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April 15, 1985
ST-HL-AE-1228
File No.: G9.15

Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
NRC Question Responses and Additional Information
in Regard to DCRDR

Reference: Letter from HL&P to NRC; ST-HL-AE-1188; February 26, 1985; STP Units 1 & 2 - NRC Question Responses; M. R. Wisenburg

Dear Mr. Knighton:

Houston Lighting and Power is pleased to provide:

(1) Responses to Question 620.02N, Parts h, i and k (Attachment 1);

(2) Resubmittal of Responses to Question 620.02N, Parts a and j (Attachment 2);

(3) Control Room Design Review Human Engineering Discrepancy Resolution Report (Attachment 3); and

(4) Control Room Design Review Executive Summary, Addendum 1 (Attachment 4).

Integration of many disciplines were involved in producing these responses. Therefore, we request that you forward a copy of the responses to the Procedures and Systems Review Branch (PSRB), the Instrumentation and Control Systems Branch (ICSB) and the Human Engineering Branch (HFEB).

W2/NRC1/s

A003
1/1

If you have any questions please contact Mr. M. E. Powell at (713) 993-1328.

Very truly yours,

M. R. Wisenburg
Manager, Nuclear Licensing

AND/yd
Attachments:
(1) Responses to Question 620.02N, Parts h, i and k
(2) Resubmittal of Question 620.02N, Parts a and j
(3) CRDR Human Engineering Discrepancy Resolution
(4) CRDR Schedule (Section 5.0 of Executive Summary Report

W2/NRC1/s

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cc:

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Attachment 1

Response to Question
620.02N (Parts h, i and k)

Question 620.02N

Provide the following information and clarification regarding your summary report for the Detailed Control Room Design Review (DCRDR) submitted April 12, 1984:

h. Discuss the resolution of the three category "A" human engineering deficiencies regarding:

(1) The green Rototellite indicator lights which cannot be distinguished when illuminated;

(2) The bypass and inoperable status light legend which are unreadable due to narrow stroke width and inadequate character separation and line spacing; and

(3) The legend messages containing more than three lines of text.

i. Discuss the results of the resolution of all unresolved human engineering deficiencies in categories "B", "C", "D", and "E".

k. Your present schedule is stated in general terms for completion of all planned DCRDR work. Provide a more specific schedule for implementation of corrective actions for human engineering deficiencies.

RESPONSE

h. Dispositions of the category "A" human engineering discrepancies (HEDs) have been updated and are included in the CRDR Human Engineering Discrepancy Resolution Report (Attachment 3). The three category "A" HED's questioned here are addressed on pages A-4 and A-5 of Appendix A of Attachment 3.

i. Dispositions of the category "B", "C", and "D" human engineering deficiencies (HEDs) have been updated and are included in the CRDR Human Engineering Discrepancy Resolution Report (Attachment 3). Category "E" criteria are those checklist items that could not be reviewed prior to the control room completion. These include items such as lighting, sound, and communications. The schedule for completion of review of Category "E" criteria is provided in response to item k below. Any HEDs resulting from review of Category "E" criteria will be addressed in the supplementary executive summary report.

k. The CRDR Executive Summary Report Section 5.0, Schedule, will be revised by an Addendum (See attachment 4). The addendum provides a specific schedule for implementation of corrective actions and resolution of HEDs. The schedule will be updated (bi-annually) to reflect the ongoing status.

Attachment 2

Resubmittal of Question
620.02N, Parts a and j
(this supercedes the Responses
provided for these Question Parts
in letter ST-HL-AE-1188, February 26, 1985)

Question 620.02N

Provide the following information and clarification regarding your summary report for the Detailed Control Room Design Review (DCRDR) submitted April 12, 1984.

a. Your systems function and task analysis (SFTA) was performed through document reviews, briefings, and walk-throughs on the mock-up and updated using the revised mock-up as reported in the SFTA Validation Report. Because the SFTA was not based on upgraded Emergency Operating Procedures (EOPs) required by Supplement 1 to NUREG-0737, and because EOPs are not typically available at early stages of design and construction, but should be available prior to licensing, please confirm, after EOPs are finalized, that information and control function needs have been adequately identified and are satisfied by available instrumentation and controls.

j. Provide justification and rationale for using random checks rather than 100 percent checks of items which cannot be completed until the control room and/or simulator is operational.

RESPONSE

a. The development of the South Texas Project Electric Generating Station (STPEGS) EOPs are based on Revision 1 of the Westinghouse Owners Group (WOG) Emergency Response Guidelines (ERGs). During the conversion process the instrumentation and control requirements of the ERGS are compared with the Regulatory Guide 1.97 equipment to develop both the normal and alternate indications available to the operators. Prior to final approval of the STPEGS EOPs, they will be placed through a verification and validation program as specified by Supplement 1 to NUREG-0737. This program will be described in detail in the Procedure Generation Package scheduled for submission in June of 1985. This program will confirm that the instrumentation and control function needs have been adequately identified and satisfied. The supplementary CRDR executive summary report will address the results of the EOP validation, and any resulting Human Engineering Discrepancies including dispositions.

j. All of the following items have been or are in the process of being implemented through engineering drawings, data sheets, and specifications:

- labels
- annunciator tiles
- demarcation painting
- meter scales
- legend light engravings and "closed corner" markings
- recorder charts, and
- vertical meter pointer color.

Each of these are designed and controlled using documents which undergo 100% review for compliance to the STP CRDR Criteria prior to issue for purchase, fabrication, and/or installation. This is a controlled design process and the purchase, fabrication, and/or installation of these items are governed by the STP Quality Assurance Program. Sample checks will be performed as identified in the CRDR Executive Summary Report as an additional assurance measure.

Attachment 3

CRDR Human Engineering
Discrepancy Resolution
Report