

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-382/84-39

Docket: 50-382

Construction Permit: CPPR-103

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

Facility: Waterford Steam Electric Station, Unit 3

Inspection At: Taft, Louisiana

Inspection Conducted: July 1 through August 31, 1984

Inspectors: *W. L. Crossman* 10/29/84
for G. L. Constable, Senior Resident Inspector Date

W. L. Crossman 10/29/84
for T. A. Flippo, Resident Inspector Date

W. L. Crossman 10/29/84
for K. A. Whittlesey, Reactor Inspector Date

W. L. Crossman 10/29/84
for W. B. Jones, Reactor Inspector Date

Approved: *W. L. Crossman* 10/29/84
W. A. Crossman, Chief Date
Reactor Project Section B

Inspection Summary

Inspection Conducted July 1 through August 31, 1984 (Report 50-382/84-39)

Areas Inspected: Routine, announced inspection of: (1) Three Mile Island (TMI) open items; (2) followup on 50.55(e) items; (3) maintenance test witnessing; (4) inquiry team exit meeting; (5) review Condition Identification and Work Authorization (CIWA) closure; (6) high pressure safety injection operability check; (7) review of corrective actions; (8) nondestructive examination of concrete common foundation basemat; and (9) general employee training. This inspection involved 476 inspector-hours onsite by four NRC inspectors.

Results: Within the nine areas inspected, three violations were identified (Failure to Follow Procedures, paragraph 7; Failure to Ensure Operability of Safeguards System, paragraph 8; and Failure to Take Adequate Corrective Action to Preclude Repetition, paragraph 9).

DETAILS

Persons Contacted

Principal Licensee Employees

- R. S. Leddick, Senior Vice President, Nuclear Operations
- *R. P. Barkhurst, Plant Manager
- *T. F. Gerrets, QA Manager
- *L. F. Storz, Assistant Plant Manager, Operations and Maintenance
- *O. D. Hayes, Operations Superintendent
- *J. R. McGaha, Maintenance Superintendent
- *P. V. Prasankumar, Technical Support Superintendent
- *W. M. Morgan, Operations QA Supervisor
- S. A. Alleman, Assistant Plant Manager, Plant Technical Support
- D. E. Dobson, Project Manager
- F. J. Englebracht, Plant Administrative Manager
- J. N. Woods, Plant Quality Manager
- L. L. Bass, Project QA Engineer
- *G. E. Wuller, Onsite Licensing Coordinator
- *W. J. Baldwin, Operations QA
- *J. J. Denhevitz, Operations QA
- *L. W. Meyers, Operations
- *C. L. Skinner, Plant Quality
- *R. J. Bentley, Licensing
- *K. L. Brewster, Licensing

*Present at exit interviews.

In addition to the above personnel, the NRC inspectors held discussions with various operations, construction, engineering, technical support, and administrative members of the licensee's staff.

2. Plant Status

The Waterford 3 site is presently in the preoperational testing phase. Construction and startup are reported at 100% and 99% complete, respectively. Plant staff has accepted 113 out of 116 systems that are required for fuel load. The three remaining systems are system supports, seismic supports, and whip restraints.

3. Three Mile Island (TMI) Open Items

Most of the TMI lessons-learned were specifically addressed during the FSAR review process. At this time, an NRC inspection is in progress covering each of the remaining open items. The following are now considered closed.

II.F.1 - Additional Accident Monitoring Instrumentation

- Attachment 4 - Containment Pressure Monitor
- Attachment 5 - Containment Water Level Monitor
- Attachment 6 - Containment Hydrogen Monitor

II.F.2 - Inadequate Core Cooling Instrumentation

The item listed below still needs resolution before fuel load:

I.D.1 - Control Room Design

No violations or deviations were identified.

4. Followup on 50.55(e) Items

(Closed) SCD 96 - Failure of CVCS Pump Train A to Start on a Safety Injection Actuation System Signal

The licensee committed to submit an amended final report to the NRC concerning SCD 96. This reevaluation does not affect the previous commitments for continued testing of the relays; it will permit resolution of the prior concerns of the NRC inspector regarding cycle testing of replacement and installed relays. This amended final report has been evaluated by the NRC and found to be acceptable. SCD 96 is considered closed.

No violations or deviations were identified.

5. Maintenance Test Witnessing

The NRC inspectors witnessed the performance of portions of the following maintenance procedure:

ME-4-155 Reactor Trip Switchgear Breakers

The NRC inspectors verified that observed portions of the testing were conducted in accordance with approved procedures and evaluated the performance of licensee personnel conducting the tests.

Although there were no violations, this specific observation was made. Section 7.4.1 states, in part, the breaker opens in 80 milliseconds or less on loss of control power when field-tested. But Section 9.5 lists the breaker opening in 90 milliseconds (maximum) if field-tested. This discrepancy was pointed out to the licensee and corrective action has been completed by changing Section 9.5 to read 80 milliseconds (maximum) if field-tested. The licensee personnel conducting the tests were aware that the 80 milliseconds was the controlling time limit.

No violations or deviations were identified.

6. Inquiry Team Exit Meeting

On July 20, 1984, a meeting was held at the Waterford 3 site at the request of Mark Peranich of I&E. The purpose of the meeting was to discuss the scope and findings of the Waterford 3 Task Force Inspection Report 50-382/84-34. The following people attended the meeting:

L. L. Bass, LP&L Construction QA Manager
A. W. Cutrona, EBASCO QA Manager
P. L. Pitman, EBASCO QA Engineer
M. K. Yates, EBASCO Project Manager
R. G. Bennet, LP&L QA Engineer
R. G. Pittman, LP&L QA Engineer
J. Sleger, Jr., LP&L Executive Assistant
T. F. Gerrets, LP&L Corporate QA Manager
K. A. Whittlesey, NRC Inspector
G. L. Constable, NRC Senior Resident Inspector
T. A. Flippo, NRC Resident Inspector
R. P. Mullikin, NRC Inspector
N. S. Carns, LP&L Completion Manager
H. J. Kunis, Jr., EBASCO QA
R. S. Leddick, LP&L Sr. Vice President, Nuclear Operations
D. E. Dobson, LP&L Project Manager
K. W. Cook, LP&L Nuclear Support & Licensing Manager
W. A. Crossman, NRC Chief, Task Force, Waterford 3
J. T. Collins, NRC Regional Administrator, Region IV
M. Peranich, NRC Inquiry Team Leader

follow-up inspection will be conducted to close issues identified in this inspection report.

7. Review Condition Identification and Work Authorization (CIWA) Closure

On August 17, 1984, the NRC inspector performed a routine surveillance of Safeguards Room A. The NRC inspector noted the accumulation of oil below the inboard bearing seal on HPSI Pump A. A subsequent surveillance, on August 28, 1984, by the NRC inspector revealed an additional accumulation of oil below the inboard bearing oil seal. The NRC inspector discussed this with the shift supervisor on August 28, 1984, to determine why this condition had not been corrected. The shift supervisor referred to CIWA 008402 which described the oil leakage from the inboard oil bearing seal on HPSI Pump A. This CIWA was being maintained as open in the shift supervisor/control room supervisor files. The NRC inspector had reviewed this CIWA prior to talking with the shift supervisor and had determined that the CIWA had been closed out on August 1, 1984, and reviewed by plant engineering on August 6, 1984. The shift supervisor explained that he removed his copy of the CIWA from his files when he received the yellow CIWA copy from the planning and scheduling work center. Review of LP&L Administrative Procedure UNT-5-002, "Condition Identification and

Work Authorization," by the NRC inspector showed that the planning and scheduling work center should have contacted the shift supervisor/control room supervisor to remove his copy of CIWA 008402 from his files between the time the CIWA was closed out and the time the CIWA was reviewed by plant engineering. This particular CIWA remained on file in the control room a minimum of 22 days after it should have been removed. A new CIWA numbered 010522 was generated on August 28, 1984, by the operations department to initiate corrective action on HPSI Pump A inboard oil bearing seal.

This is a violation (50-382/8439-01).

8. High Pressure Safety Injection Operability Check

On August 17, 1984, the NRC inspector witnessed the nonemergency start of HPSI Pump B from Safeguards Room B. The NRC inspector noted that the attending reactor operator did not perform the required surveillance of the pump prior to its start. A surveillance of HPSI Pump B by the NRC inspector revealed that the oil bubbler for the inboard pump bearings was empty. LP&L Plant Operating Manual Procedure OP-9-008, Revision 3, "Safety Injection System," paragraph 4.2, requires that sufficient oil is available for the applicable HPSI pump bearings prior to each nonemergency start. Verification that sufficient oil is available to the pump bearings is accomplished by verifying that oil is available in the oil bubbler. This verification of pump operability was not performed prior to the above nonemergency start of HPSI Pump B. This resulted in the HPSI pump being operated in a condition that indicated insufficient oil availability to the inboard pump bearings.

This is a violation (50-382/8439-02).

9. Review of Corrective Actions

On August 27, 1984, the NRC inspector reviewed Potentially Reportable Event PRE-84P-026 which was generated as a result of HPSI Pump B being operated without oil indication for the inboard pump bearings. The immediate corrective actions initiated by this report were to refill the oil bubbler and retest HPSI Pump B using LP&L Operating Procedure OP-903-030, Revision 3, "Safety Injection Pump Operability Verification." The above actions were performed and the test results showed that the pump was operable. However, additional action was not taken to correct the condition that caused the oil loss from the bubbler. LP&L Administrative Procedure UNT-5-002, "Condition Identification and Work Authorization," paragraph 5.1.1, requires that abnormal conditions observed in the course of inspection, testing, maintenance, and operations should be identified and corrected using a CIWA.

The licensee's evaluation of this incident in Potentially Reportable Event PRE-84P-026 failed to identify that the oil leakage from the bubbler was abnormally high. A separate review of this incident by the NRC inspector revealed that approximately 1/2 cup of oil had been lost from the bubbler due to leakage during the previous 16 minutes the pump had been operated.

The NRC inspector discussed this matter with the licensee on August 28, 1984. The licensee commented that the oil bubblers used on the HPSI pumps have experienced minor leakage in the past and that maintaining proper oil level in the bubblers has not been a problem. The NRC inspector was concerned that these problems, which appear to be similar in nature, have not been reviewed to determine if the oil leakage could be detrimental to the operation of the affected pumps.

On August 28, 1984, after discussions with the NRC, the licensee initiated an investigation of possible generic problems with the oil bubblers using CIWA 10522.

This is a violation (50-382/8439-03).

10 Nondestructive Examination of Concrete Common Foundation Basemat

On July 10, 1984, a meeting was held between NRC staff, LP&L representatives, and representatives of Muenow and Associates, Inc. (Muenow). LP&L's proposed program for the nondestructive examination of cracks in the Waterford 3 concrete common foundation basemat was presented by R. A. Muenow of Muenow. As consultants to the licensee, representatives of Muenow contracted to perform nondestructive microseismic evaluation of cracks in the Waterford 3 basemat using the pulse-echo method. The intent of the program was to define the depth, width, length, and orientation of selected basemat cracks.

The following day, the NRC inspectors observed initial shots of a keyed construction joint located in the west cooling tower area. This construction joint of known configuration was used for calibration, as well as illustrative purposes. After the equipment was calibrated and the process was demonstrated, the consultants began taking data on selected basemat cracks. The final evaluation and report of data collected using this pulse-echo method of nondestructive examination will be submitted after completion to the applicant and reviewed by NRC staff.

No violations or deviations were identified.

11. General Employee Training

The NRC inspectors attended the licensee's general employee training for radiation workers (GET 2) to receive required training and determine if the program was being implemented as committed in Section 13.2 of the Final Safety Analysis Report (FSAR). The licensee's program consisting of the subjects shown below, appears to meet FSAR commitments.

- a. Radiation sources, measurement, and effects
- b. Exposure limits
- c. Dosimetry
- d. Contamination control
- e. ALARA
- f. Radiation safety and emergency response
- g. Worker's rights (10 CFR 19)

General employee training is conducted on a regular weekly basis, and is being presented to all designated employees and those individuals requiring access to radiation controlled areas. Retraining is required annually.

No violations or deviations were identified.

12. Site Tour

At various times during the course of this inspection period, the NRC inspectors conducted general tours of the Fuel Handling Building, Reactor Auxiliary Building, Turbine Building, and Reactor Building to observe ongoing maintenance and testing.

No violations or deviations were noted as a result of these tours.

13. Exit Interviews

The NRC inspectors met with the licensee representatives at various times during the course of the inspection. The scope and findings of the inspection were discussed.