CHAPTER 13

CONDUCT OF OPERATION

This chapter provides information relating to the preparations and plans for operation of the AP1000. Its purpose is to provide reasonable assurance that the plant will establish and maintain a staff of sufficient size and technical competence and that operating plans provide reasonable assurance of adequate protection of the public health and safety.

13.1 Organizational Structure of Applicant

The organizational structure must be consistent with the human system interface design assumptions. See Section 1.8 and Chapter 18 for interface requirements pertaining to organizational structure.

13.1.1 Combined License Information Item

Combined License applicants referencing the AP1000 certified design will address adequacy of the organizational structure.

13.2 Training

Chapter 18, Section 18.10 references WCAP 14655, "Designer's Input for the Training of the Human Factors Engineering Verification and Validation Personnel." This document describes input from the designer on the training of the operations personnel who participate as subjects in the human factors engineering (HFE) verification and validation. The WCAP also describes how training insights are passed from the designer.

13.2.1 Combined License Information Item

Combined License applicants referencing the AP1000 certified design will develop and implement training programs for plant personnel. This includes the training program for the operations personnel who participate as subjects in the human factors engineering verification and validation. These Combined License applicant training programs will address the scope of licensing examinations as well as new training requirements.

13.3 Emergency Planning

See subsection 1.2.5 for the locations of the technical support center, the operations support center and the decontamination facilities. See Section 9.4 for a description of the HVAC systems for the main control room/control support area and the annex building. See Section 18.8 for the high level requirements for the technical support center and the operations support center. See Section 7.5 for identification of plant variables that are provided for interface to the emergency planning areas.

Communication interfaces among the main control room, the technical support center and the emergency planning centers are discussed in subsection 13.3.1.

Staffing of the emergency operations facility occurs consistent with current operating practice and with revision 1 of NUREG-0654/FEMA-REP-1.

13.3.1 Combined License Information Item

Combined License applicants referencing the AP1000 certified design will address emergency planning including post-72 hour actions and its communication interface.

Combined License applicants referencing the AP1000 certified design will address the activation of the emergency operations facility consistent with current operating practice and NUREG-0654/FEMA-REP-1.

13.4 Operational Programs

This section is discussed in subsection 13.4.1.

13.4.1 Combined License Information Item

Combined License applicants referencing the AP1000 certified design will address each operational program.

13.5 Plant Procedures

References to applicable combined license information are included in Section 1.8. This includes, for example, reference to guidelines on inservice inspection in Chapters 3 and 6, and initial testing in Chapter 14. Operational experience and the resolution of generic issues to be considered in the preparation of plant procedures are outlined in Section 1.9. Procedures to perform rod control system surveillance tests specified in WCAP-13864, Revision 1 (Reference 7), at the beginning of each fuel cycle will be provided as discussed in subsection 13.5.1. All portions of the safety-related logic circuitry will be adequately covered in the surveillance procedures as described in Generic Letter 96-01 (Reference 8).

The acceptability of the computerized procedure system, and its backup, for application to the AP1000 design will be determined as outlined in Section 18.8.

The development of plant specific refueling plans (DCD Appendix 19E provides input for refueling plans) is as discussed in subsection 13.5.1.

Outage plans are discussed in subsection 13.5.1 and should as a minimum address the following elements:

- An outage philosophy, which includes safety as a primary consideration in outage planning and implementation,
- Separate organizations responsible for scheduling and overseeing the outage; provisions for an independent safety review team that would be assigned to perform final review and grant approval for outage activities,

- Control procedures, which address both the initial outage plan and all safety-significant changes to schedule,
- Provisions to ensure that all activities receive adequate resources,
- Provisions to ensure defense-in-depth during shutdown and ensure that margins are not reduced; an alternate or backup system must be available if a safety system or a defense-in-depth system is removed from service, and
- Provisions to ensure that all personnel involved in outage activities are adequately trained; this should include operator simulator training to the extent practicable; other plant personnel, including temporary personnel, should receive training commensurate with the outage tasks they will be performing.

If freeze seals are to be used, plant-specific guidelines will be developed to reduce the potential for loss of RCS boundary and inventory when they are in use.

13.5.1 Combined License Information Item

The Combined License information requested in this subsection has been partially addressed in APP-GW-GLR-040 (Reference 10), and the applicable changes are incorporated into the DCD. No additional work is required by the Combined Operating License applicant to address the aspects of the Combined License information requested in this subsection as delineated in the following paragraph:

> The process to manage the development, review, and approval of AP1000 Normal Operating, Abnormal Operating, Emergency Operating, Refueling and Outage Planning, Alarm Response, Administrative, Maintenance, Inspection, Test, and Surveillance Procedures, as well as the procedures which address the operation of post-72 hour equipment, is delineated in APP-GW-GLR-040. In addition, APP-GW-GLR-040 provided to the NRC the Writer's Guidelines for Normal Operating and Two-Column Format Procedures, APP-GW-GJP-100 and APP-GW-GJP-200, respectively.

The Combined Operating License applicant will address Operational and Maintenance Programmatic issues, as well as training in the AP1000 COL licensing process.

The following words represent the original Combined Operating License Information Item commitment:

> Combined License applicants referencing the AP1000 certified design will address plant procedures including the following:
>
> – Normal operation
> – Abnormal operation
> – Emergency operation
> – Refueling and outage planning
> – Alarm response
> – Maintenance, inspection, test and surveillance

- Administrative
- Operation of post-72 hour equipment

13.6 Security

The Security Plan consists of the "AP1000 Physical Security Plan," Training and Qualification Plan, and Safeguards Contingency Plan. The Security Plan will be submitted to the Nuclear Regulatory Commission as a separate licensing document in order to fulfill the requirements for 10 CFR 52.79(a)(35) and 10 CFR 52.79(a)(36). The Security Plan will meet the requirements of 10 CFR 52.98(c). The plan is classified as Security Safeguards Information and is withheld from public disclosure pursuant to 10 CFR 73.21. Additionally, the "AP1000 Interim Compensatory Measures Report" (Reference 2), the "AP1000 Enhancement Report" (Reference 3), and the "AP1000 Safeguards Assessment Report" (Reference 4) are submitted to the Nuclear Regulatory Commission as separate licensing documents to establish the design of the AP1000 Security Systems. Each document is classified as Security Safeguards information and is withheld from public disclosure pursuant to 10 CFR 73.21.

13.6.1 Combined License Information Item

Combined License applicants referencing the AP1000 certified design will address site-specific information related to the security, contingency, and guards training plans. The Combined License applicant will develop the Physical Security Plan, the Training and Qualification Plan, and the Safeguards Contingency Plan. Combined License applicants will address site-specific security ITAACs as applicable.

The Combined License holder will develop and implement a Cyber Security Program.

13.7 References

1. Not used.
2. APP-GW-GLR-067, "AP1000 Interim Compensatory Measures Report," Westinghouse Electric Company LLC.
3. APP-GW-GLR-062, "AP1000 Enhancement Report," Westinghouse Electric Company LLC.
4. APP-GW-GLR-066, "AP1000 Safeguards Assessment Report," Westinghouse Electric Company LLC.
5. Not used.
6. Not used.
7. WCAP-13864, "Rod Control System Evaluation Program," Revision 1-A, November 1994.
8. USNRC Generic Letter 96-01, "Testing of Safety-Related Logic Circuits," January 10, 1996.
9. Not used.

10. APP-GW-GLR-040, "Plant Operations Maintenance and Surveillance Procedures," Westinghouse Electric Company LLC.