

JUL 23 1985

Docket No.: 50-382

Mr. R. S. Leddick
Louisiana Power and Light Company
317 Baronne Street, Mail Unit 17
New Orleans, Louisiana 70160

Dear Mr. Leddick:

SUBJECT: REVISED AUDIT AGENDA FOR WATERFORD 3 SAFETY PARAMETER DISPLAY SYSTEM

The audit of the Waterford 3 Safety Parameter Display System originally scheduled for July 29-30, 1985 will now be conducted at the site on September 25-29, 1985.

The revised agenda (Enclosure) is being provided so that you may make preparations for the audit.

If you have any questions, contact J. Wilson, the NRC Project Manager at (301) 492-7702.

Sincerely,

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George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

Enclosures:
As stated

cc: See next page

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ENCLOSURE

REVISED AUDIT PLAN FOR
EVALUATION OF THE
WATERFORD 3
SAFETY PARAMETER DISPLAY SYSTEM

Background

All holders of operating licenses issued by the Nuclear Regulatory Commission (licensees) and applicants for an operating licensee (OL) must provide a Safety Parameter Display System (SPDS) in the control room of their plant. The Commission approved requirements for the SPDS are defined in Supplement 1 to NUREG-0737.

The purpose of the SPDS is to provide a concise display of critical plant variables to control room operators to aid them in rapidly and reliably determining the safety status of the plant. NUREG-0737, Supplement 1, requires licensees and applicants to prepare a written safety analysis describing the basis on which the selected parameters are sufficient to assess the safety status of each identified function for a wide range of events, which include symptoms of severe accidents. Licensees and applicants shall also prepare an implementation plan for the SPDS which contains schedules for design, development, installation, and full operation of the SPDS as well as a design verification and validation plan. The safety analysis and the implementation plan are to be submitted to the NRC for staff review. The results of the staff's review are to be published in a Safety Evaluation Report (SER).

Section 18.2 of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," describes how the staff performs SPDS reviews for applicants of operating licenses. The staff's review process will evaluate the (1) safety analysis report, (2) the implementation plan, and (3) the verification and validation (V&V) plan. In addition, three separate audit meeting/site visits, as described below, may be arranged through the Division of Licensing Project Manager. As dictated by the comprehensiveness of the applicant/licensee's documentation and the schedule for design and implementation of the SPDS, the objectives of these audits may be met in fewer site visits.

Design Verification Audit:

The purpose of this audit meeting is to obtain additional information required to resolve any outstanding questions about the Verification and Validation (V&V) Program, to confirm that the V&V Program is being correctly implemented, and to audit the results of the V&V activities to date. At this meeting, the applicant should provide a thorough description of the SPDS

design process. Emphasis should be placed on how the applicant is assuring that the implemented SPDS will: provide appropriate parameters, be isolated from safety systems, provide reliable and valid data, and incorporate good human engineering practice.

Design Validation Audit:

After review of all documentation, an audit may be conducted to review the as-built prototype or installed SPDS. The purpose of this audit is to assure that the results of the applicant/licensee's testing demonstrate that the SPDS meets the functional requirements of the design and to assure that the SPDS exhibits good human engineering practice.

Installation Audit:

As necessary, a final audit may be conducted at the site to ascertain that the SPDS has been installed in accordance with the applicant/licensee's plan and is functioning properly. A specific concern is that the data displayed reflect the sensor signal which measures the variable displayed. This audit will be coordinated with and may be conducted by the NRC Resident Inspector.

Based on the advanced state of the Waterford 3 design, the staff plans to do a combined Design Verification and Design Validation audit on September 25-27, 1985.

NRC Audit Team

The NRC Audit Team will consist of a representative from the Human Factors Engineering Branch, assisted by two consultants from Lawrence Livermore National Laboratory (LLNL).

Agenda

Wednesday, September 25, 1985:

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| 2:00 P. M. | Entrance briefing by NRC, introductions, discussion of audit |
| 2:20 P. M. | agenda. |
| 2:30 P.M. | Short presentation by Louisiana Power and Light (LP&L) |
| 3:30 P.M. | describing the design process and current status of the |
| | SPDS; definition of the boundaries of SPDS vis-a-vis the |
| | Plant Monitor Computer. |
| 3:30 P.M. | LP&L presentations describing details of the design program |
| 5:30 P.M. | for SPDS with emphasis on: |
| | 1. Human factors analysis, standards, and criteria used |
| | in the design process, |
| | 2. reliability; |
| | (a) design characteristics, |
| | (b) methods used to estimate reliability, |
| | 3. data validation methodology and its effectiveness |
| | across normal and abnormal conditions, |

Thursday, September 26, 1985:

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|------------|--|
| 8:30 A.M. | Description of Verification and Validation Program |
| 12:30 P.M. | including: |
| | 1. Description of V&V team and demonstration of |
| | independence from the design team, |
| | 2. scope and depth of V&V Program, |
| | 3. available documentation for completed tasks and |
| | phases, |

4. test cases for validation of SPDS parameters and how they demonstrate the representativeness and useability of selected parameters,
5. human factors aspects,
6. plans for and/or results of dynamic simulator testing.

1:30 P.M.

NRC questions and review of V&V documentation,

5:30 P.M.

Short tour of control room or simulator.

Friday, September 27, 1985:

8:30 A.M.

Demonstration of SPDS page formats in TSC/EOF/Simulator.

12:00 P.M.

Walkthrough of a plant-specific EOP that involves confirmation of containment isolation.

1:00 P.M.

NRC audit of displays, display formats, interface devices, access and response times, etc.

3:30 P.M.

3:30 P.M.

NRC caucus.

4:00 P.M.

Exit briefing.