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Georgia Power

the southern electric system

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March 31, 1988

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

PLANT VOGTLE - UNIT 1
NRC DOCKET 50-424
OPERATING LICENSE NPF-68
SUPPLEMENT TO CONTROL ROOM DESIGN REVIEW
SUPPLEMENTAL SUMMARY REPORT

Gentlemen:

By letter SL-4181 dated February 29, 1988, Georgia Power Company (GPC) submitted to the NRC a supplemental summary report on the Vogtle Unit 1 control room design review as required by Operating License NPF-68, License Condition 2.C(7)c. In that letter GPC indicated that additional operator surveys were received after the Detailed Control Room Design Review Report (DCRDR) had been written. Further, we committed that a supplemental report would be submitted to the NRC by April 1, 1988, should results of the additional operator surveys have a significant impact (i.e., more than a 10% increase in Human Engineering Discrepancies (HEDs) noted) on the DCRDR provided. The additional operator surveys have been analyzed and did reveal additional HEDs. Accordingly, GPC hereby submits a supplemental report which discusses the results of the additional operator surveys.

Six copies of the enclosed report are provided for your convenience. A copy of the report is being provided to NRC Region II for its review.

Should there be any questions in this regard, please contact this office at any time.

Sincerely,

L. T. Gucwa / for
L. T. Gucwa

JAE/lm

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U. S. Nuclear Regulatory Commission
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Enclosure

c: Georgia Power Company
Mr. P. D. Rice
Mr. G. Bockhold, Jr.
GO-NORMS

U. S. Nuclear Regulatory Commission
Dr. J. N. Grace, Regional Administrator
Mr. J. B. Hopkins, Licensing Project Manager, NRR (2 copies)
Mr. J. F. Rogge, Senior Resident Inspector-Operations, Vogtle

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ENCLOSURE

PLANT VOGTLE - UNIT 1
NRC DOCKET 50-424
OPERATING LICENSE NPF-68
SUPPLEMENT TO CONTROL ROOM DESIGN REVIEW
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MAR 31 1988

CRDR SUPPLEMENTAL REPORT SURVEY RESULTS

This report revises data on previously reported survey results concerning cumulative effects of minor Human Engineering Discrepancies. The previous report is shown, followed by the updated information. The leading number is the Human Engineering Discrepancy number for reference to the Detailed Control Room Design Review report.

1222 In the event of a reactor trip, the tile associated with the event illuminates. Other tiles illuminate, counter to 0700.

No operator reported a problem with this design feature. No action is planned.

1222 Rx Trip First-out -- revised information

Ten percent of operator surveys indicated a problem with this annunciator. Engineering work is in progress to provide a separate acknowledge/reset control for this annunciator, since some comments concerned the loss of first out data when the other annunciators sharing a control were reset. This change should largely alleviate the problem. Since this annunciator provides the primary operator information on the occurrence of a Safety Injection, in support of the Emergency Operating Procedures, no further action is planned, beyond the individual control.

1282 All annunciators should be recorded on hard copy and where multi-input annunciators are used an alarm printout should identify the individual alarm inputs in the alarm condition.

Only 20% felt such a feature would be beneficial. Others cited problems with noise, printer reliability, and review time against such a feature. Based on a minimal support from operators for such a feature and the complete lack of such a feature in the system design, no action is planned.

1282 Annunciator hard copy -- revised information

Thirty-nine percent of the operators felt a hard copy would be beneficial. However the problems cited were related to lack of reflash capability rather than a hard copy. An engineering review has been initiated to determine the technical feasibility of providing a hard copy printout and expanded reflash capability.

1318 The following parameters, as identified in the ICCR, are not indicated in the control room: 1) RCP seal INJ temp, 2) RCP ACCW thermal barrier flow, 3) CCW flow to RHR HX, 4) Spent fuel pool level, 5) Spent fuel cooling water flow.

No operators reported any problem with this feature. No action is planned.

1318 Spent fuel pool level indication -- revised information

Ten percent of operator surveys indicated a desire for control room indication of spent fuel pool level. However no spent fuel is present and the pool is drained, so the desire is strictly hypothetical, not based on actual operations. An engineering review has been initiated to determine the technical feasibility of providing a control room display of this level.

1249 Use of color, colors used on both the proteus and the ERF CRTS to convey information are not consistent in use and meaning with other color codes (Red and Green) in the control room.

Only one operator felt that had ever been a problem, and that had not resulted in a misinterpretation. To further reduce the possibility of confusion the alarm state for valves was set as open, so that the red=open=alarm color convention is preserved. No further action is planned on this item.

1249 ERF color conventions -- revised information

Eighteen percent of operators reported problems, but none reported any actual misinterpretation. The previously reported change to set the alarm state to match the normal on/off color convention should prevent further problems.

1240 The proteus operating procedure 13504-1 , Rev. 0 does not describe the overall computer system, and the computer system components with which the operator can interface.

Only one supervisor felt the Proteus procedure was unsatisfactory and that concern dealt with system startup following a computer 'crash' ; a function normally performed by system engineers and technicians, not Control Room Operators. The procedure will be reviewed for potential improvement in this area.

1240 Proteus procedure -- revised information

Twenty-one percent of operators reported problems with the Proteus computer operating procedure. The problems stem from the brief treatment of normal operations in the procedure, and the relatively difficult operator interface software. The procedure will be revised to address these problems.

1244 System status feedback, the proteus does not provide feedback to the operator as to computer system status (i.e. run, stop, failed, on line).

Half the survey indicated a problem with this. The Proteus fails with the current display; data is not updated and the clock on screen stops changing. The failure is not obvious until the clock error is noticed or some operator input is attempted. By contrast the ERF computer screen blanks out after a 15 second interruption of computer data. An Engineering review has been initiated to develop a computer failure indication.

1244 Proteus computer status -- revised information

Sixty-four percent of operators reported problems with the lack of computer status information. As previously reported, an engineering review has been initiated to develop a computer failure indication.

1270 Provisions are not included to provide upon operator request, printouts by alarm group (eg. SYSTEM, SUBSYSTEM, COMPONENT).

While 26% of operators felt this would be beneficial, hardware limitations on changes preclude significant improvement. See HED 1267 for more information. N) immediate action is planned.

1270 Proteus alarm groups -- revised information

Half the operators felt this would be beneficial. However the system does have this capability. The deficiency in the operating procedure, in conjunction with the relatively 'unfriendly' software has prevented effective use of its features. The procedure revision (HED 1240) will help resolve this problem.