APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-382/84-38

Construction Permit: CPPR-103
Special Nuclear Material
License: SNM-1913

Docket: 50-382

Category: A2

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

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

Inspection At: Taft, St. Charles Parish, Louisiana

Inspection Conducted: August 20-24, 1984

Inspector: for Blaire Murray
H. D. Chaney, Radiation Specialist — Date 9/27/84

Approved: Blaire Murray
B. Murray, Chief, Facilities Radiological Protection Section — Date 9/27/84

for
W. A. Crossman, Task Leader, Region IV Task Force — Date 10/1/84

Inspection Summary

Inspection Conducted August 20-24, 1984 (Report 50-382/84-38)

Areas Inspected: Special, announced inspection of the licensee's actions to resolve previously identified inspection findings in NRC Inspection Reports 50-382/82-11, 82-12, 83-08, 83-22, 83-05, and 84-21 involving health physics and radioactive waste management activities; and selected NUREG-0737 requirements. The inspection involved 41 inspector-hours onsite by one NRC inspector.

Results: Within the three areas inspected, one violation was identified in one area (posting of Form NRC-3, see paragraph 4).

DETAILS

1. Persons Contacted

LP&L

*R. P. Barkhurst, Plant Manager
*S. A. Alleman, Assistant Plant Manager
*R. W. Kenning, Radiation Protection Superintendent
*W. M. Morgan, Nuclear Operations Quality Assurance (QA) Manager
*A. R. Roberts, Operations QA Engineer
*J. O. Woods, Plant Quality Manager
*R. E. Allen, Chemistry Engineer
*C. B. Hawkins, Radiochemistry Engineer
*D. E. Adams, Chemistry/Radiochemistry Engineer-Nuclear Services
*D. A. Landeche, ALARA Coordinator
*L. R. Simon, Radioactive Waste (RW) Engineer
*G. E. Wuller, Onsite Licensing Coordinator
*K. L. Brewster, Licensing Engineer
*E. M. Rollins, Radiological Control Unit Coordinator
*J. L. Etheridge, Corporate RW Engineer
*D. L. Hoel, Health Physics (HP) Supervisor
C. R. Hall, HP Supervisor
R. O. Lee, HP Instructor
*D. W. Herrin, Licensing Engineer

Others

*K. A. Whittlesey, NRC Reactor Inspector
D. O. Marpe, Systems Engineer, Consultant
B. V. Nougrad, Joint Test Group, Consultant
*N. E. DuBry, Nuclear Oversight Engineer, Middle South Utilities

*Denotes those present during the exit interview.

The NRC inspector also interviewed other Wat-3 administrative, operations, and training department personnel during this inspection.

2. Previously Identified Inspection Findings that were Satisfactorily Resolved

(Closed) Open Item (382/8211-11): Technical Specifications (TS) - Based on a review of the draft TS, the NRC's concerns in this area regarding RW effluent controls and environmental monitoring are resolved. This item is considered closed.

(Closed) Open Item (382/8211-12): Procedures - The licensee had completed issuance of all procedures for the operation, surveillance, and calibration of RW instrumentation. The licensee is currently revising selected RW instrumentation procedures to make them more efficient and less cumbersome. This item is considered closed.

(Closed) Open Item (382/8322-02): Gaseous and Liquid RW Systems ALARA Reviews - The licensee had performed two independent ALARA reviews of the Wat-3 gaseous and liquid RW systems. These reviews satisfy the NRC's concerns in this area. Licensee representatives indicated to the NRC inspector that identified system deficiencies would be monitored and evaluated as an operational ALARA data base. This item is considered closed.

3. Previously Identified Inspection Findings that Were Not Closed During This Inspection

a. Open Item that Could Impact on Initial Reactor Criticality

Open Item (382/8211-03): Air Cleaning Systems - This item was previously discussed in NRC Inspection Reports 50-382/82-11 and 84-21. The licensee had, since the last inspection, completed loading and testing of the air cleaning systems for the shield building, controlled ventilation system, fuel building, hot machine shop, and decontamination room. The remaining two systems (auxiliary building and containment) will be loaded and tested approximately 2 weeks prior to reactor criticality.

b. Open Items that Could Impact or Exceeding 5 Percent Power

Open Item (382/8405-02): NUREG-0737 (Item II.B.3), Postaccident Sampling Capability - This item was last discussed in NRC Inspection Report 50-382/84-21. At the time of this inspection, the licensee had finished modifying the containment air sampling system, but had not completed replacement of the sample return line mechanical connector referenced during the last inspection. The line that the mechanical connector is on (discharge to containment sump) will most likely carry undiluted reactor coolant during postaccident sampling activities and, therefore, should be replaced or seal-welded to ensure leak tightness.

Open Item (382/8405-03): NUREG-0737 - (Item II.F.1, Attachments 1 and 2) Noble Gas Effluent Monitor and Sampling of Plant Effluents - This item was previously discussed in NRC Inspection Report 50-382/84-21. The Office of Nuclear Reactor Regulation (NRR) has determined, in Supplemental Safety Evaluation Report No. 6 of NUREG-0787, that the above noted systems need to be operational prior to exceeding 5 percent power.

The licensee's high range (reactor accident) effluent monitoring systems associated with the following reactor systems/areas were determined to be acceptable:

" Spent Fuel Building - This monitoring system need not be operational until spent fuel is placed in the building.

" Condenser Vacuum Discharge - The licensee's low range monitoring system automatically diverts effluent releases to the main ventilation stack for monitoring and release upon a low range radioactivity alarm signal. The monitoring of gaseous releases at the condenser vacuum discharge satisfies Regulatory Guide (RG) 1.97 recommendations.

The licensee's high range effluent monitor for the main ventilation stack satisfies NUREG-0737 and RG 1.97 except for verification of representative sampling of the particulate and iodine grab sampling portion of the system. This portion of Open Item 382/8405-03 remains open pending the completion of plant ventilation stack high range effluent monitor and grab sample system representative sampling studies.

c. Open Items that Need not be Resolved Until After Issuance of the Facility Operating License

Open Item (382/8211-10): RW Instrumentation - This item was previously discussed in NRC Inspection Report 50-382/84-18. The NRC inspector was concerned regarding alarm reflash capabilities at trouble panel alarm L0210 located on control panel (CP) 36. The NRC inspector determined that the radiation monitoring system console (CP-6) located adjacent to CP-36 provided annunciated alarms for all radiation monitoring system alarms that are indicated on CP-36. Since each individual alarm must be acknowledged on CP-6, this appears to resolve the NRC's concerns in this area. This item is also being followed up by the Wat-3 NRC Resident Inspector during control room habitability evaluations. The remaining portion of this open item concerning representative media (liquid or gas) calibration of RW effluent monitors was discussed with the licensee's representatives. Procedures are being developed to provide for calibration of effluent monitors with appropriate gaseous and liquid calibration sources within 6 months after issuance of the facility operating license.

Open Item (382/8211-14): Radwaste and Transportation Activities - This item was previously discussed in NRC Inspection Report 50-382/84-18. The licensee is currently revising existing radioactive material transportation procedures to bring them into conformance with current 10 CFR Parts 20.311 and 71 requirements. The

licensee has purchased a computerized RW classification, characterization, and Department of Transportation shipping software system to ensure compliance with the requirements of 10 CFR Parts 20.311, 61, and 71. This RW classification and characterization program (RADMAN Topical Report - WMG-102, May 1983) had been reviewed and found conditionally acceptable by the NRC Office of Nuclear Material Safety and Safeguards. The licensee intends to have a consultant provide semiannual isotopic studies of individual waste stream for waste classification purposes. This item is considered open pending the development of implementing procedures for the above noted programs.

4. Radioactive Waste Management Activities

The licensee's RW management program was reviewed to determine compliance with the Final Safety Analysis Report (FSAR) commitments, 10 CFR Part 61, and 10 CFR Part 50, Appendix A, "General Design Criteria," 64 requirements.

The NRC inspector specifically reviewed the licensee's facilities for deboronization of liquids, solidification of radioactive liquids (sludges and resins), and the compaction of dry active waste (DAW). These facilities and their equipment are discussed in Section 11 of the FSAR. The licensee had installed a portable demineralization system inside the existing waste solidification area to provide for further effluent deboronizations prior to discharge to the environment. The licensee indicated that the portable system was necessary to meet established nonradiological boron limits in liquid discharges. After reviewing the licensee's portable solidification facility (Section 11.4.4.2 of the FSAR) and the interim dry compacted waste facility (Section 11.4.8.1 of the FSAR), the NRC inspector discussed with the licensee's representatives the following health physics aspects of the two facilities:

" potential unmonitored radioactive material release points involving the:

- solidification liner ventilation system (portable solidification system)

- DAW compactor ventilation system

- solidification test specimen laboratory in the interim dry compacted waste facility

The licensee's representative acknowledged that even though monitoring equipment was not in place and operational procedures did not address some of these concerns, they would be addressed prior to operation. During this review, it was also noted that the FSAR description of the DAW

compactor's filtered ventilation system (Section 11.4.8.1) does not agree with the system found in place on the compactor. The FSAR states that the filtered ventilation system is a closed loop system. The ventilation system found on the compactor is an open system. This was discussed with NRR and they will be responsible for its final resolution.

The NRC inspector also noted during tours of the licensee's facilities that Form NRC-3, "Notice to Employees," was not sufficiently posted to allow employees to observe this posting on the way to and from places of work. 10 CFR Parts 19.11(c) and (d) and 50.7(e) required that:

" 19.11(c) - "Each licensee and applicant shall post Form NRC-3, (Revision 6-82 or later) "Notice to Employees," as required by Parts 30, 40, 50, 60, 70, 72, and 150 of this chapter."

" 19.11(d) - "Documents, notices, or forms posted pursuant to this section shall appear in a sufficient number of places to permit individuals engaged in licensed activities to observe them on the way to or from any particular licensed activity location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered."

" 50.7(e) - "Each licensee, permittee and each applicant shall post Form NRC-3, 'Notice to Employees,' on its premises. Posting must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work . . . ."

The NRC inspector traced worker routes from the employee automobile parking areas to various working group work areas/offices. The following routes (routinely used by the majority of site personnel) did not provide adequate posting of Form NRC-3:

" via the security access point in the administration building to:

- the reactor control room
- the inplant HP office on the +7 elevation
- other plant areas via the +21 elevation access
- the turbine building
- the chemistry office on the +7 elevation
- the instrument and controls trailer inside the protected area
- the service building/machine shop

The licensee noted to the NRC inspector that Form NRC-3 was posted in the security building and administrative building. This specific posting in the security building was located at a height of about 7 feet from the floor in a remote corner of the security building which made the form not readily observable by personnel entering or leaving the controlled access

to the protected area. The administrative building was noted to have adequate posting for employees with work areas in the administrative building. The posting was located on bulletin boards throughout this building.

This lack of sufficient posting of Form NRC-3 constitutes a violation of the requirements set forth in both 10 CFR Parts 19.11(c) and (d) and 50.7(e) (382/8438-01).

5. Exit Interview

The NRC inspector met with the licensee's representatives denoted in paragraph 1 at the conclusion of the inspection on August 24, 1984. The NRC inspector noted to the licensee that no open items associated with radiation protection or radioactive waste remain open that will impact on fuel load, and emphasized the need for the licensee to resolve the remaining open items discussed in paragraph 3.