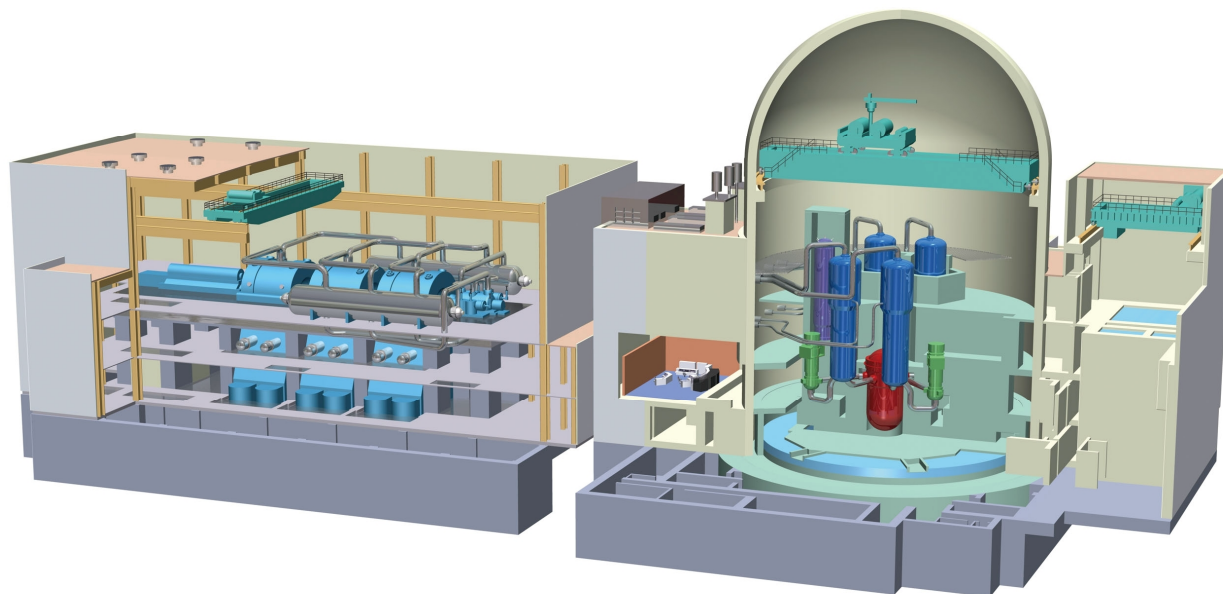




**DESIGN CONTROL DOCUMENT FOR THE
US-APWR**

**Chapter 13
Conduct of Operations**

**MUAP- DC013
REVISION 1
AUGUST 2008**



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ACRONYMS AND ABBREVIATIONS

A/B	auxiliary building
CFR	Code of Federal Regulations
COL	Combined License
CAS	central alarm station
DBT	design basis threat
EOF	emergency operations facility
ERDS	emergency response data system
FSAR	Final Safety Analysis Report
HSI	human-system interface
HVAC	heating, ventilation, and air conditioning
I&C	instrumentation and control
IDS	intrusion detection system
MCR	main control room
NRC	U.S. Nuclear Regulatory Commission
NUREG	NRC Technical Report Designation (Nuclear Regulatory Commission)
RG	Regulatory Guide
SAS	secondary alarm station
SPDS	safety parameter display system
SRP	Standard Review Plan
TSC	technical support center

13.0 CONDUCT OF OPERATIONS

This chapter provides information relating to the preparations and plans for the design, construction, and operation of the US-APWR plant. Its purpose is to provide adequate assurance that the Combined License (COL) Applicant establishes and maintains a staff of adequate size and technical competence and that operating plans followed by the licensee are adequate to protect the public health and safety (Ref. 13.1-1, 13.1-2, 13.1-3, 13.1-4, 13.1-5).

13.1 Organizational Structure of Applicant**13.1.1 Management and Technical Support Organization**

The development of the management and technical support organization structure is designated as the responsibility of the COL Applicant. The COL Applicant provides a description of the corporate or home office organization, its functions and responsibilities, and the number and qualifications of personnel. The COL Applicant directs attention to activities that include facility design, design review, design approval, construction management, testing, and operation of the plant.

13.1.1.1 Design, Construction, and Operating Responsibilities

The development of a description of past experience in the design, construction, and operation of nuclear power plants and past experience in activities of similar scope and complexity is designated as the responsibility of the COL Applicant. The Applicant describes its management, engineering, and technical support organizations. The description includes organizational charts for the current headquarters and engineering structure and any planned modifications and additions to those organizations that reflect the added functional responsibilities with the nuclear power plant.

13.1.1.2 Organizational Arrangement

The development of a description of the organizational arrangement is designated as the responsibility of the COL Applicant. This description shows how the added functional responsibilities associated with the addition of the nuclear power plant to the Applicant's power generation capacity are delegated and assigned (or expected to be assigned to each of the working or performance-level organizational units to implement these responsibilities). The description includes organizational charts reflecting the current corporate structure and the specific working- or performance-level organizational units that provide technical support for the operation.

13.1.1.3 Qualifications

The development of the description of the general qualification requirements in terms of educational background and experience for positions or classes of positions depicted in the organizational arrangement is designated as the responsibility of the COL Applicant. For identified positions or classes of positions that have functional responsibilities for other than the identified application, the expected proportion of time assigned to the other activities is described.

13.1.2 Operating Organization

The development of the organizational structure for the plant organization, its personnel responsibilities and authorities, and operating shift crews is designated as the responsibility of the COL Applicant.

13.1.3 Qualifications of Nuclear Plant Personnel

The development of the description of education, training, and experience requirements established for management, operating, technical, and maintenance positions for the operating organization is designated as the responsibility of the COL Applicant.

13.1.4 Combined License Information

- COL 13.1(1) *The COL Applicant is to provide a description of the corporate or home office organization, its functions and responsibilities, and the number and qualifications of personnel. The COL Applicant directs attention to activities that include facility design, design review, design approval, construction management, testing, and operation of the plant.*
- COL 13.1(2) *The COL Applicant is to develop a description of past experience in the design, construction, and operation of nuclear power plants and past experience in activities of similar scope and complexity.*
- COL 13.1(3) *The COL Applicant is to describe its management, engineering, and technical support organizations. The description includes organizational charts for the current headquarters and engineering structure and any planned modifications and additions to those organizations that reflect the added functional responsibilities with the nuclear power plant.*
- COL 13.1(4) *The COL Applicant is to develop a description of the organizational arrangement is designated as the responsibility of the COL Applicant. This description shows how the added functional responsibilities associated with the addition of the nuclear power plant to the Applicant's power generation capacity are delegated and assigned (or expected to be assigned to each of the working or performance-level organizational units to implement these responsibilities). The description includes organizational charts reflecting the current corporate structure and the specific working- or performance-level organizational units that provide technical support for the operation.*
- COL 13.1(5) *The COL Applicant is to develop the description of the general qualification requirements in terms of educational background and experience for positions or classes of positions depicted in the organizational arrangement.*

COL 13.1(6) *The COL Applicant is to develop the organizational structure for the plant organization, its personnel responsibilities and authorities, and operating shift crews.*

COL 13.1(7) *The COL Applicant is to develop the description of education, training, and experience requirements established for management, operating, technical, and maintenance positions for the operating organization.*

13.1.5 References

13.1-1 “Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants,” Energy. Title 10, Code of Federal Regulations, Part 52, U.S. Nuclear Regulatory Commission, Washington, DC.

13.1-2 “Domestic Licensing of Production and Utilization Facilities,” Energy. Title 10, Code of Federal Regulations, Part 50, U.S. Nuclear Regulatory Commission, Washington, DC.

13.1-3 Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG-0800, U.S. Nuclear Regulatory Commission, Washington, DC.

13.1-4 Combined License Applications for Nuclear Power Plants (LWR Edition). Regulatory Guide 1.206, U.S. Nuclear Regulatory Commission, Washington, DC, June 2007.

13.1-5 “Human-System Interface Design,” Human Factors Engineering Program Review Model. Element 8, NUREG-0711, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, February 2004.

13.2 Training

The development of training programs is designated as the responsibility of the COL Applicant. The training program development is consistent with the human-system interface (HSI) guidance in Chapter 18 (Ref. 13.2-1, 13.2-2, 13.2-3).

13.2.1 Plant Staff Training Program

13.2.1.1 Program Description

The development of the training program description is designated as the responsibility of the COL Applicant.

13.2.1.1.1 Licensed Plant Staff Training Program

In accordance with U.S. Nuclear Regulatory Commission (NRC) Technical Report Designation (NUREG)-0800, Section 13.2.1.1.3 (Ref. 13.2-4), the development of training programs for reactor operators is designated as the responsibility of the COL Applicant.

13.2.1.1.2 Non-licensed Plant Staff Training Program (to be verified during construction)

In accordance with NUREG-0800, Section 13.2.2.1.3 (Ref. 13.2-4), the development of training programs for non-licensed plant staff is designated as the responsibility of the COL Applicant.

13.2.1.2 Coordination with Preoperational Tests and Fuel Loading

The development of training programs is designated as the responsibility of the COL Applicant. These programs include a chart, which shows the schedule of each part of the training program for each functional group of employees in the organization in relation to the schedule for preoperational testing, expected fuel loading, and expected time for examinations prior to plant criticality for licensed operators.

13.2.2 Applicable Nuclear Regulatory Commission Documents

The extent to which portions of applicable NRC guidance is used in the facility training program or the justification of exceptions are designated as the responsibilities of the COL Applicant.

13.2.3 Combined License Information

COL 13.2(1) *The COL Applicant is to develop the training program description.*

COL 13.2(2) *The COL Applicant is to develop training programs for reactor operators in accordance with NUREG-0800, Section 13.2.1.1.3 (Ref. 13.2-4).*

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- COL 13.2(3) *The COL Applicant is to develop training programs for non-licensed plant staff in accordance with NUREG-0800, Section 13.2.2.1.3 (Ref. 13.2-4).*
- COL 13.2(4) *The COL Applicant is to develop training programs. These programs include a chart, which shows the schedule of each part of the training program for each functional group of employees in the organization in relation to the schedule for preoperational testing, expected fuel loading, and expected time for examinations prior to plant criticality for licensed operators.*
- COL 13.2(5) *The COL Applicant is to determine the extent to which portions of applicable NRC guidance is used in the facility training program or the justification of exceptions.*

13.2.4 References

- 13.2-1 Qualification and Training of Personnel for Nuclear Power Plants. Regulatory Guide 1.8, Rev. 3, Nuclear Regulatory Commission, Washington, DC, May 2000.
- 13.2-2 "Human-System Interface Design," Human Factors Engineering Program Review Model. Element 8, NUREG-0711, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, February 2004.
- 13.2-3 "Operators' Licenses," Energy. Title 10, Code of Federal Regulations, Part 55, U.S. Nuclear Regulatory Commission, Washington, DC.
- 13.2-4 Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG-800, U.S. Nuclear Regulatory Commission, Washington, DC.

13.3 Emergency Planning

Emergency planning is designated as the responsibility of the COL Applicant. However, design features, facilities, functions, and equipment necessary for emergency planning are considered in the design bases for the standard plant (Ref. 13.3-1, 13.3-2, 13.3-3, 13.3-4, 13.3-5). Details of these features, as they relate to the basic design, are included as follows and are consistent with the descriptions in Chapter 7. Interfaces of these features with site-specific designs and site parameters are the responsibility of the COL Applicant.

- Technical Support Center (TSC)

The onsite TSC is an onsite facility that provides plant management and technical support to the plant operations personnel during emergency conditions as described in subsection 7.5.1.6.1. The TSC has technical data displays and plant records available to assist in the detailed analysis and diagnosis of abnormal plant conditions and any significant release of radioactivity to the environment. The TSC provides the following functions:

- The TSC has facilities to support the plant management and technical personnel who are assigned there during an emergency.
- The TSC is the primary onsite communications center for the plant during an emergency.
- The facility consists of a plant data display system by visual display units and large display panel. These equipments are redundant including these power supplies. The TSC displays include,
 - Plant systems variables,
 - In-plant radiological information,
 - Meteorological information, and
 - Offsite radiological information.
- The TSC provides telephones and facsimiles, which utilize by multiple methods of telecommunication including private and public lines, satellite communications, and ample working areas for all personnel as described in section 9.5.2.
- The TSC is close to the main control room (MCR), located in the access building (AC/B). The walking time from the TSC to the MCR does not exceed 2 minutes.
- Working space, without crowding, for the personnel assigned to the TSC at the maximum level of occupancy is approximately 75 square feet per person.
 - The TSC working space is sized for a minimum of 25 persons including 20 persons designated by the licensee and five NRC personnel.

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- A TSC heating, ventilation, and air conditioning (HVAC) system is provided that includes high-efficiency particulate air and charcoal filters as described in subsection 9.4.3.1.2.4.
 - The TSC HVAC system functions in a manner comparable to the main control room HVAC system.
 - The TSC HVAC need not be seismic Category I qualified, redundant, instrumented in the MCR, or automatically activated to fulfill its role.

- Emergency Operations Facility (EOF)

The EOF is a near-site or on-site support facility for the management of overall licensee emergency response (including coordination with Federal, State, and local officials), coordination of radiological and environmental assessments, and determination of recommended public protective actions.

- The EOF has the appropriate technical data displays and plant records to assist in the diagnosis of plant conditions and to evaluate the potential or actual release of radioactive materials to the environment.
- The EOF computer provides plant data displays to assist in the diagnosis of plant conditions and to evaluate the potential or actual release of radioactive materials to the environment.
- A senior licensee official in the EOF organizes and manages licensee offsite resources to support the TSC and the MCR operators.

- Emergency Response Data System (ERDS)

The ERDS is a data transmission system. This system is designed to send a set of variables from the plant to the NRC Operations Center. This data may be used for analyses by the NRC headquarters technical support groups and the NRC executive team. The ERDS provides for the following functions:

- This system fulfills the function of the emergency response data system of Appendix E to Title 10, Code of Federal Regulations (CFR), Part 50 (Ref. 13.3-1).
- This system transmits information that aids the NRC in its role of providing advice and support to the nuclear power plant licensee, State and local authorities, and other Federal officials.

- Data communication with the TSC, the EOF, and the ERDS

- A data communication system establishes the interface and link with the TSC, the EOF, and the ERDS and allows data exchange with the plant. The TSC receives plant information from the unit bus.

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- The EOF and the ERDS receive plant information from the station bus.
 - The following countermeasures are applied to prevent cyber security threats:
 - The plant instrumentation and control (I&C) and HSI systems do not link to external networks. An exception is the link from unit management computer to the station bus.
 - Communication from the unit management computer to the station bus is restricted one direction. A dedicated transmission protocol is used which is not general-purpose, such as transmission control protocol/internet protocol, user datagram protocol, etc.
 - Communication between the station bus and the TSC, the EOF or the ERDS (NRC) is also one direction and uses a dedicated transmission protocol.
 - If a computer system, which has a general-purpose local area network, is connected to the station bus, an adequate gateway processor with a firewall function is inserted.
 - The firewall program currently used is MISTY®, which uses 128-bit code key. This firewall program is safer than the data encryption standard code, which is more typically used in the U.S. Alternate firewall programs may be used in the future, as the security features of new technology evolves.
 - Safety Parameter Display System (SPDS)

The SPDS provides a display of plant parameters from which the safety status of operation may be assessed in the MCR, the TSC, and the EOF. The SPDS provides the following functions:

- The primary function of the SPDS is to help operating personnel in the MCR make quick assessments of the plant safety status.
- Duplication of the SPDS displays in the TSC and the EOF improves the exchange of information between these facilities and the MCR and assists corporate and plant management in the decision-making process.
- The SPDS is operated during normal operations and during all classes of emergencies.
- The SPDS has the flexibility to allow future modifications to be incorporated, such as the capability to handle operator interaction and diagnostic analysis.
- The functions and design of SPDS in the MCR are realized as a part of the overall HSI design

The Postaccident Sampling System (PASS) is provided for emergency planning. It is described in section 9.3.2 and 12.3.

13.3.1 Combined License Application and Emergency Plan Content

The development of a comprehensive emergency plan shall be designated as the responsibility of the COL Applicant. The plan is a physically separate document (Section 13.3 of the Final Safety Analysis Report (FSAR)) and incorporates, by reference, State and local emergency plans. It includes copies of letters of agreement from State and local governmental agencies with emergency planning responsibilities.

The FSAR addresses emergency classification and action level scheme. It also addresses security-related aspects of emergency planning.

13.3.2 Emergency Plan Considerations for Multi-Unit Site

The development of the emergency plan for multi-unit site is designated as the responsibility of the COL Applicant depending on the location of the new reactor on, or near, an operating reactor site with an existing emergency plan.

13.3.3 Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria

The development of emergency planning inspections, tests, analyses, and acceptance criteria are designated as the responsibility of the COL Applicant.

13.3.4 Combined License Information

COL 13.3(1) *The COL Applicant is to develop interfaces of design features with site specific designs and site parameters.*

COL 13.3(2) *The COL Applicant is to develop a comprehensive emergency plan as a physically separate document.*

COL 13.3(3) *The COL Applicant is to develop an emergency classification and action level scheme.*

COL 13.3(4) *The COL Applicant is to develop the security-related aspects of emergency planning.*

COL 13.3(5) *The COL Applicant is to develop a multi-unit site interface plan depending on the location of the new reactor on, or near, an operating reactor site with an existing emergency plan.*

COL 13.3(6) *The COL Applicant is to develop an emergency planning inspections, tests, analyses, and acceptance criteria.*

COL 13.3(7) *The COL Applicant is to develop the description of the operation*

support center.

13.3.5 References

- 13.3-1 'Emergency Planning and Preparedness for Production and Utilization Facilities,' "Domestic Licensing of Production and Utilization Facilities," Energy. Title 10, Code of Federal Regulations, Part 50, Appendix E, U.S. Nuclear Regulatory Commission, Washington, DC.
- 13.3-2 Emergency Planning and Preparedness for Nuclear Power Reactors. Regulatory Guide 1.101, Rev. 5, U.S. Nuclear Regulatory Commission, Washington, DC, June 2005.
- 13.3-3 Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants. NUREG-0654/FEMA-REP-1, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, November 1980 (supplemented by March 2002 addenda).
- 13.3-4 Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria. SECY-05-0197, U.S. Nuclear Regulatory Commission, Washington, DC, October 2005.
- 13.3-5 Staff Requirements-SECY-05-0197-Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria. SRM-SECY-05-0197, U.S. Nuclear Regulatory Commission, Washington, DC, February 2006.

13.4 Operational Program Implementation

The development of operational program descriptions and implementation schedules is designated as the responsibility of the COL Applicant.

13.4.1 Combined License Information

COL 13.4(1) *The COL Applicant is to develop a description and schedule for the implementation of operational programs. The COL Applicant is to “fully describe” the operational programs as defined in SECY-05-0197 (Ref. 13.4-1) and provide commitments for the implementation of operational programs required by regulation. In some instances, programs may be implemented in phases. The COL Applicant is to include the phased implementation milestones in their submittal.*

13.4.2 References

13.4-1 Staff Requirements-SECY-05-0197-Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria. SRM-SECY-05-0197, U.S. Nuclear Regulatory Commission, Washington, DC, February 2006.

13.5 Plant Procedures

The development of administrative and operating procedures to be used by the operating organization (plant staff) is designated as the responsibility of the COL Applicant. Detailed written procedures are not included in the FSAR; however, a brief description of the nature and content of the procedures and a schedule for their preparation is developed (Ref. 13.5-1, 13.5-2).

13.5.1 Administrative Procedures

Administrative procedures describing administrative controls over activities that are important to safety for the operation of a facility are to be developed by the COL Applicant. Regulatory Guide (RG) 1.33 (Ref. 13.5-1) policies and procedures or specifically described alternative methods are utilized. A target date for completion of operating procedures prior to fuel loading is established.

Administrative procedures address those that provide administrative controls and those for control of operational activities of the plant staff.

13.5.2 Operating and Maintenance Procedures

Operating and maintenance procedures are developed by the COL Applicant.

13.5.2.1 Operating and Emergency Operating Procedures

Procedures performed by licensed operators in the MCR are developed by the COL Applicant. Operating procedures that are used by the operating organization to ensure routine operating, off-normal, and emergency activities are conducted in a safe manner are described. The plan includes the implementation of these procedures (Ref. 13.5-3).

13.5.2.1.1 Procedure Classification

The COL Applicant is to describe the different classifications of procedures the operators will use in the MCR and locally in the plant for operations, the operating organization responsible for maintaining the procedures, and the general format and content of the different classifications. The classifications must be sufficient enough to ensure that procedures will be available to the plant staff to accomplish the functions contained in the listing of RG 1.33.

13.5.2.1.2 Operating Procedure Program

The COL Applicant is to describe the program for developing and implementing operating procedures. Target dates for completion of program elements are developed.

13.5.2.1.3 Emergency Operating Procedure Program

The COL Applicant is to describe the program for developing and implementing emergency operating procedures. Target dates for completion and submittal to the NRC (as required) of program elements are also be developed. This procedures generation

package includes a plant specific technical guideline, a plant specific writer's guide, a description of a program for verification and validation, and a description of the program for training operators on emergency operating procedures.

13.5.2.2 Maintenance and Other Operating Procedures

The COL Applicant is to describe the classifications of maintenance and other operating procedures, the operating organization group or groups responsible for following each class of procedure, and the general objectives and character of each class and subclass.

13.5.3 Combined License Information

COL 13.5(1) *The COL Applicant is to develop administrative procedures describing administrative controls over activities that are important to safety for the operation of a facility.*

COL 13.5(2) *Deleted*

COL 13.5(3) *The COL Applicant is to develop procedures performed by licensed operators in the main control room. Operating procedures that are used by the operating organization to ensure routine operating, off-normal, and emergency activities are conducted in a safe manner are described. The plan includes the implementation of these procedures (Ref. 13.5-3).*

COL 13.5(4) *The COL Applicant is to describe the different classifications of procedures the operators will use in the main control room and locally in the plant for operations, the operating organization responsible for maintaining the procedures, and the general format and content of the different classifications.*

COL 13.5(5) *The COL Applicant is to describe the program for developing operating procedures.*

COL 13.5(6) *The COL Applicant is to describe the program for developing and implementing emergency operating procedures.*

COL 13.5(7) *The COL Applicant is to describe the classifications of maintenance and other operating procedures, the operating organization group or groups responsible for following each class of procedure, and the general objectives and character of each class and subclass.*

13.5.4 References

13.5-1 Quality Assurance Program Requirements (Operation). Regulatory Guide 1.33, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, February 1978.

- 13.5-2 Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants. ANSI/ANS 3.2, American Nuclear Society, 1994.
- 13.5-3 Guidelines for the Preparation of Emergency Operating Procedures. NUREG-0899, U.S. Nuclear Regulatory Commission, Washington, DC, August 1982.

13.6 Security

The comprehensive physical security program is the responsibility of the COL Applicant and is addressed in the security plan, contingency plan, and guard training plan provided by the COL Applicant. The security plan is submitted to the NRC as a separate licensing document in order to fulfill the requirements of 10 CFR 50.34 (Ref. 13.6-1). The security plan meets the requirements contained in 10 CFR 26 (Ref. 13.6-2) and 10 CFR 73 (Ref. 13.6-3) and is maintained in accordance with the requirements of 10 CFR 50.54 (Ref. 13.6-4). The plan is classified as security safeguards information and withheld from public disclosure pursuant to 10 CFR 73.21 (Ref. 13.6-5).

The physical security design for the US-APWR provides features to detect, delay, assist response to, and defend against the design basis threat (DBT) for radiological sabotage in compliance with the requirements of 10 CFR 73.55. The US-APWR physical security design in conjunction with the comprehensive physical security program provide the prerequisite high assurance specified by 10 CFR 73.55(a) that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety.

13.6.1 Physical Security – Combined License

As stated above.

13.6.2 Physical Security – Design Certification

Security Related Information – Withhold Under 10 CFR 2.390

13.6.2.1 Barriers, Isolation Zone, and Controlled Access Points

Security Related Information – Withhold Under 10 CFR 2.390

(SRI)

(SRI)

~~Security Related Information - Withhold Under 10 CFR 2.390~~

(SRI)

13.6.2.2 Vital Areas and Vital Equipment

~~Security Related Information - Withhold Under 10 CFR 2.390~~

(SRI)

~~Security Related Information – Withhold Under 10 CFR 2.390~~

13.6.2.3 Alarm Systems and Detection Aids

(SRI)

~~Security Related Information – Withhold Under 10 CFR 2.390~~

(SRI)

~~Security Related Information – Withhold Under 10 CFR 2.390~~

(SRI)

13.6.2.4 Security Lighting

~~Security Related Information – Withhold Under 10 CFR 2.390~~

(SRI)

13.6.2.5 Security Communication Systems

~~Security Related Information – Withhold Under 10 CFR 2.390~~

(SRI)

13.6.2.6 Security Power

~~Security Related Information – Withhold Under 10 CFR 2.390~~

(SRI)

13.6.3 Physical Security – Early Site Permit

Not applicable.

13.6.4 Combined License Information

COL 13.6(1) *The COL Applicant is to develop and provide plant overall security plan and implementation schedule for the security programs.*

13.6.5 References

- 13.6-1 'Contents of Construction Permit and Operating License Applications; Technical Information,' "Domestic Licensing of Production and Utilization Facilities," Energy. Title 10, Code of Federal Regulations, Part 50.34, U.S. Nuclear Regulatory Commission, Washington, DC.
- 13.6-2 "Fitness for Duty Programs," Energy. Title 10, Code of Federal Regulations, Part 26, U.S. Nuclear Regulatory Commission, Washington, DC.
- 13.6-3 "Physical Protection of Plants and Materials," Energy. Title 10, Code of Federal Regulations, Part 73, U.S. Nuclear Regulatory Commission, Washington, DC.
- 13.6-4 'Conditions of Licenses,' "Domestic Licensing of Production and Utilization Facilities," Energy. Title 10, Code of Federal Regulations, Part 50.54, U.S. Nuclear Regulatory Commission, Washington, DC.
- 13.6-5 'Requirements for the Protection of Safeguards Information,' "Physical Protection of Plants and Materials," Energy. Title 10, Code of Federal Regulations, Part 73.21, U.S. Nuclear Regulatory Commission, Washington, DC.
- 13.6-6 US-APWR Design Certification, Physical Element Review, Rev. 1, (Safeguards Information) September 2008
- 13.6-7 US-APWR High Assurance Assessment Evaluation (Safeguards Information) September 2008
- 13.6-8 NEI-03-12 Template for Security Plan and Training and Qualification Plan, Rev. 4 (Safeguards Information)

13.7 Fitness for Duty

The development of the plant's "fitness-for-duty program" and its implementation for an operating plant is the responsibility of the COL Applicant. The COL application also includes a description of the Applicant's fitness-for-duty programs during the construction [Ref. 13.7-1].

13.7.1 Combined License Information

COL 13.7(1) The COL Applicant is to develop the description of the operating and construction plant fitness-for-duty programs.

13.7.2 References

13.7-1 "Fitness for Duty Programs," Energy. Title 10, Code of Federal Regulations, Part 26, U.S. Nuclear Regulatory Commission, Washington, DC.