APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-382/88-09 Operating License: NPF-38

Docket: 50-382

Licensee: Louisiana Power & Light Company (LP&L)
N-80
317 Baronne Street
New Orleans, Louisiana 70160

Facility Name: Waterford Steam Electric Station, Unit 3 (W3)

Inspection At: W3, Taft, Louisiana

Inspection Conducted: April 4-8, 1988

Inspectors: H F Bundy 4/26/88
for T. O. McKernon, Reactor Inspector, Test Programs Section, Division of Reactor Safety — Date

H F Bundy 4/26/88
H. F. Bundy, Reactor Inspector, Test Programs Section, Division of Reactor Safety — Date

Accompanied By: W. C. Seidle, Chief, Test Programs Section
Division of Reactor Safety on April 7-8, 1988

Approved: W. C. Seidle 4/26/88
W. C. Seidle, Chief, Test Programs Section
Division of Reactor Safety — Date

Inspection Summary

Inspection Conducted April 4-8, 1988 (Report 50-382/88-09)

Areas Inspected: Routine, unannounced inspection of the licensee's surveillance procedures and records and verification of reactor coolant system (RCS) leak rates.

Results: The procedures and records reviewed in the areas of inservice inspection of components and inservice testing of pumps and valves pursuant to 10 CFR 50.55a(g) and ASME Section XI appeared to satisfy all requirements. The procedures and records related to Technical Specifications required surveillances appeared to satisfy all requirements. However, an area of confusion relating to anomalies in calibration and control of measuring and test equipment was identified (paragraph 2). The NRC inspectors verified the adequacy of the licensee's calculating techniques for determining RCS leak rates.

DETAILS

1. Persons Contacted

LP&L

R. Barkhurst, Vice President, Nuclear/Site Director
*N. Carns, Plant Manager
*P. Backes, Special Assistant to Vice President
*P. Prasenkumar, Plant Technical Services Manager
*S. Alleman, Quality Assurance Manager
R. Starkey, Operations Superintendent
*T. Smith, Plant Engineering Superintendent
*G. Muller, Operational Licensing Supervisor
*D. Schultz, Operations Shift Technical Advisor Supervisor
G. Koehler, Operations Quality Assurance Supervisor
*D. Baker, Event Analysis and Response Supervisor
L. Bass, Technical Support Supervisor
*G. Robin, Inservice Inspection Coordinator
*A. Harris, Shift Technical Advisor
C. DeDeaux, Technical Specifications Coordinator

NRC

*W. Smith, Senior Resident Inspector
T. Staker, Resident Inspector
*E. Tomlinson, Nuclear Reactor Regulation
*W. C. Seidle, Chief, Test Programs Section, Division of Reactor Safety

The NRC inspectors also interviewed other licensee personnel during the inspection.

*Denotes those attending the exit interview on April 8, 1988.

2. Surveillance Procedures and Records (61700)

The purpose of this part of the inspection was to ascertain whether the surveillance of safety-related systems and components was being conducted in accordance with approved procedures as required by the licensee's Technical Specifications (TS), Inservice Inspection (ISI) Plan, and Inservice Testing (IST) Plan. Pursuant to this objective, the NRC inspectors reviewed the following licensee documents:

- 10 Year Inservice Inspection Program, Revision 3 (ISI Plan)
- W3 LP&L Pump and Valve Inservice Test Plan, Revision 5 (IST Plan)

The NRC inspectors then selected certain TS surveillance requirements and components listed in the ISI and IST Plans and reviewed the associated licensee test procedures and an appropriate number of test results records

for each procedure. The TS surveillance requirements of ISI or IST components together with the associated test procedures reviewed by the NRC inspectors are tabulated in the attachment.

The NRC inspectors determined that the required tests were being scheduled and performed as required in accordance with approved procedures. Acceptance criteria were specified in the procedures, and the records stated satisfaction of acceptance criteria. Appropriate instructions for returning equipment to service following testing were given. Also, selected test personnel were verified to have appropriate certifications. All requirements appeared to have been satisfied. However, anomalies in calibration and control of measuring and test equipment (M&TE) discovered in one test record are discussed below.

During a review of records pertaining to Surveillance Procedure MI-3-305, Revision 3, "Instrumentation Loop Check," dated October 24, 1986, for Bistable SG-IL-1113C, it was noted that Task Card No. 1, Note 1, indicated that one of the test equipment meters was out of tolerance. In particular, the record stated, ". . . as found data for SG-ILEI-1113C, TBB 19 and 20 is out of tolerance due to bad (out of tolerance) test equipment. No adjustments were made. As left data was taken with good test equipment." The NRC inspectors noted that five M&TE items were listed on the test record; Decade Box, MIET 124.006; Transmation 1040, MIET 76.022; Keithley, MIET 41.010; Fluke 8600, MIET 20.100; and Transmation 1040, MIET 76.028. During subsequent inspection, the NRC inspectors found that only two of the five test meters could have been suspect; these were Keithley MIET 41.010 and the Fluke 8600, MIET 20.100 meters. Through discussions with the M&TE supervisor, it was determined that no records of Condition Identified (CIs) or Nonconformance Evaluation Reports had been generated. The licensee's administrative procedures required the M&TE user to report suspect "out of tolerance" test equipment to the facility meter issue personnel.

When a suspect "out of tolerance" test equipment item is identified, a CI and a Nonconformance Evaluation Report are generated. In this manner a formal review of other test data taken with the suspect test equipment can be performed and an evaluation for safety-related concerns made. Since none of the M&TE equipment listed on the test record had CIs or Nonconformance Evaluation Reports generated during or after the usage period, it appeared M&TE calibration was in-tolerance. Further, although the as-found data were recorded using the suspect M&TE, the suspect M&TE was not identified on the test record.

Through discussions with the licensee, it was postulated that the involved technician recorded the "as-found" data with an out-of-tolerance test meter and then turned the suspect meter into the facility meter issue personnel. Upon receiving a good meter from the issue facility, the technician took and recorded the "as-left" data and the instrument identity on the task card. The technician did not record the identity of the test instrument with which the "as-found" data was measured. The licensee's Administrative Procedure MD-1-021, Revision 1, "M&TE Accountability," required the M&TE user to record the M&TE identity on the task card.

However, Adminsitrative Procedure MD-1-021, Revision 0, the procedure in effect during the surveillance, did not specifically require the recording of M&TE identity on the task card. The licensee stated that the general practice used by the I&C technicians is to record the identity of the M&TE upon completion of the procedure. If during the procedure, a suspect instrument is identified, the instrument is returned to the issue facility, and a good meter checked out. The procedure is then reperformed, in toto, using the in-tolerance instrument and the M&TE identity is recorded on the task card.

From the above discussion, there appears to be no safety significance in that the licensee took and recorded the as-left data with an in-tolerance meter. No adjustments were made to system instrumentation and the identity of the good M&TE was recorded on the task card.

However, it is significant to note that the licensee's procedures for M&TE accountability do not relate with the same specificity, in writing, as generally practiced. Revision 1 of the M&TE accountability procedure specifies that the identity of M&TE be recorded on the task card. However, the implementation of this procedure is left to the interpretation of the M&TE user. M&TE traceability is vital to a comprehensive M&TE program. If a general work practice is acceptable and has shown success in its effectuation, then confusion and errors can be avoided by incorporating the practice into the licensee's procedure. The NRC inspectors concluded that the licensee should consider a revision to the existing procedure to include more delineated guidance.

Within the scope of this inspection, no violations or deviations were identified.

3. Verification of Reactor Coolant System (RCS) Leak Rates (61728)

During this inspection, the NRC inspectors reviewed the licensee's procedure for RCS inventory leakage calculation. The following records for RCS inventory accountability were reviewed:

- OP-903-024, Revision 6, dated March 30, 1988, 0445 hours
- OP-903-024, Revision 6, dated March 30, 1988, 0710 hours
- OP-903-024, Revision 6, dated March 30, 1988, 1640 hours
- OP-903-024, Revision 6, dated March 30, 1988, 1758 hours
- OP-903-024, Revision 6, dated March 31, 1988, 0005 hours

The NRC inspectors verified that the licensee's calculating technique for determining RCS leak rates was satisfactory. By utilizing the licensee's RCS data and inputting this data into the NRC's RCSLK9 program, the NRC inspectors verified the correctness of the licensee's calculated identified and unidentified leak rates. For those leak rate results outside the limiting conditions for operation, the NRC inspectors reviewed the licensee's response and timeliness in identifying, isolating, and

reporting the incident to the NRC. In addition, the NRC inspectors verified that post-event leak rates were within the acceptable limits of the Technical Specifications.

Within the scope of this inspection, no violations or deviations were identified.

4. Exit Interview

The NRC inspectors met with licensee representatives denoted in Section 1 on April 8, 1988, and summarized the scope and findings of the inspection. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during the inspection.

ATTACHMENT

PROCEDURES AND RECORDS REVIEWED

Requirement/ Component	Description	Test Procedures
TS 4.1.2.2C	Verify correct actuation of auto valves in boron injection flow path on SIAS	OP-903-029, R4
TS 4.1.3.4C	Verify drop times for full-length CEAs	NE-02-020, R0
TS 4.3.2.1, Table 4.3-2, Item 2.b	Containment spray (CSAS) containment pressure high-high channel calibration	MI-3-201, R4 OP-903-107, R3
TS 4.3.2.1, Table 4.3-2, Item 7.b	SG level low and delta P high emergency feedwater (EFAS) trip channel calibration	MI-3-305, R3 MI-3-306, R4 MI-3-201, R4
TS 4.4.3.1.3a and b	Verify pressurizer heaters are automatically shed from emergency power sources on SIAS and verify heaters can be energized from control room	OP-903-028, R2
TS 4.4.6	Verify dissolved oxygen, chlorine, and fluorine are within limits	CE-2-006, R5
TS 4.5.1d	Verify SI tank isolation valves open when RCS pressure exceeds 535 psia and upon receipt of SI test signal	OP-903-025, R1 OP-903-029, R3
TS 4.5.2e1	Verify each auto valve in ECCS subsystem actuates to correct position on SIAS and RAS	OP-903-029, R3 OP-903-091, R2
TS 4.6.1.3c	Verify only one door in each containment air lock can be opened at a time	PE-5-024, R2 OP-903-113, R0
TS 4.6.2.2b	Verify that each containment cooling fan group starts automatically on SIAS and verify cooling water flow $\geq$ 1325 gpm	OP-903-029, R3
TS 4.7.3b	Verify each CCW/ACCW valve servicing safety-related equipment actuates to correct position on SIAS and CSAS test signals	OP-903-029, R3 OP-903-036, R4

Requirement/ Component	Description	Test Procedures
TS 4.8.2.1d	Verify 125 VDC battery capacity is adequate	ME-3-230, R5
TS 4.7.10.1.1f	Perform functional test of fire suppression water system by verifying each pump delivers 2000 gpm at 100 psid, cycling each valve in flow path not testable during plant operation, and sequential pump start to maintain system pressure at 96.5 psig	OP-903-056, R5 OP-903-077, R2
TS 4.7.10.1.3c	Inspection of diesel fire pumps 12 V starting batteries	ME-3-200, R2
IST/Charging Pump A	Test CVCS charging pump	OP-903-003, R6
IST/Valve SI-138A	Test valve in safety injection system	OP-903-032, R5
ISI	Administrative procedure for controlling ISI	NOEP-251, R0
ISI/Class 1 RCS Pressure Boundary	Perform RCS leak check prior to startup	QI-009-003, R1
ISI/Weld 04-012 (RC)	Perform UT inspection of weld	WTR-ISI-47, R0
ISI/Weld 17-039 (SI)	Perform UT inspection of weld	WTR-ISI-206, R0
ISI/Weld 42-022 (MS)	Perform UT inspection of weld	WTR-ISI-206, R0, FC1
ISI/Weld 48-001 (FW)	Perform UT inspection of weld	WTR-ISI-206, R0, FC1
ISI/Weld 58-002 (CS)	Perform PT inspection of weld	WTR-ISI-11, R0
ISI/Restraint ACR-462 (AC)	Perform visual inspection of restraint	WTR-ISI-8, R0
ISI/Spring Hanger FWSH-348 (FW)	Perform visual checks of spring hanger	WTR-ISI-8, R0