

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-382/85-01

Operating License: NPF-26

Docket: 50-382

Licensee: Louisiana Power & Light Company (LP&L)
142 Delaronde Street
New Orleans, Louisiana 70174

Facility Name: Waterford Steam Electric Station, Unit 3

Inspection At: Taft, Louisiana

Inspection Conducted: January 7-11, 1985

Inspector: Bruce A. Boardman
for J. R. Boardman, Reactor Inspector, Special
Projects and Engineering Section,
Reactor Project Branch 1

August 15, 1985
Date

Approved: Bruce A. Boardman
L. Constable, Chief, Project Section B,
Reactor Project Branch 1

August 15, 1985
Date

Inspection Summary

Inspection Conducted January 7-11, 1985 (Report 50-382/85-01)

Areas Inspected: Reactive, unannounced inspection of followup on previously identified items and licensee procurement of spare parts for safety-related applications and maintenance of emergency feedwater (EFW) pump motors. The inspection involved 37 inspector-hours onsite by one NRC inspector.

Results: Within one area inspected (procurement of spare parts), one violation was identified (failure to have procedures requiring purchase of spare parts to FSAR requirements. Within the other area (maintenance of EFW pump motors) one violation (failure to have procedures to implement manufacturer's maintenance recommendations) was identified.

DETAILS

1. Persons Contacted

Principal Licensee Employees

- *R. S. Leddick, Senior Vice President, Nuclear Operations
- *R. P. Barkhurst, Plant Manager
- *T. F. Gerrets, Quality Assurance (QA) Manager
- *J. R. McGaha, Maintenance Superintendent
- *L. F. Storz, Assistant Plant Manager
- *J. Woods, Plant QA Manager
- *T. Chiles, Material Superintendent
- *K. Brewster, On-Site Licensing
- *G. Wuller, On-Site Licensing
- G. Ingraham
- *P. V. Prasankumar, Technical Support Supervisor
- *W. M. Morgan, Operations QA Manager
- *F. J. Englebracht, Manager Plant Administrative Services
- M. Hamilton, Plant Engineering
- *A. S. Lockhart, Consultant
- *B. Thigpen
- *N. S. Carns, LP&L
- M. Moodly, LP&L
- *S. Alleman, Assistant Plant Manager
- Brian Ward, Plant Quality
- *J. J. Zabritski, Plant Quality
- R. Naylor, Project Engineering
- R. W. Keller, Plant Engineering
- *J. B. Perez, Operation QA
- V. M. Burgard, Plant Quality
- J. Billerbeck, Plant Engineering
- J. Carson, Plant Engineering

NRC Personnel

- *G. L. Constable, Senior Resident Inspector
- *T. Flipppo, Resident Inspector
- *W. B. Jones, Reactor Inspector

*Denotes those attending the exit interview on January 11, 1985.

The NRC inspector also interviewed other licensee personnel.

2. Review of Licensee Significant Deficiency (SCD)

(Open) SCD-63 Procurement of Spare/Replacement Parts

a. Purchase Order Documentation Review

In NRC Inspection Report 84-42, the NRC inspector discussed 17 safety-related purchase orders for which there was missing documentation. The 8 listed below were selected by the licensee for review for acceptability.

A89511D	L22269D
A94582D	L32717D
L08404D	L47967
L17721H	L48243K

The licensee had not completed his review of all eight purchase orders.

Two of these orders (A89511D and L08404D) were included in the Burns and Roe (B&R) review. The NRC inspector found no backup documentation for these two orders in the B&R records showing the scope of the purchase order documents reviewed. In the case of a third purchase order (L08404D), the B&R records did not contain a complete document package.

There is no documentation that the B&R review package for each purchase order contained all data required for the determination of material acceptability.

b. FSAR Requirements Safety-Related Electrical Equipment Parts

Related to SCD-63 and the adequacy of LP&L procurement of spare and repair parts for the operation phase, the NRC inspector had the following finding during this inspection.

Waterford SES Unit 3 Operations Quality Assurance Program, Section 17.2.2.3 states:

"The quality Assurance Program provides control over activities affecting the quality of structures, systems, and components to an extent commensurate with their importance to safety. Table 3.2-1 of this FSAR provides the safety related classification of plant structures, systems, and components and identifies those items subject to the a 10 CFR 50, Appendix B, Quality Assurance Program as herein described."

Waterford SES Unit 3 FSAR Table 3.2-1 includes a note 12 as being applicable for the category "Electric Systems and Equipment."

Note 12 states:

"12. Electrical Equipment - All cables, relays, motors, switchgear and other electrical equipment serving safety system components required to function during the SSE shall be Class 1E, if they are necessary for the performance of the component's function. All Class 1E electrical equipment will receive applicable portions of 10 CFR 50 Appendix B QA during the operations phase."

The licensee did not have procedures to assure compliance with this FSAR requirement affecting quality, as required by 10 CFR 50, Appendix B, Criterion V. This is an apparent violation (50-382/8501-01).

License documentation does not show that FSAR Table 3.21, note 12, was considered by LP&L, or B&R, in their reviews and analyses for SCD-63.

c. LP&L Procured Operation Phase Spare and Repair Parts for the Emergency Feedwater (EFW) Pump Motors

The NRC inspector was informed of the recent failure of an upper motor bearing half for EFW Pump B. The lower bearing was undamaged. The motor for this safety-related pump requires environmental qualification.

The NRC inspector reviewed purchase order documentation provided by LP&L for EFW pump motor parts procured by purchase requisition (PR) No. 60912, dated June 16, 1982, and LP&L purchase order (PO) No. L22258D, dated November 22, 1982, to Bingham-Willamette. The original technical and QA requirements of this order appear identical to the EBASCO purchase order for the pumps and motors, NY-403431, and its invoked requirements. General Electric (GE) provided the equipment qualification (EQ) documentation for the original pump motors.

On November 22, 1983, Bingham-Willamette sent LP&L a letter stating that GE considered that the requirements on pages 2 through 6 of the LP&L PO "call for specifications far and beyond that used on the original equipment."

By Revision 2, dated December 28, 1983, to PO L-22258D (which referenced the Bingham-Willamette letter of November 22, 1983), LP&L deleted:

- (1) Quality Assurance Program Requirements (10 CFR 50, Appendix B and ANSI N45.2-1971) from page 2 of the PO.
- (2) Procedures for Design Review (ANSI N45.2-11-1974, paragraph 6.1) from page 3 of the PO.
- (3) Procurement (N45.2.13-1976) from page 3 of the PO.
- (4) Qualification of Personnel (N45.2.6-1973, paragraphs 2.1, 2.2.1, 2.2.3, and 2.2.4) from page 3 of the PO.
- (5) Reporting of Rejects and Noncompliance (10 CFR 21) from page 5 of the PO.
- (6) Collection, Storage, and Maintenance of Records (ANSI N45.2.9-1974, paragraphs 3.2.1, 3.2.6, and 5.0) from page 5 of the PO.
- (7) Certificate of Conformance (including certification that the items ordered are qualified to meet the requirements of IEEE 323-1974 and IEEE - 1975) from page 6 of the PO.

Based on a telephone communication between the NRC inspector and Bingham-Willamette on January 22, 1985, this was the last change to PO L22258D received by Bingham-Willamette and was the revision in effect when PO items 1, 2, and 3 were shipped, and the order was considered as complete by Bingham-Willamette on April 16, 1984.

The NRC inspector was provided a copy of Revision 3 to PO L22258D. This revision was identical to Revision 2 except that it required a Certificate of Conformance, but it also deleted certification that the items are qualified to meet the requirements of IEEE 323-1974 and IEEE 344-1975.

This will remain an unresolved item pending review during a subsequent inspection by the NRC inspector of a purchase order document package containing all documentation related to LP&L PO L22258D. (50-382/8501-02)

3. Additional Maintenance for the EFW Pump Motors

During the procurement documentation review of LP&L PO L22258D for EFW pump motor parts, the NRC inspector reviewed the licensee's Equipment Qualification Package 4.3W3 for the EFW pump and motor. In this package, the NRC inspector found General Electric "Topical Report: IEEE 323, Class 1E Induction Motor Model 5K811045C25 Horizontal Class B Insulated."

Page v of this qualification report states, "Qualified life can be maintained by a comprehensive motor maintenance plan such as outlined in Section VII."

The licensee stated that plant maintenance procedures for the subject motors were not based on this report, but on the GE manual.

Section VII of the report states, "Maximum motor availability and service life results from a carefully planned and executed inspection and maintenance plan. This is particularly important for safety-related motors where reliable motor performance is required throughout the life of the plant, even under emergency conditions."

"It is recommended that a general inspection and maintenance plan be established. Exact details of the plan should be tailored to the individual motor application, its environment and duty cycle. The user should determine what portion of the following program should be incorporated to achieve the optimum results within the specific conditions at the site."

Section VII then lists daily, biweekly or monthly, semiannual, biannual, and 10-year inspection programs.

Section VII also states, "Safety related motors are frequently on emergency standby duty, [such as the EFW pump motors] and as a consequence rarely are required to operate during the normal operation of the facility. Such motors require a special maintenance program to insure that they are immediately available in an emergency throughout the plant life. A suggested plan for maintenance of these motors is outlined."

The suggested special maintenance program includes additional weekly and quarterly maintenance.

If weekly motor operation is not possible, the suggested weekly maintenance includes the following:

"Rotate shaft by hand if possible or using a Pee Vee bar if required. Rotate shaft 10 revolutions or until it is evident that ring action has coated journal and surrounding area with fresh oil from the reservoir."

This maintenance is included to maintain the motor bearing oil film. One of these bearings had "wiped" at Waterford.

10 CFR Part 50, Appendix B, Criterion V, requires that activities affecting quality shall be prescribed by documented procedures and instructions. The licensee has committed to Regulatory Guide 1.33, Revision 2, and ANSI N18.7-1976 (with comments). ANSI N18.7, Section 5.3.5(4), states:

"Where appropriate sections of related documents such as vendor manuals of equipment maintenance instructions provide adequate instructions to assure the required quality of work, the applicable sections of the related documents shall be referenced in the procedure."

The NRC inspector discussed with the NRC Equipment Qualification Branch (EQB) the licensee's failure to include or address all motor manufacture's recommended and suggested maintenance for safety-related motors, including special maintenance for motors on emergency standby duty. Failure to consider such maintenance requirements is an apparent violation. (50-382/8501-03).

4. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. The one unresolved item disclosed during the inspection is discussed in paragraph 2.

5. Exit Interview

The NRC inspector met with the licensee representatives (denoted in paragraph 1) and the NRC resident inspectors at the conclusion of the inspection on January 11, 1985. The NRC inspector summarized the purpose, scope, and findings of the inspection.