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GE Nuclear Energy

ABWR

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Fax No. _____

To Chet Poslusny /
Greg Galletti

This page plus 2 page(s)

From Cal Tang

Mail Code _____
175 Curtner Avenue
San Jose, CA 95125

Phone (408) 925- 6901

FAX (408) 925-1193
or (408) 925-1687

Subject Revised 18 F Introduction
for discussion.

Message Please see attached note.

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ABWR Standard Plant

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18F.1 INTRODUCTION

This appendix contains the results of an analysis of information and control needs of the main control room operators. The analysis is based upon the operation strategies given in the ABWR Emergency Procedure Guidelines (EPGs) as presented in Appendix 18A and upon the significant operator actions determined by the Probabilistic Risk Assessment (PRA) and given in Appendix 19D.7. The minimum inventory of controls, displays and alarms from this analysis are presented in Tables 18F-1 through 18F-3 of this appendix. The information and controls identified from this analysis do not necessarily include those from other design requirements (such as those from Section 18.4.11, SPDS).

Information and control needs for each operation instruction or action were developed through task analyses conducted in the following manner:

- Each specific step in the EPGs (referred to as the EPG step) or specific operator action referenced in the PRA (herein referred to as the PRA step) was individually identified.
- For each EPG step and PRA action, a summary description of the step or operator action was developed.
- Information needs of the operator to perform the specific EPG step or PRA operator action were then identified.
- Next, the control functions that the operators perform to execute the actions specified in the EPG step or PRA operator action were identified.
- The plant process parameters or other displays that are needed for execution of the individual EPG step or PRA operator action, were then identified.
- Similarly, the controls needed for the execution of the step, were identified; and
- Annunciators necessary for the execution of the step, were identified.

- Operator aids, such as supplementary procedures or other information needed for the execution of the step, were identified.
- Displays used to provide a feedback to the operators to confirm that the specified control functions have been initiated or accomplished, were identified.
- Position of control devices that provide feedback to the operators to confirm that proper controls are manipulated to the correct positions, were identified.
- Annunciators which provide feedback to the operators to confirm that proper control actions are initiated or accomplished, were identified; and
- Operator aids, which provide feedback to the operators to confirm that proper control actions are initiated or accomplished, were identified.

Based upon the results of those operator task analyses, the listings of controls, displays and alarms that will be provided in the implemented ABWR design to support execution of the EOPs and PRA significant operator actions, (as presented in Tables 18F-1, 18F-2, and 18F-3), were generated.