

3.2 Classification of Structures, Components, and Systems

Structures, systems, and components in the AP600 are classified according to nuclear safety classification, quality groups, seismic category, and codes and standards. This section provides the methodology used for safety-related and seismic classification of AP600 structures, systems, and components. The seismic classification is described in subsection 3.2.1. Subsection 3.2.2 describes the classification including nuclear safety-related classification and the corresponding codes and standards. Additionally, subsection 3.2.2 describes nonsafety-related equipment classifications.

3.2.1 Seismic Classification

General Design Criterion 2 requires that nuclear power plant "Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena, such as earthquakes, tornados, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions." 10 CFR 100, Appendix A sets forth the criteria to which the plant design bases demonstrate the capability to function during and after vibratory ground motion associated with the safe shutdown earthquake conditions.

The seismic classification methodology used in AP600 complies with the preceding criteria, as well as with recommendations stated within Regulatory Guide 1.29. Conformance with the recommendations of Regulatory Guide 1.29 is discussed in subsection 1.9.1. The methodology classifies structures, systems, and components into three categories: seismic Category I (C-I), seismic Category II (C-II) and non-seismic (NS).

Seismic Category I applies to both functionality and integrity, and seismic Category II applies only to integrity. Non-seismic items located in the proximity of safety-related items, the failure of which during a safe shutdown earthquake could result in loss of function of safety-related items, are designated as seismic Category II.

3.2.1.1 Definitions

3.2.1.1.1 Seismic Category I (C-I)

Seismic Category I applies to, in general, safety-related structures, systems, and components, Seismic Category I also applies to those structures, systems, and components required to support or protect safety-related structures, systems, and components. The exceptions to this general rule are a limited number of structures, such as those required for tornado missile protection, which do not have a safety-related function to perform during or following a seismic event. (See subsection 3.2.2.3.)

Safety-related items are those necessary to provide for the following:

- The integrity of the reactor coolant pressure boundary
- The capability to shut down the reactor and maintain it in a safe shutdown condition

- Capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guideline exposures of 10 CFR 100.

Seismic Category I structures, systems, and components are designed to withstand the appropriate seismic loads, as discussed in Section 3.7, and other applicable loads without loss of function. Seismic Category I structures are protected from interaction with adjacent non-seismic structures as described in subsection 3.7.2.8.

Seismic Category I structures, systems, and components meet the quality assurance requirements of 10 CFR 50, Appendix B. The criteria used for the design of seismic Category I structures, systems, and components are discussed in Section 3.7.

3.2.1.1.2 Seismic Category II (C-II)

Seismic Category II applies to plant structures, systems, and components which perform no safety-related function, and the continued function of which is not required. Seismic Category II applies to structures, systems, and components designed to prevent their collapse under the safe shutdown earthquake. Structures, systems and components are classified as seismic Category II to preclude their structural failure during a safe shutdown earthquake or interaction with seismic Category I items which could degrade the functioning of a safety-related structure, system, or component to an unacceptable level, or could result in incapacitating injury to occupants of the main control room.

Seismic Category II structures, systems, and components are designed so that the safe shutdown earthquake does not cause unacceptable structural failure of or interaction with seismic Category I items. Seismic Category II fluid systems require an appropriate level of pressure boundary integrity if located near sensitive equipment.

The criteria used for the design of seismic Category II structures, systems, and components are discussed in Section 3.7.

Pertinent portions of 10 CFR, 50, Appendix B apply to seismic Category II structures, systems, and components. The quality assurance requirements for Seismic Category II structures, systems, and components are sufficient to provide that these components will meet the requirement to not cause unacceptable structural failure of or interaction with seismic Category I items. See Section 17.4 for the Combined License applicant Quality assurance program requirement.

3.2.1.1.3 Non-Seismic

Non-seismic (NS) structures, systems, and components are those that are not classified seismic Category I or Category II.

The criteria used for the design of non-seismic structures, components and systems are discussed in Section 3.7.

The non-seismic lines and associated equipment, are routed, to the extent practicable, outside of safety-related buildings and rooms to avoid adverse system interactions. In cases where these lines are routed in safety-related areas, the non-seismic item is evaluated for the safe shutdown earthquake and is upgraded to seismic Category II if a credible failure could cause an unacceptable interaction.

Although the seismic category for an item located in the proximity of safety-related structures, systems, and components may be upgraded to seismic Category II, its pre-assigned equipment class remains unchanged.

3.2.1.2 Classifications

Table 3.2-1 illustrates the general relationship between safety-related equipment classes and seismic categories. In most cases, except as noted in subsection 3.2.2.5, safety-related items are also seismic Category I items. When portions of systems are identified as seismic Category I, the boundaries of seismic Category I portions of the system are shown on the piping and instrumentation diagram (P&ID) of that system. See subsection 1.7.2 for a list of the piping and instrumentation diagrams.

3.2.1.3 Classification of Building Structures

Building structures are assigned a seismic category as indicated in Table 3.2-2. Codes and standards used in the design and construction of building structures are given in Section 3.8. The building structures are not assigned a safety classification in subsection 3.2.2 with the exception of the containment vessel.

3.2.2 AP600 Classification System

The assignment of safety-related classification and use of codes and standards conforms to the requirements of 10 CFR 50.55a for the development of a Quality Group classification and the use of codes and standards. The description of the equipment classification which follows identifies the classifications requiring the full 10 CFR 50, Appendix B quality assurance program as described in Chapter 17 and the Quality Group associated with each classification.

The classification system provides a means of identifying the extent to which structures, systems, and components are related to safety-related and seismic requirements. The classification system provides an easily recognizable means of identifying the extent to which structures, systems, and components, are related to ANS nuclear safety classification, NRC quality groups, ASME Code, Section III classification, seismic category and other applicable industry standards, as shown in Table 3.2-3.

3.2.2.1 Classification Definitions

The definitions used in the classification of structures, systems and components are provided in the following. Unless otherwise noted these definitions apply throughout the safety analysis

report. These definitions are consistent with the draft ANS Definitions for Light Water Reactor Standards.

Safety-related is a classification applied to items relied upon to remain functional during or following a design basis event to provide a safety-related function. Safety-related also applies to documentation and services affecting a safety-related item.

Safety-related function is a function that is relied upon during or following a design basis event to provide for the following:

- The integrity of the reactor coolant pressure boundary
- The capability to shut down the reactor and maintain it in a safe shutdown condition
- The capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guideline exposures of 10 CFR 100.

Design basis event is an event that is a condition of normal operation (including anticipated operational occurrences), a design basis accident, an external event, or natural phenomena for which the plant must be designed so that the safety-related functions are achievable.

Design basis accidents and transients are those design basis events that are accidents and transients and are postulated in the safety analyses. The design basis accidents and transients are used in the design of the plant to establish acceptable performance requirements for structures, systems, and components.

3.2.2.2 Application of Classification

The AP600 requires adaptation of safety classification documents and standards because of the way that the AP600 accomplishes safety-related functions.

In addition to 10 CFR 50.55a, the AP600 classification has been developed considering requirements and guidelines in the following:

- ANSI N18.2 (Reference 1) - safety classification
- ANS 51.1 (Reference 2) - safety classification
- Regulatory Guide 1.26 - Quality Groups
- Regulatory Guide 1.97 - instrumentation requirements
- 10 CFR 21.

Conformance with the guidelines of Regulatory Guides 1.26 and 1.97 is discussed in subsection 1.9.1.

The general guidelines for safety classification in the ANSI and ANS standards are useful in the development of the AP600 classification. The specific classifications for various structures, systems, and components included in Regulatory Guide 1.26 and ANSI 18.2 and

ANS 51.1 are based on a nuclear power plant with active safety systems and are not necessarily appropriate for the passive safety systems of the AP600.

For the purposes of equipment classification, structures, systems, and components are classified as Class A, B, C, D, E, F, L, P, R, or W. For mechanical equipment Classes A, B, and C are equivalent to ANS Safety Class 1, 2, and 3. For electrical equipment Class C is equivalent to Class 1E. Structures, systems, and components classified equipment class A, B, or C or seismic Category I are basic components as defined in 10 CFR Part 21.

Equipment Class D is a nonsafety-related class. Classes E, F, L, P, R, and W are nonsafety-related classes associated with different industry codes and standards.

Components are classified down to the replacement part level according to the definitions and criteria of the classification system. A single item or portion thereof, which provides two or more functions of different classes is classified according to the most stringent function. Different portions of the same structure, system, or component may perform different functions and be assigned to different equipment classes if the structure, system, and component contains a suitable interface boundary.

The definitions and criteria for the AP600 equipment classes follow.

3.2.2.3 Equipment Class A

Class A is a safety-related class equivalent to ANS Safety Class 1. It applies to the reactor coolant system pressure boundary, including the required isolation valves and mechanical supports. This class has the highest integrity, and the lowest probability of leakage.

10 CFR 21 applies to Class A structures, systems, and components. Class A structures, systems, and components are seismic Category I and use codes and standards consistent with the guidelines for NRC Quality Group A. 10 CFR 50, Appendix B and ASME Code, Section III, Class 1 apply.

3.2.2.4 Equipment Class B

Class B is a safety-related class equivalent to ANS Safety Class 2. It limits the leakage of radioactive material from the containment following a design basis accident. This class is designed to accomplish the following:

- It provides fission product barrier or primary containment radioactive material holdup or isolation.
- It provides the containment boundary including penetrations and isolation valves. This also includes piping that functions as the containment boundary. For example, the steam and feedwater system inside containment and the secondary shell of the steam generator are Class B by this criterion.

- It circulates a non-containment/non-reactor coolant fluid to provide a post-accident safety-related function into and out of the containment. These lines have a Class B pressure boundary inside the containment. The outside containment lines in this circulation loop can be Class C or a nonsafety-related class if suitable containment isolation valves are provided.
- It introduces emergency negative reactivity to make the reactor subcritical (for example, control rods).
- This class also applies to structures, systems, and components where leakage could cause a loss of adequate core cooling. In isolating leaks, credit can be taken for automatic safety-related isolation and for appropriate operator action. As a minimum, operator action needs redundant safety-related indication and alarm followed by 30 minutes for operator action.

10 CFR 21 applies to Class B structures, systems, and components. Class B structures, systems, and components are seismic Category I and use codes and standards consistent with the guidelines for NRC Quality Group B. 10 CFR 50, Appendix B, and ASME Code, Section III, Class 2 or Class MC apply. ASME Code, Section III, Subsection NE applies to the containment vessel and guard pipes.

3.2.2.5 Equipment Class C

Class C is a safety-related class equivalent to ANS Safety Class 3. It applies to other safety-related functions required to mitigate design basis accidents and other design basis events. Minor leakage will not prevent Class C structures, systems, and components from meeting the safety-related function, either from the regard of radiation dose or system functioning.

This class also applies to equipment that, upon rupturing, would cause dose limits for unrestricted areas, as specified in 10 CFR 20, to be exceeded or would cause a loss of core cooling.

10 CFR 21 applies to Class C structures, systems, and components. Class C structures, systems, and components use codes and standards consistent with the guidelines for NRC Quality Group C. Class C structures, systems, and components are seismic Category I except those noted below which are not required to provide a safety-related function following a seismic event. 10 CFR 50, Appendix B and ASME Code, Section III, Class 3 apply. In addition to these requirements, for systems that provide emergency core cooling functions, full radiography in accordance with the requirements of ASME Code, Section III, ND-5222 will be conducted on the piping butt welds during construction. For Class C air and gas storage tanks fabricated without welding, ASME Code, Section VIII, Appendix 22 may be used in lieu of Section III, Class 3. 10 CFR 50, Appendix B requirements and 10 CFR 21 apply to the manufacture of safety-related air and gas storage tanks. For core support structures ASME Code, Section III, Subsection NG applies. For electrical systems, appropriate IEEE standards, including IEEE standard 323-83 (Reference 3) and IEEE standard 344-84 (Reference 4), apply.

Class C applies to structures, systems, and components not included in Class A or Class B that are designed and relied upon to accomplish one or more of the following safety-related functions:

- Provide safety injection or maintain sufficient reactor coolant inventory to allow for core cooling
- Provide core cooling
- Provide containment cooling
- Provide for removal of radiation from the containment atmosphere as necessary to meet the offsite dose limits
- Limit the buildup of radioactive material in the atmosphere of rooms and areas outside containment as necessary to meet the offsite dose limits
- Introduce negative reactivity control measures to achieve or maintain safe shutdown conditions (for example, boron addition)
- Limit the buildup of hydrogen in the containment atmosphere to acceptable values
- Maintain geometry of structures inside the reactor vessel so that the control rods can be inserted (when required) and the fuel remains in a coolable geometry
- Provide load-bearing structures and supports for Class A, B, and C structures, systems, and components. This applies to structures and supports that are not part of the pressure boundary.
- Provide structures and buildings to protect Class A, B, and C structures, systems, and components from events such as internal/external missiles, seismic, and flooding. Structures protecting equipment from nonseismic events are not required to be seismic Category I.
- Provide permanent radiation shielding to allow operator access to the main control room and to limit the exposure to Class A, B and C structures, systems, and components
- Provide safety support functions to Class A, B and C structures, systems, and components, such as, heat removal, room cooling, and electrical power
- Provide instrumentation and controls for automatic or manual actuation of Class A, B, and C structures, systems, and components necessary to perform the safety-related functions of the Class A, B, or C structure, system or component. This includes the processing of signals and interlock functions required for proper safety performance of these structures, systems, and components.

- Handle spent fuel, the failure of which could result in fuel damage such that significant quantities of radioactive material could be released from the fuel and results in offsite doses greater than normal limits (for example, new and spent fuel racks, the bridge, and the hoist)
- Maintain spent fuel sub-critical
- Monitor radioactive effluent to confirm that release rates or total releases are within limits established for normal operations and transient operation
- Monitor variables to indicate status of Class A, B or C structures, systems, and components required for post-accident mitigation
- Provide for functions defined in Class B where structures, systems, and components, or portions thereof are not within the scope of the ASME Code, Section III, Class 2.
- Provide provisions for connecting temporary equipment to extend the use of safety related systems. See subsection 1.9.5 for a discussion of actions required for an extended loss of onsite and offsite ac power sources.

The components and portions of systems that provide emergency core cooling functions and are required to have radiography of a random sample of welds during construction include the following:

- Accumulators
- Injection piping from the accumulators to the reactor coolant system isolation check valves in the direct vessel injection line
- Piping from the in-containment refueling water storage tank (IRWST) and recirculation screens to the reactor coolant system isolation check valves in the direct vessel injection line
- Piping from the Stage 1, 2, and 3 automatic depressurization system valves to the IRWST including the spargers.

The IRWST is formed from portions of structural modules that are elements of the containment internal structures. The inspection requirements for the welds in these structural modules are provided in Subsection 3.8.3.6.2.

3.2.2.6 Equipment Class D

Class D is nonsafety-related with some additional requirements on procurement, inspection or monitoring.

For Class D structures, systems, and components containing radioactivity, it is demonstrated by conservative analysis that the potential for failure due to a design basis event does not result in exceeding the normal offsite doses per 10 CFR 20. This criterion is in conformance with the definition of Class D in Regulatory Guide 1.26.

A structure, system or component is classified as Class D when it directly acts to prevent unnecessary actuation of the passive safety systems. Structures, systems and components which support those which directly act to prevent the actuation of passive safety systems are also Class D. The inclusion of these nonsafety-related structures, systems, and components in Class D recognizes that these systems provide an important first level of defense that helps to reduce the calculated probabilistic risk assessment core melt frequency. These structures, systems, and components are normally used to support plant cooldown and depressurization and to maintain shutdown conditions during maintenance and refueling outages.

For Class D structures, systems, and components considered to be risk significant as defined in the reliability assurance program (see Section 16.2). Provisions are made to check for operability, including appropriate testing and inspection, and to repair out-of-service structures, systems, and components. These provisions are documented and administered in the plant reliability assurance plan and operating and maintenance procedures.

A portion of chemical and volume control system is defined as the reactor coolant pressure boundary and is Class D. This portion of the chemical and volume control system is seismically analyzed. See subsection 5.2.1.1 for the seismic analysis requirements.

Some Class D structures, systems, and components are assumed to function in a severe containment environment. The design requirements for these components include operation in such an environment. An evaluation is done to confirm that the structure, system, or component can be expected to function in such an environment.

Standard industrial quality assurance standards are applied to Class D structures, systems, and components to provide appropriate integrity and function although 10 CFR 50, Appendix B and 10 CFR 21 do not apply. 10 CFR 50, Appendix B and 10 CFR 21 do apply to Class D structures, systems, and components that are seismic Category I. These industrial quality assurance standards are consistent with the guidelines for NRC Quality Group D. The industry standards used for Class D structures, systems and components are widely used industry standards. Typical industrial standards used for Class D systems and components are provided as follows:

- Pressure vessels - ASME Code, Section VIII
- Piping - ANSI B 31.1. Power Piping, (Reference 5)
- Pumps - API 610 (Reference 6), or Hydraulic Institute Standards (Reference 7)
- Valves - ANSI B16.34 (Reference 8)

- Atmospheric storage tanks - API-650 (Reference 9), AWWA D 100 (Reference 10), or ANSI B96.1 (Reference 11)
- 0 - 15 psig Storage Tanks - API-620 (Reference 12)
- AC motor and generators - NEMA MG1-78 (Reference 13)
- Circuit breakers, switchgear, relays, substations and fuses - IEEE C37 (Reference 14).

The buildings containing Class D structures, systems, and components, as well as the anchorage of the structures, systems, and components to the building, are designed to the seismic requirements of the Uniform Building Code (Reference 15). The systems and components are not designed for seismic loads. However, when Class D structures, systems, and components are located near a Class A, B, or C structure, system, or component, the requirements for seismic Category II may apply.

For Class D structures, systems, and components required to be monitored for maintenance effectiveness by 10 CFR 50.65, the availability parameters and criteria are included in the maintenance monitoring plan for evaluating the effectiveness of the maintenance program.

As examples, Class D applies to structures, systems, and components not included in Class A, B or C that provide the following functions:

- Provide core or containment cooling which prevents challenges to the passive core cooling system and the passive containment cooling system
- Process, extract, encase, store or reuse radioactive fluid or waste
- Verify that plant operating conditions are within technical specification limits
- Provide permanent shielding for post accident access to Class A, B or C structures, systems, and components or of offsite personnel
- Handle spent fuel, the failure of which could result in fuel damage such that limited quantities of radioactive material could be released from the fuel such as fuel handling tools
- Protect Class B or C structures, systems, and components necessary to attain or maintain safe shutdown following fire
- Indicate the status of protection system bypasses that are not automatically removed as a part of the protection system operation
- Aid in determining the cause or consequences of an event for post-accident investigation

- Prevent interaction that could result in preventing Class A, B or C structures, systems, and components from performing required safety-related functions

3.2.2.7 Other Equipment Classes

Equipment classes E, F, L, P, R, and W are nonsafety-related. They apply to structures, systems, and components not covered in the above classes. They have no safety-related function to perform. They do not contain sufficient radioactive material that a release could exceed applicable limits.

Structures, systems, and components that do not normally contain radioactive fluids, gases, or solids but have the potential to become radioactively contaminated are classified as one of these nonsafety-related classes if all of the following criteria are satisfied:

- The system is only potentially radioactive and does not normally contain radioactive material, and
- The system has shown in plant operations that the operation with the system containing radioactive material meets or can meet unrestricted area release limits, and
- An evaluation of the system confirms that the system contains features and components that keep the consequences of a system failure as low as reasonably achievable, and
- The system has no other regulatory guidance requiring its inclusion in Classes A, B, C or D.

This review of the system features and components includes the following as a minimum:

- Features and components that control and limit the radioactive contamination in the system
- Features that facilitate an expeditious cleanup should the system become contaminated
- Features and components that limit and control the radiological consequences of a potential system failure
- The means by which the system prevents propagation to an event of greater consequence.

There are no special quality assurance requirements for Class E, F, L, P, R, and W structures, systems, and components. Unless specifically specified, 10 CFR Part 21 and Part 50, Appendix B do not apply. The systems and components are normally not designed for seismic loading. However, there may be special cases where some seismic design is required. See subsection 3.2.1 for more details.

Structures, systems, and components are designed in accordance with an industry standard at the discretion of the designer. The following provides examples of industry standards which may be used for these classes:

Class E - This class is used for nonsafety-related structures, systems, and components that do not have a specialized industry standard or classification, as noted in the following classes.

Class F - This class is used for Fire Protection Systems. It complies with National Fire Protection Association Codes which invoke ANSI B31.1 (Reference 5), AWWA (American Water Works Association), API (American Petroleum Institute), Underwriters Laboratories (UL), and other codes, depending on service. See subsection 9.5.1 for quality assurance requirements for fire protection structures, systems, and components. In some cases fire protection systems are designated as AP600 equipment **Class G**.

Class L - This class is used in heating, ventilation and air-conditioning systems. It complies with SMACNA - 1985 (Reference 16). Components may also be procured to AMCA and ASHRAE standards.

Class P - This class is used for plumbing equipment. It complies with the National Plumbing Code (Reference 17).

Class R - This class is for air cleaning units and components that may be required to contain, clean, or exclude radioactively contaminated air. It complies with ASME 509 (Reference 18). When used with 10 CFR Part 50 Appendix B quality assurance, it is equivalent to Class C.

Class W - This class complies with American Water Works Association guidelines with no specific quality assurance requirements.

3.2.2.8 Instrumentation and Control Line Interface Criteria

Class C instrumentation, as defined in subsection 3.2.2.5 have a safety-related equipment class pressure boundary including the sensing line, valves and instrument sensor. The pressure boundary is the same safety-related equipment class as the systems or components it is connected to. Sensing lines connected to the reactor coolant system pressure boundary are Class B if a suitable flow restrictor is provided.

The parts of the sensor, outside the pressure boundary, are designated Class C (1E) if they provide a safety-related function per subsection 3.2.2.1. They are Class D if the instrument supports Class D functions per subsection 3.2.2.6. Otherwise the parts are Class E.

3.2.2.9 Electrical Classifications

Safety-related electrical equipment is equipment Class C, as outlined in subsection 3.2.2.5, and is constructed to IEEE standards for Class 1E. The nonsafety-related electrical equipment and instrumentation is constructed to standards including non-Class 1E IEEE standards and

National Electrical Manufacturers Association (NEMA) standards. Safety-related electrical equipment and instrumentation is identified in Section 3.11.

3.2.3 Inspection Requirements

Safety-related structures, systems, and components built to the requirements of the ASME Code, Section III, are required by 10 CFR 50.55a to have in-service inspections. The requirements of the in-service inspection program for ASME Code, Section III structures, systems, and components are found in Section XI of the ASME Code.

The following ASME standards apply to safety-related structures, systems, and components:

- Pumps (Class A, B, C) - ASME Code, Section XI, Subsection IWP
- Valves (Class A, B, C) - ASME Code, Section XI, Subsection IWV
- Equipment supports (Class A, B, C) - ASME Code, Section XI, Subsection IWF
- Metal containments and vessels - ASME Code, Section XI, Subsection IWE
- Other Class A components such as pipes and tanks - ASME Code, Section XI, Subsection IWB
- Other Class B components such as pipes and tanks - ASME Code, Section XI, Subsection IWC
- Other Class C components such as pipes and tanks - ASME Code, Section XI, Subsection IWD.

The inspection requirements, if applicable, for Class D structures, systems, and components are established by the designer for each structure, system, and component. These inspection requirements are developed so that the reliability of the structures, systems, and components is not degraded. The inspection requirements are included in the administratively controlled inspection or maintenance plans.

3.2.4 Application of AP600 Safety-Related Equipment and Seismic Classification System

The application of the AP600 equipment and seismic classification system to AP600 systems and components is shown in Table 3.2-3. Table 3.2-3 lists safety-related and seismic category I mechanical and fluid system component and associated equipment class and seismic category as well as other related information. The table also provides information on the systems that contain Class D components. Additional information on the Class D functions of the various systems can be found in the description in the Design Control Document (DCD) for the systems. Mechanical and fluid systems that contain no safety-related or Class D systems are included in the table and general information provided on the system. Supports for piping and components have the same classification as the component or piping supported.

Supports for AP600 equipment Class A, B, and C mechanical components and piping are constructed to ASME Code, Section III, Subsection NF requirements. The principle construction code for supports for nonsafety-related components and piping is the same as that for the supported component or piping.

Following the name of each system is the building location of the system components. Some of the systems supply all or most of the buildings. This is indicated by identifying the location as various. Where a system includes piping or ducts that only passed through a building without including any components that building is generally not included in the list.

The following list includes the systems in Table 3.2-3. The three letters in the beginning of each line is the acronym for the system. The systems included in Table 3.2-3 are listed alphabetically by three letter acronym. Those systems marked with an asterisk * are electrical or instrumentation systems and are not included in Table 3.2-3. The components in the incore instrumentation system that have a pressure boundary function are included in the table. See Section 3.11 for identification of safety-related electrical and instrumentation equipment.

NSSS/Steam Generator Controls And Auxiliaries

BDS	Steam Generator Blowdown System
CNS	Containment System
CVS	Chemical and Volume Control System
PCS	Passive Containment Cooling System
PXS	Passive Core Cooling System
RCS	Reactor Coolant System
RNS	Normal Residual Heat Removal System
RXS	Reactor System
SGS	Steam Generator System

Nuclear Control and Monitoring

*DAS	Diverse Actuation System
IIS	Incore Instrumentation System
*OCS	Operation and Control Centers
*PMS	Protection and Safety Monitoring System
PSS	Primary Sampling System
*RMS	Radiation Monitoring System
*SJS	Seismic Monitoring System
*SMS	Special Monitoring System

Main Power Cycle and Auxiliaries

CDS	Condensate System
CFS	Turbine Island Chemical Feed System
CPS	Condensate Polishing System
DTS	Demineralized Water Treatment System
DWS	Demineralized Water Transfer and Storage System
FWS	Main and Startup Feedwater System
GSS	Gland Seal System

HDS	Heater Drain System
MSS	Main Steam System
MTS	Main Turbine System
RWS	Raw Water System
TDS	Turbine Island Vents, Drains and Relief System

Class 1E and Emergency Power Systems

*IDS	Class 1E dc and UPS System
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Cooling and Circulating Water

CCS	Component Cooling Water System
CES	Condenser Tube Cleaning System
CWS	Circulating Water System
SFS	Spent Fuel Pit Cooling System
SWS	Service Water System
TCS	Turbine Building Closed Cooling Water System

Auxiliary Steam

ASS	Auxiliary Steam Supply System
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Generation and Transmission

*ZAS	Main Generation System
*ZBS	Transmission Switchyard and Offsite Power System
*ZVS	Excitation and Voltage Regulation System

Radwaste

WGS	Gaseous Radwaste System
WLS	Liquid Radwaste System
WRS	Radioactive Waste Drain System
WSS	Solid Radwaste System

HVAC

VAS	Radiologically Controlled Area Ventilation System
VBS	Nuclear Island Nonradioactive Ventilation System
VCS	Containment Recirculation Cooling System
VES	Main Control Room Emergency Habitability System
VFS	Containment Air Filtration System
VHS	Health Physics and Hot Machine Shop HVAC System
VLS	Containment Hydrogen Control System
VRS	Radwaste Building HVAC System
VTs	Turbine Building Ventilation System
VUS	Containment Leak Rate Test System
VWS	Central Chilled Water System
VXS	Annex/Auxiliary Nonradioactive Ventilation System
VYS	Hot Water Heating System
VZS	Diesel Generator Building Ventilation System

Turbine-Generator Controls and Auxiliary

CMS	Condenser Air Removal System
HCS	Generator Hydrogen and CO ₂ Systems
HSS	Hydrogen Seal Oil System
LOS	Main Turbine and Generator Lube Oil System
*TOS	Main Turbine Control and Diagnostics System

Material Handling

FHS	Fuel Handling and Refueling System
MHS	Mechanical Handling System

Piping Services

CAS	Compressed and Instrument Air Systems
DOS	Standby Diesel and Auxiliary Boiler Fuel Oil System
FPS	Fire Protection System
PGS	Plant Gas Systems
PWS	Potable Water System

Non-Class 1E Power Systems

*ECS	Main AC Power System
*EDS	Non-Class 1E dc and UPS System
ZOS	Onsite Standby Power System

Miscellaneous Electrical Systems

*EFS	Communication Systems
*EGS	Grounding and Lightning Protection System
*EHS	Special Process Heat Tracing System
*ELS	Plant Lighting System
*EQS	Cathodic Protection System

Non-Nuclear Controls and Monitoring

*DDS	Data Display and Processing System
*MES	Meteorological and Environmental Monitoring System
*PLS	Plant Control System
*SES	Plant Security System
SSS	Secondary Sampling System
*TVS	Closed Circuit TV System

Non-Radioactive Drains

DRS	Storm Drain System
RDS	Gravity and Roof Drain Collection System
SDS	Sanitary Drainage System
WWS	Waste Water System

Those systems marked with an asterisk (*) are electrical or instrumentation systems and are not included in Table 3.2-3.

3.2.5 Combined License Information

This section contains no requirement for additional information to be provided in support of the Combined License application.

3.2.6 References

1. ANSI N18.2a-75, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants."
2. ANS/ANSI 51.1-83, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants."
3. IEEE/ANSI 323-83, "IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations."
4. IEEE/ANSI 334-82, "Type Tests of Continuous Duty Class 1E Motors for Nuclear Power Generating Stations."
5. ASME/ANSI B31.1-1989, "Power Piping, ASME Code for Pressure Piping."
6. API 610-81, "Centrifugal Pumps for General Refinery Services."
7. "Hydraulic Institute Standards," 1975, Hydraulic Institute.
8. ASME/ANSI B16.34-81, "Valves - Flanged and Butt-welding End."
9. API-650-80, "Welded Steel Tanks for Oil Storage," Revision 1, February 1984.
10. AWWA D100-84, "Welded Steel Tanks for Water Storage."
11. ANSI B96.1-81, "Welded Aluminum-Alloy Storage Tanks."
12. API-620-82, "Recommended Rules for Design and Construction of Large, Welded, Low-Pressure Storage Tanks, Revision 1, April 1985.
13. NEMA MG-1-78, "Motors and Generators," Revision 8, July 1984, National Electric Manufacturers Association.
14. IEEE C37-89, IEEE standards on circuit breakers, switch gear, relays, substations, fuses, etc.
15. "Uniform Building Code (1989)," International Conference of Building Officials.
16. SMACNA - 1985, HVAC Duct Construction Standards - Metal and Flexible, 1985 Edition, Sheet Metal and Air-Conditioning Contractors National Association.

17. The BOCA Basis/National Plumbing Code 1984: Model Plumbing Regulations for the Protection of Public Health, Safety and Welfare: Sixth Edition, Building Officials and Code Administrators International.
18. ASME/ANSI N509-89, "Nuclear Power Plant Air Cleaning Units and Components."

Table 3.2-1

COMPARISON OF SAFETY CLASSIFICATION REQUIREMENTS

AP600 Code Letter (1)	ANS Equipment Safety Class (2)	RG 1.29 Seismic Design Reqmnts (3)	ASME Code, Sec. III Class (4)	IEEE Requirements (5)	RG 1.26 NRC Quality Group (5)	10 CFR 50 Appendix B (6)	Inspection & Testing Requirements (7)	Required Test & Maint. (8)
A	SC-1	I	1	NA	GROUP A	YES	YES(7)	(8)
B	SC-2	I	2	NA	GROUP B	YES	YES(7)	(8)
C	SC-3	I	3	1E	GROUP C	YES	YES(7)	(8)
D	NNS(2)	NA(9)	NA(10)	(10)	GROUP D	NO(10)	YES(11)	(11)
OTHER	NNS(2)	NA(13)	NA	NA	NA	NA(12)	NA	NA

NA - Not Applicable

OTHER includes Classes E, F, L, P, R, and W.

Notes:

1. A single letter equipment classification identifies the safety class, quality group, and other classifications for AP600. See the subsection 3.2.2 for definition.
2. AP600 safety classification is an adaptation of that defined in ANSI 51.1. The NNS defined in the ANSI 51.1 standard is divided into several AP600 equipment classifications namely, Classes D E, F, L, P, R, and W.
3. See subsection 3.2.1 for definition of seismic categories.
4. ASME Boiler and Pressure Vessel Code, Section III defines various classes of structures, systems, and components for nuclear power plants. It defines criteria and requirements based on the classification. It is not applicable for nonsafety-related components.
5. The quality group classification corresponds to those provided in Regulatory Guide 1.26.
6. "Yes" means quality assurance program is required according to 10 CFR 50 Appendix B.
7. "No" means quality assurance program is not required according to 10 CFR 50 Appendix B.
8. Class A, B, and C, structures, systems, and components built to ASME Code, Section II are inspected to ASME Code, Section XI requirements. See the text for additional specification of requirements.
9. Class A, B, and C structures, systems, and components that are required to function to mitigate design base accidents have some testing requirements included in the plant technical specifications. In addition to the requirements in the technical specifications, testing and maintenance requirements are included in an administratively controlled reliability assurance plan.
10. See subsection 3.2.1 for cases when seismic Category II requirements are applicable for Class D structures, systems, and components.
11. Class D structures, systems, and components have selected reliability assurance programs and procedures to provide availability when needed. These programs are administratively controlled programs and are not included in the technical specifications.
12. Normal industrial procedures are followed in procuring, designing, fabricating, and testing these nonsafety-related structures, systems, and components.
13. Some Class E, F, L, P, R, and W structures, systems, and components may be classified as seismic Category II. See subsection 3.7.3.

Table 3.2-2

SEISMIC CLASSIFICATION OF BUILDING STRUCTURES

Structure	Category
Nuclear Island Basemat Containment Interior Shield Building Auxiliary Building Containment Air Baffle	C-I
Containment Vessel	C-I
Plant vent and stair structure	C-II
Turbine Building	NS
Annex Building Columns A - D	NS
Annex Building Columns E - I	C-II
Radwaste Building	NS
Diesel-Generator Building	NS
Circulating Water Pumphouse and Towers	NS

C-I - Seismic Category I

C-II - Seismic Category II

NS - Non-seismic

Note:

1. Within the broad definition of seismic Category I and II structures, these buildings contain members and structural subsystems the failure of which would not impair the capability for safe shutdown. Examples of such systems would be elevators, stairwells not required for access in the event of a postulated earthquake, and nonstructural partitions in nonsafety-related areas. These substructures are classified as non-seismic.

Table 3.2-3 (Sheet 1 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Auxiliary Steam Supply System (ASS)					Location: Turbine Building
System components are Class E					
Steam Generator Blowdown System (BDS)					Location: Turbine Building
System components are Class E					
Compressed and Instrument Air System (CAS)					Location: Various
CAS-PL-V014	Instrument Air Supply Outside Containment Isolation	B	I	ASME III-2	
CAS-PL-V015	Instrument Air Supply Inside Containment Isolation	B	I	ASME III-2	
CAS-PL-V027	Containment Penetration Test Connection Isolation	B	I	ASME III-2	
CAS-PL-V204	Service Air Supply Outside Containment Isolation	B	I	ASME III-2	
CAS-PL-V205	Service Air Supply Inside Containment Isolation	B	I	ASME III-2	
CAS-PL-V219	Containment Penetration Test Connection Isolation	B	I	ASME III-2	
CAS-PY-C02	Containment Instrument Air Inlet Penetration	B	I	ASME III, MC	
CAS-PY-C03	Containment Service Air Inlet Penetration	B	I	ASME III, MC	
Balance of system components are Class E					
Component Cooling Water System (CCS)					Location: Auxiliary Building and Turbine Building
n/a	Heat Exchangers, CCS and SWS Side	D	NS	ASME VIII	
n/a	Pumps	D	NS	Hydraulic Institute Stds.	
n/a	Tanks	D	NS	ASME VIII	
n/a	Valves Providing CCS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
CCS-PL-V200	CCS Containment Isolation Valve - Inlet Line ORC	B	I	ASME III-2	
CCS-PL-V201	CCS Containment Isolation Valve - Inlet Line IRC	B	I	ASME III-2	

Table 3.2-3 (Sheet 2 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Component Cooling Water System (Continued)					
CCS-PL-V207	CCS Containment Isolation Valve - Outlet Line IRC	B	I	ASME III-2	
CCS-PL-V208	CCS Containment Isolation Valve - Outlet Line ORC	B	I	ASME III-2	
CCS-PL-V209	Containment Isolation Valve Test Connection - Outlet Line	B	I	ASME III-2	
CCS-PL-V257	Containment Isolation Valve Test Connection - Inlet Line	B	I	ASME III-2	
CCS-PY-C01	Containment Supply Header Penetration	B	I	ASME III, MC	
CCS-PY-C02	Containment Return Header Penetration	B	I	ASME III, MC	
Balance of system components are Class E					
Condensate System (CDS)					Location: Turbine Building
System components are Class E					
Condenser Tube Cleaning System (CES)					Location: Turbine Building
System components are Class E					
Turbine Island Chemical Feed System (CFS)					Location: Turbine Building
System components are Class E					
Condenser Air Removal System (CMS)					Location: Turbine Building
N/A	Condenser Vacuum Breakers	E	NS	ANSI 16.34	
Balance of system components are Class D					
Containment System (CNS)					Location: Containment
CNS-MV-01	Containment Vessel	B	I	ASME III, MC	
CNS-MY-Y01	Equipment Hatch	B	I	ASME III, MC	
CNS-MY-Y02	Maintenance Hatch	B	I	ASME III, MC	
CNS-MY-Y03	Personnel Hatch - 135'-3"	B	I	ASME III, MC	
CNS-MY-Y04	Personnel Hatch - 107'-2"	B	I	ASME III, MC	
	Spare Containment Penetrations	B	I	ASME III, MC	
Condensate Polishing System (CPS)					Location: Turbine Building
System components are Class E					

Table 3.2-3 (Sheet 3 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Chemical and Volume Control System (CVS) Location: Containment, Auxiliary Building, and Annex Building					
n/a	Heat Exchangers, CVS and CCS Side	D	NS	ASME VIII/TEMA	
n/a	Pumps	D	NS	Hydraulic Institute Stds.	
n/a	Tank	D	NS	API 650	
n/a	Demineralizers	D	NS	ASME VIII	
n/a	Filters	D	NS	ASME VIII	
n/a	Valves Providing CVS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
CVS-PL-V001	RCS Purification Stop	A	I	ASME III-1	
CVS-PL-V002	RCS Purification Stop	A	I	ASME III-1	
CVS-PL-V003	RCS Purification Stop	C	I	ASME III-3	
CVS-PL-V040	Resin Flush IRC Isolation	B	I	ASME III-2	
CVS-PL-V041	Resin Flush ORC Isolation	B	I	ASME III-2	
CVS-PL-V042	Flush Line Containment Isolation Relief	B	I	ASME III-2	
CVS-PL-V045	Letdown Containment Isolation IRC	B	I	ASME III-2	
CVS-PL-V046	Letdown Pressure Instrument Root	B	I	ASME III-2	
CVS-PL-V047	Letdown Containment Isolation ORC	B	I	ASME III-2	
CVS-PL-V080	RCS Purification Return Line Check Valve	C	I	ASME III-3	
CVS-PL-V081	RCS Purification Return Line Stop Valve	A	I	ASME III-1	
CVS-PL-V082	RCS Purification Return Line Check Valve	A	I	ASME III-1	
CVS-PL-V084	Auxiliary Pressurizer Spray Line Isolation	A	I	ASME III-1	
CVS-PL-V085	Auxiliary Pressurizer Spray Line	A	I	ASME III-1	
CVS-PL-V090	Makeup Line Containment Isolation	B	I	ASME III-2	
CVS-PL-V091	Makeup Line Containment Isolation	B	I	ASME III-2	

Table 3.2-3 (Sheet 4 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Chemical and Volume Control System (Continued)					
CVS-PL-V092	Hydrogen Add Containment Isolation	B	I	ASME III-2	
CVS-PL-V094	Hydrogen Add IRC Isolation	B	I	ASME III-2	
CVS-PL-V096	Hydrogen Add Containment Isolation Test Connection	B	I	ASME III-2	
CVS-PL-V100	Makeup Line Containment Isolation Relief	B	I	ASME III-2	
CVS-PL-V136A	Demineralized Water System Isolation	C	I	ASME III-3	
CVS-PL-V136B	Demineralized Water System Isolation	C	I	ASME III-3	
CVS-PY-C01	Demineralizer Resin Flush Line Containment Penetration	B	I	ASME III, MC	
CVS-PY-C02	Letdown Line Containment Penetration	B	I	ASME III, MC	
CVS-PY-C03	Makeup Line Containment Penetration	B	I	ASME III, MC	
CVS-PY-C04	Hydrogen Add Line Containment Penetration	B	I	ASME III, MC	

Balance of system components are Class E

Circulating Water System (CWS)

Location: Turbine Building and pump intake structure

System components are Class E

Standby Diesel and Auxiliary Boiler Fuel Oil System (DOS)

Location: Diesel Generator Building and yard

n/a	Fuel Oil Transfer Package	D	NS	Manufacturer Std.	
n/a	Fuel Oil Storage Tanks	D	NS	API 650	
n/a	Fuel Oil Day Tanks	D	NS	ASME VIII	
n/a	Valves Providing DOS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
n/a	Ancillary Diesel Generator Fuel Tank	D	II	UL 142	

Balance of system components are Class E

Table 3.2-3 (Sheet 5 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Storm Drain System (DRS)					Location: Various
System components are Class E					
Demineralized Water Treatment System (DTS)					Location: Turbine Building
System components are Class E					
Demineralized Water Transfer and Storage System (DWS)					Location: Various
n/a	Condensate Storage Tanks	D	NS	API 650	
n/a	Valves Providing DWS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
DWS-PL-V244	Demineralized Water Supply Containment Isolation - Outside	B	I	ASME III-2	
DWS-PL-V245	Demineralized Water Supply Containment Isolation - Inside	B	I	ASME III-2	
DWS-PL-V248	Containment Penetration Test Connection Isolation	B	I	ASME III-2	
DWS-PY-C01	Containment Demineralized Water Supply Penetration	B	I	ASME III, MC	
Balance of system components are Class E					
Fuel Handling and Refueling System (FHS)					Location: Containment and Auxiliary Building
FHS-FH-02	Fuel Handling Machine	C	I	AISC	
FHS-FH-52	Spent Fuel Assembly Handling Tool	C	I	AISC	

Table 3.2-3 (Sheet 6 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Fuel Handling and Refueling System (Continued)					
FHS-FS-01	New Fuel Storage Rack	D	I	Manufacturer Std.	
FHS-FS-02	Spent Fuel Storage Rack	D	I	Manufacturer Std.	
FHS-FT-01	Fuel Transfer Tube	B	I	ASME III Class MC	
FHS-MT-01	Spent Fuel Pool	C	I	ACI 349	ACI 349 Evaluation of Structural Boundary Only
FHS-MT-02	Fuel Transfer Canal	C	I	ACI 349	ACI 349 Evaluation of Structural Boundary Only
FHS-MT-05	Spent Fuel Cask Loading Pit	C	I	ACI 349	ACI 349 Evaluation of Structural Boundary Only
FHS-MT-06	Spent Fuel Cask Washdown Pit	C	I	ACI 349	ACI 349 Evaluation of Structural Boundary Only
FHS-MY-Y01	Spent Fuel Transfer Gate	C	I	Manufacturer Std.	
FHS-MY-Y02	Spent Fuel Cask Loading Pit Gate	C	I	Manufacturer Std.	
FHS-PL-V001	Fuel transfer tube Isolation Valve	C	I	ASME-III-3	
FHS-PY-B01	Fuel Transfer Tube Blind Flange	B	I	ASME III-2	
Balance of system components are Class E					
Fire Protection System (FPS)					
FPS-PL-V050	Fire Water Containment Supply Isolation	B	I	ASME III-2	Location: Various
FPS-PL-V051	Fire Water Containment Test Connection Isolation	B	I	ASME III-2	

Table 3.2-3 (Sheet 7 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
FPS-PL-V052	Fire Water Containment Supply Isolation - Inside	B	I	ASME III-2	
FPS-PY-C01	Fire Protection to Containment Penetration	B	I	ASME III, MC	
Balance of system components are Class E					
Main and Startup Feedwater System (FWS)					Location: Turbine Building
n/a	Startup Feedwater Pumps	D	NS	Hydraulic Institute Standards	
n/a	Valves Providing SFW AP600 Equipment Class D Function	D	NS	ANSI 16.34	
Balance of system components are Class E					
Gland Seal System (GSS)					Location: Turbine Building
System components are Class D					
Generator Hydrogen and CO₂ Systems (HCS)					Location: Turbine Building
System components are Class E					
Heater Drain System (HDS)					Location: Turbine Building
System components are Class E					
Hydrogen Seal Oil System (HSS)					Location: Turbine Building
System components are Class E					
Incore Instrumentation System (IIS)					Location: Containment
n/a	IIS Guide Tubes	A	I	ASME III-1	
n/a	Thimble assemblies	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 8 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Main Turbine and Generator Lube Oil System (LOS)					Location: Turbine Building
System components are Class E					
Mechanical Handling System (MHS)					Location: Various
MHS-MH-01	Containment Polar Crane	C	I	ASME NOG-1	
MHS-MH-05	Equipment Hatch Hoist	C	I	Manufacturer Std.	
Balance of system components are Class E					
Main Steam System (MSS)					Location: Turbine Building
System components are Class E					
Main Turbine System (MTS)					Location: Turbine Building
System components are Class E					
Passive Containment Cooling System (PCS)					Location: Containment Shield Building and Auxiliary building
PCS-MT-01	Passive Containment Cooling Water Storage Tank	C	I	ACI 349	See subsection 6.2.2.2.3 for additional design requirements
PCS-MT-03	Water Distribution Bucket	C	I	Manufacturer Std.	See subsection 6.2.2.2.3 for additional design requirements
PCS-MT-04	Water Collection Troughs	C	I	Manufacturer Std.	See subsection 6.2.2.2.3 for additional design requirements
PCS-MT-05	Passive Containment Cooling Ancillary Water Storage Tank	D	II	API 650	
PCS-PL-V001A	PCCWST Isolation	C	I	ASME III-3	
PCS-PL-V001B	PCCWST Isolation	C	I	ASME III-3	
PCS-MP-01A	PCS Recirculation Pump	D	NS	Hydraulic Institute Standards	Equipment anchorage is Seismic Category II
PCS-MP-01B	PCS Recirculation Pump	D	NS	Hydraulic Institute Standards	Equipment anchorage is Seismic Category II

Table 3.2-3 (Sheet 9 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
PCS-PL-V002A	PCCWST Series Isolation	C	I	ASME III-3	
PCS-PL-V002B	PCCWST Series Isolation	C	I	ASME III-3	
PCS-PL-V005	PCCWST Supply to FPS Isolation	C	I	ASME III-3	
PCS-PL-V009	Spent Fuel Pool Emergency Makeup Isolation Valve	C	I	ASME III-3	
PCS-PL-V010A	Flow Transmitter FT001 Root Valve	C	I	ASME III-3	
PCS-PL-V010B	Flow Transmitter FT001 Root Valve	C	I	ASME III-3	
PCS-PL-V011A	Flow Transmitter FT002 Root Valve	C	I	ASME III-3	
PCS-PL-V011B	Flow Transmitter FT002 Root Valve	C	I	ASME III-3	
PCS-PL-V012A	Flow Transmitter FT003 Root Valve	C	I	ASME III-3	
PCS-PL-V012B	Flow Transmitter FT003 Root Valve	C	I	ASME III-3	
PCS-PL-V013A	Flow Transmitter FT004 Root Valve	C	I	ASME III-3	
PCS-PL-V013B	Flow Transmitter FT004 Root Valve	C	I	ASME III-3	
PCS-PL-V015	Water Bucket Makeup Line Drain Valve	C	I	ASME III	
PCS-PL-V016	PCCWST Drain Isolation Valve	C	I	ASME III-3	

Table 3.2-3 (Sheet 10 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
PCS-PL-V017	Chemical Addition Tank Vent D Isolation Valve	D	NS	ANSI 16.34	Equipment Anchorage is Seismic Category II
PCS-PL-V018	Recirculation Pump Throttle Valve	D	NS	ANSI 16.34	Equipment anchorage is Seismic Category II
PCS-PL-V019	Chemical Addition Tank Fill Isolation Valve	D	NS	ANSI 16.34	Equipment Anchorage is Seismic Category II
PCS-PL-V020	Water Bucket Makeup Line Isolation Valve	C	I	ASME III-3	
PCS-PL-V021	PCCWST TO Recirculation Pump Suction Isolation Valve	D	NS	ANSI 16.34	Equipment anchorage is Seismic Category II
PCS-PL-V022	Chemical Addition Tank Drain Isolation Valve	D	NS	ANSI 16.34	Equipment Anchorage is Seismic Category II
PCS-PL-V023	PCS Recirculation Return Isolation	C	I	ASME III-3	
PCS-PL-V025	Pressure Transmitter PT 031 Root Isolation Valve	D	NS	ANSI 16.34	Equipment Anchorage is Seismic Category II
PCS-PL-V029	PCCWST Isolation Valve Leakage Detection Drain	C	I	ASME III-3	
PCS-PL-V030	PCCWST Isolation Valve Leakage Detection Crossconnect Valve	C	I	ASME III-3	
PCS-PL-V031A	Level Transmitter LT 016 & 010 Root Isolation Valve	C	I	ASME III-3	
PCS-PL-V031B	Level Transmitter LT 015 & 011 Root Isolation Valve	C	I	ASME III-3	

Table 3.2-3 (Sheet 11 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
PCS-PL-V033	Recirculation Pump Suction from Long Term Makeup Isolation Valve	C	I	ASME III-3	
PCS-PL-V035A	Recirculation Pump Suction Isolation Valve	D	NS	ANSI 16.34	Equipment anchorage is Seismic Category II
PCS-PL-V035B	Recirculation Pump Suction Isolation Valve	D	NS	ANSI 16.34	Equipment anchorage is Seismic Category II
PCS-PL-V036A/B	Recirculation Pump Discharge Check Valve	D	NS	ANSI 16.34	Equipment anchorage is Seismic Category II
PCS-PL-V037	PCCAWST Discharge Isolation Valve	D	NS	ANSI 16.34	Equipment anchorage is Seismic Category II
PCS-PL-V038	PCCAWST Drain Isolation Valve	D	NS	ANSI 16.34	Equipment anchorage is Seismic Category II
PCS-PL-V039	PCCWST Long-Term Makeup Check Valve	C	I	ASME III-3	
PCS-PL-V040	Recirculation Pump Suction from PCCAWST Isolation Valve	D	NS	ANSI 16.34	Equipment Anchorage is Seismic Category II
PCS-PL-V041	PCCAWST Recirculation Return Line Isolation Valve	D	NS	ANSI 16.34	Equipment Anchorage is Seismic Category II

Table 3.2-3 (Sheet 12 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
PCS-PL-V042	PCCWST Long-Term Makeup Isolation Drain Valve	C	I	ASME III-3	
PCS-PL-V043	PCCAWST Recirculation Return Line Drain Isolation Valve	D	NS	ANSI 16.34	PCS-PL-V043 Equipment Anchorage is Seismic Category II
PCS-PL-V044	PCCWST Long-Term Makeup Isolation Valve	C	I	ASME III-3	
PCS-PL-V045	Emergency Makeup to the Spent Fuel Pool Isolation Valve	C	I	ASME III-3	
PCS-PL-V046	PCCWST Recirculation Return Isolation Valve	C	I	ASME III-3	
PCS-PL-V047	PCCWST Discharge Line Cross-Connect Isolation Valve	C	I	ASME III-3	
PCS-PL-V048	Recirculation Pump Fire Suction Isolation Valve	D	NS	ANSI 16.34	Seismically analyzed for operability
PCS-PL-V049	Emergency Makeup to the Spent Fuel Pool Drain Isolation Valve	C	I	ASME III-3	
PCS-PL-V050	Spent Fuel Pool Long Term Makeup Isolation Valve	C	I	ASME III-3	
PCS-PL-V051	Spent Fuel Pool Emergency Makeup Lower Isolation	C	I	ASME III-3	
PCS-PL-V100	Temporary Containment Washdown Isolation Valve	D	NS	ANSI 16.34	Equipment Anchorage is Seismic Category II
PCS-PY-B01	Spent Fuel Pool Emergency Makeup Isolation	C	I	ASME III-3	

Balance of system components are Class E

Table 3.2-3 (Sheet 13 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Plant Gas Systems (PGS)					Location: Various
System components are Class E					
Primary Sampling System (PSS)			Location: Containment and Auxiliary Building		
n/a	Grab Sample Unit	D	NS	Manufacturer Std.	
n/a	Sample Cooler, PSS and CCS Side	D	NS	ASME VIII/TEMA	
n/a	Valves Providing PSS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
PSS-PL-V001A	Hot Leg Sample Isolation	B	I	ASME III-2	
PSS-PL-V001B	Hot Leg Sample Isolation	B	I	ASME III-2	
PSS-PL-V003	Pressurizer Liquid Isolation	B	I	ASME III-2	
PSS-PL-V004A	PXS Accumulator Sample Isolation	C	I	ASME III-3	
PSS-PL-V004B	PXS Accumulator Sample Isolation	C	I	ASME III-3	
PSS-PL-V005A	PXS CMT A Sample Isolation	B	I	ASME III-2	
PSS-PL-V005B	PXS CMT B Sample Isolation	B	I	ASME III-2	
PSS-PL-V005C	PXS CMT A Sample Isolation	B	I	ASME III-2	
PSS-PL-V005D	PXS CMT B Sample Isolation	B	I	ASME III-2	

Table 3.2-3 (Sheet 14 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Primary Sampling System (Continued)					
PSS-PL-V008	Containment Air Sample Containment Isolation IRC	B	I	ASME III-2	
PSS-PL-V010A	Liquid Sample Line Containment Isolation IRC	B	I	ASME III-2	
PSS-PL-V010B	Liquid Sample Line Containment Isolation IRC	B	I	ASME III-2	
PSS-PL-V011	Liquid Sample Line Containment Isolation ORC	B	I	ASME III-2	
PSS-PL-V012A	Liquid Sample Check Valve	C	I	ASME III-3	
PSS-PL-V012B	Liquid Sample Check Valve	C	I	ASME III-3	
PSS-PL-V023	Sample Return Line Containment Isolation ORC	B	I	ASME III-2	
PSS-PL-V024	Sample Return Containment Isolation Check IRC	B	I	ASME III-2	
PSS-PL-V046	Air Sample Line Containment Isolation ORC	B	I	ASME III-2	
PSS-PL-V076A	Containment Testing Boundary Isolation Valve	C	I	ASME III-3	
PSS-PL-V076B	Containment Testing Boundary Isolation Valve	C	I	ASME III-3	
PSS-PL-V082	Containment Isolation Test Connection Isolation Valve	C	I	ASME III-3	
PSS-PL-V083	Containment Isolation Test Connection Isolation Valve	C	I	ASME III-3	
PSS-PL-V085	Containment Isolation Test Connection Isolation Valve	B	I	ASME III-2	
PSS-PL-V086	Containment Isolation Test Connection Isolation Valve	C	I	ASME III-3	
PSS-PY-C01	Common Primary Sample Line Penetration	B	I	ASME III, MC	
PSS-PY-C02	Containment Atmosphere Sample Line Penetration	B	I	ASME III, MC	
PSS-PY-C03	Containment Atmosphere Sample Line Penetration	B	I	ASME III, MC	

Balance of system components are Class E

Table 3.2-3 (Sheet 15 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Potable Water System (PWS)					Location: Various
System components are Class E					
Passive Core Cooling System (PXS)					Location: Containment
PXS-ME-01	Passive Residual Heat Removal Heat Exchanger	A	I	ASME III-1	
PXS-MT-01A	Accumulator Tank A	C	I	ASME III-3	
PXS-MT-01B	Accumulator Tank B	C	I	ASME III-3	
PXS-MT-02A	Core Makeup Tank A	A	I	ASME III-1	
PXS-MT-02B	Core Makeup Tank B	A	I	ASME III-1	
PXS-MT-03	In-Containment Refueling Water Storage Tank	C	I	ACI 349/AISC N690	ACI 349 Is Used for Evaluation of Structural Boundary
PXS-MT-04	IRWST Gutter	C	I	Manufacturer Std.	
PXS-MW-01A	Reactor Coolant Depressurization Sparger A	C	I	ASME III-3	
PXS-MW-01B	Reactor Coolant Depressurization Sparger B	C	I	ASME III-3	
PXS-MY-Y01A	IRWST Screen A	C	I	Manufacturer Std.	
PXS-MY-Y01B	IRWST Screen B	C	I	Manufacturer Std.	
PXS-MY-Y02A	Containment Recirculation Screen A	C	I	Manufacturer Std.	
PXS-MY-Y02B	Containment Recirculation Screen B	C	I	Manufacturer Std.	
PXS-MY-Y03A	pH Adjustment Basket A	C	I	Manufacturer Std.	
PXS-MY-Y03B	pH Adjustment Basket B	C	I	Manufacturer Std.	
PXS-PL-V002A	CMT A CL Inlet Isolation	A	I	ASME III-1	
PXS-PL-V002B	CMT B CL Inlet Isolation	A	I	ASME III-1	
PXS-PL-V010A	CMT A Upper Sample	B	I	ASME III-2	
PXS-PL-V010B	CMT B Upper Sample	B	I	ASME III-2	
PXS-PL-V011A	CMT A Lower Sample	B	I	ASME III-2	

Table 3.2-3 (Sheet 16 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V011B	CMT B Lower Sample	B	I	ASME III-2	
PXS-PL-V012A	CMT A Drain	A	I	ASME III-1	
PXS-PL-V012B	CMT B Drain	A	I	ASME III-1	
PXS-PL-V013A	CMT A Discharge Manual Isolation	A	I	ASME III-1	
PXS-PL-V013B	CMT B Discharge Manual Isolation	A	I	ASME III-1	
PXS-PL-V014A	CMT A Discharge Isolation	A	I	ASME III-1	
PXS-PL-V014B	CMT B Discharge Isolation	A	I	ASME III-1	
PXS-PL-V015A	CMT A Discharge Isolation	A	I	ASME III-1	
PXS-PL-V015B	CMT B Discharge Isolation	A	I	ASME III-1	
PXS-PL-V016A	CMT A Discharge Check	A	I	ASME III-1	
PXS-PL-V016B	CMT B Discharge Check	A	I	ASME III-1	
PXS-PL-V017A	CMT A Discharge Check	A	I	ASME III-1	
PXS-PL-V017B	CMT B Discharge Check	A	I	ASME III-1	
PXS-PL-V019A	DVI Line A Vent	B	I	ASME III-2	
PXS-PL-V019B	DVI Line B Vent	B	I	ASME III-2	
PXS-PL-V021A	Accumulator A Nitrogen Vent	C	I	ASME III-3	
PXS-PL-V021B	Accumulator B Nitrogen Vent	C	I	ASME III-3	
PXS-PL-V022A	Accumulator A Pressure Relief	C	I	ASME III-3	
PXS-PL-V022B	Accumulator B Pressure Relief	C	I	ASME III-3	
PXS-PL-V023A	Accumulator A Pressure Transmitter B Isolation	C	I	ASME III-3	
PXS-PL-V023B	Accumulator B Pressure Transmitter B Isolation	C	I	ASME III-3	
PXS-PL-V024A	Accumulator A Pressure Transmitter A Isolation	C	I	ASME III-3	
PXS-PL-V024B	Accumulator B Pressure Transmitter A Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 17 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V025A	Accumulator A Sample	C	I	ASME III-3	
PXS-PL-V025B	Accumulator B Sample	C	I	ASME III-3	
PXS-PL-V026A	Accumulator A Drain	C	I	ASME III-3	
PXS-PL-V026B	Accumulator B Drain	C	I	ASME III-3	
PXS-PL-V027A	Accumulator A Discharge Isolation	C	I	ASME III-3	
PXS-PL-V027B	Accumulator B Discharge Isolation	C	I	ASME III-3	
PXS-PL-V028A	Accumulator A Discharge Check	A	I	ASME III-1	
PXS-PL-V028B	Accumulator B Discharge Check	A	I	ASME III-1	
PXS-PL-V029A	Accumulator A Discharge Check	A	I	ASME III-1	
PXS-PL-V029B	Accumulator B Discharge Check	A	I	ASME III-1	
PXS-PL-V030A	CMT A Highpoint Vent	B	I	ASME III-2	
PXS-PL-V030B	CMT B Highpoint Vent	B	I	ASME III-2	
PXS-PL-V031A	CMT A Highpoint Vent	B	I	ASME III-2	
PXS-PL-V031B	CMT B Highpoint Vent	B	I	ASME III-2	
PXS-PL-V033A	Accumulator A Check Valve Drain	B	I	ASME III-2	
PXS-PL-V033B	Accumulator B Check Valve Drain	B	I	ASME III-2	
PXS-PL-V042	Nitrogen Supply Containment Isolation ORC	B	I	ASME III-2	
PXS-PL-V043	Nitrogen Supply Containment Isolation IRC	B	I	ASME III-2	
PXS-PL-V052	Accumulator Nitrogen Containment Penetration TC	B	I	ASME III-2	

Table 3.2-3 (Sheet 18 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V080A	CMT A WR Level Isolation	B	I	ASME III-2	
PXS-PL-V080B	CMT B WR Level Isolation	B	I	ASME III-2	
PXS-PL-V081A	CMT A WR Level Isolation	B	I	ASME III-2	
PXS-PL-V081B	CMT B WR Level Isolation	B	I	ASME III-2	
PXS-PL-V085A	CMT A NR Upper Level Isolation	B	I	ASME III-2	
PXS-PL-V085B	CMT B NR Upper Level Isolation	B	I	ASME III-2	
PXS-PL-V086A	CMT A NR Upper Level Isolation	B	I	ASME III-2	
PXS-PL-V086B	CMT B NR Upper Level Isolation	B	I	ASME III-2	
PXS-PL-V087A	CMT A NR Lower Level Isolation	B	I	ASME III-2	
PXS-PL-V087B	CMT B NR Lower Level Isolation	B	I	ASME III-2	
PXS-PL-V088A	CMT A NR Lower Level Isolation	B	I	ASME III-2	
PXS-PL-V088B	CMT B NR Lower Level Isolation	B	I	ASME III-2	
PXS-PL-V101	PRHR HX Inlet Isolation	A	I	ASME III-1	
PXS-PL-V102A	PRHR HX Inlet Head Vent	B	I	ASME III-2	
PXS-PL-V102B	PRHR HX Inlet Head Drain	B	I	ASME III-2	

Table 3.2-3 (Sheet 19 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V103A	PRHR HX Outlet Head Vent	B	I	ASME III-2	
PXS-PL-V103B	PRHR HX Outlet Head Drain	B	I	ASME III-2	
PXS-PL-V104A	PRHR HX Flow Transmitter A Isolation	B	I	ASME III-2	
PXS-PL-V104B	PRHR HX Flow Transmitter B Isolation	B	I	ASME III-2	
PXS-PL-V105A	PRHR HX Flow Transmitter A Isolation	B	I	ASME III-2	
PXS-PL-V105B	PRHR HX Flow Transmitter B Isolation	B	I	ASME III-2	
PXS-PL-V108A	PRHR HX Control	A	I	ASME III-1	
PXS-PL-V108B	PRHR HX Control	A	I	ASME III-1	
PXS-PL-V109	PRHR HX/RCS Return Isolation	A	I	ASME III-1	
PXS-PL-V111A	PRHR HX Highpoint Vent	B	I	ASME III-2	
PXS-PL-V111B	PRHR HX Highpoint Vent	B	I	ASME III-2	
PXS-PL-V113	PRHR HX Pressure Transmitter Isolation	B	I	ASME III-2	
PXS-PL-V117A	Containment Recirculation A Isolation	C	I	ASME III-3	
PXS-PL-V117B	Containment Recirculation B Isolation	C	I	ASME III-3	
PXS-PL-V118A	Containment Recirculation A Isolation	C	I	ASME III-3	
PXS-PL-V118B	Containment Recirculation B Isolation	C	I	ASME III-3	
PXS-PL-V119A	Containment Recirculation A Check	C	I	ASME III-3	
PXS-PL-V119B	Containment Recirculation B Check	C	I	ASME III-3	
PXS-PL-V120A	Containment Recirculation A Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 20 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V120B	Containment Recirculation B Isolation	C	I	ASME III-3	
PXS-PL-V121A	IRWST Line A Isolation	C	I	ASME III-3	
PXS-PL-V121B	IRWST Line B Isolation	C	I	ASME III-3	
PXS-PL-V122A	IRWST Injection A Check	A	I	ASME III-1	
PXS-PL-V122B	IRWST Injection B Check	A	I	ASME III-1	
PXS-PL-V123A	IRWST Injection A Isolation	A	I	ASME III-1	
PXS-PL-V123B	IRWST Injection B Isolation	A	I	ASME III-1	
PXS-PL-V124A	IRWST Injection A Check	A	I	ASME III-1	
PXS-PL-V124B	IRWST Injection B Check	A	I	ASME III-1	
PXS-PL-V125A	IRWST Injection A Isolation	A	I	ASME III-1	
PXS-PL-V125B	IRWST Injection B Isolation	A	I	ASME III-1	
PXS-PL-V126A	IRWST Injection Check Test	C	I	ASME III-3	
PXS-PL-V126B	IRWST Injection Check Test	C	I	ASME III-3	
PXS-PL-V127	IRWST to Containment Sump	C	I	ASME III-3	
PXS-PL-V128A	IRWST Injection Check Test	B	I	ASME III-2	
PXS-PL-V128B	IRWST Injection Check Test	B	I	ASME III-2	
PXS-PL-V129A	IRWST Injection Check Test	B	I	ASME III-2	
PXS-PL-V129B	IRWST Injection Check Test	B	I	ASME III-2	
PXS-PL-V130A	IRWST Gutter Bypass A Isolation	C	I	ASME III-3	
PXS-PL-V130B	IRWST Gutter Bypass B Isolation	C	I	ASME III-3	
PXS-PL-V150A	IRWST Level Transmitter A Isolation	C	I	ASME III-3	
PXS-PL-V150B	IRWST Level Transmitter B Isolation	C	I	ASME III-3	
PXS-PL-V150C	IRWST Level Transmitter C Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 21 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V150D	IRWST Level Transmitter D Isolation	C	I	ASME III-3	
PXS-PL-V151A	IRWST Level Transmitter A Isolation	C	I	ASME III-3	
PXS-PL-V151B	IRWST Level Transmitter B Isolation	C	I	ASME III-3	
PXS-PL-V151C	IRWST Level Transmitter C Isolation	C	I	ASME III-3	
PXS-PL-V151D	IRWST Level Transmitter D Isolation	C	I	ASME III-3	
PXS-PL-V201A	Accumulator A Leak Test	B	I	ASME III-2	
PXS-PL-V201B	Accumulator B Leak Test	B	I	ASME III-2	
PXS-PL-V202A	Accumulator A Leak Test	C	I	ASME III-3	
PXS-PL-V202B	Accumulator B Leak Test	C	I	ASME III-3	
PXS-PL-V205A	RNS Discharge Leak Test	B	I	ASME III-2	
PXS-PL-V205B	RNS Discharge Leak Test	B	I	ASME III-2	
PXS-PL-V206	RNS Discharge Leak Test	C	I	ASME III-3	
PXS-PL-V207A	RNS Suction Leak Test	B	I	ASME III-2	
PXS-PL-V207B	RNS Suction Leak Test	B	I	ASME III-2	
PXS-PL-V208A	RNS Suction Leak Test	B	I	ASME III-2	
PXS-PL-V217	PXS Leak Test Line Isolation	D	NS	ANSI B31.1	
PXS-PL-V221	Test Header to IRWST	D	NS	ANSI B31.1	
PXS-PL-V230A	CMT A Fill Isolation	B	I	ASME III-2	
PXS-PL-V230B	CMT B Fill Isolation	B	I	ASME III-2	
PXS-PL-V231A	CMT A Fill Check	B	I	ASME III-2	
PXS-PL-V231B	CMT B Fill Check	B	I	ASME III-2	
PXS-PL-V232A	Accumulator A Fill/Drain Isolation	C	I	ASME III-3	
PXS-PL-V232B	Accumulator B Fill/Drain Isolation	C	I	ASME III-3	
PXS-PY-C01	Nitrogen Makeup Containment Penetration	B	I	ASME III, MC	

Balance of system components are Class E

Table 3.2-3 (Sheet 22 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (RCS)					Location: Containment
RCS-MB-01	Steam Generator 1	A	I	ASME III-1	
RCS-MB-02	Steam Generator 2	A	I	ASME III-1	
RCS-MP-01A	SG 1 Normal Rotation Reactor Coolant Pump	A	I	ASME III-1	
RCS-MP-01B	SG 1 Reverse Rotation Reactor Coolant Pump	A	I	ASME III-1	
RCS-MP-02A	SG 2 Normal Rotation Reactor Coolant Pump	A	I	ASME III-1	
RCS-MP-02B	SG 2 Reverse Rotation Reactor Coolant Pump	A	I	ASME III-1	
RCS-MV-01	Reactor Vessel	A	I	ASME III-1	
RCS-MV-02	Pressurizer	A	I	ASME III-1	
RCS-MY-Y11	SG 1 Shell	B	I	ASME III-1	
RCS-MY-Y12	SG 1 Channel Head Divider Plate	B	I	ASME III-1	
RCS-MY-Y13	SG 1 Tube Bundle Support Assembly	C	I	ASME III, NG	
RCS-MY-Y14	SG 1 Steam Flow Limiting Venturi	B	I	ASME III, NG	
RCS-MY-Y15	SG 1 Feedwater Distribution Ring Supports	B	I	ASME III, NG	
RCS-MY-Y21	SG 2 Shell	B	I	ASME III-1	
RCS-MY-Y22	SG 2 Channel Head Divider Plate	B	I	ASME III-1	
RCS-MY-Y23	SG 2 Tube Bundle Support Assembly	C	I	ASME III, NG	
RCS-MY-Y24	SG 2 Steam Flow Limiting Venturi	B	I	ASME III, NG	
RCS-MY-Y25	SG 2 Feedwater Distribution Ring Supports	B	I	ASME III, NG	
RCS-PL-V001A	First Stage ADS	A	I	ASME III-1	
RCS-PL-V001B	First Stage ADS	A	I	ASME III-1	

Table 3.2-3 (Sheet 23 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
RCS-PL-V002A	Second Stage ADS	A	I	ASME III-1	
RCS-PL-V002B	Second Stage ADS	A	I	ASME III-1	
RCS-PL-V003A	Third Stage ADS	A	I	ASME III-1	
RCS-PL-V003B	Third Stage ADS	A	I	ASME III-1	
RCS-PL-V004A	Fourth Stage ADS	A	I	ASME III-1	
RCS-PL-V004B	Fourth Stage ADS	A	I	ASME III-1	
RCS-PL-V004C	Fourth Stage ADS	A	I	ASME III-1	
RCS-PL-V004D	Fourth Stage ADS	A	I	ASME III-1	
RCS-PL-V005A	Pressurizer Safety Valve	A	I	ASME III-1	
RCS-PL-V005B	Pressurizer Safety Valve	A	I	ASME III-1	
RCS-PL-V007A	ADS Test Valve	B	I	ASME III-2	
RCS-PL-V007B	ADS Test Valve	B	I	ASME III-2	
RCS-PL-V010A	ADS Discharge Header A Vacuum Relief	C	I	ASME III-3	
RCS-PL-V010B	ADS Discharge Header B Vacuum Relief	C	I	ASME III-3	
RCS-PL-V011A	First Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V011B	First Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V012A	Second Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V012B	Second Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V013A	Third Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V013B	Third Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V014A	Fourth Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V014B	Fourth Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V014C	Fourth Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V014D	Fourth Stage ADS Isolation	A	I	ASME III-1	
RCS-PL-V095	Hot Leg 2 Level Instrument Root	B	I	ASME III-2	
RCS-PL-V096	Hot Leg 2 Level Instrument Root	B	I	ASME III-2	ADS Test Valve

Table 3.2-3 (Sheet 24 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
RCS-PL-V097	Hot Leg 1 Level Instrument Root	B	I	ASME III-2	
RCS-PL-V098	Hot Leg 1 Level Instrument Root	B	I	ASME III-2	
RCS-PL-V101A	Cold Leg 1A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V101B	Cold Leg 1A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V101C	Cold Leg 1A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V101D	Cold Leg 1A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V101E	Cold Leg 1A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V102A	Cold Leg 1B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V102B	Cold Leg 1B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V102C	Cold Leg 1B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V102D	Cold Leg 1B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V102E	Cold Leg 1B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V103A	Cold Leg 2A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V103B	Cold Leg 2A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V103C	Cold Leg 2A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V103D	Cold Leg 2A Flow Meter Instrument Root	B	I	ASME III-2	

Table 3.2-3 (Sheet 25 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
RCS-PL-V103E	Cold Leg 2A Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V104A	Cold Leg 2B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V104B	Cold Leg 2B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V104C	Cold Leg 2B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V104D	Cold Leg 2B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V104E	Cold Leg 2B Flow Meter Instrument Root	B	I	ASME III-2	
RCS-PL-V108A	Hot Leg 1 Sample Isolation	B	I	ASME III-2	
RCS-PL-V108B	Hot Leg 2 Sample Isolation	B	I	ASME III-2	
RCS-PL-V110A	Pressurizer Spray Valve	A	I	ASME III-1	
RCS-PL-V110B	Pressurizer Spray Valve	A	I	ASME III-1	
RCS-PL-V111A	Pressurizer Spray Block Valve	A	I	ASME III-1	
RCS-PL-V111B	Pressurizer Spray Block Valve	A	I	ASME III-1	
RCS-PL-V120	Reactor Vessel Flange Leakoff	D	NS	ANSI B31.1	
RCS-PL-V121	Reactor Vessel Flange Leakoff	D	NS	ANSI B31.1	
RCS-PL-V122A	Reactor Vessel Flange Leakoff	D	NS	ANSI B31.1	
RCS-PL-V122B	Reactor Vessel Flange Leakoff	D	NS	ANSI B31.1	
RCS-PL-V150A	Reactor Vessel Head Vent	A	I	ASME III-1	
RCS-PL-V150B	Reactor Vessel Head Vent	A	I	ASME III-1	
RCS-PL-V150C	Reactor Vessel Head Vent	A	I	ASME III-1	
RCS-PL-V150D	Reactor Vessel Head Vent	A	I	ASME III-1	

Table 3.2-3 (Sheet 26 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
RCS-PL-V203	Pressurizer Steam Space Sample Isolation	B	I	ASME III-2	
RCS-PL-V204	Pressurizer Manual Vent	A	I	ASME III-1	
RCS-PL-V205	Pressurizer Manual Vent	A	I	ASME III-1	
RCS-PL-V210A	Pressurizer Spray Bypass	B	I	ASME III-2	
RCS-PL-V210B	Pressurizer Spray Bypass	B	I	ASME III-2	
RCS-PL-V225A	Pressurizer Level Steam Space Instrument Root	B	I	ASME III-2	
RCS-PL-V225B	Pressurizer Level Steam Space Instrument Root	B	I	ASME III-2	
RCS-PL-V225C	Pressurizer Level Steam Space Instrument Root	B	I	ASME III-2	
RCS-PL-V225D	Pressurizer Level Steam Space Instrument Root	B	I	ASME III-2	
RCS-PL-V226A	Pressurizer Level Liquid Space Instrument Root	B	I	ASME III-2	
RCS-PL-V226B	Pressurizer Level Liquid Space Instrument Root	B	I	ASME III-2	
RCS-PL-V226C	Pressurizer Level Liquid Space Instrument Root	B	I	ASME III-2	
RCS-PL-V226D	Pressurizer Level Liquid Space Instrument Root	B	I	ASME III-2	
RCS-PL-V228	Wide Range Pressurizer Level B Steam Space Instrument Root	B	I	ASME III-2	
RCS-PL-V229	Wide Range Pressurizer Level B Liquid Space Instrument Root	B	I	ASME III-2	
RCS-PL-V232	Manual Head Vent	C	I	ASME III-3	
RCS-PL-V233	Head Vent Isolation	C	I	ASME III-3	
RCS-PL-V241	ADS Valve Discharge Header Drain Isolation	C	I	ASME III-3	
RCS-PL-V242	ADS Valve Discharge Header Drain Check	D	NS	ANSI 16.34	

Table 3.2-3 (Sheet 27 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
RCS-PL-V255A	RCP 1A Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V255B	RCP 1B Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V255C	RCP 2A Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V255D	RCP 2B Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V256A	RCP 1A Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V256B	RCP 1B Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V256C	RCP 2A Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V256D	RCP 2B Flange Leakoff	D	NS	ANSI 16.34	
RCS-PL-V260A	RCP 1A Flush	A	I	ASME III-1	
RCS-PL-V260B	RCP 1B Flush	A	I	ASME III-1	
RCS-PL-V260C	RCP 2A Flush	A	I	ASME III-1	
RCS-PL-V260D	RCP 2B Flush	A	I	ASME III-1	
RCS-PL-V261A	RCP 1A Drain	A	I	ASME III-1	
RCS-PL-V261B	RCP 1B Drain	A	I	ASME III-1	
RCS-PL-V261C	RCP 2A Drain	A	I	ASME III-1	
RCS-PL-V261D	RCP 2B Drain	A	I	ASME III-1	
RCS-PY-K03	Safety Valve Discharge Chamber Rupture Disk	C	I	ASME III-3	
RCS-PY-K04	Safety Valve Discharge Chamber Rupture Disk	C	I	ASME III-3	
Gravity and Roof Drain Collection System (RDS)					Location: Various
System components are Class E					
Normal Residual Heat Removal System (RNS)			Location: Containment and Auxiliary Building		
RNS-ME-01A	Normal Residual Heat Removal Heat Exchanger A (Tube Side)	C	I	ASME III-3	Shellside - Class D ASME VIII, Div. 1
RNS-ME-01B	Normal Residual Heat Removal Heat Exchanger B (Tube Side)	C	I	ASME III-3	Shellside - Class D ASME VIII, Div. 1
RNS-MP-01A	Residual Heat Removal Pump A	C	I	ASME III-3	Pump Motor - Class D
RNS-MP-01B	Residual Heat Removal Pump B	C	I	ASME III-3	Pump Motor - Class D

Table 3.2-3 (Sheet 28 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Con- struction Code	Comments
Normal Residual Heat Removal System (Continued)					
RNS-PL-V001A	RNS HL Suction Isolation - Inner	A	I	ASME III-1	
RNS-PL-V001B	RNS HL Suction Isolation - Inner	A	I	ASME III-1	
RNS-PL-V002A	RNS HL Suction and Containment Isolation - Outer	A	I	ASME III-1	
RNS-PL-V002B	RNS HL Suction and Containment Isolation - Outer	A	I	ASME III-1	
RNS-PL-V003A	RCS Pressure Boundary Valve Thermal Relief	B	I	ASME III-2	
RNS-PL-V003B	RCS Pressure Boundary Valve Thermal Relief	B	I	ASME III-2	
RNS-PL-V004A	RCS Pressure Boundary Valve Thermal Relief Isolation	B	I	ASME III-2	
RNS-PL-V004B	RCS Pressure Boundary Valve Thermal Relief Isolation	B	I	ASME III-2	
RNS-PL-V005A	RNS Pump A Suction Isolation	C	I	ASME III-3	
RNS-PL-V005B	RNS Pump B Suction Isolation	C	I	ASME III-3	
RNS-PL-V006A	RNS HX A Outlet Flow Control	C	I	ASME III-3	
RNS-PL-V006B	RNS HX B Outlet Flow Control	C	I	ASME III-3	
RNS-PL-V007A	RNS Pump A Discharge Isolation	C	I	ASME III-3	
RNS-PL-V007B	RNS Pump B Discharge Isolation	C	I	ASME III-3	
RNS-PL-V008A	RNS HX A Bypass Flow Control	C	I	ASME III-3	
RNS-PL-V008B	RNS HX B Bypass Flow Control	C	I	ASME III-3	
RNS-PL-V010	RNS Discharge Containment Isolation Valve Test	C	I	ASME III-3	

Table 3.2-3 (Sheet 29 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Con- struction Code	Comments
Normal Residual Heat Removal System (Continued)					
RNS-PL-V011	RNS Discharge Containment Isolation Valve - ORC	B	I	ASME III-2	
RNS-PL-V012	RNS Discharge Containment Isolation Valve Test Connection ORC	B	I	ASME III-2	
RNS-PL-V013	RNS Discharge Containment Isolation - IRC	B	I	ASME III-2	
RNS-PL-V014	RNS Discharge Containment Isolation Valve Test Connection	C	I	ASME III-3	
RNS-PL-V015A	RNS Discharge RCS Pressure Boundary	A	I	ASME III-1	
RNS-PL-V015B	RNS Discharge RCS Pressure Boundary	A	I	ASME III-1	
RNS-PL-V016	RNS Discharge Containment Penetration Isolation Valves Test	C	I	ASME III-3	
RNS-PL-V017A	RNS Discharge RCS Pressure Boundary	A	I	ASME III-1	
RNS-PL-V017B	RNS Discharge RCS Pressure Boundary	A	I	ASME III-1	
RNS-PL-V021	RNS HL Suction Pressure Relief	B	I	ASME III-2	
RNS-PL-V022	RNS Suction Header Containment Isolation - ORC	B	I	ASME III-2	
RNS-PL-V023	RNS Suction from IRWST - Containment Isolation	B	I	ASME III-2	
RNS-PL-V024	RNS Discharge to IRWST Isolation	C	I	ASME III-3	
RNS-PL-V025A	RNS HX A Bypass Flow Instrument Isolation	C	I	ASME III-3	
RNS-PL-V025B	RNS HX B Bypass Flow Instrument Isolation	C	I	ASME III-3	
RNS-PL-V026A	RNS HX A Bypass Flow Instrument Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 30 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Normal Residual Heat Removal System (Continued)					
RNS-PL-V026B	RNS HX B Bypass Flow Instrument Isolation	C	I	ASME III-3	
RNS-PL-V029	RNS Discharge to CVS	C	I	ASME III-3	
RNS-PL-V030A	RNS HX A Shell Drain	D	NS	ANSI B31.1	
RNS-PL-V030B	RNS HX B Shell Drain	D	NS	ANSI B31.1	
RNS-PL-V031A	RNS Train A Discharge Flow Instrument Isolation	C	I	ASME III-3	
RNS-PL-V031B	RNS Train B Discharge Flow Instrument Isolation	C	I	ASME III-3	
RNS-PL-V032A	RNS Train A Discharge Flow Instrument Isolation	C	I	ASME III-3	
RNS-PL-V032B	RNS Train B Discharge Flow Instrument Isolation	C	I	ASME III-3	
RNS-PL-V033A	RNS Pump A Suction Pressure Instrument Isolation	C	I	ASME III-3	
RNS-PL-V033B	RNS Pump B Suction Pressure Instrument Isolation	C	I	ASME III-3	
RNS-PL-V034A	RNS Pump A Discharge Pressure Instrument Isolation	C	I	ASME III-3	
RNS-PL-V034B	RNS Pump B Discharge Pressure Instrument Isolation	C	I	ASME III-3	
RNS-PL-V035A	RNS HX A Shell Vent	D	NS	ANSI 16.34	
RNS-PL-V035B	RNS HX B Shell Vent	D	NS	ANSI 16.34	
RNS-PL-V036A	RNS Pump A Suction Piping Drain. Isolation	C	I	ASME III-3	
RNS-PL-V036B	RNS Pump B Suction Piping Drain. Isolation	C	I	ASME III-3	
RNS-PL-V045	RNS Pump Discharge Relief	C	I	ASME III-3	
RNS-PL-V046	RNS HX A Channel Head Drain. Isolation	C	I	ASME III-3	
RNS-PL-V048	RNS HX B Channel Head Drain. Isolation	C	I	ASME III-3	
RNS-PL-V050	RNS Pump A Casing Drain. Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 31 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Normal Residual Heat Removal System (Continued)					
RNS-PL-V051	RNS Pump B Casing Drain. Isolation	C	I	ASME III-3	
RNS-PL-V052	RNS Pump Suction From Spent Fuel Pool Isolation	C	I	ASME III-3	
RNS-PL-V053	RNS Pump Discharge to Spent Fuel Pool Isolation	C	I	ASME III-3	
RNS-PL-V059	RNS Pump Suction Containment Isolation Test Connection	C	I	ASME III-3	
RNS-PL-V061	RNS Return from CVS - Containment Isolation	B	I	ASME III-2	
RNS-PY-C01	Normal Residual Heat Removal Suction Line Penetration	B	I	ASME III, MC	
RNS-PY-C02	Normal Residual Heat Removal Discharge Line Penetration	B	I	ASME III, MC	
Balance of system components are Class E					
Raw Water System (RWS)				Location: Yard, Turbine Building	
System components are Class E					
Reactor System (RXS)				Location: Containment	
n/a	Fuel Assemblies	C	I	Manufacturer Std.	
RXS-FR-B04	Control Rod Cluster B4	B	I	Manufacturer Std.	
RXS-FR-B06	Control Rod Cluster B6	B	I	Manufacturer Std.	
RXS-FR-B08	Control Rod Cluster B8	B	I	Manufacturer Std.	
RXS-FR-B10	Control Rod Cluster B10	B	I	Manufacturer Std.	
RXS-FR-C05	Control Rod Cluster C5	B	I	Manufacturer Std.	
RXS-FR-C07	Control Rod Cluster C7	B	I	Manufacturer Std.	

Table 3.2-3 (Sheet 32 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-FR-C09	Control Rod Cluster C9	B	I	Manufacturer Std.	
RXS-FR-D02	Control Rod Cluster D2	B	I	Manufacturer Std.	
RXS-FR-D04	Control Rod Cluster D4	B	I	Manufacturer Std.	
RXS-FR-D06	Control Rod Cluster D6	B	I	Manufacturer Std.	
RXS-FR-D08	Control Rod Cluster D8	B	I	Manufacturer Std.	
RXS-FR-D10	Control Rod Cluster D10	B	I	Manufacturer Std.	
RXS-FR-D12	Control Rod Cluster D12	B	I	Manufacturer Std.	
RXS-FR-E03	Control Rod Cluster E3	B	I	Manufacturer Std.	
RXS-FR-E11	Control Rod Cluster E11	B	I	Manufacturer Std.	
RXS-FR-F02	Control Rod Cluster F2	B	I	Manufacturer Std.	
RXS-FR-F04	Control Rod Cluster F4	B	I	Manufacturer Std.	
RXS-FR-F06	Control Rod Cluster F6	B	I	Manufacturer Std.	
RXS-FR-F08	Control Rod Cluster F8	B	I	Manufacturer Std.	
RXS-FR-F10	Control Rod Cluster F10	B	I	Manufacturer Std.	
RXS-FR-F12	Control Rod Cluster F12	B	I	Manufacturer Std.	
RXS-FR-G03	Control Rod Cluster G3	B	I	Manufacturer Std.	
RXS-FR-G07	Control Rod Cluster G7	B	I	Manufacturer Std.	
RXS-FR-G11	Control Rod Cluster G11	B	I	Manufacturer Std.	

Table 3.2-3 (Sheet 33 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-FR-H02	Control Rod Cluster H2	B	I	Manufacturer Std.	
RXS-FR-H04	Control Rod Cluster H4	B	I	Manufacturer Std.	
RXS-FR-H06	Control Rod Cluster H6	B	I	Manufacturer Std.	
RXS-FR-H08	Control Rod Cluster H8	B	I	Manufacturer Std.	
RXS-FR-H10	Control Rod Cluster H10	B	I	Manufacturer Std.	
RXS-FR-H12	Control Rod Cluster H12	B	I	Manufacturer Std.	
RXS-FR-J03	Control Rod Cluster J3	B	I	Manufacturer Std.	
RXS-FR-J11	Control Rod Cluster J11	B	I	Manufacturer Std.	
RXS-FR-K02	Control Rod Cluster K2	B	I	Manufacturer Std.	
RXS-FR-K04	Control Rod Cluster K4	B	I	Manufacturer Std.	
RXS-FR-K06	Control Rod Cluster K6	B	I	Manufacturer Std.	
RXS-FR-K08	Control Rod Cluster K8	B	I	Manufacturer Std.	
RXS-FR-K10	Control Rod Cluster K10	B	I	Manufacturer Std.	
RXS-FR-K12	Control Rod Cluster K12	B	I	Manufacturer Std.	
RXS-FR-L05	Control Rod Cluster L5	B	I	Manufacturer Std.	
RXS-FR-L07	Control Rod Cluster L7	B	I	Manufacturer Std.	
RXS-FR-L09	Control Rod Cluster L9	B	I	Manufacturer Std.	

Table 3.2-3 (Sheet 34 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-FR-M04	Control Rod Cluster M4	B	I	Manufacturer Std.	
RXS-FR-M06	Control Rod Cluster M6	B	I	Manufacturer Std.	
RXS-FR-M08	Control Rod Cluster M8	B	I	Manufacturer Std.	
RXS-FR-M10	Control Rod Cluster M10	B	I	Manufacturer Std.	
RXS-MI-01	Reactor Upper Internals	C	I	ASME III, CS	
RXS-MI-02	Reactor Lower Internals	C	I	ASME III, CS	
RXS-MI-10	Non-Threaded Fasteners	D	NS	ASME III, CS	
RXS-MI-11	Threaded Structural Fasteners	C	I	ASME III, CS	
RXS-MI-20	Lower Core Support Plate	C	I	ASME III, CS	
RXS-MI-21	Secondary Core Support	D	II	ASME III, CS	
RXS-MI-22	Vortex Suppression Plate	D	II	ASME III, CS	
RXS-MI-23	Radial Reflector Assembly	C	II	ASME III, CS	
RXS-MI-24	Radial Supports [4]	C	I	ASME III, CS	
RXS-MI-25	Core Barrel	C	I	ASME III, CS	
RXS-MI-26	Core Barrel Nozzle	C	I	ASME III, CS	
RXS-MI-27	Head and Vessel Pins	D	II	ASME III, CS	
RXS-MI-28	Lower Support Plate Fuel Alignment Pins	C	I	ASME III, CS	
RXS-MI-29	Core Barrel Hold Down Spring	C	I	ASME III, CS	
RXS-MI-50	Upper Support	C	I	ASME III, CS	
RXS-MI-51	Upper Core Plate	C	I	ASME III, CS	
RXS-MI-52	Support Columns [38]	C	I	ASME III, CS	
RXS-MI-53	Guide Tube Assemblies [61]	C	I	ASME III, CS	
RXS-MI-54	Upper Support Plate Fuel Alignment Pins	C	I	ASME III, CS	
RXS-MI-55	Upper Core Plate Inserts	C	I	ASME III, CS	
RXS-MI-56	Safety Injection Deflector	D	II	ANSI B31.1	

Table 3.2-3 (Sheet 35 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MI-57	Irradiation Specimen Guide Tubes	D	II	ANSI B31.1	
RXS-MI-58	Head Cooling Nozzles	D	II	ANSI B31.1	
RXS-MV-10	Reactor Integrated Head Package	C	I	AISC-690	
RXS-MV-10A	Integrated Head Package Shroud	C	I	ASME-NF	
RXS-MV-10B	Integrated Head Package Seismic Support Plate	C	I	ASME-NF	
RXS-MV-11A07	Control Rod Drive Mechanism Position A7	D	NS	Manufacturer Std.	
RXS-MV-11A07L	CRDM Latch Housing	A	I	ASME III-1	
RXS-MV-11A07R	CRDM Rod Travel Housing	A	I	ASME III-1	
RXS-MV-11B04	Control Rod Drive Mechanism Position B4	D	NS	Manufacturer Std.	
RXS-MV-11B04L	CRDM Latch Housing B4	A	I	ASME III-1	
RXS-MV-11B04R	CRDM Rod Travel Housing B4	A	I	ASME III-1	
RXS-MV-11B06	Control Rod Drive Mechanism Position B6	D	NS	Manufacturer Std.	
RXS-MV-11B06L	CRDM Latch Housing B6	A	I	ASME III-1	
RXS-MV-11B06R	CRDM Rod Travel Housing B6	A	I	ASME III-1	
RXS-MV-11B08	Control Rod Drive Mechanism Position B8	D	NS	Manufacturer Std.	
RXS-MV-11B08L	CRDM Latch Housing B8	A	I	ASME III-1	
RXS-MV-11B08R	CRDM Rod Travel Housing B8	A	I	ASME III-1	
RXS-MV-11B10	Control Rod Drive Mechanism Position B10	D	NS	Manufacturer Std.	
RXS-MV-11B10L	CRDM Latch Housing B10	A	I	ASME III-1	
RXS-MV-11B10R	CRDM Rod Travel Housing B10	A	I	ASME III-1	
RXS-MV-11C03	Control Rod Drive Mechanism Position C3	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 36 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11C03L	CRDM Latch Housing C3	A	I	ASME III-1	
RXS-MV-11C03R	CRDM Rod Travel Housing C3	A	I	ASME III-1	
RXS-MV-11C05	Control Rod Drive Mechanism Position C5	D	NS	Manufacturer Std.	
RXS-MV-11C05L	CRDM Latch Housing C5	A	I	ASME III-1	
RXS-MV-11C05R	CRDM Rod Travel Housing C5	A	I	ASME III-1	
RXS-MV-11C07	Control Rod Drive Mechanism Position C7	D	NS	Manufacturer Std.	
RXS-MV-11C07L	CRDM Latch Housing C7	A	I	ASME III-1	
RXS-MV-11C07R	CRDM Rod Travel Housing C7	A	I	ASME III-1	
RXS-MV-11C09	Control Rod Drive Mechanism Position C9	D	NS	Manufacturer Std.	
RXS-MV-11C09L	CRDM Latch Housing C9	A	I	ASME III-1	
RXS-MV-11C09R	CRDM Rod Travel Housing C9	A	I	ASME III-1	
RXS-MV-11C11	Control Rod Drive Mechanism Position C11	D	NS	Manufacturer Std.	
RXS-MV-11C11L	CRDM Latch Housing C11	A	I	ASME III-1	
RXS-MV-11C11R	CRDM Rod Travel Housing C11	A	I	ASME III-1	
RXS-MV-11D02	Control Rod Drive Mechanism Position D2	D	NS	Manufacturer Std.	
RXS-MV-11D02L	CRDM Latch Housing D2	A	I	ASME III-1	
RXS-MV-11D02R	CRDM Rod Travel Housing D2	A	I	ASME III-1	
RXS-MV-11D04	Control Rod Drive Mechanism Position D4	D	NS	Manufacturer Std.	
RXS-MV-11D04L	CRDM Latch Housing D4	A	I	ASME III-1	
RXS-MV-11D04R	CRDM Rod Travel Housing D4	A	I	ASME III-1	
RXS-MV-11D06	Control Rod Drive Mechanism Position D6	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 37 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11D06L	CRDM Latch Housing D6	A	I	ASME III-1	
RXS-MV-11D06R	CRDM Rod Travel Housing D6	A	I	ASME III-1	
RXS-MV-11D08	Control Rod Drive Mechanism Position D8	D	NS	Manufacturer Std.	
RXS-MV-11D08L	CRDM Latch Housing D8	A	I	ASME III-1	
RXS-MV-11D08R	CRDM Rod Travel Housing D8	A	I	ASME III-1	
RXS-MV-11D10	Control Rod Drive Mechanism Position D10	D	NS	Manufacturer Std.	
RXS-MV-11D10L	CRDM Latch Housing D10	A	I	ASME III-1	
RXS-MV-11D10R	CRDM Rod Travel Housing D10	A	I	ASME III-1	
RXS-MV-11D12	Control Rod Drive Mechanism Position D12	D	NS	Manufacturer Std.	
RXS-MV-11D12L	CRDM Latch Housing D12	A	I	ASME III-1	
RXS-MV-11D12R	CRDM Rod Travel Housing D12	A	I	ASME III-1	
RXS-MV-11E03	Control Rod Drive Mechanism Position E3	D	NS	Manufacturer Std.	
RXS-MV-11E03L	CRDM Latch Housing E3	A	I	ASME III-1	
RXS-MV-11E03R	CRDM Rod Travel Housing E3	A	I	ASME III-1	
RXS-MV-11E05	Control Rod Drive Mechanism Position E5	D	NS	Manufacturer Std.	
RXS-MV-11E05L	CRDM Latch Housing E5	A	I	ASME III-1	
RXS-MV-11E05R	CRDM Rod Travel Housing E5	A	I	ASME III-1	
RXS-MV-11E07	Control Rod Drive Mechanism Position E7	D	NS	Manufacturer Std.	
RXS-MV-11E07L	CRDM Latch Housing E7	A	I	ASME III-1	
RXS-MV-11E07R	CRDM Rod Travel Housing E7	A	I	ASME III-1	

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**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11E09	Control Rod Drive Mechanism Position E9	D	NS	Manufacturer Std.	
RXS-MV-11E09L	CRDM Latch Housing E9	A	I	ASME III-1	
RXS-MV-11E09R	CRDM Rod Travel Housing E9	A	I	ASME III-1	
RXS-MV-11E11	Control Rod Drive Mechanism Position E11	D	NS	Manufacturer Std.	
RXS-MV-11E11L	CRDM Latch Housing E11	A	I	ASME III-1	
RXS-MV-11E11R	CRDM Rod Travel Housing E11	A	I	ASME III-1	
RXS-MV-11F02	Control Rod Drive Mechanism Position F2	D	NS	Manufacturer Std.	
RXS-MV-11F02L	CRDM Latch Housing F2	A	I	ASME III-1	
RXS-MV-11F02R	CRDM Rod Travel Housing F2	A	I	ASME III-1	
RXS-MV-11F04	Control Rod Drive Mechanism Position F4	D	NS	Manufacturer Std.	
RXS-MV-11F04L	CRDM Latch Housing F4	A	I	ASME III-1	
RXS-MV-11F04R	CRDM Rod Travel Housing F4	A	I	ASME III-1	
RXS-MV-11F06	Control Rod Drive Mechanism Position F6	D	NS	Manufacturer Std.	
RXS-MV-11F06L	CRDM Latch Housing F6	A	I	ASME III-1	
RXS-MV-11F06R	CRDM Rod Travel Housing F6	A	I	ASME III-1	
RXS-MV-11F08	Control Rod Drive Mechanism Position F8	D	NS	Manufacturer Std.	
RXS-MV-11F08L	CRDM Latch Housing F8	A	I	ASME III-1	
RXS-MV-11F08R	CRDM Rod Travel Housing F8	A	I	ASME III-1	

Table 3.2-3 (Sheet 39 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11F10	Control Rod Drive Mechanism Position F10	D	NS	Manufacturer Std.	
RXS-MV-11F10L	CRDM Latch Housing F10	A	I	ASME III-1	
RXS-MV-11F10R	CRDM Rod Travel Housing F10	A	I	ASME III-1	
RXS-MV-11F12	Control Rod Drive Mechanism Position F12	D	NS	Manufacturer Std.	
RXS-MV-11F12L	CRDM Latch Housing F12	A	I	ASME III-1	
RXS-MV-11F12R	CRDM Rod Travel Housing F12	A	I	ASME III-1	
RXS-MV-11G01	Control Rod Drive Mechanism Position G1	D	NS	Manufacturer Std.	
RXS-MV-11G01L	CRDM Latch Housing G1	A	I	ASME III-1	
RXS-MV-11G01R	CRDM Rod Travel Housing G1	A	I	ASME III-1	
RXS-MV-11G03	Control Rod Drive Mechanism Position G3	D	NS	Manufacturer Std.	
RXS-MV-11G03L	CRDM Latch Housing G3	A	I	ASME III-1	
RXS-MV-11G03R	CRDM Rod Travel Housing G3	A	I	ASME III-1	
RXS-MV-11G05	Control Rod Drive Mechanism Position G5	D	NS	Manufacturer Std.	
RXS-MV-11G05L	CRDM Latch Housing G5	A	I	ASME III-1	
RXS-MV-11G05R	CRDM Rod Travel Housing G5	A	I	ASME III-1	
RXS-MV-11G07	Control Rod Drive Mechanism Position G7	D	NS	Manufacturer Std.	
RXS-MV-11G07L	CRDM Latch Housing G7	A	I	ASME III-1	
RXS-MV-11G07R	CRDM Rod Travel Housing G7	A	I	ASME III-1	

Table 3.2-3 (Sheet 40 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11G09	Control Rod Drive Mechanism Position G9	D	NS	Manufacturer Std.	
RXS-MV-11G09L	CRDM Latch Housing G9	A	I	ASME III-1	
RXS-MV-11G09R	CRDM Rod Travel Housing G9	A	I	ASME III-1	
RXS-MV-11G11	Control Rod Drive Mechanism Position G11	D	NS	Manufacturer Std.	
RXS-MV-11G11L	CRDM Latch Housing G11	A	I	ASME III-1	
RXS-MV-11G11R	CRDM Rod Travel Housing G11	A	I	ASME III-1	
RXS-MV-11G13	Control Rod Drive Mechanism Position G13	D	NS	Manufacturer Std.	
RXS-MV-11G13L	CRDM Latch Housing G13	A	I	ASME III-1	
RXS-MV-11G13R	CRDM Rod Travel Housing G13	A	I	ASME III-1	
RXS-MV-11H02	Control Rod Drive Mechanism Position H2	D	NS	Manufacturer Std.	
RXS-MV-11H02L	CRDM Latch Housing H2	A	I	ASME III-1	
RXS-MV-11H02R	CRDM Rod Travel Housing H2	A	I	ASME III-1	
RXS-MV-11H04	Control Rod Drive Mechanism Position H4	D	NS	Manufacturer Std.	
RXS-MV-11H04L	CRDM Latch Housing H4	A	I	ASME III-1	
RXS-MV-11H04R	CRDM Rod Travel Housing H4	A	I	ASME III-1	
RXS-MV-11H06	Control Rod Drive Mechanism Position H6	D	NS	Manufacturer Std.	
RXS-MV-11H06L	CRDM Latch Housing H6	A	I	ASME III-1	
RXS-MV-11H06R	CRDM Rod Travel Housing H6	A	I	ASME III-1	

Table 3.2-3 (Sheet 41 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11H08	Control Rod Drive Mechanism Position H8	D	NS	Manufacturer Std.	
RXS-MV-11H08L	CRDM Latch Housing H8	A	I	ASME III-1	
RXS-MV-11H08R	CRDM Rod Travel Housing H8	A	I	ASME III-1	
RXS-MV-11H10	Control Rod Drive Mechanism Position H10	D	NS	Manufacturer Std.	
RXS-MV-11H10L	CRDM Latch Housing H10	A	I	ASME III-1	
RXS-MV-11H10R	CRDM Rod Travel Housing H10	A	I	ASME III-1	
RXS-MV-11H12	Control Rod Drive Mechanism Position H12	D	NS	Manufacturer Std.	
RXS-MV-11H12L	CRDM Latch Housing H12	A	I	ASME III-1	
RXS-MV-11H12R	CRDM Rod Travel Housing H12	A	I	ASME III-1	
RXS-MV-11J03	Control Rod Drive Mechanism Position J3	D	NS	Manufacturer Std.	
RXS-MV-11J03L	CRDM Latch Housing J3	A	I	ASME III-1	
RXS-MV-11J03R	CRDM Rod Travel Housing J3	A	I	ASME III-1	
RXS-MV-11J05	Control Rod Drive Mechanism Position J5	D	NS	Manufacturer Std.	
RXS-MV-11J05L	CRDM Latch Housing J5	A	I	ASME III-1	
RXS-MV-11J05R	CRDM Rod Travel Housing J5	A	I	ASME III-1	
RXS-MV-11J07	Control Rod Drive Mechanism Position J7	D	NS	Manufacturer Std.	
RXS-MV-11J07L	CRDM Latch Housing J7	A	I	ASME III-1	
RXS-MV-11J07R	CRDM Rod Travel Housing J7	A	I	ASME III-1	

Table 3.2-3 (Sheet 42 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11J09	Control Rod Drive Mechanism Position J9	D	NS	Manufacturer Std.	
RXS-MV-11J09L	CRDM Latch Housing J9	A	I	ASME III-1	
RXS-MV-11J09R	CRDM Rod Travel Housing J9	A	I	ASME III-1	
RXS-MV-11J11	Control Rod Drive Mechanism Position J11	D	NS	Manufacturer Std.	
RXS-MV-11J11L	CRDM Latch Housing J11	A	I	ASME III-1	
RXS-MV-11J11R	CRDM Rod Travel Housing J11	A	I	ASME III-1	
RXS-MV-11K02	Control Rod Drive Mechanism Position K2	D	NS	Manufacturer Std.	
RXS-MV-11K02L	CRDM Latch Housing K2	A	I	ASME III-1	
RXS-MV-11K02R	CRDM Rod Travel Housing K2	A	I	ASME III-1	
RXS-MV-11K04	Control Rod Drive Mechanism Position K4	D	NS	Manufacturer Std.	
RXS-MV-11K04L	CRDM Latch Housing K4	A	I	ASME III-1	
RXS-MV-11K04R	CRDM Rod Travel Housing K4	A	I	ASME III-1	
RXS-MV-11K06	Control Rod Drive Mechanism Position K6	D	NS	Manufacturer Std.	
RXS-MV-11K06L	CRDM Latch Housing K6	A	I	ASME III-1	
RXS-MV-11K06R	CRDM Rod Travel Housing K6	A	I	ASME III-1	
RXS-MV-11K08	Control Rod Drive Mechanism Position K8	D	NS	Manufacturer Std.	
RXS-MV-11K08L	CRDM Latch Housing K8	A	I	ASME III-1	
RXS-MV-11K08R	CRDM Rod Travel Housing K8	A	I	ASME III-1	
RXS-MV-11K10	Control Rod Drive Mechanism Position K10	D	NS	Manufacturer Std.	
RXS-MV-11K10L	CRDM Latch Housing K10	A	I	ASME III-1	
RXS-MV-11K10R	CRDM Rod Travel Housing K10	A	I	ASME III-1	

Table 3.2-3 (Sheet 43 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11K12	Control Rod Drive Mechanism Position K12	D	NS	Manufacturer Std.	
RXS-MV-11K12L	CRDM Latch Housing K12	A	I	ASME III-1	
RXS-MV-11K12R	CRDM Rod Travel Housing K12	A	I	ASME III-1	
RXS-MV-11L03	Control Rod Drive Mechanism Position L3	D	NS	Manufacturer Std.	
RXS-MV-11L03L	CRDM Latch Housing L3	A	I	ASME III-1	
RXS-MV-11L03R	CRDM Rod Travel Housing L3	A	I	ASME III-1	
RXS-MV-11L05	Control Rod Drive Mechanism Position L5	D	NS	Manufacturer Std.	
RXS-MV-11L05L	CRDM Latch Housing L5	A	I	ASME III-1	
RXS-MV-11L05R	CRDM Rod Travel Housing L5	A	I	ASME III-1	
RXS-MV-11L07	Control Rod Drive Mechanism Position L7	D	NS	Manufacturer Std.	
RXS-MV-11L07L	CRDM Latch Housing L7	A	I	ASME III-1	
RXS-MV-11L07R	CRDM Rod Travel Housing L7	A	I	ASME III-1	
RXS-MV-11L09	Control Rod Drive Mechanism Position L9	D	NS	Manufacturer Std.	
RXS-MV-11L09L	CRDM Latch Housing L9	A	I	ASME III-1	
RXS-MV-11L09R	CRDM Rod Travel Housing L9	A	I	ASME III-1	
RXS-MV-11L11	Control Rod Drive Mechanism Position L11	D	NS	Manufacturer Std.	
RXS-MV-11L11L	CRDM Latch Housing L11	A	I	ASME III-1	
RXS-MV-11L11R	CRDM Rod Travel Housing L11	A	I	ASME III-1	

Table 3.2-3 (Sheet 44 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11M04	Control Rod Drive Mechanism Position M4	D	NS	Manufacturer Std.	
RXS-MV-11M04L	CRDM Latch Housing M4	A	I	ASME III-1	
RXS-MV-11M04R	CRDM Rod Travel Housing M4	A	I	ASME III-1	
RXS-MV-11M06	Control Rod Drive Mechanism Position M6	D	NS	Manufacturer Std.	
RXS-MV-11M06L	CRDM Latch Housing M6	A	I	ASME III-1	
RXS-MV-11M06R	CRDM Rod Travel Housing M6	A	I	ASME III-1	
RXS-MV-11M08	Control Rod Drive Mechanism Position M8	D	NS	Manufacturer Std.	
RXS-MV-11M08L	CRDM Latch Housing M8	A	I	ASME III-1	
RXS-MV-11M08R	CRDM Rod Travel Housing M8	A	I	ASME III-1	
RXS-MV-11M10	Control Rod Drive Mechanism Position M10	D	NS	Manufacturer Std.	
RXS-MV-11M10L	CRDM Latch Housing M10	A	I	ASME III-1	
RXS-MV-11M10R	CRDM Rod Travel Housing M10	A	I	ASME III-1	
RXS-MV-11N07	Control Rod Drive Mechanism Position N7	D	NS	Manufacturer Std.	
RXS-MV-11N07L	CRDM Latch Housing N7	A	I	ASME III-1	
RXS-MV-11N07R	CRDM Rod Travel Housing N7	A	I	ASME III-1	
RXS-MY-Y01	Irradiation Tube Plug Seat Jack	D	NS	Manufacturer Std.	

Balance of system components are Class E

Sanitary Drainage System (SDS)

Location: Various

System components are Class P

Spent Fuel Pool Cooling System (SFS)

Location: Auxiliary Building, Containment

Table 3.2-3 (Sheet 45 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Spent Fuel Pool Cooling System (Continued)					
n/a	Heat Exchangers, SFS and CCS Side	D	NS	ASME VIII	
n/a	Pumps	D	NS	Hydraulic Institute Std.	
n/a	Demineralsizers	D	NS	ASME VIII	
n/a	Filters	D	NS	ASME VIII	
n/a	Valves Providing SFS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
SFS-PL-V024A	Spent Fuel Pool Level Instrument Isolation	C	I	ASME III-3	
SFS-PL-V024B	Spent Fuel Pool Level Instrument Isolation	C	I	ASME III-3	
SFS-PL-V024C	Spent Fuel Pool Level Instrument Isolation	C	I	ASME III-3	
SFS-PL-V028	Cask Washdown Pit Level Instrument Isolation	C	I	ASME III-3	
SFS-PL-V031	SFS Refueling Cavity Drain to SGS Compartment Isolation	C	I	ASME III-3	
SFS-PL-V032	SFS Refueling Cavity Suction Isolation	C	I	ASME III-3	
SFS-PL-V033	SFS Refueling Cavity Drain to Containment Sump Isolation	C	I	ASME III-3	
SFS-PL-V034	SFS Suction Line Containment Isolation	B	I	ASME III-2	
SFS-PL-V035	SFS Suction Line Containment Isolation	B	I	ASME III-2	
SFS-PL-V037	SFS Discharge Line Containment Isolation	B	I	ASME III-2	
SFS-PL-V038	SFS Discharge Line Containment Isolation	B	I	ASME III-2	
SFS-PL-V039	SFS Suction Line from IRWST Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 46 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Spent Fuel Pool Cooling System (Continued)					
SFS-PL-V040	SFS Fuel Transfer Canal Drain Isolation	C	I	ASME III-3	
SFS-PL-V041	SFS Cask Loading Pit Drain Isolation	C	I	ASME III-3	
SFS-PL-V042	Cask Loading Pit to Pump Suction Isolation	C	I	ASME III-3	
SFS-PL-V043	SFS CVS Makeup Reverse Flow Prevention	C	I	ASME III-3	
SFS-PL-V05	SFS Discharge to Cask Loading Pit Isolation	C	I	ASME III-3	
SFS-PL-V047	SFS Demineralized Water Makeup to SFP Reverse Flow Prevent	C	I	ASME III-3	
SFS-PL-V048	SFS Containment Penetration Test Connection	B	I	ASME III-2	
SFS-PL-V049	SFS Cask Loading Pit Drain to WLS Isolation	C	I	ASME III-3	
SFS-PL-V056	SFS Containment Penetration Test Connection Isolation	B	I	ASME III-2	
SFS-PL-V058	SFS Containment Isolation Valve V034 Test	C	I	ASME III-3	
SFS-PL-V066	Spent Fuel Pool to Cask Washdown Pit Isolation	C	I	ASME III-3	
SFS-PL-V068	Cask Washdown Pit Drain Isolation	C	I	ASME III-3	
SFS-PY-C01	Spent Fuel Cooling Pump Discharge to IRWST	B	I	ASME III, MC	
SFS-PY-C02	Spent Fuel Cooling Pump Suction from IRWST	B	I	ASME III, MC	
Balance of system components are Class D					

Table 3.2-3 (Sheet 47 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (SGS)				Location: Containment and Auxiliary Building	
SGS-MY-Y01A	Steam Generator A PORV Silencer	D	NS	Manufacturer Std.	
SGS-MY-Y01B	Steam Generator B PORV Silencer	D	NS	Manufacturer Std.	
SGS-PL-V001A	LT001 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V001B	LT005 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V002A	LT001 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V002B	LT005 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V003A	LT002 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V003B	LT006 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V004A	LT002 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V004B	LT006 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V005A	LT003 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V005B	LT007 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V006A	LT003 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V006B	LT007 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V007A	LT004 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V007B	LT008 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V008A	LT004 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V008B	LT008 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V010A	LT011 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V010B	LT013 Root Isolation Valve	B	I	ASME III-2	

Table 3.2-3 (Sheet 48 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
SGS-PL-V011A	LT011 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V011B	LT013 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V012A	LT012 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V012B	LT014 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V013A	LT012 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V013B	LT014 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V014A	PORV Discharge Condensate Drain Isolation	D	NS	ANSI B31.1	
SGS-PL-V014B	PORV Discharge Condensate Drain Isolation	D	NS	ANSI B31.1	
SGS-PL-V015A	FT021 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V015B	FT023 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V016A	FT020 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V016B	FT022 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V017A	FT021 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V017B	FT023 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V018A	FT020 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V018B	FT022 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V019A	Main Steam Line Vent Isolation	B	I	ASME III-2	
SGS-PL-V019B	Main Steam Line Vent Isolation	B	I	ASME III-2	
SGS-PL-V022A	PT030 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V022B	PT034 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V023A	PT031 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V023B	PT035 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V024A	PT032 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V024B	PT036 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V025A	PT033 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V025B	PT037 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V027A	PORV Block Valve SG 01	B	I	ASME III-2	

Table 3.2-3 (Sheet 49 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
SGS-PL-V027B	PORV Block Valve SG 02	B	I	ASME III-2	
SGS-PL-V030A	Main Steam Safety Valve SG 01	B	I	ASME III-2	
SGS-PL-V030B	Main Steam Safety Valve SG 02	B	I	ASME III-2	
SGS-PL-V031A	Main Steam Safety Valve SG 01	B	I	ASME III-2	
SGS-PL-V031B	Main Steam Safety Valve SG 02	B	I	ASME III-2	
SGS-PL-V032A	Main Steam Safety Valve SG 01	B	I	ASME III-2	
SGS-PL-V032B	Main Steam Safety Valve SG 02	B	I	ASME III-2	
SGS-PL-V036A	Steam Line Condensate Drain Isolation	B	I	ASME III-2	
SGS-PL-V036B	Steam Line Condensate Drain Isolation	B	I	ASME III-2	
SGS-PL-V038A	Steam Line #1 Nitrogen Supply Isolation	B	I	ASME III-2	
SGS-PL-V038B	Steam Line #2 Nitrogen Supply Isolation	B	I	ASME III-2	
SGS-PL-V040A	Main Steam Line Isolation	B	I	ASME III-2	
SGS-PL-V040B	Main Steam Line Isolation	B	I	ASME III-2	
SGS-PL-V042A	MSIV Bypass Control Isolation	B	I	ASME III-2	
SGS-PL-V042B	MSIV Bypass Control Isolation	B	I	ASME III-2	
SGS-PL-V043A	MSIV Bypass Control Isolation	C	I	ASME III-3	
SGS-PL-V043B	MSIV Bypass Control Isolation	C	I	ASME III-3	
SGS-PL-V045A	SG 1 Condensate Pipe Drain Valve	B	I	ASME III-2	

Table 3.2-3 (Sheet 50 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
SGS-PL-V045B	SG 2 Condensate Pipe Drain Valve	B	I	ASME III-2	
SGS-PL-V046A	LT015 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V046B	LT017 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V047A	LT015 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V047B	LT017 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V048A	LT016 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V048B	LT018 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V049A	LT016 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V049B	LT018 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V050A	LT044 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V050B	LT046 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V051A	LT044 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V051B	LT046 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V052A	LT045 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V052B	LT047 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V053A	LT045 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V053B	LT047 Root Isolation Valve	B	I	ASME III-2	
SGS-PL-V056A	PT062 Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V056B	PT063 Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V057A	Main Feedwater Isolation	B	I	ASME III-2	
SGS-PL-V057B	Main Feedwater Isolation	B	I	ASME III-2	
SGS-PL-V058A	Main Feedwater Check	B	I	ASME III-2	
SGS-PL-V058B	Main Feedwater Check	B	I	ASME III-2	
SGS-PL-V062A	FT055A Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V062B	FT056A Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V063A	FT055A Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V063B	FT056A Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V064A	FT055A Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V064B	FT056A Root Isolation Valve	C	I	ASME III-3	

Table 3.2-3 (Sheet 51 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
SGS-PL-V065A	FT055A Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V065B	FT056A Root Isolation Valve	C	I	ASME III-3	
SGS-PL-V067A	Startup Feedwater Isolation	B	I	ASME III-2	
SGS-PL-V067B	Startup Feedwater Isolation	B	I	ASME III-2	
SGS-PL-V073A	SG 1 Drain Isolation	B	I	ASME III-2	
SGS-PL-V073B	SG 2 Drain Isolation	B	I	ASME III-2	
SGS-PL-V074A	SG Blowdown Isolation	B	I	ASME III-2	
SGS-PL-V074B	SG Blowdown Isolation	B	I	ASME III-2	
SGS-PL-V075A	SG Series Blowdown Isolation	C	I	ASME III-3	
SGS-PL-V075B	SG Series Blowdown Isolation	C	I	ASME III-3	
SGS-PL-V084A	SG 1 Nitrogen Sparging Isolation	B	I	ASME III-2	
SGS-PL-V084B	SG 2 Nitrogen Sparging Isolation	B	I	ASME III-2	
SGS-PL-V086A	Steam Line Condensate Drain Control	C	I	ASME III-3	
SGS-PL-V086B	Steam Line Condensate Drain Control	C	I	ASME III-3	
SGS-PL-V233A	Power Operated Relief Valve	C	I	ASME III-3	
SGS-PL-V233B	Power Operated Relief Valve	C	I	ASME III-3	
SGS-PL-V240A	MSIV Bypass Isolation	B	I	ASME III-2	
SGS-PL-V240B	MSIV Bypass Isolation	B	I	ASME III-2	
SGS-PL-V250A	Main Feedwater Control	C	I	ASME III-3	
SGS-PL-V250B	Main Feedwater Control	C	I	ASME III-3	
SGS-PL-V255A	Startup Feedwater Control	C	I	ASME III-3	
SGS-PL-V255B	Startup Feedwater Control	C	I	ASME III-3	
SGS-PL-V256A	Startup Feedwater Check Valve	C	I	ASME III-3	

Table 3.2-3 (Sheet 52 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
SGS-PL-V256B	Startup Feedwater Check Valve	C	I	ASME III-3	
SGS-PY-C01A	Main Steam Line A Penetration	B	I	ASME III, MC	
SGS-PY-C01B	Main Steam Line B Penetration	B	I	ASME III, MC	
SGS-PY-C02A	Main Feedwater Line A Penetration	B	I	ASME III, MC	
SGS-PY-C02B	Main Feedwater Line B Penetration	B	I	ASME III, MC	
SGS-PY-C03A	Steam Generator A Blow-down Line Penetration	B	I	ASME III, MC	
SGS-PY-C03B	Steam Generator B Blow-down Line Penetration	B	I	ASME III, MC	
SGS-PY-C05A	Startup Feedwater Line A Penetration	B	I	ASME III, MC	
SGS-PY-C05B	Startup Feedwater Line B Penetration	B	I	ASME III, MC	
Secondary Sampling System (SSS)					Location: Turbine Building
System components are Class E					
Service Water System (SWS)					Location: Turbine Building and Yard
n/a	Service Water Cooling Tower Fans	D	NS	Manufacturer Std.	
n/a	Service Water Cooling Tower	D	NS	Manufacturer Std.	
n/a	Service Water Pumps	D	NS	Hydraulic Institute Std.	
n/a	Valves Providing SWS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
Turbine Building Closed Cooling Water System (TCS)					Location: Turbine Building
System components are Class E					

Table 3.2-3 (Sheet 53 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Turbine Island Vents, Drains and Relief System (TDS)					Location: Turbine Building
n/a	Piping and components that provide the path from the GSS and CMS to atmosphere and rad monitor	D	NS	ANSI B31.1	
Balance of system components are Class E					
Main Turbine Control and Diagnostic System (TOS)					Location: Turbine Building
System components are Class E					
Radiologically Controlled Area Ventilation System (VAS)					Location: Auxiliary Building and Annex Building
n/a	CVS and RNS Pump Room Coolers	Note 2	NS	Manufacturer Std.	
n/a	Valves Providing VAS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
n/a	Shutoff, Isolation, and Balancing Dampers	L	NS	ANSI/AMCA-500	
n/a	Fire Dampers	Note 3	NS	UL-555	
n/a	Air Handling Units	L	NS	Manufacturer Std.	
n/a	Filters	L	NS	UL 900	
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class L					
Nuclear Island Nonradioactive Ventilation System (VBS)					Location: Auxiliary Building and Annex Building
n/a	Battery Rooms Exhaust Fans	Note 2	NS	AMCA	
n/a	PCS Room Heaters	Note 2	NS	Manufacturer Std.	
n/a	Fire Dampers	Note 3	NS	UL-555S	
n/a	Dampers Providing AP600 Equipment Class D Function	Note 2	NS	ANSI/AMCA-500	
n/a	Dampers in lines isolating radioactive contamination	R	NS	ASME-509	
n/a	Shutoff, Isolation, and Balancing Dampers	L	NS	ANSI/AMCA-500	
VBS-MP-01A	Sample Pump A	C	I	Manufacturer Std.	
VBS-MP-01B	Sample Pump B	C	I	Manufacturer Std.	

Table 3.2-3 (Sheet 54 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Nuclear Island Nonradioactive Ventilation System (VBS) (Continued)					
n/a	MCR/TSC Supplemental Air Filtration Units	Note 2	NS	ASME N509	
VBS-PL-V164	MCR Penetration Test Valve	C	I	ASME III-3	
VBS-PL-V165	MCR Penetration Test Valve	C	I	ASME III-3	
VBS-PL-V166	MCR Isolation Test Valve	C	I	ASME III-3	
VBS-PL-V167	MCR Isolation Test Valve	C	I	ASME III-3	
VBS-PL-V168	MCR Isolation Test Valve	C	I	ASME III-3	
VBS-PL-V169	MCR Isolation Test Valve	C	I	ASME III-3	
VBS-PL-V186	MCR Isolation Valve	C	I	ASME III-3	
VBS-PL-V187	MCR Isolation Valve	C	I	ASME III-3	
VBS-PL-V188	MCR Isolation Valve	C	I	ASME III-3	
VBS-PL-V189	MCR Isolation Valve	C	I	ASME III-3	
VBS-PL-V190	MCR Isolation Valve	C	I	ASME III-3	
VBS-PL-V191	MCR Isolation Valve	C	I	ASME III-3	
n/a	Valves Providing VBS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
n/a	Other Air Handling Units	Note 2	NS	Manufacturer Std.	
n/a	Filters	Note 2	NS	UL 900	
n/a	Fans, Ductwork	Note 2, L or R	NS	SMACNA	

Table 3.2-3 (Sheet 55 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tab Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Nuclear Island Nonradioactive Ventilation System (VBS) (Continued)					
VBS-MA-10A	Ancillary Fan	D	NS	ANSI/AMCA 210, 211, 300	Equipment anchorage is Seismic Category II
VBS-MA-10B	Ancillary Fan	D	NS	ANSI/AMCA 210, 211, 300	Equipment anchorage is Seismic Category II
VBS-MA-11	Ancillary Fan	D	NS	ANSI/AMCA 210, 211, 300	Equipment anchorage is Seismic Category II
VBS-MA-12	Ancillary Fan	D	NS	ANSI/AMCA 210, 211, 300	Equipment anchorage is Seismic Category II
Balance of system components are Class L					
Containment Recirculation Cooling System (VCS)					
					Location: Containment
n/a	Dampers	L	NS	ANSI/AMCA-500	
n/a	Fan Coil Units	L	NS	Manufacturer Std.	
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class L					
Main Control Room Emergency Habitability System (VES)					
					Location: Auxiliary Building
VES-MD-D001A	Relief Damper	Note 1	I	ASME 509/510	
VES-MD-D001B	Relief Damper	Note 1	I	ASME 509/510	
VES-MT-01	Emergency Air Storage Tank 01	C	I	ASME VIII, Appendix 22	
VES-MT-02	Emergency Air Storage Tank 02	C	I	ASME VIII, Appendix 22	
VES-MT-03	Emergency Air Storage Tank 03	C	I	ASME VIII, Appendix 22	

Table 3.2-3 (Sheet 56 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
VES-MT-04	Emergency Air Storage Tank 04	C	I	ASME VIII, Appendix 22	
VES-MT-05	Emergency Air Storage Tank 05	C	I	ASME VIII, Appendix 22	
VES-MT-06	Emergency Air Storage Tank 06	C	I	ASME VIII, Appendix 22	
VES-MT-07	Emergency Air Storage Tank 07	C	I	ASME VIII, Appendix 22	
VES-MT-08	Emergency Air Storage Tank 08	C	I	ASME VIII, Appendix 22	
VES-MT-09	Emergency Air Storage Tank 09	C	I	ASME VIII, Appendix 22	
VES-MT-10	Emergency Air Storage Tank 10	C	I	ASME VIII, Appendix 22	
VES-MT-11	Emergency Air Storage Tank 11	C	I	ASME VIII, Appendix 22	
VES-MT-12	Emergency Air Storage Tank 12	C	I	ASME VIII, Appendix 22	
VES-MT-13	Emergency Air Storage Tank 13	C	I	ASME VIII, Appendix 22	
VES-MT-14	Emergency Air Storage Tank 14	C	I	ASME VIII, Appendix 22	
VES-MT-15	Emergency Air Storage Tank 15	C	I	ASME VIII, Appendix 22	
VES-MT-16	Emergency Air Storage Tank 16	C	I	ASME VIII, Appendix 22	
VES-MT-17	Emergency Air Storage Tank 17	C	I	ASME VIII, Appendix 22	
VES-MT-18	Emergency Air Storage Tank 18	C	I	ASME VIII, Appendix 22	
VES-MT-19	Emergency Air Storage Tank 19	C	I	ASME VIII, Appendix 22	
VES-MT-20	Emergency Air Storage Tank 20	C	I	ASME VIII, Appendix 22	
VES-MT-21	Emergency Air Storage Tank 21	C	I	ASME VIII, Appendix 22	

Table 3.2-3 (Sheet 57 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Con- struction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
VES-MT-22	Emergency Air Storage Tank 22	C	I	ASME VIII, Appendix 22	
VES-MT-23	Emergency Air Storage Tank 23	C	I	ASME VIII, Appendix 22	
VES-MT-24	Emergency Air Storage Tank 24	C	I	ASME VIII, Appendix 22	
VES-MT-25	Emergency Air Storage Tank 25	C	I	ASME VIII, Appendix 22	
VES-MT-26	Emergency Air Storage Tank 26	C	I	ASME VIII, Appendix 22	
VES-MT-27	Emergency Air Storage Tank 27	C	I	ASME VIII, Appendix 22	
VES-MT-28	Emergency Air Storage Tank 28	C	I	ASME VIII, Appendix 22	
VES-MT-29	Emergency Air Storage Tank 29	C	I	ASME VIII, Appendix 22	
VES-MT-30	Emergency Air Storage Tank 30	C	I	ASME VIII, Appendix 22	
VES-MT-31	Emergency Air Storage Tank 31	C	I	ASME VIII, Appendix 22	
VES-MT-32	Emergency Air Storage Tank 32	C	I	ASME VIII, Appendix 22	
VES-PL-V001	Air Delivery Alternate Isolation Valve	C	I	ASME III-3	

Table 3.2-3 (Sheet 58 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
VES-PL-V002A	Pressure Regulating Valve A	C	I	ASME III-3	
VES-PL-V002B	Pressure Regulating Valve B	C	I	ASME III-3	
VES-PL-V005A	Air Delivery Main Isolation Valve A	C	I	ASME III-3	
VES-PL-V005B	Air Delivery Main Isolation Valve B	C	I	ASME III-3	
VES-PL-V006A	Air Delivery Line Pressure Instrument Isolation Valve A	C	I	ASME III-3	
VES-PL-V006B	Air Delivery Line Pressure Instrument Isolation Valve B	C	I	ASME III-3	
VES-PL-V016	Temporary Instrument Isolation Valve A	C	I	ASME III-3	
VES-PL-V018	Temporary Instrument Isolation Valve A	C	I	ASME III-3	
VES-PL-V019	Temporary Instrument Isolation Valve B	C	I	ASME III-3	
VES-PL-V020	Temporary Instrument Isolation Valve B	C	I	ASME III-3	
VES-PL-V022A	Pressure Relief Isolation Valve A	C	I	ASME III-3	

Table 3.2-3 (Sheet 59 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
VES-PL-V022B	Pressure Relief Isolation Valve B	C	I	ASME III-3	
VES-PL-V024A	Air Tank Isolation Valve A	C	I	ASME III-3	
VES-PL-V024B	Air Tank Isolation Valve B	C	I	ASME III-3	
VES-PL-V025A	Air Tank Isolation Valve A	C	I	ASME III-3	
VES-PL-V025B	Air Tank Isolation Valve B	C	I	ASME III-3	
VES-PL-V038	Makeup Air Stop Valve	C	I	ASME III-3	
VES-PL-V040A	Air Tank Safety Relief Valve A	C	I	ASME III-3	
VES-PL-V040B	Air Tank Safety Relief Valve B	C	I	ASME III-3	
VES-PL-V041A	Air Tank Safety Relief Valve A	C	I	ASME III-3	
VES-PL-V041B	Air Tank Safety Relief Valve B	C	I	ASME III-3	
VES-PL-V043A	Differential Pressure Instrument Line Isolation Valve A	C	I	ASME III-3	
VES-PL-V043B	Differential Pressure Instrument Line Isolation Valve B	C	I	ASME III-3	
VES-PL-V044	Main Air Flowpath Isolation Valve	C	I	ASME III-3	
Containment Air Filtration System (VFS)			Location: Auxiliary Building and Annex Building		
VFS-PY-C01	Containment Supply Duct Penetration	B	I	ASME III, MC	
VFS-PY-C02	Containment Exhaust Duct Penetration	B	I	ASME III, MC	
VFS-MY-Y01	Containment Air Supply Debris Screen	C	I	ASME Sec. III Class 3	

Table 3.2-3 (Sheet 60 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Containment Air Filtration System (Continued)					
VFS-MY-Y02	Containment Air Exhaust Debris Screen	C	I	ASME Sec. III Class 3	
VFS-PL-V001	Containment Isolation Test Connection	B	I	ASME III-2	
VFS-PL-V002	Containment Isolation Test Connection	B	I	ASME III-2	
VFS-PL-V007	Containment Isolation Test Connection	B	I	ASME III-2	
VFS-PL-V008	Containment Isolation Test Connection	B	I	ASME III-2	
VFS-PL-V009	Containment Purge Discharge Containment Isolation Valve	B	I	ASME III-2	
VFS-PL-V010	Containment Purge Discharge Containment Isolation Valve	B	I	ASME III-2	
VFS-PL-V012	Containment Isolation Test Connection	B	I	ASME III-2	
VFS-PL-V015	Containment Isolation Test Connection	B	I	ASME III-2	
n/a	Valves Providing VFS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
n/a	Dampers in lines isolating radioactive contamination	R	NS	ASME-509	
n/a	Shutoff, Isolation, and Balancing Dampers	L	NS	ANSI/AMCA-500	
n/a	Fire Dampers	Note 3	NS	UL-555	
n/a	Supply Air Handling Units	L	NS	Manufacturer Std.	
n/a	Air Exhaust Filtration Units	R	NS	ASME N509	
n/a	Fans, Ductwork	L or R	NS	SMACNA or ASME N509	

Balance of system components are Class L and Class R

Health Physics and Hot Machine Shop HVAC System (VHS)

Location: Annex Building

n/a	Shutoff, Isolation, and Balancing Dampers	L	NS	ANSI/AMCA-500	
n/a	Fire Dampers	Note 3	NS	UL-555	

Table 3.2-3 (Sheet 61 of 67)

AP600 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Health Physics and Hot Machine Shop HVAC System (Continued)					
n/a	Air Handling Units w/ Filters	L	NS	Manufacturer Std.	
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class E or Class L					
Containment Hydrogen Control System (VLS)					Location: Containment
n/a	Hydrogen Igniters	D	NS	Manufacturer Std.	Provides Hydrogen Control Following Severe Accidents
VLS-MY-E01A	Catalytic Hydrogen Recombiner A	C	I	Manufacturer Std.	
VLS-MY-E01B	Catalytic Hydrogen Recombiner B	C	I	Manufacturer Std.	
VLS-MY-E02	IRWST Catalytic Hydrogen Recombiner	C	I	Manufacturer Std.	
VLS-MY-E03	CVS Compartment Catalytic Hydrogen Recombiner	C	I	Manufacturer Std.	
n/a	Fire Dampers	Note 3	NS	UL-555	
Balance of system components are Class E or Class L					
Radwaste Building Ventilation System (VRS)					Location: Radwaste Building
n/a	Shutoff, Isolation, and Balancing Dampers	L	NS	ANSI/AMCA-500	
n/a	Fire Damper	Note 3	NS	UL-555	
n/a	Air Handling Units	L	NS	Manufacturer Std.	
n/a	Filters	L	NS	UL 900	
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class E or Class L					
Turbine Building Ventilation System (VTS)					Location: Turbine Building
n/a	Shutoff, Isolation, and Balancing Dampers	L	NS	ANSI/AMCA-500	
n/a	Fire Dampers	Note 3	NS	UL-555	
n/a	Air Handling Units w/ Filters	L	NS	Manufacturer Std., UL-900	

Table 3.2-3 (Sheet 62 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Turbine Building Ventilation System (VTS) (Continued)					Location: Turbine Building
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class L					
Containment Leak Rate Test System (VUS)					Location: Auxiliary Building
VUS-PL-V015	Main Equipment Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V016	Maintenance Equipment Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V017	Personnel Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V018	Personnel Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V019	Personnel Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V020	Personnel Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V021	Personnel Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V022	Personnel Hatch Test Connection	B	I	ASME III-2	
VUS-PL-V023	Fuel Transfer Tube Test Connection	B	I	ASME III-2	
VUS-PL-V101	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V102	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V103	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V104	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V109	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V110	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V111	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V112	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	

Table 3.2-3 (Sheet 63 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Containment Leak Rate Test System (Continued)					
VUS-PL-V113	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V114	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V115	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V116	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V117	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V118	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V119	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V120	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V121	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V122	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V123	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V124	Electrical Penetration Test Isolation Valve	B	I	ASME III-2	
VUS-PL-V140	Spare Penetration Test Connection	B	I	ASME III-2	
VUS-PL-V141	Spare Penetration Test Connection	B	I	ASME III-2	
VUS-PL-V142	Spare Penetration Test Connection	B	I	ASME III-2	
Balance of system components are Class E					
Central Chilled Water System (VWS)					
n/a	Air Cooled Chiller	D	NS	Manufacturer Std.	Location: Various
n/a	Pumps	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 64 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Central Chilled Water System (Continued)					
n/a	Tanks	D	NS	ASME VIII	
n/a	Valves Providing VWS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
VWS-PY-C01	Containment Chilled Water Supply Penetration	B	I	ASME III, MC	
VWS-PY-C02	Containment Chilled Water Return Penetration	B	I	ASME III, MC	
VWS-PL-V058	Fan Coolers Supply Containment Isolation	B	I	ASME III-2	
VWS-PL-V062	Fan Coolers Supply Containment Isolation	B	I	ASME III-2	
VWS-PL-V082	Fan Coolers Return Containment Isolation	B	I	ASME III-2	
VWS-PL-V086	Fan Coolers Return Containment Isolation	B	I	ASME III-2	
VWS-PL-V424	Containment Penetration Test Connection	B	I	ASME III-2	
VWS-PL-V425	Containment Penetration Test Connection	B	I	ASME III-2	
Balance of system components are Class E					
Annex/Auxiliary Nonradioactive Ventilation System (VXS) Location: Auxiliary Building and Annex Building					
n/a	Air Handling Unit Fans Providing AP600 Equipment Class D Function	Note 2	NS	AMCA	
n/a	Dampers Providing VXS AP600 Equipment Class D Function	Note 2	NS	ANSI/AMCA- 500	
n/a	Exhaust Fan Providing Ancillary Diesel Room Ventilation	Note 2	NS	AMCA	
n/a	Fire Dampers	Note 3	NS	UL-555 or UL-555S	
n/a	Air Handling Units	L	NS	Manufacturer Std.	
n/a	Filters	L	NS	UL 900	
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class E or Class L					

Table 3.2-3 (Sheet 65 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Hot Water Heating System (VYS)					Location: Various
System components are Class E					
Diesel Generator Building Ventilation System (VZS)				Location: Diesel Generator Building	
n/a	Unit Heaters Providing AP600 Equipment Class D Function	Note 2	NS	UL-1025; NFPA 70	
n/a	Fans Providing AP600 Equipment Class D Function	Note 2	NS	AMCA	
n/a	Dampers Providing VZS AP600 Equipment Class D Function	Note 2	NS	AMCA	
n/a	Fire Dampers	Note 3	NS	UL-555	
n/a	Air Handling Units	L	NS	Manufacturer Std.	
n/a	Filters	L	NS	UL 900	
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class E					
Gaseous Radwaste System (WGS)				Location: Auxiliary Building	
n/a	Gas Cooler	D	NS	ASME VIII/ TEMA	
n/a	Sample Pumps	D	NS	Manufacturer Std.	
n/a	Guard and Delay Beds	D	NS	ASME VIII	Design for 1/2 SSE
n/a	Moisture Separator	D	NS	ASME VIII	
n/a	Valves Providing WGS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
Liquid Radwaste System (WLS)				Location: Containment and Auxiliary Building	
n/a	Heat Exchangers, WLS and CCS Side	D	NS	ASME VIII/ TEMA	
n/a	Pumps	D	NS	Manufacturer Std.	
n/a	Tanks	D	NS	ASME III without Code Stamp	
n/a	Degasifier	D	NS	ASME VIII	

Table 3.2-3 (Sheet 66 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Liquid Radwaste System (Continued)					
n/a	Ion Exchangers	D	NS	ASME VIII	
n/a	Filters	D	NS	ASME VIII	
n/a	Valves Providing WLS AP600 Equipment Class D Function (local drain valves in Radwaste Building)	D	NS	ANSI 16.34	
WLS-PL-V055	Sump Discharge Containment Isolation IRC	B	I	ASME III-2	
WLS-PL-V057	Sump Discharge Containment Isolation ORC	B	I	ASME III-2	
WLS-PL-V067	RCDT Gas Outlet Containment Isolation IRC	B	I	ASME III-2	
WLS-PL-V068	RCDT Gas Outlet Containment Isolation ORC	B	I	ASME III-2	
WLS-PL-V071A	CVS Compartment to Sump	C	I	ASME III-3	
WLS-PL-V071B	PXS A Compartment to Sump	C	I	ASME III-3	
WLS-PL-V071C	PXS B Compartment to Sump	C	I	ASME III-3	
WLS-PL-V072A	CVS Compartment to Sump	C	I	ASME III-3	
WLS-PL-V072B	PXS A Compartment to Sump	C	I	ASME III-3	
WLS-PL-V072C	PXS B Compartment to Sump	C	I	ASME III-3	
WLS-PY-C02	Reactor Coolant Drain Tank WLS Connection Penetration	B	I	ASME III, MC	
WLS-PY-C03	Containment Sump Pumps Combined Discharge Penetration	B	I	ASME III, MC	
Balance of system components are Class E					
Radioactive Waste Drain System (WRS)					Location: Auxiliary Building
n/a	Pumps	D	NS	Manufacturer Std.	
n/a	Valves Providing WRS AP600 Equipment Class D Function	D	NS	ANSI 16.34	

Table 3.2-3 (Sheet 67 of 67)

**AP600 CLASSIFICATION OF MECHANICAL AND
FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT**

Tag Number	Description	AP600 Class	Seismic Category	Principal Construction Code	Comments
Solid Radwaste System (WSS)					Location: Auxiliary Building
n/a	Pumps	D	NS	Manufacturer Std.	
n/a	Tanks	D	NS	ASME VIII	
n/a	Filters	D	NS	ASME VIII	
n/a	Valves Providing WSS AP600 Equipment Class D Function	D	NS	ANSI 16.34	
Balance of system components are Class E					
Waste Water System (WWS)					Location: Various
System components are Class E					
Onsite Standby Power System (ZOS)					Location: Diesel Generator Building
n/a	Diesel Generator Engines	D	NS	Manufacturer Std.	
n/a	Diesel Generator Starting Units	D	NS	NEMA MG 1	
n/a	Diesel Generator Radiators	D	NS	CAGI	
n/a	Diesel Generator Silencers	D	NS	API 661	
n/a	Valves Providing ZOS Diesel Generator Engines AP600 Equipment Class D Function	D	NS	ANSI 16.34	
Balance of system components are Class E					

Notes:

1. Component performs a safety-related function equivalent to AP600 equipment Class C. The component is constructed using the standards for Class R and a quality assurance program in conformance with 10 CFR Part 50 Appendix B .
2. Component performs an AP600 equipment Class D function and is constructed using the standards for Class L or Class R.
3. Fire dampers are constructed to the requirements of UL-555 or UL-555S if they are fire and smoke dampers and are located in Class D, Class L, and Class R ducts.