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July 28, 2010

PG&E Letter DCL-10-091

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
Response to NRC Letter dated June 18, 2010, Request for Additional Information (High Energy Piping) for the Diablo Canyon License Renewal Application

Reference 1: PG&E Letter DCL-09-079, "License Renewal Application," dated November 23, 2009

Dear Commissioners and Staff:

By letter dated November 23, 2009 (Reference 1), Pacific Gas and Electric Company (PG&E) submitted a License Renewal Application (LRA) for Diablo Canyon Units 1 and 2 (DCPP) requesting the DCPP Facility Operating Licenses be extended for 20 years beyond their current expiration dates.

In a letter to PG&E dated May 24, 2010, the NRC requested additional information (RAI) related to the LRA Scoping and Screening Methodology Audit conducted at DCPP March 15-18, 2010. PG&E Letter DCL-10-067, dated June 18, 2010, responded to this RAI, and determined that high-energy piping in the turbine building should be included in the scope of the license renewal in accordance with 10 CFR 54.4(a)(2) under the preventative option of NEI 95-10, Appendix F, to protect safety-related cable in the turbine building from the effects of pipe whip and jet impingement. DCL-10-067 committed to including the high-energy piping in a future LRA.

Enclosure 1 of this letter is Amendment 5 which includes the addition of the high-energy piping in the turbine building to the scope of the LRA. PG&E has identified these additional changes to the LRA submitted in Reference 1 with line-in/line-out annotations in the attached pages.

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Should you have any questions or if additional information is needed regarding this letter, please contact Mr. Terence L. Grebel, License Renewal Project Manager, at (805) 545-4160.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 28, 2010.

Sincerely,

James R. Becker
Site Vice President

pns3/9782
Enclosures
cc: Diablo Distribution
cc/enc: Elmo E. Collins, NRC Region IV Regional Administrator
Nathaniel Ferrer, NRC Project Manager, License Renewal
Kimberly J. Green, NRC Project Manager, License Renewal
Michael S. Peck, NRC Senior Resident Inspector
Alan B. Wang, NRC Project Manager, Office of Nuclear Reactor Regulation

Enclosure 1

License Renewal Application Amendment 5 and Methodology Summary

In PG&E letter DCL-10-067, dated June 18, 2010, PG&E responded to request for additional information (RAI) 2.3-4 and committed to add high energy systems in the turbine building into the scope of license renewal. These systems are being added because these high energy systems could interact with safety-related electrical cable in the turbine building. The preventive approach is being used for the high energy systems in order to provide added assurance that safety-related cable in the turbine building is not damaged by the effects of pipe whip and jet impingement due to the potential aging-related failure of a high energy component.

The high energy systems in the Diablo Canyon Power Plant (DCPP) turbine building were identified based on the plant licensing basis. The high energy portions of the following systems were evaluated and included within the scope of license renewal. An aging evaluation has been performed, and the corresponding license renewal application (LRA) sections and tables have been revised. The corresponding tables in Chapter 3 were also revised. The following systems or portions of systems in the turbine building contain high energy. These high energy systems were added to the scope of license renewal:

- Extraction steam and heater drip system (2.3.3.18)
- Turbine generator and associated systems (2.3.3.18)
- Secondary sampling system (2.3.3.18)
- Turbine steam supply system (2.3.4.1)
- Auxiliary steam system (2.3.4.2)
- Feedwater system (2.3.4.3)
- Condensate system (2.3.4.4)

The components in the portions of the above systems that were added to scope were evaluated using the methodology as described in Chapter 2. The newly added components were evaluated, and any new materials or environments were identified and added to the materials, environments, aging effects, and aging management programs list contained in Chapter 3. Additionally the Chapter 3 tables were revised to reflect the results of the aging evaluations of the newly added components. The LRA page changes included in this amendment only show text and individual table line items that have been added or deleted from the previous amendment (with exception to Table 2.2-1, for the purpose of clarity). Existing text and table line items that did not change have not been included in this amendment.

In addition to the changes resulting from the addition of high energy systems, there are also revisions to screening and aging management review results identified due to the adjustment of the scoping boundary and identification of corrections that were needed.

List of Revised License Renewal Application Sections and Tables

Table/Section No.	Name
Section 2.3.3.18	Miscellaneous Systems In Scope ONLY for Criterion 10 CFR 54.4(a)(2)
Section 2.3.4.1	Turbine Steam Supply System
Section 2.3.4.2	Auxiliary Steam System
Section 2.3.4.3	Feedwater System
Section 2.3.4.4	Condensate System
Section 3.3.2.1.18	Miscellaneous Systems In-Scope ONLY based on Criterion 10 CFR 54.4(a)(2)
Section 3.4.2.1.1	Turbine Steam Supply System
Section 3.4.2.1.2	Auxiliary Steam System
Section 3.4.2.1.4	Condensate System
Table 2.2-1	DCPP Scoping Results
Table 2.3.3-18	Miscellaneous Systems In Scope ONLY Based on Criterion 10 CFR 54.4(a)(2)
Table 2.3.4-1	Turbine Steam Supply System
Table 2.3.4-2	Auxiliary Steam System
Table 2.3.4-3	Feedwater System
Table 2.3.4-4	Condensate System
Table 3.3.1	Summary of Aging Management Evaluations in Chapter VII of NUREG-1801 for Auxiliary Systems
Table 3.3.2-18	Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2)
Table 3.4.1	Summary of Aging Management Evaluations in Chapter VIII of NUREG-1801 for Steam and Power Conversion System
Table 3.4.2-1	Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System
Table 3.4.2-2	Steam and Power Conversion System – Summary of Aging Management Evaluation – Auxiliary Steam System
Table 3.4.2-3	Steam and Power Conversion System – Summary of Aging Management Evaluation – Feedwater System
Table 3.4.2-4	Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System
Appendix B2.1.10	Closed-Cycle Cooling Water System

2.3.3.18 Miscellaneous Systems In Scope ONLY for Criterion 10 CFR 54.4(a)(2)

The following systems are within the scope of license renewal only based on the criterion of 10 CFR 54.4(a)(2):

- Turbine generator associated systems

System Descriptions/System Intended Functions

Extraction steam and heater drip system

The purpose of the extraction steam and heater drip system is to provide preheated feedwater to the steam generators to improve cycle efficiency.

Extraction steam from the high pressure turbine and drains from the moisture separator reheaters are used to heat the feedwater in the last two stages of the feedwater heaters. Extraction steam from the low pressure turbines is used to heat the feedwater in the first four stages of the feedwater heaters. The extraction steam and heater drip system is nonsafety and performs no safety-related functions.

The extraction steam and heater drip system contains nonsafety piping that is located within safety-related areas. The extraction steam and heater drip system piping and piping components in the turbine building contain high energy fluids.

The majority of the extraction steam and heater drip system consists of piping which contains high energy fluids located in the turbine building where there are some safety related cables. There is also a portion of system piping located in the auxiliary building. Therefore, portions ~~Portions~~ of the extraction steam and heater drip system are within the scope of license renewal as nonsafety-related affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2) for spatial interaction.

Secondary Sampling System

The secondary sampling system is a nonsafety-related system that provides sampling and analysis of secondary plant systems.

The central sample panel for each unit is located in the auxiliary building. Each unit has another sample panel located in the buttress area west of the turbine building. Most of the sample points and lines are in the turbine building but the lines leading to the central sample panels are in the auxiliary building. Portions of the secondary sampling system piping and piping components in the turbine building contain high energy fluids.

Portions of the secondary sampling system are in scope as nonsafety affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2) due to spatial interaction and structural integrity. High energy portions of the secondary sampling system in the turbine building could prevent the satisfactory accomplishment of a safety-related function associated with certain safety-related cables. These portions of the secondary sampling system are within the scope of license renewal as nonsafety affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2).

Turbine Generator Associated Systems

The purpose of the turbine generator associated systems is to support operation of the main turbine and generator by supplying turbine shaft sealing, generator shaft sealing, generator gas cooling, and generator water cooling. It also supplies shaft sealing for the main feed pump turbines. It includes the following systems:

- Gland sealing system, which prevents air leakage into the turbine along the shaft
- Hydrogen cooling for the main generator
- Generator seal oil, which prevents hydrogen from leaking from the main generator
- Stator cooling water system

The turbine generator associated systems do not perform any safety functions.

The turbine generator associated systems piping and piping components in the turbine building contain high energy fluids.

The high energy portions of the turbine generator associated systems in the turbine building could prevent the satisfactory accomplishment of a safety-related function associated with certain safety-related cables. Therefore, portions of the turbine generator associated systems are within the scope of license renewal as nonsafety-related affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2) for spatial interaction.

FSAR References

Details of the extraction steam and heater drip system are discussed in FSAR Sections 3.6.1.2, 10.2.2.1, and 10.4.7.2.

Details of the radiation monitoring system (mechanical) system are discussed in FSAR Sections 11.4.1, 11.4.2.2, and Table 11.4-1.

Details of the sanitary sewage system are discussed in FSAR Section 9.2.8.

Details of the secondary sampling system are discussed in FSAR Sections 3.6.1.2 and 9.3.2.3.

Details of the service cooling water system are discussed in FSAR Section 9.2.1.

Details of the solid radwaste system are discussed in FSAR Sections 11.2 and 11.5.

Details of the turbine generator associated systems are discussed in FSAR Sections 3.6.1.2, 10.2.2.3, and 10.4.3.

License Renewal Boundary Drawings

The license renewal boundary drawings for the extraction steam and heater drip system are listed below:

LR-DCPP-05-106705-02
LR-DCPP-05-106705-03
LR-DCPP-05-106705-04
LR-DCPP-05-106705-05
LR-DCPP-05-106705-06
LR-DCPP-05-106705-07
LR-DCPP-05-107705-02
LR-DCPP-05-107705-03
LR-DCPP-05-107705-05
LR-DCPP-05-107705-06
LR-DCPP-05-107705-07
LR-DCPP-28-106728-04
LR-DCPP-28-106728-05
LR-DCPP-28-107728-04
LR-DCPP-28-107728-05

The license renewal boundary drawings for the secondary sampling system are listed below:

LR-DCPP-02-106702-02
LR-DCPP-02-106702-03
LR-DCPP-02-106702-04
LR-DCPP-02-106702-05
LR-DCPP-02-106702-08
LR-DCPP-02-107702-02
LR-DCPP-02-107702-03
LR-DCPP-02-107702-05
LR-DCPP-02-107702-08
LR-DCPP-02-107702-14
LR-DCPP-03-106703-02
LR-DCPP-04-106704-02
LR-DCPP-04-106704-03
LR-DCPP-04-106704-05
LR-DCPP-04-106704-06
LR-DCPP-04-106704-14
LR-DCPP-05-106705-02
LR-DCPP-06-106706-05
LR-DCPP-06-106706-07
LR-DCPP-06-106706-08
LR-DCPP-28-106728-04
LR-DCPP-28-106728-05
LR-DCPP-28-106728-07A
LR-DCPP-28-107728-04
LR-DCPP-28-107728-05
LR-DCPP-28-107728-07A

The license renewal boundary drawings for the turbine generator associated systems are listed below:

LR-DCPP-22-106722-02
LR-DCPP-22-106722-03
LR-DCPP-22-106722-04
LR-DCPP-22-106722-05
LR-DCPP-22-106722-05A
LR-DCPP-22-106722-06
LR-DCPP-22-107722-02
LR-DCPP-22-107722-03
LR-DCPP-22-107722-04
LR-DCPP-22-107722-05
LR-DCPP-22-107722-06

2.3.4.1 Turbine Steam Supply System

System Description

The turbine steam supply system conveys the generated steam from the nuclear steam supply system to the turbine generator, turbine driven feedwater pumps, the turbine-driven auxiliary ~~feed~~ feedwater pump, condenser steam dumps, and the auxiliary steam system. Portions of the turbine steam supply system piping and piping components in the turbine building contain high energy fluids.

System Intended Functions

The turbine steam supply system provides heat removal from the RCS for controlled cooldown during normal, accident and post-accident conditions. Portions of the turbine steam supply system provide containment isolation and overpressure protection for the secondary side of the steam generators and the main steam piping. The turbine steam supply system also provides steam as a motive force to support the operation of the turbine-driven auxiliary feedwater pumps. Therefore, ~~portions of~~ the turbine steam supply system is ~~are~~ within the scope of license renewal based on the criteria of 10 CFR 54.4(a)(1).

Portions of the safety-related turbine steam supply system attach to nonsafety-related piping such that the structural failure of the nonsafety-related piping could prevent satisfactory accomplishment of safety-related system functions. Some of the turbine steam supply system in the auxiliary building contains nonsafety-related components that are spatially oriented such that their failure could prevent the satisfactory accomplishment of a safety-related function associated with a safety-related component. ~~Therefore,~~ High energy portions of turbine steam supply system in the turbine building could prevent the satisfactory accomplishment of a safety-related function associated with certain safety-related cables. These portions of the turbine steam supply system are ~~within the~~ in scope ~~of license renewal~~ as nonsafety affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2).

Portions of the turbine steam supply system support ATWS, fire protection, SBO and EQ requirements and are within the scope of license renewal based on the criteria 10 CFR 54.4(a)(3).

FSAR References

Additional details of the turbine steam supply system can be found in FSAR Sections 3.6.1.2, 6.5.2.1.2, 10.2, 10.3, 10.4.4, and 10.4.8.

License Renewal Boundary Drawings

The license renewal boundary drawings for the turbine steam supply system are listed below:

LR-DCPP-04-106704-05
LR-DCPP-04-106704-06
LR-DCPP-04-106704-07
LR-DCPP-04-106704-09
LR-DCPP-04-106704-10
LR-DCPP-04-106704-11
LR-DCPP-04-106704-12
LR-DCPP-04-106704-13
LR-DCPP-04-106704-17
LR-DCPP-04-107704-05
LR-DCPP-04-107704-06
LR-DCPP-04-107704-07
LR-DCPP-04-107704-10
LR-DCPP-04-107704-11
LR-DCPP-04-107704-12
LR-DCPP-04-107704-13

2.3.4.2 Auxiliary Steam System

System Description

The auxiliary steam system consists of two auxiliary boilers, pumps, receivers, tanks, piping, and valves. One auxiliary boiler (0-2) is located in a separate building; the other auxiliary boiler (0-1) is located in a separate room in the Unit 1 ventilation building and is abandoned. The piping and valves associated with the auxiliary steam system are located in the auxiliary boiler enclosure, the turbine building, the auxiliary building, the fuel handling building, and the containment. The system contains piping which penetrates containment and contains the necessary containment isolation valves. The auxiliary steam system piping and piping components in the turbine building contain high energy fluids.

System Intended Functions

Portions of the nonsafety-related auxiliary steam system piping are attached to safety-related containment penetration piping such that the structural failure of the nonsafety-related piping could prevent satisfactory accomplishment of safety-related system functions. Portions of the auxiliary steam system in the auxiliary building and containment contain nonsafety-related components that are spatially oriented such that their failure could prevent the satisfactory accomplishment of a safety-related function associated with a safety-related component. The high energy portions of the auxiliary steam system in the turbine building could prevent the satisfactory accomplishment of a safety-related function associated with certain safety-related cables. These portions of the auxiliary steam system are within the scope of license renewal as nonsafety-related components affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2).

FSAR References

Additional details of the auxiliary steam system are included in FSAR Sections 3.6.1.2 and 9.3.7.1.

License Renewal Boundary Drawings

The license renewal boundary drawings for the auxiliary steam system are listed below:

LR-DCPP-06-106706-04

2.3.4.3 Feedwater System

System Description

The water discharged from the feedwater pumps flows through the single stage of high pressure heaters to the steam generators through four lines penetrating the containment, one line for each steam generator. Flow regulating valves, flow venturis, isolation valves, bypass regulating valves, and a check valve are installed in each line outside the containment. The feedwater system piping and piping components in the turbine building contain high energy fluids.

System Intended Functions

Portions of the safety-related feedwater system attach to nonsafety-related piping such that the structural failure of the nonsafety-related piping could prevent satisfactory accomplishment of safety-related system functions. Portions of the feedwater system in the auxiliary building contain nonsafety-related components that are spatially oriented such that their failure could prevent the satisfactory accomplishment of a safety-related function associated with a safety-related component. The high energy portions of the feedwater system that are in the turbine building could prevent the satisfactory accomplishment of a safety-related function associated with certain safety-related cables. These portions of feedwater system are within the scope of license renewal as nonsafety affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2).

FSAR References

Additional details of the feedwater system are included in FSAR Sections 3.6.1.2 and 10.4.7.

License Renewal Boundary Drawings

The license renewal boundary drawings for the feedwater system are listed below:

LR-DCPP-03-106703-05
LR-DCPP-03-107703-05

2.3.4.4 Condensate System

System Description

The purposes of the condensate system are: (1) to collect the condensate from the exhaust steam of main turbines and feedwater pump turbines and the steam cycle drains in the main condenser hotwell, and (2) to deliver deaerated water from the main condenser hotwells to the suction of the main feedwater pumps. Together with the feedwater system, the feedwater is delivered to the steam generators at the required pressure and temperature. The hotwell may also provide water to the firewater system or the auxiliary feedwater system for long-term cooling.

Major components in the condensate system include the main condenser, condensate demineralizers three half capacity centrifugal condensate pumps and three condensate booster pumps.

The condensate system interfaces with the feedwater system, which is evaluated in Section 2.3.4.3. The condensate system interfaces with the secondary sampling system, which is evaluated in the secondary sampling system in Section 2.3.3.18. The condensate storage tank, which provides makeup and surge capacity to compensate for changes in condensate system inventory, is evaluated in the makeup water system in Section 2.3.3.5.

Portions of the condensate system piping and piping components in the turbine building contain high energy fluids.

System Intended Functions

Portions of the condensate system are located in the auxiliary building and contain nonsafety-related components that are spatially oriented such that their failure could prevent the satisfactory accomplishment of a safety-related function associated with a safety-related component. High energy portions of the condensate system in the turbine building could prevent the satisfactory accomplishment of a safety-related function associated with certain safety-related cables. Portions of the condensate system may be used to provide water for long term cooling. These portions of the condensate system are in scope as nonsafety affecting safety-related components based on the criterion of 10 CFR 54.4(a)(2).

The license renewal boundary drawings for the condensate system are listed below:

LR-DCPP-02-106702-05
LR-DCPP-02-106702-06

LR-DCPP-02-106702-07
LR-DCPP-02-106702-08
LR-DCPP-02-106702-12
LR-DCPP-02-106702-14
LR-DCPP-02-107702-05
LR-DCPP-02-107702-06
LR-DCPP-02-107702-07
LR-DCPP-02-107702-08
LR-DCPP-02-107702-12
LR-DCPP-02-107702-14

3.3.2.1.18 Miscellaneous Systems In-Scope ONLY based on Criterion 10 CFR 54.4(a)(2)

Materials

The materials of construction for the miscellaneous systems in scope ONLY based on Criterion 10 CFR 54.4(a)(2) component types are:

- Copper Alloy (greater than 15 percent Zinc)
- Nickel Alloys

Environment

The miscellaneous systems in scope ONLY based on Criterion 10 CFR 54.4(a)(2) component types are exposed to the following environments:

- Dry Gas
- Lubricating Oil

Aging Effects Requiring Management

The following miscellaneous systems in-scope ONLY based on Criterion 10 CFR 54.4(a)(2) aging effects require management:

- Wall thinning

Aging Management Programs

The following aging management programs manage the aging effects for the miscellaneous systems in scope ONLY based on Criterion 10 CFR 54.4(a)(2) component types:

- Flow-Accelerated Corrosion (B2.1.6)
- Lubricating Oil Analysis (B2.1.23)

3.4.2.1.1 Turbine Steam Supply System

Materials

The materials of construction for the turbine steam supply system component types are:

- Glass
- Nickel Alloys

3.4.2.1.2 Auxiliary Steam System

Materials

The materials of construction for the auxiliary steam system component types are:

- Cast Iron (Gray Cast Iron)

Environment

The auxiliary steam system components are exposed to the following environments:

- ~~Dry Gas~~

3.4.2.1.4 Condensate System

Environment

The condensate system components are exposed to the following environments:

- Closed Cycle Cooling Water
- Dry Gas

Aging Effects Requiring Management

The following condensate system aging effects require management:

- Cracking

Aging Management Programs

The following aging management programs manage the aging effects for the condensate system component types:

- Closed-Cycle Cooling Water System (B2.1.10)

Table 2.2-1 DCPP Scoping Results

System/Structure	In Scope	Section 2 Scoping Results
Reactor Vessel, Internals, and Reactor Coolant System		
Pressurizer	Yes	2.3.1.3
Reactor coolant, includes: RVLIS and RVRLIS	Yes	2.3.1.2
Reactor core, includes: Nuclear Fuel Control Rod Mechanical SSCs	Yes	2.3.1.5
Reactor vessel and internals	Yes	2.3.1.1
Steam generators	Yes	2.3.1.4
Engineered Safety Features		
Containment HVAC, including: Containment H_2 control	Yes	2.3.2.4
Containment spray	Yes	2.3.2.2
Residual heat removal	Yes	2.3.2.3
Safety injection	Yes	2.3.2.1
Auxiliary Systems		
Auxiliary building HVAC, includes: Main auxiliary building HVAC Miscellaneous auxiliary building HVAC Fuel handling building HVAC	Yes	2.3.3.11
Chemical and volume control	Yes	2.3.3.8
Component cooling water	Yes	2.3.3.4
Compressed air, includes: Backup air and N_2 Compressed breathing air	Yes	2.3.3.7
Control Room HVAC, includes: Plant process computer HVAC	Yes	2.3.3.10
Cranes and fuel handling, includes: Fuel handling cranes, hoists, and monorails Nuclear fuel storage	Yes	2.3.3.1
Diesel generator fuel oil	Yes	2.3.3.13
Diesel generator	Yes	2.3.3.14

System/Structure	In Scope	Section 2 Scoping Results
Fire Protection, includes: Fire Detection Firewater system CO_2 system Halon (Sim/Comp Rooms) system Portable fire extinguishers	Yes	2.3.3.12
Gaseous radwaste	Yes	2.3.3.16
Liquid radwaste	Yes	2.3.3.17
Lube Oil	Yes	2.3.3.15
Makeup water, includes Domestic and drinking water	Yes	2.3.3.5
Miscellaneous HVAC, includes: Turbine Building ASW Pump Room Ventilation Radwaste Storage Building	Yes	2.3.3.9
Miscellaneous systems in scope ONLY for criterion 10 CFR 54.4(a)(2), includes:	Yes	2.3.3.18
Extraction steam and heater drip	-	-
Radiation monitoring (mechanical)	-	-
Sanitary sewage	-	-
Secondary sampling	-	-
Service cooling water	-	-
Solid radwaste	-	-
Turbine generator associated systems	-	-
Nuclear steam supply sampling	Yes	2.3.3.6
Oily water and turbine sump	Yes	2.3.3.19
Saltwater and chlorination, includes: Saltwater system Auxiliary saltwater Chlorination	Yes	2.3.3.3
Spent fuel pool cooling, includes: Spent fuel pool cooling Spent fuel pool purification	Yes	2.3.3.2
Hazardous waste	No	N/A
Laundry facility and decontamination equipment	No	N/A
Nitrogen and hydrogen	No	N/A

System/Structure	In Scope	Section 2 Scoping Results
Steam and Power Conversion System		
Auxiliary feedwater, includes: Long-term cooling water - auxiliary feedwater alternate suction sources	Yes	2.3.4.5
Auxiliary steam	Yes	2.3.4.2
Condensate, includes: Condensate polishing	Yes	2.3.4.4
Feedwater	Yes	2.3.4.3
Turbine steam supply (TSS), includes: TSS –downstream of MSIV TSS –upstream of MSIV TSS –steam generator blowdown	Yes	2.3.4.1
~~Turbine generator associated systems~~	~~No~~	~~N/A~~
Containments, Structures, and Component Supports		
Auxiliary building	Yes	2.4.3
Containment building	Yes	2.4.1
Control room (located in auxiliary building)	Yes	2.4.2
Discharge structure	Yes	2.4.12
Diesel fuel oil pump vaults and structures	Yes	2.4.7
Earthwork and yard structures	Yes	2.4.11
Fuel handling building	Yes	2.4.9
Intake structure and intake control building	Yes	2.4.10
Outdoor water storage tank foundations and encasements	Yes	2.4.13
Pipeway structure	Yes	2.4.6
Radwaste storage facilities	Yes	2.4.5
Supports	Yes	2.4.14
Turbine building, includes: Administration building CCW heat exchanger room Elevated walkway Emergency diesel generator rooms	Yes	2.4.4
230kV Switchyard, 500kV Switchyard, and electrical foundations and structures	Yes	2.4.8
Independent spent fuel storage installation and cask transfer facility	No	N/A

System/Structure	In Scope	Section 2 Scoping Results
Auxiliary boiler enclosure	No	N/A
Avila gate guardhouse	No	N/A
Avila gate storage building	No	N/A
Bechtel administration trailers	No	N/A
Bio-lab shower / Laboratory facility	No	N/A
Biological laboratory and offices	No	N/A
Blast and paint facility	No	N/A
Boat dock	No	N/A
Boat repair shop	No	N/A
Building, auto, and land services trailer	No	N/A
Building mechanic shop	No	N/A
Chemical storage building	No	N/A
Chlorination and domestic water building (not in use)	No	N/A
Clarifier and make-up pretreatment building	No	N/A
Document Control RMS Building	No	N/A
Document storage facilities	No	N/A
Emergency Operations Facility	No	N/A
Employee assistance program office trailer	No	N/A
Energy Information Center	No	N/A
Engineering services trailer	No	N/A
Environmental monitoring program facilities	No	N/A
Firing range	No	N/A
Fitness for duty buildings	No	N/A
Fitness trailer	No	N/A
Fleet mechanic office	No	N/A
Gas cylinder storage	No	N/A
General construction paint compressor building (not in use)	No	N/A
General construction paint shack / sand blast facility	No	N/A
Hazardous waste facility	No	N/A
Hazardous material office and warehouse	No	N/A
Housekeeping field office	No	N/A
Intake maintenance shop	No	N/A

System/Structure	In Scope	Section 2 Scoping Results
Intake office/security access building	No	N/A
Ionics reverse osmosis facility	No	N/A
Laundry facility	No	N/A
Learning center and maintenance shop	No	N/A
Learning center and simulator	No	N/A
Main warehouse	No	N/A
MATCON express trailer	No	N/A
Meteorological Tower No. 1 and building	No	N/A
Meteorological Tower No. 2 and building	No	N/A
NOS project files	No	N/A
Nuclear Quality Services trailer	No	N/A
Oceanography laboratory	No	N/A
Offsite emergency laboratory	No	N/A
Old Steam Generator Storage Facility	No	N/A
Outage services facilities	No	N/A
Plant compressed air facility	No	N/A
Plant security building and structures	No	N/A
Portable fire pump building	No	N/A
Raw water collection facility and wells at Diablo Creek	No	N/A
Radiation protection trailer	No	N/A
Restroom trailers	No	N/A
Scaffold storage building	No	N/A
Security guard station	No	N/A
Service air pad building	No	N/A
Sewage treatment plant	No	N/A
Site overlook	No	N/A
Storage building - 500kV switchyard	No	N/A
Technical maintenance/Telecom/Medical facility	No	N/A
Telecommunications trailer	No	N/A
Telephone terminal building	No	N/A
Turbine generator equipment warehouse	No	N/A
Unit 2 cold machine shop	No	N/A

System/Structure	In Scope	Section 2 Scoping Results
Utility Crew / Firewatch / Radwaste field office	No	N/A
Vehicle maintenance shop	No	N/A
Vehicle maintenance shop parts office	No	N/A
Vending machine facility	No	N/A
Warehouse A	No	N/A
Warehouse B	No	N/A
Wastewater holding and treatment equipment enclosure	No	N/A
Westinghouse office trailer	No	N/A
Yard Containment Access Facility	No	N/A
Electrical and Instrumentation and Controls		
AMSAC	Yes	N/A
Control rod electrical SSCs	Yes	N/A
Communications	Yes	N/A
Eagle 21	Yes	N/A
Emergency lighting, includes: Emergency AC lighting Emergency DC lighting Battery operated lighting Control room lighting Pipe rack lighting	Yes	N/A
Incore flux mapping	Yes	N/A
Main generator electrical equipment (25kV)	Yes	N/A
Nuclear instrumentation	Yes	N/A
Radiation monitoring	Yes	N/A
Safety parameter display	Yes	N/A
Seismic monitoring, includes: Reactor seismic trip	Yes	N/A
Site emergency and containment evacuation	Yes	N/A
Solid state protection	Yes	N/A
120 VAC	Yes	N/A
125 VDC	Yes	N/A
480V	Yes	N/A
4.16kV	Yes	N/A
12kV	Yes	N/A

System/Structure	In Scope	Section 2 Scoping Results
230kV	Yes	N/A
500kV	Yes	N/A
Auxiliary building control board digital	No	N/A
Boric acid heat trace	No	N/A
Cathodic protection	No	N/A
Digital rod position indication	No	N/A
Loose parts monitoring	No	N/A
Meteorological monitoring	No	N/A
Plant data network	No	N/A
Plant process computer and annunciator	No	N/A
Security	No	N/A
Security UPS	No	N/A
120V general use and normal lighting	No	N/A

Table 2.3.3-18 Miscellaneous Systems In Scope ONLY Based on Criterion 10 CFR 54.4(a)(2)

Component Type	Intended Function
Expansion Joint	Leakage Boundary (spatial)
Heat Exchanger (Air Side Seal Oil Cooler)	Leakage Boundary (spatial)
Heat Exchanger (Gas Dryer Water Gas)	Leakage Boundary (spatial)
Heat Exchanger (Gas Dryer)	Leakage Boundary (spatial)
Heat Exchanger (H2 Side Seal Oil Cooler)	Leakage Boundary (spatial)
Heat Exchanger (Stator Clg O2 Cooler)	Leakage Boundary (spatial)
Orifice	Leakage Boundary (spatial)
Regulators	Leakage Boundary (spatial)
Rupture Disc	Leakage Boundary (spatial)
Thermowell	Leakage Boundary (spatial)
Trap	Leakage Boundary (spatial)

Table 2.3.4-1 Turbine Steam Supply System

Component Type	Intended Function
Expansion Joint	Leakage Boundary (spatial)
Flow Indicator	Leakage Boundary (spatial)
Heat Exchanger (Steam Generator Blowdown)	Leakage Boundary (spatial)
Heat Exchanger (Turbine Bldg)	Leakage Boundary (spatial)
Sight Gauge	Leakage Boundary (spatial)
Strainer	Filter Leakage Boundary (spatial) Pressure Boundary
~~Test Connection~~	~~Pressure Boundary~~
Turbine	Leakage Boundary (spatial) Pressure Boundary

Table 2.3.4-2 Auxiliary Steam System

Component Type	Intended Function
Heat Exchanger (CO2 Vaporizer)	Leakage Boundary (spatial)
Heat Exchanger (Reboiler)	Leakage Boundary (spatial)
Heater	Leakage Boundary (spatial)

Table 2.3.4-3 Feedwater System

Component Type	Intended Function
Filter	Leakage Boundary (spatial)
Flow Element	Leakage Boundary (spatial) Pressure Boundary Throttle
Heat Exchanger (Feedwater Heater)	Leakage Boundary (spatial) Structural Integrity (attached)
Orifice	Leakage Boundary (spatial)

Table 2.3.4-4 Condensate System

Component Type	Intended Function
Demineralizer	Leakage Boundary (spatial)
Ejector	Leakage Boundary (spatial)
Filter	Leakage Boundary (spatial)
Flexible Hoses	Leakage Boundary (spatial)
Flow Element	Leakage Boundary (spatial)
Flow Indicator	Leakage Boundary (spatial)
Heat Exchanger (Caustic Dilution Hx - Shell)	Leakage Boundary (spatial)
Heat Exchanger (Caustic Dilution Hx - Tubesheet)	Leakage Boundary (spatial)
Heat Exchanger (Condensate Cooler - Shell)	Leakage Boundary (spatial)
Heat Exchanger (Condensate Cooler - Tubesheet)	Leakage Boundary (spatial)
Heat Exchanger (Feedwater Heater - Head)	Leakage Boundary (spatial)

Table 2.3.4-4 Condensate System (Continued)

Component Type	Intended Function
Heat Exchanger (Feedwater Heater - Shell)	Leakage Boundary (spatial)
Heat Exchanger (Feedwater Heater)	Leakage Boundary (spatial)
Heat Exchanger (Gland Steam Condenser - Head)	Leakage Boundary (spatial)
Heat Exchanger (Gland Steam Condenser - Shell)	Leakage Boundary (spatial)
Heat Exchanger (Heaters Drain Cooler - Head)	Leakage Boundary (spatial)
Heat Exchanger (Heaters Drain Cooler - Shell)	Leakage Boundary (spatial)
Heat Exchanger (Hydrogen Cooler - Head)	Leakage Boundary (spatial)
Heat Exchanger (Hydrogen Cooler - Shell)	Leakage Boundary (spatial)
Heat Exchanger (SJAE Aftercondenser - Head)	Leakage Boundary (spatial)
Heat Exchanger (SJAE Aftercondenser - Shell)	Leakage Boundary (spatial)
Heat Exchanger (SJAE Intercondenser - Head)	Leakage Boundary (spatial)
Heat Exchanger (SJAE Intercondenser - Shell)	Leakage Boundary (spatial)
Heat Exchanger (Stator Coil Cooler - Head)	Leakage Boundary (spatial)
Heat Exchanger (Stator Coil Cooler - Shell)	Leakage Boundary (spatial)
Orifice	Leakage Boundary (spatial)
Pulsation Dampener	Leakage Boundary (spatial)
Strainer	Leakage Boundary (spatial)
Tank	Leakage Boundary (spatial)
Trap	Leakage Boundary (spatial)
Tubing	Leakage Boundary (spatial)

Table 3.3.1 Summary of Aging Management Evaluations in Chapter VII of NUREG-1801 for Auxiliary Systems

Item Number	Component Type	Aging Effect / Mechanism	Aging Management Program	Further Evaluation Recommended	Discussion
3.3.1.80	Stainless steel and copper alloy piping, piping components, and piping elements exposed to raw water	Loss of material due to pitting, crevice, and microbiologically influenced corrosion	Open-Cycle Cooling Water System (B2.1.9)	No	Consistent with NUREG-1801 for material, environment, and aging effect, but a different aging management program Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22) is credited. ~~Not applicable. DCPP has no in-scope stainless steel and copper alloy piping, piping components, and piping elements exposed to raw water in the emergency diesel generator system, so the applicable NUREG-1801 lines were not used.~~

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Closure Bolting	LBS~~, SIA~~	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	Bolting Integrity (B2.1.7)	VIII.H-4	3.4.1.22	B
Closure Bolting	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of preload	Bolting Integrity (B2.1.7)	VIII.H-5	3.4.1.22	B
Demineralizer	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VII.C2-14	3.3.1.47	B
Demineralizer	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Expansion Joint	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Expansion Joint	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-1	3.4.1.16	A
Expansion Joint	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-2	3.4.1.14	A
Filter	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VII.C2-14	3.3.1.47	B
Filter	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Filter	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Filter	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Filter	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Filter	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Filter	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Flow Element	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VII.C2-14	3.3.1.47	B
Flow Element	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Flow Element	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Flow Element	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Flow Element	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Flow Element	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Flow Element	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Flow Element	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B
Flow Element	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	A
Flow Element	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Flow Element	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-1	3.4.1.16	A
Flow Element	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-2	3.4.1.14	A
Flow Element	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Flow Element	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Flow Indicator	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Flow Indicator	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Flow Indicator	LBS	Glass	Plant Indoor Air (Ext)	None	None	VIII.I-5	3.4.1.40	A
Flow Indicator	LBS	Glass	Secondary Water (Int)	None	None	VIII.I-8	3.4.1.40	A
Flow Indicator	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VII.J-15	3.3.1.94	A
Flow Indicator	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Flow Indicator	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-4	3.4.1.16	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Flow Indicator	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Flow Indicator	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Heat Exchanger (Air Side Seal Oil Cooler)	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.A-1	3.4.1.24	B
Heat Exchanger (Air Side Seal Oil Cooler)	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Heat Exchanger (Air Side Seal Oil Cooler)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Air Side Seal Oil Cooler)	LBS	Copper Alloy	Closed Cycle Cooling Water (Ext)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	D
Heat Exchanger (Air Side Seal Oil Cooler)	LBS	Copper Alloy	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	D
Heat Exchanger (Air Side Seal Oil Cooler)	LBS	Copper Alloy	Lubricating Oil (Ext)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-3	3.4.1.18	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Air Side Seal Oil Cooler)	LBS	Copper Alloy	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-3	3.4.1.18	B
Heat Exchanger (Gas Dryer Water Gas)	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Heat Exchanger (Gas Dryer Water Gas)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Gas Dryer Water Gas)	LBS	Carbon Steel	Secondary Water (Ext)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Gas Dryer Water Gas)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Gas Dryer)	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Heat Exchanger (Gas Dryer)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (H2 Side Seal Oil Cooler)	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.A-1	3.4.1.24	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (H2 Side Seal Oil Cooler)	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Heat Exchanger (H2 Side Seal Oil Cooler)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (H2 Side Seal Oil Cooler)	LBS	Copper Alloy	Closed Cycle Cooling Water (Ext)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	D
Heat Exchanger (H2 Side Seal Oil Cooler)	LBS	Copper Alloy	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	D
Heat Exchanger (H2 Side Seal Oil Cooler)	LBS	Copper Alloy	Lubricating Oil (Ext)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-3	3.4.1.18	B
Heat Exchanger (H2 Side Seal Oil Cooler)	LBS	Copper Alloy	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-3	3.4.1.18	B
Heat Exchanger (Stator Clg O2 Cooler)	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.A-1	3.4.1.24	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Stator Clg O2 Cooler)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Stator Clg O2 Cooler)	LBS	Copper Alloy	Closed Cycle Cooling Water (Ext)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	D
Heat Exchanger (Stator Clg O2 Cooler)	LBS	Copper Alloy	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	D
Orifice	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VII.C2-14	3.3.1.47	B
Orifice	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Orifice	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Orifice	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Orifice	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B
Orifice	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Orifice	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Orifice	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-1	3.4.1.16	A
Orifice	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-2	3.4.1.14	A
Orifice	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Orifice	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Piping	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Piping	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Piping	LBS	Carbon Steel	Plant Indoor Air (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.B1-7	3.4.1.30	B
Piping	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-7	3.4.1.0440	A
Piping	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Piping	LBS	Carbon Steel	Secondary Water (Int)	Wall thinning	Flow-Accelerated Corrosion (B2.1.6)	VIII.E-35	3.4.1.29	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Piping	LBS	Carbon Steel	Steam (Int)	Wall thinning	Flow-Accelerated Corrosion (B2.1.6)	VIII.A-17	3.4.1.29	B
Piping	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-4	3.4.1.02	A
Piping	LBS	Carbon Steel	Steam (Int)	Wall thinning	Flow-Accelerated Corrosion (B2.1.6)	VIII.C-5	3.4.1.29	B
Piping	LBS	Nickel Alloys	Plant Indoor Air (Ext)	None	None	VIII.I-9	3.4.1.41	A
Piping	LBS	Nickel Alloys	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-1	3.4.1.37	E, 4
Piping	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Piping	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B
Piping	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	A
Piping	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Piping	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Piping	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-1	3.4.1.16	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-2	3.4.1.14	A
Piping	LBS, SIA	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A
Pump	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Pump	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Pump	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-7	3.4.1.04	A
Pump	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Pump	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B
Pump	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Pump	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Regulators	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VII.C2-14	3.3.1.47	B
Regulators	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Rupture Disc	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Rupture Disc	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-7	3.4.1.04	A
Sight Gauge	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Sight Gauge	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Sight Gauge	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-11	3.4.1.04	A
Sight Gauge	LBS	Glass	Lubricating Oil (Int)	None	None	VIII.I-6	3.4.1.40	A
Sight Gauge	LBS	Glass	Plant Indoor Air (Ext)	None	None	VIII.I-5	3.4.1.40	A
Sight Gauge	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Sight Gauge	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Sight Gauge	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-4	3.4.1.16	A
Sight Gauge	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-5	3.4.1.14	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Strainer	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Strainer	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Strainer	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Tank	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VII.C2-14	3.3.1.47	B
Tank	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Tank	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	D
Tank	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Tank	LBS	Carbon Steel	Plant Indoor Air (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.B1-7	3.4.1.30	D
Tank	LBS	Carbon Steel	Plant Indoor Air (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.B1-7	3.4.1.30	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Tank	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-7	3.4.1.04	C
Tank	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	C
Tank	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	D
Tank	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	D
Tank	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	C
Tank	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Tank	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	C
Test Connection	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Test Connection	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-7	3.4.1.04	A
Test Connection	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-4	3.4.1.02	A
Thermowell	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Thermowell	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Thermowell	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	A
Thermowell	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Trap	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Trap	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Trap	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Trap	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-4	3.4.1.02	A
Trap	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	A
Trap	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Trap	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Trap	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Tubing	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VII.C2-14	3.3.1.47	B
Tubing	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Tubing	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Tubing	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Tubing	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Tubing	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Tubing	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Tubing	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B
Tubing	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	A
Tubing	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Tubing	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Tubing	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Tubing	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Tubing	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Tubing	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Valve	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Valve	LBS	Carbon Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-14	3.4.1.07	B
Valve	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Valve	LBS	Carbon Steel	Plant Indoor Air (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.B1-7	3.4.1.30	B
Valve	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-7	3.4.1.04	A
Valve	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Valve	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Valve	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-4	3.4.1.02	A
Valve	LBS	Copper Alloy	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	B
Valve	LBS	Copper Alloy	Dry Gas (Int)	None	None	VIII.I-3	3.4.1.44	A
Valve	LBS	Copper Alloy	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-3	3.4.1.18	B
Valve	LBS	Copper Alloy (> 15% Zinc)	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-16	3.4.1.26	B
Valve	LBS	Copper Alloy (> 15% Zinc)	Closed Cycle Cooling Water (Int)	Loss of material	Selective Leaching of Materials (B2.1.17)	VIII.E-19	3.4.1.35	A
Valve	LBS	Copper Alloy (> 15% Zinc)	Dry Gas (Int)	None	None	VIII.I-3	3.4.1.44	A
Valve	LBS	Copper Alloy (> 15% Zinc)	Plant Indoor Air (Ext)	None	None	VIII.I-2	3.4.1.41	A
Valve	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-24	3.4.1.25	B
Valve	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Cracking	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-25	3.4.1.23	B
Valve	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	A
Valve	LBS	Stainless Steel	Lubricating Oil (Int)	Loss of material	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	VIII.A-9	3.4.1.19	B
Valve	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A

Table 3.3.2-18 Auxiliary Systems – Summary of Aging Management Evaluation – Miscellaneous Systems in scope ONLY for Criterion 10 CFR 54.4(a)(2) (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Valve	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-1	3.4.1.16	A
Valve	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.C-2	3.4.1.14	A
Valve	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Valve	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A

Table 3.4.1 Summary of Aging Management Evaluations in Chapter VIII of NUREG-1801 for Steam and Power Conversion System

Item Number	Component Type	Aging Effect / Mechanism	Aging Management Program	Further Evaluation Recommended	Discussion
3.4.1.19	Stainless steel piping, piping components, piping elements, and heat exchanger components exposed to lubricating oil	Loss of material due to pitting, crevice, and microbiologically-influenced corrosion	Lubricating Oil Analysis (B2.1.23) and One-Time Inspection (B2.1.16)	Yes	Consistent with NUREG-1801 with aging management program exceptions. **The aging management program(s) with exceptions to NUREG-1801 include: Lubricating Oil Analysis (B2.1.23) **See further evaluation in subsection 3.4.2.2.8. ~~Not applicable. DCPP has no in-scope stainless steel components exposed to lube oil in the steam and power conversion systems, so the applicable NUREG-1801 lines were not used. See further evaluation in Section 3.4.2.2.8.~~

Table 3.4.1 Summary of Aging Management Evaluations in Chapter VIII of NUREG-1801 for Steam and Power Conversion System (Continued)

Item Number	Component Type	Aging Effect / Mechanism	Aging Management Program	Further Evaluation Recommended	Discussion
3.4.1.23	Stainless steel piping, piping components, and piping elements exposed to closed-cycle cooling water >60°C (>140°F)	Cracking due to stress corrosion cracking	Closed-Cycle Cooling Water System (B2.1.10)	No	Consistent with NUREG-1801 with aging management program exceptions. **The aging management program(s) with exceptions to NUREG-1801 include: Closed-Cycle Cooling Water System (B2.1.10) ~~Not applicable. DCPP has no in-scope stainless steel piping, piping components, or piping elements exposed to closed-cycle cooling water >60°C (140°F), so the applicable NUREG-1801 line was not used.~~

Table 3.4.1 Summary of Aging Management Evaluations in Chapter VIII of NUREG-1801 for Steam and Power Conversion System (Continued)

Item Number	Component Type	Aging Effect / Mechanism	Aging Management Program	Further Evaluation Recommended	Discussion
3.4.1.24	Steel heat exchanger components exposed to closed cycle cooling water	Loss of material due to general, pitting, crevice, and galvanic corrosion	Closed-Cycle Cooling Water System (B2.1.10)	No	Consistent with NUREG-1801 with aging management program exceptions. **The aging management program(s) with exceptions to NUREG-1801 include: Closed-Cycle Cooling Water System (B2.1.10) ~~Not applicable. DCPP has no in-scope steel heat exchanger components exposed to closed cycle cooling water in the steam and power conversion systems, so the applicable NUREG-1801 rows were not used.~~

Table 3.4.2-1 Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Expansion Joint	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Expansion Joint	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Expansion Joint	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Flow Element	LBS, PB, TH	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Flow Element	LBS, PB, TH	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Flow Element	LBS, PB, TH	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Flow Element	LBS, PB, TH	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Flow Indicator	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Flow Indicator	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-8	3.4.1.04	A

Table 3.4.2-1 Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Flow Indicator	LBS	Glass	Plant Indoor Air (Ext)	None	None	VIII.I-5	3.4.1.40	A
Flow Indicator	LBS	Glass	Secondary Water (Int)	None	None	VIII.I-8	3.4.1.40	A
Flow Indicator	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Flow Indicator	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-4	3.4.1.16	A
Flow Indicator	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A
Heat Exchanger (Sample Cooler)	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Heat Exchanger (Sample Cooler)	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Heat Exchanger (Steam Generator Blowdown)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Steam Generator Blowdown)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A

Table 3.4.2-1 Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Turbine Bldg)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	D
Heat Exchanger (Turbine Bldg)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-11	3.4.1.04	C
Heat Exchanger (Turbine Bldg)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Orifice	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Orifice	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Orifice	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Orifice	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Piping	LBS	Nickel Alloys	Plant Indoor Air (Ext)	None	None	VIII.I-9	3.4.1.41	A
Piping	LBS	Nickel Alloys	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-1	3.4.1.37	E, 4
Piping	LBS	Stainless Steel	Plant Indoor Air (Int)	None	None	None	None	G

Table 3.4.2-1 Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Piping	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Sight Gauge	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Sight Gauge	LBS	Carbon Steel	Sodium Hydroxide (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	None	None	G
Sight Gauge	LBS	Carbon Steel	Sulfuric Acid (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	None	None	G
Sight Gauge	LBS	Glass	Plant Indoor Air (Ext)	None	None	VIII.I-5	3.4.1.40	A
Sight Gauge	LBS	Glass	Sodium Hydroxide (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	None	None	G
Sight Gauge	LBS	Glass	Sulfuric Acid (Int)	None	None	None	None	G
Strainer	FIL, LBS, PB	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-1 Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Strainer	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Tank	LBS	Carbon Steel	Plant Indoor Air (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.B1-7	3.4.1.30	D
Tank	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
~~Test Connection~~	~~PB~~	~~Stainless Steel~~	~~Plant Indoor Air (Ext)~~	~~None~~	~~None~~	~~VIII.I-10~~	~~3.4.1.41~~	~~A~~
~~Test Connection~~	~~PB~~	~~Stainless Steel~~	~~Secondary Water (Int)~~	~~Loss of material~~	~~Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)~~	~~VIII.D1-4~~	~~3.4.1.16~~	~~A~~
~~Test Connection~~	~~PB~~	~~Stainless Steel~~	~~Steam (Int)~~	~~Cracking~~	~~Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)~~	~~VIII.A-10~~	~~3.4.1.39~~	~~E, 4~~
~~Test Connection~~	~~PB~~	~~Stainless Steel~~	~~Steam (Int)~~	~~Loss of material~~	~~Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)~~	~~VIII.A-12~~	~~3.4.1.37~~	~~E, 4~~
Trap	LBS	Carbon Steel	Atmosphere/ Weather (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-8	3.4.1.28	B
Trap	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Trap	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A

Table 3.4.2-1 Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Trap	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Trap	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Turbine	LBS, PB	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Turbine	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	C
Valve	LBS, PB, SIA	Carbon Steel	Atmosphere/ Weather (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-8	3.4.1.28	B
Valve	LBS, PB	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Valve	LBS	Copper Alloy	Plant Indoor Air (Ext)	None	None	VIII.I-2	3.4.1.41	A
Valve	LBS	Copper Alloy	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-5	3.4.1.15	A
Valve	LBS	Stainless Steel	Dry Gas (Int)	None	None	VIII.I-12	3.4.1.44	A
Valve	LBS	Stainless Steel	Plant Indoor Air (Int)	None	None	None	None	G
Valve	LBS, PB, SIA	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4

Table 3.4.2-1 Steam and Power Conversion System – Summary of Aging Management Evaluation – Turbine Steam Supply System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Valve	LBS, PB, SIA	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4

Table 3.4.2-2 Steam and Power Conversion System – Summary of Aging Management Evaluation – Auxiliary Steam System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Closure Bolting	LBS	Stainless Steel	Plant Indoor Air (Ext)	Loss of preload	Bolting Integrity (B2.1.7)	None	None	H, 1
Heat Exchanger (Aux Steam Drain Rec Vent Cond)	LBS, SIA, SS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.G-5 ~~VII.F2-9~~	3.4.1.24~~3.3.1.48~~	B
~~Heat Exchanger (Aux Steam Drain Rec Vent Cond)~~	~~LBS, SIA, SS~~	~~Carbon Steel~~	~~Steam (Int)~~	~~Wall thinning~~	~~Flow-Accelerated Corrosion (B2.1.6)~~	~~VIII.B1-9~~	~~3.4.1.29~~	~~B~~
Heat Exchanger (CO2 Vaporizer)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (CO2 Vaporizer)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-8	3.4.1.37	E, 6
Heat Exchanger (Reboiler)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Reboiler)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-8	3.4.1.37	E, 6
Heater	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-2 Steam and Power Conversion System – Summary of Aging Management Evaluation – Auxiliary Steam System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heater	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-8	3.4.1.37	E, 6
Piping	LBS, SIA	Carbon Steel	Atmosphere/ Weather (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-8	3.4.1.28	B
~~Piping~~	~~LBS~~	~~Carbon Steel~~	~~Demineralized Water (Int)~~	~~Loss of material~~	~~Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)~~	~~VIII.B1-11~~	~~3.4.1.04~~	~~A~~
Piping	LBS, SIA	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-11	3.4.1.04	A
Piping	LBS, SIA	Carbon Steel	Secondary Water (Int)	Wall thinning	Flow-Accelerated Corrosion (B2.1.6)	VIII.G-39	3.4.1.29	B
Piping	LBS	Stainless Steel	Raw Water (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VII.H2-18 ~~VIII.G-30~~	3.3.1.80~~3.4.1 .32~~	E, 5
Piping	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16) ~~Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)~~	VIII.B1-4	3.4.1.16	~~E, 1~~A
~~Piping~~	~~LBS~~	~~Stainless Steel~~	~~Steam (Int)~~	~~Cracking~~	~~Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)~~	~~VIII.B1-2~~	~~3.4.1.39~~	~~E, 6~~

Table 3.4.2-2 Steam and Power Conversion System – Summary of Aging Management Evaluation – Auxiliary Steam System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
~~Piping~~	~~LBS~~	~~Stainless Steel~~	~~Steam (Int)~~	~~Loss of material~~	~~Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)~~	~~VIII.B1-3~~	~~3.4.1.37~~	~~E, 6~~
Pump	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.G-38	3.4.1.04	A
Strainer	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-8	3.4.1.37	E, 6
Test Connection	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-8	3.4.1.37	E, 6
Valve	LBS	Cast Iron (Gray Cast Iron)	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	None	None	G
Valve	LBS	Cast Iron (Gray Cast Iron)	Secondary Water (Int)	Loss of material	Selective Leaching of Materials (B2.1.17)	VIII.G-26	3.4.1.36	A
~~Valve~~	~~LBS~~	~~Copper Alloy (Aluminum > 8%)~~	~~Dry Gas (Int)~~	~~None~~	~~None~~	~~VIII.I-3~~	~~3.4.1.44~~	~~A~~
Valve	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.B1-4	3.4.1.16	A

Notes for Table 3.4.2-2:

Standard Notes:

~~D Component is different, but consistent with NUREG-1801 item for material, environment, and aging effect. AMP takes some exceptions to NUREG-1801 AMP.~~

G Environment not in NUREG-1801 for this component and material.

H Aging effect not in NUREG-1801 for this component, material and environment combination.

Plant Specific Notes:

1 The Loss of Preload aging effect is not identified in NUREG-1801 for this component, material, and environment combination. Loss of preload is managed by the Bolting Integrity (B2.1.7) AMP.~~Component is abandoned-in-place; thus the Water Chemistry aging management program does not apply~~.

Table 3.4.2-3 Steam and Power Conversion System – Summary of Aging Management Evaluation – Feedwater System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Filter	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Filter	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-8	3.4.1.04	A
Filter	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Filter	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-4	3.4.1.16	A
Filter	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A
Flow Element	LBS, PB, TH	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Flow Element	LBS, PB, TH	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-8	3.4.1.04	A
Flow Element	LBS, PB, TH	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A
Heat Exchanger (Feedwater Heater)	LBS, SIA	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-3 Steam and Power Conversion System – Summary of Aging Management Evaluation – Feedwater System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Feedwater Heater)	LBS, SIA	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-8	3.4.1.04	A
Heat Exchanger (Sample Cooler)	LBS	Stainless Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.G-2	3.4.1.25	B
Heat Exchanger (Sample Cooler)	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Orifice	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Orifice	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-4	3.4.1.16	A
Orifice	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A
Piping	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Piping	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-4	3.4.1.16	A
Piping	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A

Table 3.4.2-3 Steam and Power Conversion System – Summary of Aging Management Evaluation – Feedwater System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Pump	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Pump	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-8	3.4.1.04	A
Pump	LBS, SIA	Stainless Steel Cast Austenitic	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Pump	LBS, SIA	Stainless Steel Cast Austenitic	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-4	3.4.1.16	A
Pump	LBS, SIA	Stainless Steel Cast Austenitic	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A
Valve	LBS, PB	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Valve	LBS, PB	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-4	3.4.1.16	A
Valve	LBS, PB	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.D1-5	3.4.1.14	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Closure Bolting	LBS	Stainless Steel	Plant Indoor Air (Ext)	Loss of preload	Bolting Integrity (B2.1.7)	None	None	H, 1
Demineralizer	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Demineralizer	LBS	Carbon Steel	Plant Indoor Air (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.G-34	3.4.1.30	D
Demineralizer	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Ejector	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Ejector	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Ejector	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Ejector	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Ejector	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Filter	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Filter	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Filter	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Filter	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Filter	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Flexible Hoses	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Flexible Hoses	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Flexible Hoses	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Flow Element	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Flow Element	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Flow Element	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Flow Element	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Flow Element	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Flow Indicator	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Flow Indicator	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Flow Indicator	LBS	Glass	Plant Indoor Air (Ext)	None	None	VIII.I-5	3.4.1.40	A
Flow Indicator	LBS	Glass	Secondary Water (Int)	None	None	VIII.I-8	3.4.1.40	A
Flow Indicator	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Flow Indicator	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Flow Indicator	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Heat Exchanger (Caustic Dilution Hx - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Caustic Dilution Hx - Shell)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Heat Exchanger (Caustic Dilution Hx - Tubesheet)	LBS	Copper Alloy	Secondary Water (Ext)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-5	3.4.1.15	C
Heat Exchanger (Caustic Dilution Hx - Tubesheet)	LBS	Copper Alloy	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-5	3.4.1.15	C
Heat Exchanger (Condensate Cooler - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Condensate Cooler - Shell)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Feedwater Heater - Head)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Feedwater Heater - Head)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Feedwater Heater - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Feedwater Heater - Shell)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Feedwater Heater - Shell)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Heat Exchanger (Gland Steam Condenser - Head)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Gland Steam Condenser - Head)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Gland Steam Condenser - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Gland Steam Condenser - Shell)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Heat Exchanger (Heaters Drain Cooler - Head)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Heaters Drain Cooler - Head)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Heaters Drain Cooler - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Heaters Drain Cooler - Shell)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Hydrogen Cooler - Head)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (Hydrogen Cooler - Head)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Hydrogen Cooler - Shell)	LBS	Carbon Steel	Dry Gas (Int)	None	None	VIII.I-15	3.4.1.44	A
Heat Exchanger (Hydrogen Cooler - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Main Condenser)	PB, SIA	Carbon Steel	Secondary Water (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.E-37	3.4.1.03	E, 2~~1~~
Heat Exchanger (Main Condenser)	PB, SIA	Carbon Steel	Steam (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.A-16	3.4.1.02	E, 2~~1~~
Heat Exchanger (SJAE Aftercondenser - Head)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (SJAE Aftercondenser - Head)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (SJAE Aftercondenser - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (SJAE Aftercondenser - Shell)	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Heat Exchanger (SJAE Intercondenser - Head)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (SJAE Intercondenser - Head)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (SJAE Intercondenser - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Heat Exchanger (SJAE Intercondenser - Shell)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Stator Coil Cooler - Head)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Heat Exchanger (Stator Coil Cooler - Head)	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-37	3.4.1.03	A
Heat Exchanger (Stator Coil Cooler - Shell)	LBS	Carbon Steel	Closed Cycle Cooling Water (Int)	Loss of material	Closed-Cycle Cooling Water System (B2.1.10)	VIII.E-5	3.4.1.24	B
Heat Exchanger (Stator Coil Cooler - Shell)	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Orifice	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Orifice	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Orifice	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Orifice	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Orifice	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Piping	LBS	Carbon Steel	Raw Water (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.G-36	3.4.1.08	E, 32
Piping	LBS, PB	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Piping	LBS	Carbon Steel	Secondary Water (Int)	Wall thinning	Flow-Accelerated Corrosion (B2.1.6)	VIII.E-35	3.4.1.29	B
Piping	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Piping	LBS	Carbon Steel	Steam (Int)	Wall thinning	Flow-Accelerated Corrosion (B2.1.6)	VIII.A-17	3.4.1.29	B
Piping	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Piping	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Piping	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Piping	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Piping	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Pulsation Dampener	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Pulsation Dampener	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Pulsation Dampener	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Pump	LBS	Carbon Steel	Raw Water (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.G-36	3.4.1.08	E, 32
Pump	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Pump	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Pump	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Sight Gauge	LBS	Copper Alloy	Raw Water (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.E-18	3.4.1.32	E, 32
Strainer	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Strainer	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Tank	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Tank	LBS	Carbon Steel	Plant Indoor Air (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.G-34	3.4.1.30	D
Tank	LBS	Carbon Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Trap	LBS	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Trap	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Trap	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Trap	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Trap	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Tubing	LBS	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Tubing	LBS	Stainless Steel	Secondary Water (Ext)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Tubing	LBS	Stainless Steel	Secondary Water (Ext)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Tubing	LBS	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Tubing	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A
Tubing	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Tubing	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4
Valve	LBS, PB	Carbon Steel	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
~~Valve~~	~~LBS~~	~~Carbon Steel~~	~~Plant Indoor Air (Ext)~~	~~Loss of material~~	~~External Surfaces Monitoring Program (B2.1.20)~~	~~VIII.H-7~~	~~3.4.1.28~~	~~B~~
Valve	LBS	Carbon Steel	Raw Water (Int)	Loss of material	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B2.1.22)	VIII.G-36	3.4.1.08	E, 3~~2~~
Valve	LBS	Carbon Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Valve	LBS, PB	Cast Iron	Plant Indoor Air (Ext)	Loss of material	External Surfaces Monitoring Program (B2.1.20)	VIII.H-7	3.4.1.28	B
Valve	LBS, PB	Cast Iron	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-34	3.4.1.04	A
Valve	LBS	Cast Iron	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-16	3.4.1.02	A
Valve	LBS, PB	Stainless Steel	Plant Indoor Air (Ext)	None	None	VIII.I-10	3.4.1.41	A
Valve	LBS, PB	Stainless Steel	Secondary Water (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-29	3.4.1.16	A
Valve	LBS	Stainless Steel	Secondary Water (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.E-30	3.4.1.14	A

Table 3.4.2-4 Steam and Power Conversion System – Summary of Aging Management Evaluation – Condensate System (Continued)

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Valve	LBS	Stainless Steel	Steam (Int)	Cracking	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-10	3.4.1.39	E, 4
Valve	LBS	Stainless Steel	Steam (Int)	Loss of material	Water Chemistry (B2.1.2) and One-Time Inspection (B2.1.16)	VIII.A-12	3.4.1.37	E, 4

Notes for Table 3.4.2-4:

Standard Notes:

H Aging effect not in NUREG-1801 for this component, material and environment combination.

Plant Specific Notes:

1 The Loss of Preload aging effect is not identified in NUREG-1801 for this component, material, and environment combination. Loss of preload is managed by the Bolting Integrity (B2.1.7) AMP.

3 The in-scope condensate system components which may have a raw water environment are abandoned-in-place. Thus, the Open-Cycle Cooling Water System aging management program does not apply.

4 The Water Chemistry Program (B2.1.2) and the One-Time Inspection Program (B2.1.16) manages loss of material due to pitting and crevice corrosion and cracking due to stress corrosion cracking. The One-Time Inspection Program (B2.1.16) includes selected components at susceptible locations.

B2.1.10 Closed-Cycle Cooling Water System

Program Description

The closed-cycle cooling water (CCCW) system program manages loss of material, cracking and reduction of heat transfer for components in the closed-cycle cooling water systems. The program provides for: (1) preventive measures to minimize corrosion including maintenance of corrosion inhibitor, pH buffering agent, and biocide concentrations, and (2) periodic system and component performance testing and inspection. Preventive measures include the monitoring and control of corrosion inhibitors and other chemical parameters, such as pH, in accordance with the guidelines of EPRI TR-107396, Revision 1 (EPRI 1007820). Periodic inspection and testing to confirm function and monitor corrosion is performed in accordance with EPRI TR-107396, Revision 1 (EPRI 1007820), and industry and plant operating experience.

DCPP has four systems within the scope of license renewal that meet the definition for CCCW systems in Generic Letter 89-13 and portions of additional systems (heat exchangers or coolers) that are serviced directly by these systems. These CCCW systems are not subject to significant sources of contamination. The water chemistry is controlled in these systems and heat is not directly rejected to a heat sink.

The CCCW systems in License Renewal scope are:

- component cooling water (CCW) system
- service cooling water (SCW) system
- diesel engine jacket cooling water (DECW) system, a subsystem of the diesel generator system
- auxiliary building HVAC system

The program maintains water chemistry within the parameter limits specified in plant procedures and consistent with those in EPRI TR-107396, Revision 1 (EPRI 1007820), in order to minimize corrosion and microbiological growth. The chemicals added to the CCW and SCW systems are potassium molybdate (iron and aluminum corrosion inhibitor), potassium nitrite (iron corrosion inhibitor), tolyltriazole (TTA - a copper corrosion inhibitor), potassium tetra borate (buffering), potassium hydroxide (pH control), glutaraldehyde (biocide) and isothiazoline (biocide). The chemicals added to the DECW system are potassium dichromate and potassium hydroxide (corrosion inhibitors). The cooling water system associated with the auxiliary building HVAC system is maintained as a sealed pure water system based on potable water, without additives.

The CCCW system program periodically monitors system chemistry to verify it is being maintained in accordance with the guidelines of EPRI TR-107396, Revision 1 (EPRI 1007820), with stated exceptions, to minimize corrosion and SCC. In addition, nonchemistry testing and inspection techniques consistent with EPRI TR-107396, Revision 1 (EPRI 1007820), are used to confirm the effectiveness of the program.

The CCW pumps are periodically tested to verify pump performance. Nondestructive examinations are used to verify that the pressure boundary intended function of the CCW heat exchangers is maintained. Periodic performance testing of the CCW heat exchangers is part of the open-cycle cooling water system program (B2.1.9). Diesel engine performance parameters are monitored through periodic surveillance tests. These tests are used to monitor the performance of the DECW system components. Inspections are performed periodically on the in-scope DECW components.

The SCW system, stator cooling water system, and the auxiliary building HVAC system chilled water systems are within the scope of license renewal per 10 CFR 54.4(a)(2) for spatial interaction concerns only. Therefore, the only component intended function applicable to these systems is (a)(2) leakage boundary (spatial). The periodic sampling and maintenance of system chemistry within specified limits are adequate to manage aging before the loss of this intended function.