3.2 Classification of Structures, Components, and Systems

Structures, systems, and components in the AP1000 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 AP1000 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 AP1000 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.

There are no safety-related structures, systems, or components outside the scope of the AP1000 DCD.

The nonsafety-related structures, systems, and components outside the scope of the AP1000 DCD are classified as non-seismic (NS).

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 50.34.

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.

Systems and components identified as safety-related systems and components in Table 3.2-3, and electrical and instrumentation components identified in Table 3.11-1, are the systems and components necessary for continued operation that must remain functional without undue risk of the health and safety of the public during and following an operating basis earthquake. Systems and components identified as Equipment Class A, B, and C in Table 3.2-3, and electrical and instrumentation components identified in Table 3.11-1, are the systems and components that per the criteria of 10 CFR Part 50, Appendix S, must be demonstrated, prior to resuming operations, to have no functional damage following a seismic ground motion exceeding the operating basis earthquake ground motion. See Section 3.7 for information on the operating basis earthquake.

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 the analysis and design of seismic Category II structures, systems, and components. The quality assurance requirements for the analysis and design of seismic Category II structures, systems, and components are performed in accordance with the Westinghouse AP1000 quality plan as described in Section 17.3 and 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 17.7 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. The seismic classification of the deep well injection system is provided in Table 3.2-2.

3.2.2 AP1000 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.

There are no safety-related structures, systems, or components outside the scope of the AP1000 DCD.

See Table 3.2-3 for the classification of the deep well injection system.

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 Design Control Document. These definitions are consistent with the ANS Definitions for Light Water Reactor Standards (ANS-58.14-1993).

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 50.34.

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 AP1000 requires adaptation of safety classification documents and standards because of the way that the AP1000 accomplishes safety-related functions.

In addition to 10 CFR 50.55a, the AP1000 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 AP1000 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 AP1000.

For the purposes of equipment classification, structures, systems, and components are classified as Class A, B, C, D, E, F, G, 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, G, 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, or component contains a suitable interface boundary.

The definitions and criteria for the AP1000 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 applies. ASME Code, Section III, Class 1 applies to pressure retaining components.

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 applies. ASME Code, Section III, Class 2 or Class MC applies to pressure retaining components. 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 applies. ASME Code, Section III, Class 3 applies to pressure retaining components. 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 of a random sample of welds 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 323-74 (Reference 3) and IEEE standard 344-87 (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)
- 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.
- Maintain spent fuel integrity, 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, spent fuel pool, fuel transfer tube isolation valve)
- 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. Pertinent portions of 10 CFR 50, Appendix B are applied to seismic Category II applications as described in Subsection 3.2.1.1.2. 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 (Reference 13)

- Circuit breakers, switchgear, relays, substations and fuses – IEEE C37 (Reference 14).

The NS 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 (for example, fuel handling machine, spent fuel handling tool, new and spent fuel racks)
- 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
- Limit the buildup of hydrogen in the containment atmosphere to acceptable values

3.2.2.7 Other Equipment Classes

Equipment classes E, F, G, 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, G, 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 and G – These classes are used for Fire Protection Systems. They comply 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. Portions of fire protection systems that protect safety-related SSCs are designated as AP1000 equipment **Class F**, which meets the requirements of ANSI B31-1 and requires seismic analysis.

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 OM Code, Subsection ISTB
- Valves (Class A, B, C) – ASME OM Code, Subsection ISTC
- 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 AP1000 Safety-Related Equipment and Seismic Classification System

The application of the AP1000 equipment and seismic classification system to AP1000 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 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 AP1000 equipment Class A, B, and C mechanical components and piping are constructed to ASME Code, Section III, Subsection NF requirements. The principal 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

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

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 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

*ZRS Offsite Retail 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 contained no requirement for additional information.

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 323-74, “IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations.”

4. IEEE 344-1987, “IEEE Recommended Practice for Seismic Qualification of Class 1E Equipment 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 Buttwelding 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-1-98, “Motors and Generators,” Revision 1, January 1998, National Electric Manufacturers Association.

14. IEEE C37, IEEE standards on circuit breakers, switch gear, relays, substations, fuses, etc.

15. “Uniform Building Code (1997),” International Conference of Building Officials.

16. SMACNA - 1995, HVAC Duct Construction Standards - Metal and Flexible, 1985 Edition, Sheet Metal and Air-Conditioning Contractors National Association.

17. The BOCA Basic/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 AG-1-1997, “Code on Nuclear Air and Gas Treatment.”

Table 3.2-1
Comparison of Safety Classification Requirements

AP1000 Code Letter (1)	ANS Equipment Safety Class (2)	RG 1.29 Seismic Design Reqmnts (3)	ASME Code, Sec. III Class (4)	IEEE Requirements	RG 1.26 NRC Quality Group (5)	10 CFR 50 Appendix B (6)	Inspection & Testing Requirements	Required Test & Maint.
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 AP1000. See the Subsection 3.2.2 for definition.
2. AP1000 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 AP1000 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.
   "No" means quality assurance program is not required according to 10 CFR 50 Appendix B.
7. Class A, B, and C, structures, systems, and components built to ASME Code, Section III are inspected to ASME Code, Section XI requirements. See the text for additional specification of requirements.
8. 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.
9. See Subsection 3.2.1 for cases when seismic Category II requirements are applicable for Class D structures, systems, and components.
10. See the text for a discussion of the industry standards used in the construction of 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, G, 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[1][4]
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 – First bay adjacent to Nuclear Island outlined by Columns I.1 to R and 11.05 to 11.2	C-II
Turbine Building – All portions of Turbine Building except first bay adjacent to Nuclear Island as outlined by Columns H.05 to R and 12.1 to 20	NS[2]
Turbine Building	NS[2]
Annex Building Area Outlined by Columns A - D and 8 - 13 Area Outlined by Columns A - G and 13 - 16	NS[2]
Annex Building Area Outlined by Columns E - I.1 and 2 - 13	C-II
Radwaste Building	NS[2]
Diesel-Generator Building	NS[3]
Circulating Water Pumphouse and Towers	NS
Deep well injection system	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.
2. The NS designation for the turbine building, the radwaste building, and a portion of the annex building indicates that the buildings are not seismic Category I or seismic Category II. The seismic requirements for these buildings are outlined in Subsection 3.7.2.8.
3. The NS designation for the diesel-generator building indicates that the building is not seismic Category I or seismic Category II. The seismic requirements for buildings containing Class D equipment, including the diesel generator building, are outlined in Subsection 3.2.2.6.
4. Within the broad definition of seismic Category I and II structures, this system contains structural subsystems the failure of which would not impair the capability for safe shutdown.

Table 3.2-3 (Sheet 1 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 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, 2	
CAS-PY-C03	Containment Service Air Inlet Penetration	B	I	ASME III, 2	
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 AP1000 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 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 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-V214	CCS Supply Containment Isolation - IRC	C	I	ASME III-3	
CCS-PL-V215	CCS Supply Containment Isolation Valve Test Connection - IRC	C	I	ASME III-3	
CCS-PL-V216	Containment Leak Test Outlet Line - IRC	C	I	ASME III-3	
CCS-PL-V217	Containment Isolation Valve V207 Body Test Connection Valve	C	I	ASME III-3	
CCS-PL-V270	CCS IRC Relief Valve	C	I	ASME III-3	
CCS-PL-V271	CCS IRC Relief Valve	C	I	ASME III-3	
CCS-PL-220	CCS Containment Isolation Relief Valve	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, 2	
CCS-PY-C02	Containment Return Header Penetration	B	I	ASME III, 2	
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					

Table 3.2-3 (Sheet 3 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
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	
n/a	Spare Containment Penetrations	B	I	ASME III, MC	
Condensate Polishing System (CPS)				Location: Turbine Building	
System components are Class E					
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 AP1000 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-V058	Letdown Line Containment Isolation Relief	B	I	ASME III-2	

Table 3.2-3 (Sheet 4 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Chemical and Volume Control System (Continued)					
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	
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, 2	
CVS-PY-C03	Makeup Line Containment Penetration	B	I	ASME III, MC	
CVS-PY-C04	Hydrogen Add Line Containment Penetration	B	I	ASME III, 2	
Balance of system components are Class D or E					

Table 3.2-3 (Sheet 5 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Circulating Water System (CWS)				Location: Turbine Building and pump intake structure	
System components are Class E					
Standby Diesel 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 AP1000 Equipment Class D Function	D	NS	ANSI 16.34	
n/a	Ancillary Diesel Generator Fuel Tank	D	II	ASME VIII	Located in Annex Building
Balance of system components are Class E					
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 AP1000 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, 2	
Balance of system components are Class E					
Electrical Distribution System (ECS)				Location: Annex Building	
n/a	Ancillary Diesel Generator Engines	D	NS	Manufacturer Standard	Anchorage is SCII
n/a	Ancillary Diesel Generator Radiators	D	NS	CAGI	

Table 3.2-3 (Sheet 6 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Electrical Distribution System (ECS) (Continued)					
n/a	Ancillary Diesel Generator Silencers	D	NS	API661	
n/a	Valve providing fuel to ECS Ancillary Diesel Generators	D	NS	ANSI 16.34	
Balance of system components are Class E					
Fuel Handling and Refueling System (FHS)				Location: Containment and Auxiliary Building	
FHS-FH-01	Refueling Machine	D	II	AISC	
FHS-FH-02	Fuel Handling Machine	D	II	AISC	
FHS-FH-04	New Fuel Elevator	D	II	AISC	
FHS-FH-05	Fuel Transfer System	D	II	AISC	
FHS-FH-52	Spent Fuel Assembly Handling Tool	D	II	AISC	
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	Jurisdictional Boundary CV Only, Remaining Portion Optional
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.	

Table 3.2-3 (Sheet 7 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Fuel Handling and Refueling System (FHS) (Continued)					
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 Class MC	
Balance of system components are Class E					
Fire Protection System (FPS)				Location: Various	
FPS-PL-V050	Fire Water Containment Supply Isolation	B	I	ASME III-2	
FPS-PL-V051	Fire Water Containment Test Connection Isolation	B	I	ASME III-2	
FPS-PL-V052	Fire Water Containment Supply Isolation - Inside	B	I	ASME III-2	
FPS-PY-C01	Fire Protection Containment Penetration	B	I	ASME III, 2	
FPS-PL-V441	Auxiliary Connection to CCS Isolation	D	NS	ANSI B31.1	
Containment standpipe and suppression system components	Includes all FPS components Inside Rector Containment with the exception of those used for containment isolation and containment spray	F	NS	ANSI B31.1	Seismic Analysis Consistent with ASME Section III Class 3 Systems
Various	Auxiliary Building Standpipe and Non-1E Equipment Penetration Room Preaction Sprinkler System components	F	NS	ANSI B31.1	Seismic Analysis Consistent with ASME Section III Class 3 Systems
Balance of system components are Class E, F & G					
Main and Startup Feedwater System (FWS)				Location: Turbine Building	
n/a	Startup Feedwater Pumps	D	NS	Hydraulic Institute Standards	
n/a	Valves Providing SFW AP1000 Equipment Class D Function	D	NS	ANSI 16.34	
Balance of system components are Class E					

Table 3.2-3 (Sheet 8 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Gland Seal System (GSS)				Location: Turbine Building	
System components are Class D					
Generator Hydrogen and CO_2 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.	
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	NUREG-0554 supplemented by ASME NOG-1	
MHS-MH-02	Cask Handling Crane	C	I	NUREG-0554 supplemented by ASME NOG-1	
MHS-MH-05	Equipment Hatch Hoist	C	I	NUREG-0554 supplemented by ASME NOG-1	
MHS-MH-06	Maintenance Hatch Hoist	C	I	NUREG-0554 supplemented by ASME NOG-1	
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

Table 3.2-3 (Sheet 9 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
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-PL-V001C	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
PCS-PL-V002A	PCCWST Series Isolation	C	I	ASME III-3	
PCS-PL-V002B	PCCWST Series Isolation	C	I	ASME III-3	
PCS-PL-V002C	PCCWST Series Isolation	C	I	ASME III-3	
PCS-PL-V004	Recirculation Bypass Isolation Valve	D	NS	ANSI B16.34	Equipment Anchorage is Seismic Category II
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	

Table 3.2-3 (Sheet 10 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
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	
PCS-PL-V017	Chemical Addition Tank Vent 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	

Table 3.2-3 (Sheet 11 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
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	
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

Table 3.2-3 (Sheet 12 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
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
PCS-PL-V042	PCCWST Long-Term Makeup Isolation Drain Valve	C	I	ASME III-3	PCS-PL-V043
PCS-PL-V043	PCCAWST Recirculation Return Line Drain Isolation Valve	D	NS	ANSI 16.34	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-V047A/B	PCS Recirculation Pump Discharge Isolation Valve	D	NS	ANSI B16.34	Equipment Anchorage is Seismic Category II
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-V052	Spent Fuel Pool Emergency Makeup Isolation Valve	C	I	ASME III-3	

Table 3.2-3 (Sheet 13 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Containment Cooling System (Continued)					
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	
PCS-PY-C01	Containment Pressure Instrument Line Penetration	B	I	ASME, MC	
PCS-PY-C02	Containment Pressure Instrument Line Penetration	B	I	ASME, MC	
PCS-PY-C03	Containment Pressure Instrument Line Penetration	B	I	ASME, MC	
PCS-PY-C04	Containment Pressure Instrument Line Penetration	B	I	ASME, MC	
Balance of system components are Class E					
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 AP1000 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	

Table 3.2-3 (Sheet 14 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Primary Sampling System (Continued)					
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	
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	

Table 3.2-3 (Sheet 15 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Primary Sampling System (Continued)					
PSS-PY-C03	Containment Atmosphere Sample Line Penetration	B	I	ASME III, 2	
Balance of system components are Class E					
Potable Water System (PWS)				Location: Various	
PWS-PL-V418	PWS MCR Isolation Valve	C	I	ASME III-3	
PWS-PL-V420	PWS MCR Isolation Valve	C	I	ASME III-3	
PWS-PL-V498	PWS MCR Vacuum Relief	C	I	ASME III-3	
Balance of 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.	Structural frame and attachment use ASME III, Subsection NF criteria. Screen modules use manufacturer std.
PXS-MY-Y01B	IRWST Screen B	C	I	Manufacturer Std.	Structural frame and attachment use ASME III, Subsection NF criteria. Screen modules use manufacturer std.

Table 3.2-3 (Sheet 16 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-MY-Y01C	IRWST Screen C	C	I	Manufacturer Std.	Structural frame and attachment use ASME III, Subsection NF criteria. Screen modules use manufacturer std.
PXS-MY-Y02A	Containment Recirculation Screen A	C	I	Manufacturer Std.	Structural frame and attachment use ASME III, Subsection NF criteria. Screen modules use manufacturer std.
PXS-MY-Y02B	Containment Recirculation Screen B	C	I	Manufacturer Std.	Structural frame and attachment use ASME III, Subsection NF criteria. Screen modules use 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-MY-Y03C	pH Adjustment Basket C	C	I	Manufacturer Std.	
PXS-MY-Y03D	pH Adjustment Basket D	C	I	Manufacturer Std.	
PXS-MY-Y81	Downspout Screen 1A	C	I	Manufacturer Std.	
PXS-MY-Y82	Downspout Screen 1B	C	I	Manufacturer Std.	
PXS-MY-Y83	Downspout Screen 1C	C	I	Manufacturer Std.	
PXS-MY-Y84	Downspout Screen 1D	C	I	Manufacturer Std.	
PXS-MY-Y85	Downspout Screen 2A	C	I	Manufacturer Std.	
PXS-MY-Y86	Downspout Screen 2B	C	I	Manufacturer Std.	
PXS-MY-Y87	Downspout Screen 2C	C	I	Manufacturer Std.	
PXS-MY-Y88	Downspout Screen 2D	C	I	Manufacturer Std.	

Table 3.2-3 (Sheet 17 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
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	
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	RNS to CMT Injection Line A Drain	B	I	ASME III-2	
PXS-PL-V019B	RNS to CMT Injection Line B Drain	B	I	ASME III-2	
PXS-PL-V020A	IRWST Injection Line A Drain	B	I	ASME III-2	
PXS-PL-V020B	IRWST Injection Line B Drain	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	
PXS-PL-V025A	Accumulator A Sample	C	I	ASME III-3	
PXS-PL-V025B	Accumulator B Sample	C	I	ASME III-3	

Table 3.2-3 (Sheet 18 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
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	
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-V082A	CMT A Upper Level A Isolation 1	B	I	ASME III-2	
PXS-PL-V082B	CMT B Upper Level A Isolation 1	B	I	ASME III-2	
PXS-PL-V083A	CMT A Upper Level A Isolation 2	B	I	ASME III-2	
PXS-PL-V083B	CMT B Upper Level A Isolation 2	B	I	ASME III-2	

Table 3.2-3 (Sheet 19 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V084A	CMT A Upper Level A Vent	B	I	ASME III-2	
PXS-PL-V084B	CMT B Upper Level A Vent	B	I	ASME III-2	
PXS-PL-V085A	CMT A Upper Level A Drain	B	I	ASME III-2	
PXS-PL-V085B	CMT B Upper Level A Drain	B	I	ASME III-2	
PXS-PL-V086A	CMT A Upper Level B Isolation 1	B	I	ASME III-2	
PXS-PL-V086B	CMT B Upper Level B Isolation 1	B	I	ASME III-2	
PXS-PL-V087A	CMT A Upper Level B Isolation 2	B	I	ASME III-2	
PXS-PL-V087B	CMT B Upper Level B Isolation 2	B	I	ASME III-2	
PXS-PL-V088A	CMT A Upper Level B Vent	B	I	ASME III-2	
PXS-PL-V088B	CMT B Upper Level B Vent	B	I	ASME III-2	
PXS-PL-V089A	CMT A Upper Level B Drain	B	I	ASME III-2	
PXS-PL-V089B	CMT B Upper Level B Drain	B	I	ASME III-2	
PXS-PL-V092A	CMT A Lower Level A Isolation 1	B	I	ASME III-2	
PXS-PL-V092B	CMT B Lower Level A Isolation 1	B	I	ASME III-2	
PXS-PL-V093A	CMT A Lower Level A Isolation 2	B	I	ASME III-2	
PXS-PL-V093B	CMT B Lower Level A Isolation 2	B	I	ASME III-2	
PXS-PL-V094A	CMT A Lower Level A Vent	B	I	ASME III-2	
PXS-PL-V094B	CMT B Lower Level A Vent	B	I	ASME III-2	
PXS-PL-V095A	CMT A Lower Level A Drain	B	I	ASME III-2	
PXS-PL-V095B	CMT B Lower Level A Drain	B	I	ASME III-2	
PXS-PL-V096A	CMT A Lower Level B Isolation 1	B	I	ASME III-2	
PXS-PL-V096B	CMT B Lower Level B Isolation 1	B	I	ASME III-2	
PXS-PL-V097A	CMT A Lower Level B Isolation 2	B	I	ASME III-2	
PXS-PL-V097B	CMT B Lower Level B Isolation 2	B	I	ASME III-2	
PXS-PL-V098A	CMT A Lower Level B Vent	B	I	ASME III-2	
PXS-PL-V098B	CMT B Lower Level B Vent	B	I	ASME III-2	

Table 3.2-3 (Sheet 20 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V099A	CMT A Lower Level B Drain	B	I	ASME III-2	
PXS-PL-V099B	CMT B Lower Level B Drain	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	
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-V106	Containment Recirculation A Highpoint Vent	C	I	ASME III-3	
PXS-PL-V107	Containment Recirculation A Highpoint Vent	C	I	ASME III-3	
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-V115A	Containment Recirculation A Drain	C	I	ASME III-3	
PXS-PL-V115B	Containment Recirculation B Drain	C	I	ASME III-3	
PXS-PL-V116A	Containment Recirculation A Drain	C	I	ASME III-3	
PXS-PL-V116B	Containment Recirculation B Drain	C	I	ASME III-3	
PXS-PL-V117A	Containment Recirculation A Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 21 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
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	
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 Injection Line A Drain	C	I	ASME III-3	
PXS-PL-V128A	IRWST Injection Check Test	A	I	ASME III-1	
PXS-PL-V128B	IRWST Injection Check Test	A	I	ASME III-1	
PXS-PL-V129A	IRWST Injection Check Test	A	I	ASME III-1	
PXS-PL-V129B	IRWST Injection Check Test	A	I	ASME III-1	
PXS-PL-V130A	IRWST Gutter Bypass A Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 22 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V130B	IRWST Gutter Bypass B Isolation	C	I	ASME III-3	
PXS-PL-V131A	IRWST Injection Line A Drain	B	I	ASME III-2	
PXS-PL-V131B	IRWST Injection Line B Drain	B	I	ASME III-2	
PXS-PL-V132A	IRWST Injection Line A Drain	B	I	ASME III-2	
PXS-PL-V132B	IRWST Injection Line B Drain	B	I	ASME III-2	
PXS-PL-V133A	IRWST Injection Line A Highpoint Vent	B	I	ASME III-2	
PXS-PL-V133B	IRWST Injection Line B Highpoint Vent	B	I	ASME III-2	
PXS-PL-V134A	IRWST Injection Line A Highpoint Vent	B	I	ASME III-2	
PXS-PL-V134B	IRWST Injection Line B Highpoint Vent	B	I	ASME III-2	
PXS-PL-V135A	IRWST Injection Line A Highpoint Vent Isolation	B	I	ASME III-2	
PXS-PL-V135B	IRWST Injection Line B Highpoint Vent Isolation	B	I	ASME III-2	
PXS-PL-V149	RNS Suction Pump Line Drain	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	
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	

Table 3.2-3 (Sheet 23 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
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-PL-V250A	CMT A Check Valve Test Valve	A	I	ASME III-1	
PXS-PL-V250B	CMT B Check Valve Test Valve	A	I	ASME III-1	
PXS-PL-V251A	CMT A Check Valve Test Valve	A	I	ASME III-1	
PXS-PL-V251B	CMT B Check Valve Test Valve	A	I	ASME III-1	
PXS-PL-V252A	CMT A Check Valve Test Valve	A	I	ASME III-1	

Table 3.2-3 (Sheet 24 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
PXS-PL-V252B	CMT B Check Valve Test Valve	A	I	ASME III-1	
PXS-PY-C01	Nitrogen Makeup Containment Penetration	B	I	ASME III, 2	
Balance of system components are Class E					
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/B	SG 1A(B) Reactor Coolant Pump	A	I	ASME III-1	Pump Motor – Class D
n/a	Rotor Shaft	C	I	Manufacturer Std	
n/a	Impeller	C	I	Manufacturer Std	
n/a	Flywheel	C	I	Manufacturer Std	
n/a	RCP Heat Exchanger (Tube Side)	A	I	ASME III-1	Shellside – Class D, ASME VIII, Div. 1
n/a	Pump Motor Cooling Water to HX Inlet Connector	A	I	ASME III-1	
n/a	Pump Motor Cooling Water from HX Outlet Connector	A	I	ASME III-1	
RCS-MP-02A/B	SG 2A(B) Reactor Coolant Pump	A	I	ASME III-1	Pump Motor – Class D
n/a	Rotor Shaft	C	I	Manufacturer Std	
n/a	Impeller	C	I	Manufacturer Std	
n/a	Flywheel	C	I	Manufacturer Std	
n/a	RCP Heat Exchanger (Tube Side)	A	I	ASME III-1	Shellside – Class D, ASME VIII, Div. 1
n/a	Pump Motor Cooling Water to HX Inlet Connector	A	I	ASME III-1	

Table 3.2-3 (Sheet 25 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
n/a	Pump Motor Cooling Water from HX Outlet Connector	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	
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	

Table 3.2-3 (Sheet 26 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
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
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	Hot Leg 1 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V101B	Hot Leg 1 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V101C	Hot Leg 1 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V101D	Hot Leg 1 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V101E	Hot Leg 1 Flow Instrument Root	B	I	ASME III-2	

Table 3.2-3 (Sheet 27 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
RCS-PL-V101F	Hot Leg 1 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V102A	Hot Leg 2 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V102B	Hot Leg 2 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V102C	Hot Leg 2 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V102D	Hot Leg 2 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V102E	Hot Leg 2 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V102F	Hot Leg 2 Flow Instrument Root	B	I	ASME III-2	
RCS-PL-V103	PRHR HX Outlet Line Drain	B	I	ASME III-2	
RCS-PL-V171A	Cold Leg 1A Bend Instrument Root	B	I	ASME III-2	
RCS-PL-V171B	Cold Leg 1A Bend Instrument Root	B	I	ASME III-2	
RCS-PL-V172A	Cold Leg 1B Bend Instrument Root	B	I	ASME III-2	
RCS-PL-V172B	Cold Leg 1B Bend Instrument Root	B	I	ASME III-2	
RCS-PL-V173A	Cold Leg 2A Bend Instrument Root	B	I	ASME III-2	
RCS-PL-V173B	Cold Leg 2A Bend Instrument Root	B	I	ASME III-2	
RCS-PL-V174A	Cold Leg 2B Bend Instrument Root	B	I	ASME III-2	
RCS-PL-V174B	Cold Leg 2B Bend 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	

Table 3.2-3 (Sheet 28 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
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	
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	

Table 3.2-3 (Sheet 29 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor Coolant System (Continued)					
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 Steam Space Instrument Root	B	I	ASME III-2	
RCS-PL-V229	Wide Range Pressurizer Level 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	
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-PL-V260A	RCP 1A Vent	A	I	ASME III-1	
RCS-PL-V260B	RCP 1B Vent	A	I	ASME III-1	
RCS-PL-V260C	RCP 2A Vent	A	I	ASME III-1	
RCS-PL-V260D	RCP 2B Vent	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

Table 3.2-3 (Sheet 30 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Normal Residual Heat Removal System (Continued)					
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
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	

Table 3.2-3 (Sheet 31 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Normal Residual Heat Removal System (Continued)					
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	
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	

Table 3.2-3 (Sheet 32 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Normal Residual Heat Removal System (Continued)					
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-V046A	RNS HX A Channel Head Drain. Isolation	C	I	ASME III-3	
RNS-PL-V046B	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	
RNS-PL-V051	RNS Pump B Casing Drain. Isolation	C	I	ASME III-3	

Table 3.2-3 (Sheet 33 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Normal Residual Heat Removal System (Continued)					
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-V055	RNS Pump Suction to Cask Loading Pit Isolation	C	I	ASME III-3	
RNS-PL-V056	RNS Pump Suction to Cask Loading Pit Isolation	C	I	ASME III-3	
RNS-PL-V057A	RNS Pump A Miniflow Isolation	C	I	ASME III-3	
RNS-PL-V057B	RNS Pump B Miniflow 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-PL-V066A	RNS Discharge to DVI Line A Drain	C	I	ASME III-3	
RNS-PL-V066B	RNS Discharge to DVI Line B Drain	C	I	ASME III-3	
RNS-PL-V067A	RNS Discharge to DVI Line A Drain	B	I	ASME III-2	
RNS-PL-V067B	RNS Discharge to DVI Line B Drain	B	I	ASME III-2	
RNS-PL-V068	RNS Discharge to IRWST Drain	C	I	ASME III-3	
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					

Table 3.2-3 (Sheet 34 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (RXS)				Location: Containment	
n/a	Fuel Assemblies	C	I	Manufacturer Std.	
RXS-FR-B06	Control Rod Cluster B6	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.	
RXS-FR-C09	Control Rod Cluster C9	B	I	Manufacturer Std.	
RXS-FR-C11	Control Rod Cluster C11	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-E03	Control Rod Cluster E3	B	I	Manufacturer Std.	
RXS-FR-E05	Control Rod Cluster E5	B	I	Manufacturer Std.	
RXS-FR-E07	Control Rod Cluster E7	B	I	Manufacturer Std.	
RXS-FR-E09	Control Rod Cluster E9	B	I	Manufacturer Std.	
RXS-FR-E11	Control Rod Cluster E11	B	I	Manufacturer Std.	
RXS-FR-E13	Control Rod Cluster E13	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-F12	Control Rod Cluster F12	B	I	Manufacturer Std.	
RXS-FR-F14	Control Rod Cluster F14	B	I	Manufacturer Std	
RXS-FR-G03	Control Rod Cluster G3	B	I	Manufacturer Std.	
RXS-FR-G05	Control Rod Cluster G5	B	I	Manufacturer Std.	
RXS-FR-G07	Control Rod Cluster G7	B	I	Manufacturer Std.	
RXS-FR-G09	Control Rod Cluster G9	B	I	Manufacturer Std.	
RXS-FR-G11	Control Rod Cluster G11	B	I	Manufacturer Std.	
RXS-FR-G13	Control Rod Cluster G13	B	I	Manufacturer Std.	
RXS-FR-H04	Control Rod Cluster H4	B	I	Manufacturer Std.	
RXS-FR-H08	Control Rod Cluster H8	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-J05	Control Rod Cluster J5	B	I	Manufacturer Std.	
RXS-FR-J07	Control Rod Cluster J7	B	I	Manufacturer Std.	
RXS-FR-J09	Control Rod Cluster J9	B	I	Manufacturer Std.	

Table 3.2-3 (Sheet 35 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-FR-J11	Control Rod Cluster J11	B	I	Manufacturer Std.	
RXS-FR-J13	Control Rod Cluster J13	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-K12	Control Rod Cluster K12	B	I	Manufacturer Std.	
RXS-FR-K14	Control Rod Cluster K14	B	I	Manufacturer Std.	
RXS-FR-L03	Control Rod Cluster L3	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.	
RXS-FR-L11	Control Rod Cluster L11	B	I	Manufacturer Std.	
RXS-FR-L13	Control Rod Cluster L13	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-FR-N5	Control Rod Cluster N5	B	I	Manufacturer Std.	
RXS-FR-N7	Control Rod Cluster N7	B	I	Manufacturer Std.	
RXS-FR-N9	Control Rod Cluster N9	B	I	Manufacturer Std.	
RXS-FR-N11	Control Rod Cluster N11	B	I	Manufacturer Std.	
RXS-FR-P6	Control Rod Cluster P6	B	I	Manufacturer Std.	
RXS-FR-P10	Control Rod Cluster P10	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-22	Vortex Suppression Plate	D	II	ASME III, CS	
RXS-MI-23	Core Shroud 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	

Table 3.2-3 (Sheet 36 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
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 [42]	C	I	ASME III, CS	
RXS-MI-53	Guide Tube Assemblies [69]	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	
RXS-MI-57	Irradiation Specimen Guide Tubes	D	II	ANSI B31.1	
RXS-MI-58	Head Cooling Nozzles	D	II	ANSI B31.1	
n/a	Neutron Pad	D	II	Manufacturer Std.	
RXS-MI-80	Reactor Vessel Flow Skirt	D	II	Manufacturer Std.	
RXS-MN-01	Reactor Vessel Cavity Reflective Insulation	D	II	Manufacturer Std.	
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 System	C	I	ASME-NF	
RXS-MV-11B06	CRDM Latch Assembly B6	D	NS	Manufacturer Std.	
RXS-MV-11B06	CRDM Drive Rod Assembly B6	D	NS	Manufacturer Std.	
RXS-MV-11B06	CRDM Coil Stack Assembly 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	CRDM Latch Assembly B8	D	NS	Manufacturer Std.	
RXS-MV-11B08	CRDM Drive Rod Assembly B8	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 37 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11B08	CRDM Coil Stack Assembly 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	CRDM Latch Assembly B10	D	NS	Manufacturer Std.	
RXS-MV-11B10	CRDM Drive Rod Assembly B10	D	NS	Manufacturer Std.	
RXS-MV-11B10	CRDM Coil Stack Assembly 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-11C05	CRDM Latch Assembly C5	D	NS	Manufacturer Std.	
RXS-MV-11C05	CRDM Drive Rod Assembly C5	D	NS	Manufacturer Std.	
RXS-MV-11C05	CRDM Coil Stack Assembly 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	CRDM Latch Assembly C7	D	NS	Manufacturer Std.	
RXS-MV-11C07	CRDM Drive Rod Assembly C7	D	NS	Manufacturer Std.	
RXS-MV-11C07	CRDM Coil Stack Assembly 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	CRDM Latch Assembly C9	D	NS	Manufacturer Std.	
RXS-MV-11C09	CRDM Drive Rod Assembly C9	D	NS	Manufacturer Std.	
RXS-MV-11C09	CRDM Coil Stack Assembly C9	D	NS	Manufacturer Std.	
RXS-MV-11C09L	CRDM Latch Housing C9	A	I	ASME III-1	

Table 3.2-3 (Sheet 38 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11C09R	CRDM Rod Travel Housing C9	A	I	ASME III-1	
RXS-MV-11C11	CRDM Latch Assembly C11	D	NS	Manufacturer Std.	
RXS-MV-11C11	CRDM Drive Rod Assembly C11	D	NS	Manufacturer Std.	
RXS-MV-11C11	CRDM Coil Stack Assembly 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-11D04	CRDM Latch Assembly D4	D	NS	Manufacturer Std.	
RXS-MV-11D04	CRDM Drive Rod Assembly D4	D	NS	Manufacturer Std.	
RXS-MV-11D04	CRDM Coil Stack Assembly 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	CRDM Latch Assembly D6	D	NS	Manufacturer Std.	
RXS-MV-11D06	CRDM Drive Rod Assembly D6	D	NS	Manufacturer Std.	
RXS-MV-11D06	CRDM Coil Stack Assembly D6	D	NS	Manufacturer Std.	
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	CRDM Latch Assembly D8	D	NS	Manufacturer Std.	
RXS-MV-11D08	CRDM Drive Rod Assembly D8	D	NS	Manufacturer Std.	
RXS-MV-11D08	CRDM Coil Stack Assembly 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	CRDM Latch Assembly D10	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 39 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11D10	CRDM Drive Rod Assembly D10	D	NS	Manufacturer Std.	
RXS-MV-11D10	CRDM Coil Stack Assembly 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	CRDM Latch Assembly D12	D	NS	Manufacturer Std.	
RXS-MV-11D12	CRDM Drive Rod Assembly D12	D	NS	Manufacturer Std.	
RXS-MV-11D12	CRDM Coil Stack Assembly 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	CRDM Latch Assembly E3	D	NS	Manufacturer Std.	
RXS-MV-11E03	CRDM Drive Rod Assembly E3	D	NS	Manufacturer Std.	
RXS-MV-11E03	CRDM Coil Stack Assembly 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	CRDM Latch Assembly E5	D	NS	Manufacturer Std.	
RXS-MV-11E05	CRDM Drive Rod Assembly E5	D	NS	Manufacturer Std.	
RXS-MV-11E05	CRDM Coil Stack Assembly 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	CRDM Latch Assembly E7	D	NS	Manufacturer Std.	
RXS-MV-11E07	CRDM Drive Rod Assembly E7	D	NS	Manufacturer Std.	
RXS-MV-11E07	CRDM Coil Stack Assembly E7	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 40 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
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	
RXS-MV-11E09	CRDM Latch Assembly E9	D	NS	Manufacturer Std.	
RXS-MV-11E09	CRDM Drive Rod Assembly E9	D	NS	Manufacturer Std.	
RXS-MV-11E09	CRDM Coil Stack Assembly 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	CRDM Latch Assembly E11	D	NS	Manufacturer Std.	
RXS-MV-11E11	CRDM Drive Rod Assembly E11	D	NS	Manufacturer Std.	
RXS-MV-11E11	CRDM Coil Stack Assembly 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-11E13	CRDM Latch Assembly E13	D	NS	Manufacturer Std.	
RXS-MV-11E13	CRDM Drive Rod Assembly E13	D	NS	Manufacturer Std.	
RXS-MV-11E13	CRDM Coil Stack Assembly E13	D	NS	Manufacturer Std.	
RXS-MV-11E13L	CRDM Latch Housing E13	A	I	ASME III-1	
RXS MV-11E13R	CRDM Rod Travel Housing E13	A	I	ASME III-1	
RXS-MV-11F02	CRDM Latch Assembly F2	D	NS	Manufacturer Std.	
RXS-MV-11F02	CRDM Drive Rod Assembly F2	D	NS	Manufacturer Std.	
RXS-MV-11F02	CRDM Coil Stack Assembly 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	CRDM Latch Assembly F4	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 41 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11F04	CRDM Drive Rod Assembly F4	D	NS	Manufacturer Std.	
RXS-MV-11F04	CRDM Coil Stack Assembly 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	CRDM Latch Assembly F6	D	NS	Manufacturer Std.	
RXS-MV-11F06	CRDM Drive Rod Assembly F6	D	NS	Manufacturer Std.	
RXS-MV-11F06	CRDM Coil Stack Assembly 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	CRDM Latch Assembly F8	D	NS	Manufacturer Std.	
RXS-MV-11F08	CRDM Drive Rod Assembly F8	D	NS	Manufacturer Std.	
RXS-MV-11F08	CRDM Coil Stack Assembly 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	
RXS-MV-11F10	CRDM Latch Assembly F10	D	NS	Manufacturer Std.	
RXS-MV-11F10	CRDM Drive Rod Assembly F10	D	NS	Manufacturer Std.	
RXS-MV-11F10	CRDM Coil Stack Assembly 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	CRDM Latch Assembly F12	D	NS	Manufacturer Std.	
RXS-MV-11F12	CRDM Drive Rod Assembly F12	D	NS	Manufacturer Std.	
RXS-MV-11F12	CRDM Coil Stack Assembly 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	

Table 3.2-3 (Sheet 42 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11F14	CRDM Latch Assembly F14	D	NS	Manufacturer Std.	
RXS-MV-11F14	CRDM Drive Rod Assembly F14	D	NS	Manufacturer Std.	
RXS-MV-11F14	CRDM Coil Stack Assembly F14	D	NS	Manufacturer Std.	
RXS-MV-11F14L	CRDM Latch Housing F14	A	I	ASME III-1	
RXS-MV-11F14R	CRDM Rod Travel Housing F14	A	I	ASME III-1	
RXS-MV-11G03	CRDM Latch Assembly G3	D	NS	Manufacturer Std.	
RXS-MV-11G03	CRDM Drive Rod Assembly G3	D	NS	Manufacturer Std.	
RXS-MV-11G03	CRDM Coil Stack Assembly 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	CRDM Latch Assembly G5	D	NS	Manufacturer Std.	
RXS-MV-11G05	CRDM Drive Rod Assembly G5	D	NS	Manufacturer Std.	
RXS-MV-11G05	CRDM Coil Stack Assembly 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	CRDM Latch Assembly G7	D	NS	Manufacturer Std.	
RXS-MV-11G07	CRDM Drive Rod Assembly G7	D	NS	Manufacturer Std.	
RXS-MV-11G07	CRDM Coil Stack Assembly 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	
RXS-MV-11G09	CRDM Latch Assembly G9	D	NS	Manufacturer Std.	
RXS-MV-11G09	CRDM Drive Rod Assembly G9	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 43 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11G09	CRDM Coil Stack Assembly 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	CRDM Latch Assembly G11	D	NS	Manufacturer Std.	
RXS-MV-11G11	CRDM Drive Rod Assembly G11	D	NS	Manufacturer Std.	
RXS-MV-11G11	CRDM Coil Stack Assembly 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	CRDM Latch Assembly G13	D	NS	Manufacturer Std.	
RXS-MV-11G13	CRDM Drive Rod Assembly G13	D	NS	Manufacturer Std.	
RXS-MV-11G13	CRDM Coil Stack Assembly 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	CRDM Latch Assembly H2	D	NS	Manufacturer Std.	
RXS-MV-11H02	CRDM Drive Rod Assembly H2	D	NS	Manufacturer Std.	
RXS-MV-11H02	CRDM Coil Stack Assembly 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	CRDM Latch Assembly H4	D	NS	Manufacturer Std.	
RXS-MV-11H04	CRDM Drive Rod Assembly H4	D	NS	Manufacturer Std.	
RXS-MV-11H04	CRDM Coil Stack Assembly H4	D	NS	Manufacturer Std.	
RXS-MV-11H04L	CRDM Latch Housing H4	A	I	ASME III-1	

Table 3.2-3 (Sheet 44 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11H04R	CRDM Rod Travel Housing H4	A	I	ASME III-1	
RXS-MV-11H06	CRDM Latch Assembly H6	D	NS	Manufacturer Std.	
RXS-MV-11H06	CRDM Drive Rod Assembly H6	D	NS	Manufacturer Std.	
RXS-MV-11H06	CRDM Coil Stack Assembly 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	
RXS-MV-11H08	CRDM Latch Assembly H8	D	NS	Manufacturer Std.	
RXS-MV-11H08	CRDM Drive Rod Assembly H8	D	NS	Manufacturer Std.	
RXS-MV-11H08	CRDM Coil Stack Assembly 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	CRDM Latch Assembly H10	D	NS	Manufacturer Std.	
RXS-MV-11H10	CRDM Drive Rod Assembly H10	D	NS	Manufacturer Std.	
RXS-MV-11H10	CRDM Coil Stack Assembly 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	CRDM Latch Assembly H12	D	NS	Manufacturer Std.	
RXS-MV-11H12	CRDM Drive Rod Assembly H12	D	NS	Manufacturer Std.	
RXS-MV-11H12	CRDM Coil Stack Assembly 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-11H14	CRDM Latch Assembly H14	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 45 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11H14	CRDM Drive Rod Assembly H14	D	NS	Manufacturer Std.	
RXS-MV-11H14	CRDM Coil Stack Assembly H14	D	NS	Manufacturer Std.	
RXS-MV-11H14L	CRDM Latch Housing H14	A	I	ASME III-1	
RXS-MV-11H14R	CRDM Rod Travel Housing H14	A	I	ASME III-1	
RXS-MV-11J03	CRDM Latch Assembly J3	D	NS	Manufacturer Std.	
RXS-MV-11J03	CRDM Drive Rod Assembly J3	D	NS	Manufacturer Std.	
RXS-MV-11J03	CRDM Coil Stack Assembly 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	CRDM Latch Assembly J5	D	NS	Manufacturer Std.	
RXS-MV-11J05	CRDM Drive Rod Assembly J5	D	NS	Manufacturer Std.	
RXS-MV-11J05	CRDM Coil Stack Assembly 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	CRDM Latch Assembly J7	D	NS	Manufacturer Std.	
RXS-MV-11J07	CRDM Drive Rod Assembly J7	D	NS	Manufacturer Std.	
RXS-MV-11J07	CRDM Coil Stack Assembly 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	
RXS-MV-11J09	CRDM Latch Assembly J9	D	NS	Manufacturer Std.	
RXS-MV-11J09	CRDM Drive Rod Assembly J9	D	NS	Manufacturer Std.	
RXS-MV-11J09	CRDM Coil Stack Assembly J9	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 46 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
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	CRDM Latch Assembly J11	D	NS	Manufacturer Std.	
RXS-MV-11J11	CRDM Drive Rod Assembly J11	D	NS	Manufacturer Std.	
RXS-MV-11J11	CRDM Coil Stack Assembly 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-11J13	CRDM Latch Assembly J13	D	NS	Manufacturer Std.	
RXS-MV-11J13	CRDM Drive Rod Assembly J13	D	NS	Manufacturer Std.	
RXS-MV-11J13	CRDM Coil Stack Assembly J13	D	NS	Manufacturer Std.	
RXS-MV-11J13L	CRDM Latch Housing J13	A	I	ASME III-1	
RXS-MV-11J13R	CRDM Rod Travel Housing J13	A	I	ASME III-1	
RXS-MV-11K02	CRDM Latch Assembly K2	D	NS	Manufacturer Std.	
RXS-MV-11K02	CRDM Drive Rod Assembly K2	D	NS	Manufacturer Std.	
RXS-MV-11K02	CRDM Coil Stack Assembly 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	CRDM Latch Assembly K4	D	NS	Manufacturer Std.	
RXS-MV-11K04	CRDM Drive Rod Assembly K4	D	NS	Manufacturer Std.	
RXS-MV-11K04	CRDM Coil Stack Assembly 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	CRDM Latch Assembly K6	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 47 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11K06	CRDM Drive Rod Assembly K6	D	NS	Manufacturer Std.	
RXS-MV-11K06	CRDM Coil Stack Assembly 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	CRDM Latch Assembly K8	D	NS	Manufacturer Std.	
RXS-MV-11K08	CRDM Drive Rod Assembly K8	D	NS	Manufacturer Std.	
RXS-MV-11K08	CRDM Coil Stack Assembly 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	CRDM Latch Assembly K10	D	NS	Manufacturer Std.	
RXS-MV-11K10	CRDM Drive Rod Assembly K10	D	NS	Manufacturer Std.	
RXS-MV-11K10	CRDM Coil Stack Assembly 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	
RXS-MV-11K12	CRDM Latch Assembly K12	D	NS	Manufacturer Std.	
RXS-MV-11K12	CRDM Drive Rod Assembly K12	D	NS	Manufacturer Std.	
RXS-MV-11K12	CRDM Coil Stack Assembly 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-11K14	CRDM Latch Assembly K14	D	NS	Manufacturer Std.	
RXS-MV-11K14	CRDM Drive Rod Assembly K14	D	NS	Manufacturer Std.	
RXS-MV-11K14	CRDM Coil Stack Assembly K14	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 48 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11K14L	CRDM Latch Housing K14	A	I	ASME III-1	
RXS-MV-11K14R	CRDM Rod Travel Housing K14	A	I	ASME III-1	
RXS-MV-11L03	CRDM Latch Assembly L3	D	NS	Manufacturer Std.	
RXS-MV-11L03	CRDM Drive Rod Assembly L3	D	NS	Manufacturer Std.	
RXS-MV-11L03	CRDM Coil Stack Assembly 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	CRDM Latch Assembly L5	D	NS	Manufacturer Std.	
RXS-MV-11L05	CRDM Drive Rod Assembly L5	D	NS	Manufacturer Std.	
RXS-MV-11L05	CRDM Coil Stack Assembly 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	CRDM Latch Assembly L7	D	NS	Manufacturer Std.	
RXS-MV-11L07	CRDM Drive Rod Assembly L7	D	NS	Manufacturer Std.	
RXS-MV-11L07	CRDM Coil Stack Assembly 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	CRDM Latch Assembly L9	D	NS	Manufacturer Std.	
RXS-MV-11L09	CRDM Drive Rod Assembly L9	D	NS	Manufacturer Std.	
RXS-MV-11L09	CRDM Coil Stack Assembly 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	CRDM Latch Assembly L11	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 49 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11L11	CRDM Drive Rod Assembly L11	D	NS	Manufacturer Std.	
RXS-MV-11L11	CRDM Coil Stack Assembly 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	
RXS-MV-11L13	CRDM Latch Assembly L13	D	NS	Manufacturer Std.	
RXS-MV-11L13	CRDM Drive Rod Assembly L13	D	NS	Manufacturer Std.	
RXS-MV-11L13	CRDM Coil Stack Assembly L13	D	NS	Manufacturer Std.	
RXS-MV-11L13L	CRDM Latch Housing L13	A	I	ASME III-1	
RXS-MV-11L13R	CRDM Rod Travel Housing L13	A	I	ASME III-1	
RXS-MV-11M04	CRDM Latch Assembly M4	D	NS	Manufacturer Std.	
RXS-MV-11M04	CRDM Drive Rod Assembly M4	D	NS	Manufacturer Std.	
RXS-MV-11M04	CRDM Coil Stack Assembly 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	CRDM Latch Assembly M6	D	NS	Manufacturer Std.	
RXS-MV-11M06	CRDM Drive Rod Assembly M6	D	NS	Manufacturer Std.	
RXS-MV-11M06	CRDM Coil Stack Assembly 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	CRDM Latch Assembly M8	D	NS	Manufacturer Std.	
RXS-MV-11M08	CRDM Drive Rod Assembly M8	D	NS	Manufacturer Std.	
RXS-MV-11M08	CRDM Coil Stack Assembly M8	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 50 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
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	CRDM Latch Assembly M10	D	NS	Manufacturer Std.	
RXS-MV-11M10	CRDM Drive Rod Assembly M10	D	NS	Manufacturer Std.	
RXS-MV-11M10	CRDM Coil Stack Assembly 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-11M12	CRDM Latch Assembly M12	D	NS	Manufacturer Std.	
RXS-MV-11M12	CRDM Drive Rod Assembly M12	D	NS	Manufacturer Std.	
RXS-MV-11M12	CRDM Coil Stack Assembly M12	D	NS	Manufacturer Std.	
RXS-MV-11M12L	CRDM Latch Housing M12	A	I	ASME III-1	
RXS-MV-11M12R	CRDM Rod Travel Housing M12	A	I	ASME III-1	
RRXS-MV-11N05	CRDM Latch Assembly N5	D	NS	Manufacturer Std.	
RXS-MV-11N05	CRDM Drive Rod Assembly N5	D	NS	Manufacturer Std.	
RXS-MV-11N05	CRDM Coil Stack Assembly N5	D	NS	Manufacturer Std.	
RXS-MV-11N05L	CRDM Latch Housing N5	A	I	ASME III-1	
RXS-MV-11N05R	CRDM Rod Travel Housing N5	A	I	ASME III-1	
RXS-MV-11N07	CRDM Latch Assembly N7	D	NS	Manufacturer Std.	
RXS-MV-11N07	CRDM Drive Rod Assembly N7	D	NS	Manufacturer Std.	
RXS-MV-11N07	CRDM Coil Stack Assembly N7	D	NS	Manufacturer Std.	
RXS-MV-11N07L	CRDM Latch Housing N7	A	I	ASME III-1	

Table 3.2-3 (Sheet 51 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11N07R	CRDM Rod Travel Housing N7	A	I	ASME III-1	
RXS-MV-11N09	CRDM Latch Assembly N9	D	NS	Manufacturer Std.	
RXS-MV-11N09	CRDM Drive Rod Assembly N9	D	NS	Manufacturer Std.	
RXS-MV-11N09	CRDM Coil Stack Assembly N9	D	NS	Manufacturer Std.	
RXS-MV-11N09L	CRDM Latch Housing N9	A	I	ASME III-1	
RXS-MV-11N09R	CRDM Rod Travel Housing N9	A	I	ASME III-1	
RXS-MV-11N11	CRDM Latch Assembly N11	D	NS	Manufacturer Std.	
RXS-MV-11N11	CRDM Drive Rod Assembly N11	D	NS	Manufacturer Std.	
RXS-MV-11N11	CRDM Coil Stack Assembly N11	D	NS	Manufacturer Std.	
RXS-MV-11N11L	CRDM Latch Housing N11	A	I	ASME III-1	
RXS-MV-11N11R	CRDM Rod Travel Housing N11	A	I	ASME III-1	
RXS-MV-11P06	CRDM Latch Assembly P6	D	NS	Manufacturer Std.	
RXS-MV-11P06	CRDM Drive Rod Assembly P6	D	NS	Manufacturer Std.	
RXS-MV-11P06	CRDM Coil Stack Assembly P6	D	NS	Manufacturer Std.	
RXS-MV-11P06L	CRDM Latch Housing P6	A	I	ASME III-1	
RXS-MV-11P06R	CRDM Rod Travel Housing P6	A	I	ASME III-1	
RXS-MV-11P08	CRDM Latch Assembly P8	D	NS	Manufacturer Std.	
RXS-MV-11P08	CRDM Drive Rod Assembly P8	D	NS	Manufacturer Std.	
RXS-MV-11P08	CRDM Coil Stack Assembly P8	D	NS	Manufacturer Std.	
RXS-MV-11P08L	CRDM Latch Housing P8	A	I	ASME III-1	
RXS-MV-11P08R	CRDM Rod Travel Housing P8	A	I	ASME III-1	
RXS-MV-11P10	CRDM Latch Assembly P10	D	NS	Manufacturer Std.	

Table 3.2-3 (Sheet 52 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Reactor System (Continued)					
RXS-MV-11P10	CRDM Drive Rod Assembly P10	D	NS	Manufacturer Std.	
RXS-MV-11P10	CRDM Coil Stack Assembly P10	D	NS	Manufacturer Std.	
RXS-MV-11P10L	CRDM Latch Housing P10	A	I	ASME III-1	
RXS-MV-11P10R	CRDM Rod Travel Housing P10	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	
SDS-PL-V001	SDS MCR Isolation Valve	C	I	ASME III-3	
SDS-PL-V002	SDS MCR Isolation Valve	C	I	ASME III-3	
Balance of system components are Class P					
Spent Fuel Pool Cooling System (SFS)			Location: Auxiliary Building, Containment		
n/a	Heat Exchangers, SFS and CCS Side	D	NS	ASME VIII	
n/a	Pumps	D	NS	Hydraulic Institute Std.	
n/a	Demineralizers	D	NS	ASME VIII	
n/a	Filters	D	NS	ASME VIII	
n/a	Valves Providing SFS AP1000 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	

Table 3.2-3 (Sheet 53 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Spent Fuel Pool Cooling System (Continued)					
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	
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-V045	SFS Discharge to Cask Loading Pit Isolation	C	I	ASME III-3	
SFS-PL-V047	SFS Demineralized Water Makeup to SFP Reverse Flow Prevent	D	NS	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	

Table 3.2-3 (Sheet 54 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Spent Fuel Pool Cooling System (Continued)					
SFS-PL-V067	SFS Containment Isolation Relief Valve	B	I	ASME III-2	
SFS-PL-V068	Cask Washdown Pit Drain Isolation	C	I	ASME III-3	
SFS-PL-V071	Refueling Cavity Overflow to SG Compartment	C	I	ASME III-3	
SFS-PL-V072	Refueling Cavity Overflow to SG Compartment	C	I	ASME III-3	
SFS-PL-V075	SFS Containment Floodup Isolation Valve	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					
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	

Table 3.2-3 (Sheet 55 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
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	
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	

Table 3.2-3 (Sheet 56 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
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	
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-V033A	Main Steam Safety Valve SG 01	B	I	ASME III-2	
SGS-PL-V033B	Main Steam Safety Valve SG 02	B	I	ASME III-2	
SGS-PL-V034A	Main Steam Safety Valve SG 01	B	I	ASME III-2	
SGS-PL-V034B	Main Steam Safety Valve SG 02	B	I	ASME III-2	
SGS-PL-V035A	Main Steam Safety Valve SG 01	B	I	ASME III-2	
SGS-PL-V035B	Main Steam Safety Valve SG 02	B	I	ASME III-2	
SGS-PL-V036A	Steam Line Condensate Drain Isolation	B	I	ASME III-2	

Table 3.2-3 (Sheet 57 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
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	
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	

Table 3.2-3 (Sheet 58 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
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	
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-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	

Table 3.2-3 (Sheet 59 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (Continued)					
SGS-PL-V093A	Orifice Isolation Valve	C	I	ASME III-3	
SGS-PL-V093B	Orifice Isolation Valve	C	I	ASME III-3	
SGS-PL-V094A	Orifice Cleanout Line Isolation Valve	C	I	ASME III-3	
SGS-PL-V094B	Orifice Cleanout Line Isolation Valve	C	I	ASME III-3	
SGS-PL-V095A	Orifice Isolation Valve	C	I	ASME III-3	
SGS-PL-V095B	Orifice Isolation Valve	C	I	ASME III-3	
SGS-PL-V096A	Steam Line Condensate Drain Level Isolation Valve	B	I	ASME III-2	
SGS-PL-V096B	Steam Line Condensate Drain Level Isolation Valve	B	I	ASME III-2	
SGS-PL-V097A	Steam Line Condensate Drain Level Isolation Valve	B	I	ASME III-2	
SGS-PL-V097B	Steam Line Condensate Drain Level Isolation Valve	B	I	ASME III-2	
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	
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	

Table 3.2-3 (Sheet 60 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Steam Generator System (SWS) (Continued)					
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				
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 AP1000 Equipment Class D Function	D	NS	ANSI 16.34	
Turbine Building Closed Cooling Water System (TCS)				Location: Turbine Building	
System components are Class E					
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.	

Table 3.2-3 (Sheet 61 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Radiologically Controlled Area Ventilation System (VAS) (Continued)					
n/a	Valves Providing VAS AP1000 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 AP1000 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.	
n/a	MCR/CSA Supplemental Air Filtration Units	Note 2	NS	ASME AG-1, Note 4	
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 AP1000 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	

Table 3.2-3 (Sheet 62 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Nuclear Island Nonradioactive Ventilation System (VBS) (Continued)					
n/a	Fans, Ductwork	Note 2, L or R	NS	SMACNA	
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	
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	

Table 3.2-3 (Sheet 63 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
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	
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	

Table 3.2-3 (Sheet 64 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
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	
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-V010A	Air Delivery Line Maintenance Isolation Valve A	C	I	ASME III-3	

Table 3.2-3 (Sheet 65 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
VES-PL-V010B	Air Delivery Line Maintenance Isolation Valve B	C	I	ASME III-3	
VES-PL-V011A	Air Delivery Line Maintenance Isolation Valve A	C	I	ASME III-3	
VES-PL-V011B	Air Delivery Line Maintenance 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	
VES-PL-V022B	Pressure Relief Isolation Valve B	C	I	ASME III-3	
VES-PL-V024A	Air Bank 1 Isolation Valve A	C	I	ASME III-3	
VES-PL-V024B	Air Bank 2 Isolation Valve B	C	I	ASME III-3	
VES-PL-V024C	Air Bank 3 Isolation Valve C	C	I	ASME III-3	
VES-PL-V024D	Air Bank 4 Isolation Valve D	C	I	ASME III-3	
VES-PL-V025A	Air Bank 1 Isolation Valve A	C	I	ASME III-3	
VES-PL-V025B	Air Bank 2 Isolation Valve B	C	I	ASME III-3	
VES-PL-V025C	Air Bank 3 Isolation Valve C	C	I	ASME III-3	
VES-PL-V025D	Air Bank 4 Isolation Valve D	C	I	ASME III-3	
VES-PL-V026A	Air Bank 1 Fill/Vent Isolation Valve A	C	I	ASME III-3	
VES-PL-V026B	Air Bank 2 Fill/Vent Isolation Valve B	C	I	ASME III-3	

Table 3.2-3 (Sheet 66 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
VES-PL-V026C	Air Bank 3 Fill/Vent Isolation Valve C	C	I	ASME III-3	
VES-PL-V026D	Air Bank 4 Fill/Vent Isolation Valve D	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-V040C	Air Tank Safety Relief Valve C	C	I	ASME III-3	
VES-PL-V040D	Air Tank Safety Relief Valve D	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	
VES-PL-V045	Eductor Flow Path Isolation Valve	C	I	ASME III-3	
VES-PL-V046	Eductor Bypass Isolation Valve	C	I	ASME III-3	
VES-PY-N01	MCR Air Filtration Line Eductor	C	I	ASME III-3	
VES-MY-F01	MCR Air Filtration Line Charcoal Filter	Note 1	I	ASME AG-1 Section FD	
VES-MY-F02	MCR Air Filtration Line HEPA Filter	Note 1	I	ASME AG-1 Section FC	
VES-MY-F03	MCR Air Filtration Line Postfilter	Note 1	1	ASME AG-1	
VES-MD-D001A	MCR Gravity Relief Dampers	Note 1	I	ASME AG-1	
VES-MD-D001B	MCR Gravity Relief Dampers	Note 1	I	ASME AG-1	
VES-MD-D002	MCR Air Filtration Line Supply Damper	Note 1	I	ASME AG-1 Section DA	

Table 3.2-3 (Sheet 67 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Main Control Room Emergency Habitability System (Continued)					
VES-MD-D003	MCR Air Filtration Line Supply Damper	Note 1	I	ASME AG-1 Section DA	
VES-MY-Y01	MCR Air Filtration Line Silencer	Note 1	I	ASME AG-1 Section SA	
VES-MY-Y02	MCR Air Filtration Line Silencer	Note 1	I	ASME AG-1 Section SA	
Containment Air Filtration System (VFS)			Location: Auxiliary Building and Annex Building		
VFS-PY-C01	Containment Supply Duct Penetration	B	I	ASME III, 2	
VFS-PY-C02	Containment Exhaust Duct Penetration	B	I	ASME III, 2	
VFS-MY-Y01	Containment Air Supply Debris Screen	C	I	ASME Sec. III Class 3	
VFS-MY-Y02	Containment Air Exhaust Debris Screen	C	I	ASME Sec. III Class 3	
VFS-PL-V003	Containment Purge Supply Containment Isolation Valve	B	I	ASME III-2	
VFS-PL-V004	Containment Purge Supply Containment Isolation Valve	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	
VFS-PL-V800A	Vacuum Relief Containment Isolation A – ORC	B	I	ASME III-2	
VFS-PL-V800B	Vacuum Relief Containment Isolation B – ORC	B	I	ASME III-2	

Table 3.2-3 (Sheet 68 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Containment Air Filtration System (Continued)					
VFS-PL-V803A	Vacuum Relief Containment Isolation Check Valve A – IRC	B	I	ASME III-2	
VFS-PL-V803B	Vacuum Relief Containment Isolation Check Valve B – IRC	B	I	ASME III-2	
n/a	Valves Providing VFS AP1000 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 AG-1, Note 4	
n/a	Fans, Ductwork	L or R	NS	SMACNA or ASME AG-1, Note 4	
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	
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

Table 3.2-3 (Sheet 69 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Containment Hydrogen Control System (VLS) (Continued)					
VLS-MY-E01A	Catalytic Hydrogen Recombiner A	D	NS	Manufacturer Std.	
VLS-MY-E01B	Catalytic Hydrogen Recombiner B	D	NS	Manufacturer Std.	
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	
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	

Table 3.2-3 (Sheet 70 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Containment Leak Rate Test System (Continued)					
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	
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	

Table 3.2-3 (Sheet 71 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Containment Leak Rate Test System (Continued)					
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-V125	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)				Location: Various	
n/a	Air Cooled Chiller	D	NS	Manufacturer Std.	
n/a	Pumps	D	NS	Manufacturer Std.	
n/a	Tanks	D	NS	ASME VIII	

Table 3.2-3 (Sheet 72 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Central Chilled Water System (Continued)					
n/a	Valves Providing VWS AP1000 Equipment Class D Function	D	NS	ANSI 16.34	
VWS-PY-C01	Containment Chilled Water Supply Penetration	B	I	ASME III, 2	
VWS-PY-C02	Containment Chilled Water Return Penetration	B	I	ASME III, 2	
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-V080	VWS Containment Isolation Relief Valve	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 AP1000 Equipment Class D Function	Note 2	NS	AMCA	
n/a	Dampers Providing VXS AP1000 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.	

Table 3.2-3 (Sheet 73 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Annex/Auxiliary Nonradioactive Ventilation System (VXS) (Continued)					
n/a	Filters	L	NS	UL 900	
n/a	Fans, Ductwork	L	NS	SMACNA	
Balance of system components are Class E or Class L					
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 AP1000 Equipment Class D Function	Note 2	NS	UL-1025; NFPA 70	
n/a	Fans Providing AP1000 Equipment Class D Function	Note 2	NS	AMCA	
n/a	Dampers Providing VZS AP1000 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 AP1000 Equipment Class D Function	D	NS	ANSI 16.34	
Liquid Radwaste System (WLS)			Location: Containment, Auxiliary, and Radwaste Buildings		
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	

Table 3.2-3 (Sheet 74 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Liquid Radwaste System (WLS) (Continued)					
n/a	Degasifier	D	NS	ASME VIII	
n/a	Ion Exchangers	D	NS	ASME VIII	
n/a	Filters	D	NS	ASME VIII	
n/a	Valves Providing WLS AP1000 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-V058	WLS Containment Isolation Relief Valve	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, 2	
WLS-PY-C03	Containment Sump Pumps Combined Discharge Penetration	B	I	ASME III, 2	
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 AP1000 Equipment Class D Function	D	NS	ANSI 16.34	

Table 3.2-3 (Sheet 75 of 75)
AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment

Tag Number	Description	AP1000 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 AP1000 Equipment Class D Function	D	NS	ANSI 16.34	
Balance of system components are Class E					
Waste Water System (WWS)				Location: Various	
WWS-PL-V506	MCR WWS Isolation Valve	C	I	ASME III-3	
Balance of 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	Manufacturer Std.	
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 AP1000 Equipment Class D Function	D	NS	ANSI 16.34	
Balance of system components are Class E					
Deep Well Injection System (DIS)				Location: Yard	
System Components are Class E, Seismic Category: NS (Note 5)					

Notes:

1. Component performs a safety-related function equivalent to AP1000 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 AP1000 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.
4. Construction is non-seismic and meets applicable portions of ASME AG-1 consistent with RG 1.140.
5. The liquid radwaste system (WLS) terminates at the point at which the radwaste enters the DIS in the discharge stream from the blowdown sump, which is the point of dilution for the Units 6 & 7 site. Refer to Figure 9.2-203.

Table 3.2-201
Not Used

Table 3.2-202
Not Used