Part 50 and the licensee's approved quality assurance program require that the activities affecting quality be accomplished in accordance with documented instructions. Visual Examination Procedure, Standing Order No. 26, Appendix G, Revision 26, dated August 7, 1988, requires that a Visual Weld Examination Report Form No. FC-1103 be prepared after an examination.

Contrary to the above, in some cases, records of inspection were not prepared. In particular, records of visual inspection performed as part of the safety system outage modification inspection followup for Safety Inspection Tank B union weld and the TIB 3B and 3C transformers' base welds were not prepared.

This is a Severity Level V violation. (Supplement I.D.) (285/8825-01)

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