

ENCLOSURE 4

Westinghouse Non-Proprietary Class 3

APP-GW-GLR-136-NP, Rev. 1

“AP1000 Human Factors Program Implementation for the Emergency Operations Facility and Technical Support Center”

(Non-Proprietary)

AP1000 DOCUMENT COVER SHEET

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*Approval of the responsible manager signifies that document is complete, all required reviews are complete, electronic file is attached and document is released for use.

Westinghouse Non-Proprietary Class 3

APP-GW-GLR-136-NP
Revision 1

October 2007

**AP1000 Human Factors
Program Implementation for
the Emergency Operations
Facility and Technical
Support Center**



APP-GW-GLR-136-NP
Revision 1

**AP1000 Human Factors Program Implementation for the
Emergency Operations Facility and Technical Support
Center**

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October 2007

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LIST OF ACRONYMS AND ABBREVIATIONS

The following abbreviations and acronyms are defined to allow an understanding of their use within this document.

COL	Combined Operating License
DCD	Design Control Document
EOF	Emergency Operations Facility
HFE	Human Factors Engineering
HSI	Human-System Interface
MCR	Main Control Room
OER	Operating Experience Review
TSC	Technical Support Center

1 PURPOSE

Chapter 18 of APP-GW-GL-700, "AP1000 Design Control Document" (Reference 1), describes the human factors engineering (HFE) program. Section 18.2.1.3 of Reference 1 lists the applicable facilities included in the scope of the AP1000 HFE program. Included in the list are the Emergency Operations Facility (EOF) and the Technical Support Center (TSC). The purpose of this document (APP-GW-GLR-136) is to address Combined Operating License (COL) Information Item 18.2-2, "Design of the Emergency Operations Facility." This document describes the method used to apply the AP1000 HFE program to both a TSC and an EOF that are used to support AP1000 plant(s).

1.1 REVISION HISTORY

This revision is provided to resolve administrative comments provided by NuStart.

2 HFE PROGRAM MANAGEMENT, AP1000 DCD 18.2

2.1 COMBINED LICENSE INFORMATION

Section 18.2.6.2 of Chapter 18 in Reference 1, the “AP1000 Design Control Document” (DCD), lists the following COL Information Item, which is COL Information Item 18.2-2 of Tier 2 Table 1.8-2.

(18.2-2) “The Combined License applicant referencing the AP1000 certified design is responsible for designing the emergency operations facility, including specification of the location and communication with the facility, in accordance with the AP1000 human factors engineering program.”

2.2 BACKGROUND INFORMATION

Requirements for emergency response capability for the TSC and the EOF are specified in NUREG-0696, “Functional Criteria for the Emergency Response Facilities” (Reference 2); NUREG-0654, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants” (Reference 3); and NUREG-0737, “Supplement 1: Requirements for Emergency Response Capabilities” (Reference 4).

2.3 CURRENT STATUS

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2.4 DESIGN PLAN

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2.5 DCD TIER 2 MARKUPS

2.5.1 Combined License Information Items

The following words replace those provided in Section 18.2.6.2 of Revision 16 of the DCD:

18.2.6.2 Emergency Operations Facility

The Combined License information requested in this subsection has been partially addressed in Reference 9 (APP-GW-GLR-136). No additional work is required to address the information as delineated in the following paragraph:

Reference 9 identifies and addresses the limited scope of functions and tasks to which the AP1000 Human Factors Engineering Program Plan (Reference 8) will be applied to TSCs and EOFs that support an AP1000 plant.

The following activities are to be addressed by the Combined License applicant:

Specific information regarding the location of the emergency operations facility and emergency operations facility communications will be provided by the Combined License applicant to address the Combined License information requested in this subsection.

The following words represent the original Combined License Information Item commitment, which has been addressed as discussed above.

The Combined License applicant referencing the AP1000 certified design is responsible for designing the emergency operations facility, including specification of the location and communication with the facility, in accordance with the AP1000 human factors engineering program.

Add Reference 9 to Section 18.2.7 as follows:

18.2.7 References

9. APP-GW-GLR-136, Rev. 0, "AP1000 Human Factors Program Implementation for the Emergency Operations Facility and Technical Support Center," Westinghouse Electric Company LLC.

Modify Table 1.8-2 as follows:

Table 1.8-2 (Sheet 12 of 13)

**SUMMARY OF AP1000 STANDARD PLANT
COMBINED LICENSE INFORMATION ITEMS**

Item No.	Subject	Subsection	Addressed by Westinghouse Document	Action Required by COL Applicant	Action Required by COL Holder
18.2-2	Design of the Emergency Operations Facility	18.2.6.2	APP-GW-GLR-136	Yes	Yes

3 REFERENCES

1. APP-GW-GL-700, Rev. 16 (Non-Proprietary), "AP1000 Design Control Document," Westinghouse Electric Company LLC.
2. NUREG-0696, "Functional Criteria for the Emergency Response Facilities", U.S. Nuclear Regulatory Commission, February 1981.
3. NUREG-0654, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," U.S. Nuclear Regulatory Commission.
4. NUREG-0737, "Supplement 1: Requirements for Emergency Response Capabilities", U.S. Nuclear Regulatory Commission, January 1993.
5. APP-OCS-GBH-001, Rev. A (Proprietary), "AP1000 Human Factors Engineering Program Plan," Westinghouse Electric Company LLC.
6. NUREG-0711, Rev. 2, "Human System Interface Program Review Model," U.S. Nuclear Regulatory Commission.
7. APP-OCS-GGR-110, Rev. 0 (Proprietary), "AP1000 Technical Support Center and Emergency Operations Facility Workshop," Westinghouse Electric Company LLC.
8. APP-OCS-J1R-110, Rev. 0 (Proprietary), "Operational Sequence Analysis Methodology," Westinghouse Electric Company LLC.
9. APP-GW-GLR-082, Rev. 0 (WCAP-16801-P) (Proprietary), "Execution and Documentation of the Human System Interface Design Implementation Plan," Westinghouse Electric Company LLC.
10. APP-OCS-J1-002, Rev. 0 (Proprietary), "AP1000 Human System Interface Design Guidelines," Westinghouse Electric Company LLC.