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OPPD
Omaha Public Power District
444 South 16th Street Mall
Omaha, NE 68102-2247

10 CFR 50.90

LIC-14-0074
June 9, 2014

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

Fort Calhoun Station, Unit No. 1
Renewed Facility Operating License No. DPR-40
NRC Docket No. 50-285

References:
1. Letter from OPPD (L. P. Cortopassi) to NRC (Document Control Desk), *License Amendment Request (LAR) 14-01, One-Time Extension of Technical Specification Surveillance Requirement 3.2, Table 3-5, Item 3,* dated February 10, 2014 (LIC-14-0011)
2. Letter from OPPD (L. P. Cortopassi) to NRC (Document Control Desk), *10 CFR 50.55a Request Number RR-13, Omaha Public Power District (OPPD) Request for Relief from Certain In-service Testing (IST) Requirements,* dated May 16, 2014 (LIC-14-0040)

SUBJECT: Supplement to License Amendment Request (LAR) 14-01

Pursuant to 10 CFR 50.90, the Omaha Public Power District (OPPD) hereby requests an amendment to the Renewed Facility Operating License No. DPR-40 for Fort Calhoun Station (FCS), Unit No. 1. The proposed amendment would revise the surveillance frequency for the pressurizer safety valves from a refueling frequency (i.e., 18 months +25%) to be consistent with the Inservice Testing Program.

The proposed change is necessary due to the extended shutdown of Fort Calhoun Station for the refueling outage that commenced in April 2011. Testing of the safety valves is performed by shipping the valves offsite to a vendor facility. The last performance of the test was completed on January 14, 2013. Due to the extended shutdown, the valves will be required to be tested prior to the next scheduled refueling outage of April 13, 2015. As a result of discussions with NRC staff it was identified that a relief request for 10 CFR 50.55a would also be required and that it was more appropriate to revise the Technical Specification to reflect the Inservice Testing Program frequency versus requesting a one-time extension to the testing frequency. This supplement incorporates those changes. A Relief Request was submitted in Reference 2 for NRC review and approval in order to allow testing of the pressurizer safety valves during the next scheduled refueling outage.

A001
NRR

OPPD has determined that this LAR does not involve a significant hazard consideration as determined per 10 CFR 50.92. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of this amendment.

The enclosure contains a description of the proposed changes, the supporting technical analyses, and the significant hazards consideration determination. Attachment 1 of the enclosure provides the existing TS pages marked-up to show the proposed changes. Attachment 2 of the enclosure provides the retyped (clean) TS pages.

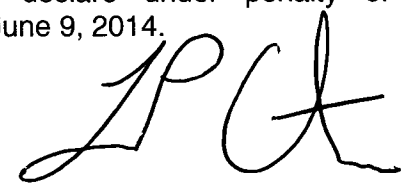
OPPD requests approval of the proposed amendment by November 1, 2014. Once approved, the amendment shall be implemented upon issuance.

There are no regulatory commitments associated with this proposed change.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated State of Nebraska official.

If you should have any questions regarding this submittal or require additional information, please contact Mr. Bill R. Hansher at (402) 533-6894.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 9, 2014.



Louis P. Cortopassi
Site Vice President and CNO

LPC/brh

Enclosure: OPPD's Evaluation of the Proposed Change

c: M. L. Dapas, NRC Regional Administrator, Region IV
J. W. Sebrosky, NRC Senior Project Manager
J. C. Kirkland, NRC Senior Resident Inspector
Director of Consumer Health Services, Department of Regulation and Licensure,
Nebraska Health and Human Services, State of Nebraska

OPPD's Evaluation of the Proposed Change

License Amendment Request (LAR) 14-01, Supplement -
Technical Specification Surveillance Requirement 3.2, Table 3-5, Item 3

ATTACHMENTS:

1. Technical Specification Page Markups
2. Technical Specification Bases Page Markups (For Information Only)
3. Retyped ("Clean") Technical Specifications Pages
4. Retyped ("Clean") Technical Specifications Bases Pages (For Information Only)

1.0 SUMMARY DESCRIPTION

License amendment request (LAR) 14-01 proposes a change to the Renewed Facility Operating License No. DPR-40 for Fort Calhoun Station (FCS), Unit No. 1. The Omaha Public Power District (OPPD) proposes to revise the surveillance frequency for the pressurizer safety valves from a refueling frequency (i.e., 18 months +25%) to be in accordance with the Inservice Testing Program. In addition to this application, a Relief Request (Reference 6.2) was submitted for NRC review and approval in order to allow testing of the pressurizer safety valves during the next scheduled refueling outage in April 2015.

2.0 DETAILED DESCRIPTION

The proposed TS changes for LAR 14-01 are as follows:

SR 3.2, Table 3-5, Item 3

Change the frequency from "R" to "In accordance with the Inservice Testing Program[1]."

Add footnote "[1] The provisions of Technical Specification 3.0.1 and 3.0.5 do not apply."

The asterisks currently used as footnotes in Table 3-5 are being revised to numbers and appear at the end of the table. As a result, text currently on 3.2 – Page 10 and subsequent pages is pulled forward.

3.0 TECHNICAL EVALUATION

The Fort Calhoun Station, Unit No. 1 (FCS) has two installed pressurizer safety valves. Technical Specification (TS) 3.2, Table 3-5, Item 3, requires that the pressurizer safety valves be tested to "Verify each pressurizer safety valve is OPERABLE in accordance with the Inservice Testing Program. Following testing, lift settings shall be 2485 psig $\pm$1% and 2530 psig $\pm$1% respectively." The table specifies a frequency of "R", designating a "Refueling" interval which is defined in TS 3.0.1 as every 18 months +/- 25 % allowing for a maximum of 22.5 months between tests. This frequency is inconsistent with the requirements of the Inservice Testing Program.

The FCS Inservice Testing Program is based on the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 1998 Edition, through 2000 Addenda. Appendix I of the ASME OM Code specifies frequency requirements for testing of pressure relief valves. Requirements applicable to the Fort Calhoun Station pressurizer safety valves appear in Section I-1330, *Test Frequencies, Class 1 Pressure Relief Valves.* This section specifies that the test interval for any individual valve shall not exceed 5-years. In addition, it indicates that at least 20% of the valves from each valve group shall be tested within any 24-month interval. Testing requirements may be satisfied by installing pre-tested valves if certain additional requirements are met regarding testing of the removed valves.

Both FCS pressurizer safety valves were removed from service in April 2011 at the end of the last operating cycle (i.e., Operating Cycle 26). At that time, both valves were tested and found to open within the lift settings specified in TS 2.1.6(1) (i.e., 2485 psig +1%/-3% and 2530 psig +1%/-3% respectively). In January 2013, in anticipation of plant restart in 2013, the two pressurizer safety valves that had been removed and tested in April 2011 were re-tested. The as-left lift settings for these two valves were demonstrated by testing at a vendor facility on January 14, 2013, and January 15, 2013 respectively. The lift settings of both valves were within a tolerance of +/-1% of setpoint, as discussed in the TS 2.1.6 Basis. These pre-tested replacement valves were subsequently installed and are now inservice.

The proposed frequency change would allow performance of the next valve tests consistent with the Inservice Testing Program interval of 24 months. In addition, a relief request from the 24 month testing requirement submitted by Reference 6.2, will be required in order to perform the testing during the next scheduled refueling outage that is scheduled to begin April 13, 2015. The proposed footnote to TS 3.2, Table 3-5, Item 5, states that TS 3.0.1 that allows up to a 25 % extension to a surveillance frequency, and TS 3.0.5 that allows an extension to the surveillance frequency if the test is missed, are not applicable to this surveillance. As documented in NRC Regulatory Issue Summary 2012-10, *NRC STAFF POSITION ON APPLYING SUREVEILLANCE REQUIREMENTS 3.0.2 AND 3.0.3 TO ADMINISTRATIVE CONTROLS PROGRAM TESTS,* (Reference 6.4) the NRC staff has determined that these delay periods do not apply to components tested under 10 CFR 50.55a(f).

Technical Specification 2.1.6(1), requires two pressurizer safety valves to be operable in Modes 1 and 2. The valves were required to be operable beginning in December 2013, when the plant was first returned to Mode 2 after the extended plant shutdown.

As the valves are sent offsite to a vendor facility, the setpoints were last set in January 2013 with the expectation of startup from the refueling outage in the spring of 2013; therefore, the need for this extension was not expected.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

4.1.1 Regulations

Code of Federal Regulations 10 CFR Part 50.55a Codes and Standards

4.1.2 Design Basis

As stated in USAR Section 4.3.10, two safety valves located on the pressurizer provide overpressure protection for the reactor coolant system. They are totally enclosed, backpressure-compensated, spring-loaded safety valves meeting ASME Code requirements.

4.1.3 Approved Methodologies

The approved testing methods as contained in the Inservice Testing Program are:

ASME Code for Operation and Maintenance of Nuclear Power Plants, 1998 Edition (ASME OM Code - 1998), through 2000 Addenda

ASME SECTION XI, 1989 Edition, Requirements for Inservice Performance Testing of Nuclear Power Plant Pressure Relief Devices and the ASME/ANSI O&M Manual, Part 1, 1987 Edition

4.1.4 Analysis

No analyses were conducted in support of the proposed amendment.

4.2 Precedent

As noted in 10 CFR 50.55a(f)(5):

5)(i) The inservice test program for a boiling or pressurized water-cooled nuclear power facility must be revised by the licensee, as necessary, to meet the requirements of paragraph (f)(4) of this section.

(ii) If a revised inservice test program for a facility conflicts with the technical specification for the facility, the licensee shall apply to the Commission for amendment of the technical specifications to conform the technical specification to the revised program.

The current surveillance frequency is more conservative than the Inservice Testing Program in that it requires testing every refueling +25 percent for a maximum period of 22.5 months. The code requires testing every 24 months. The proposed change will make the Technical Specification consistent with the code as stated in 10 CFR 50.55a.

4.3 Significant Hazards Consideration

The proposed change would revise the surveillance frequency for the pressurizer safety valves from refueling frequency (18 months +25%) to be in accordance with the Inservice Testing Program.

The Omaha Public Power District (OPPD) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. **Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?**

   Response: No.

   The requested change revises the performance interval of one TS surveillance requirement to be consistent with the Inservice Testing Program as stated in 10 CFR 50.55a(g)(5). The performance of the surveillance, or the failure to perform the surveillance, is not a precursor to an accident. Performing the surveillance or failing to perform the surveillance does not affect the probability of an accident. Even with the requested extension, the period during which the plant is in Modes 1 or 2 and the valves are required to be operable will be no longer than a typical operating cycle. Also, the proposed interval between tests will be consistent with the interval for this type of valve specified by the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 1998 Edition, through 2000 Addenda, Appendix I, frequency requirements for testing of pressure relief valves.

   Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?**

   Response: No.

   The proposed change does not alter the physical design, safety limits, or safety analysis assumptions associated with the operation of the plant. Hence, the proposed change does not introduce any new accident initiators, nor does it reduce or adversely affect the capabilities of any plant structure or system in the performance of their safety function.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. **Does the proposed amendment involve a significant reduction in a margin of safety?**

   Response: No.

   The proposed change revises the performance interval for one surveillance requirement to be consistent with the test interval for this type of valve specified by the ASME OM Code, 1998 Edition, through 2000 Addenda as required by 10 CFR 50.55a. This change does not alter any safety margins.

   Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, OPPD concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

6.1 10 CFR 50.55a

6.2 Letter from OPPD (L. P. Cortopassi) to NRC (Document Control Desk), *10 CFR 50.55a Request Number RR-13, Omaha Public Power District (OPPD) Request for Relief from Certain In-service Testing (IST) Requirements,* dated May 16, 2014 (LIC-14-0040)

Technical Specification Page Markups

[Word-processor mark-ups using "double underline/~~strikeout~~" feature for "new text/deleted text" respectively.]

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
1.	Control Element Assemblies	Drop times of all full-length CEA's	Prior to reactor criticality after each removal of the reactor vessel closure head	7.5.3
2.	Control Element Assemblies	Partial movement of all CEA's (Minimum of 6 in)	Q	7
3.	Pressurizer Safety Valves	Verify each pressurizer safety valve is OPERABLE in accordance with the Inservice Testing Program. Following testing, lift settings shall be 2485 psig ±1% and 2530 psig ±1% respectively.	~~R~~In accordance with the Inservice Testing Program[1]	7
4.	Main Steam Safety Valves	Set Point	R	4
5.	DELETED			
6.	DELETED			
7.	DELETED			
8a.	Reactor Coolant System Leakage[***3]	Evaluate	D[*2]	4
8b.	Primary to Secondary Leakage [****4]	Continuous process radiation monitors or radiochemical grab sampling	D[*2]	4
9a	Diesel Fuel Supply	Fuel Inventory	M	8.4
9b.	Diesel Lubricating Oil Inventory	Lube Oil Inventory	M	8.4
9c.	Diesel Fuel Oil Properties	Test Properties	In accordance with the Diesel Fuel Oil Testing Program	8.4
9d.	Required Diesel Generator Air Start Receiver Bank Pressure	Air Pressure	M	8.4

Amendment No. 1~~5,24,128,160,166,169,171,219, 229, 246~~, ~~257~~

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

~~* Whenever the system is at or above operating temperature and pressure.~~

~~*** Not applicable to primary to secondary LEAKAGE.~~

~~**** Verify primary to secondary LEAKAGE is ≤ 150 gallons per day through any one SG.~~
~~This surveillance is not required to be performed until 12 hours after establishment of steady state operation.~~

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
9e.	Check for and Remove Accumulated Water from Each Fuel Oil Storage Tank	Check for Water and Remove	Q	8.4
10a.	Charcoal and HEPA Filters for Control Room Air Filteration System (CRAFS)	1. In-Place Testing[**§] Charcoal adsorbers and HEPA filter banks shall be leak tested and show ≥99.95% Freon (R-11 or R-112) and cold DOP particulates removal, respectively.	On a refueling frequency or every 720 hours of system operation or after each complete or partial replacement of the charcoal adsorber/HEPA filter banks, or after any major structural maintenance on the system housing or following significant painting, fire or chemical releases in a ventilation zone communicating with the system.	9.10
		2. Laboratory Testing[**§] Verify, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows methyliodide penetration less than 0.175% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 70%.	On a refueling frequency or every 720 hours of system operation or after any structural maintenance on the HEPA filter or charcoal adsorber housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	

~~**Tests shall be performed in accordance with applicable section(s) of ANSI N510-1980.~~

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
10a.	(continued)	3. Overall System Operation		
		a. Each train shall be operated.	Ten continuous hours every month with heaters operating.	
		b. The pressure drop across the combined HEPA filters and charcoal adsorber banks shall be demonstrated to be less than 9 inches of water at system design flow rate.	R	
		c. Fan shall be shown to operate within ± 10% design flow.	R	
		4. Automatic and manual initiation of each train shall be demonstrated.	R	
10b.	Charcoal Adsorbers for Spent Fuel Storage Pool Area	1. In-Place Testing**[5] Charcoal adsorbers shall be leak tested and shall show ≥99% Freon (R-11 or R-112) removal.	On a refueling frequency or every 720 hours of system operation, or after each complete or partial replacement of the charcoal adsorber bank, or after any major structural maintenance on the system housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	6.2 9.10
		2. Laboratory Testing Verify, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows methyliodide penetration less than 10% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 95%.	On a refueling frequency or every 720 hours of system operation or after any structural maintenance on the HEPA filter or charcoal adsorber housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	

~~**Tests shall be performed in accordance with applicable section(s) of ANSI N510-1980.~~

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
10b.	(continued)	3. Overall System Operation a. Operation of each circuit shall be demonstrated.	Ten hours every month.	
		b. Volume flow rate through charcoal filter shall be shown to be between 4500 and 12,000 cfm.	R	
		4. Manual initiation of the system shall be demonstrated.	R	
10c.	Charcoal Adsorbers for S.I. Pump Room	1. In-Place Testing**[5] Charcoal adsorbers shall be leak tested and shall show ≥99% Freon (R-11 or R-112) removal.	On a refueling frequency or every 720 hours of system operation, or after each complete or partial replacement of the charcoal adsorber bank, or after any major structural maintenance on the system housing or following significant painting, fire or chemical release in any ventilation zone communicating with the system.	9.10 6.2
		2. Laboratory Testing Verify, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows methyliodide penetration less than 10% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 95%.	On a refueling frequency or following 720 hours of system operation or after any structural maintenance on the HEPA filter or charcoal adsorber housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	
		3. Overall System Operation a. Operation of each circuit shall be demonstrated.	Ten hours every month.	
		b. Volume flow rate shall be shown to be between 3000 and 6000 cfm.	R	

~~**Tests shall be performed in accordance with applicable section(s) of ANSI N510-1980.~~

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
10c.	(continued)	4. Automatic and/or manual initiation of the system shall be demonstrated.	R	
11.	Containment Ventilation System Fusible Linked Dampers	1. Demonstrate damper action. 2. Test a spare fusible link.	1 year, 2 years, 5 years, and every 5 years thereafter.	9.10
12.	Diesel Generator Under-Voltage Relays	Calibrate	R	8.4.3
13.	Motor Operated Safety Injection Loop Valve Motor Starters (HCV-311, 314, 317, 320, 327, 329, 331, 333, 312, 315, 318, 321)	Verify the contactor pickup value at ≤85% of 460 V.	R	
14.	Pressurizer Heaters	Verify control circuits operation for post-accident heater use.	R	
15.	Spent Fuel Pool Racks	Test neutron poison samples for dimensional change, weight, neutron attenuation change and specific gravity change.	1, 2, 4, 7, and 10 years after installation, and every 5 years thereafter.	
16.	Reactor Coolant Gas Vent System	1. Verify all manual isolation valves in each vent path are in the open position.	During each refueling outage just prior to plant start-up.	
		2. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights.	R	
		3. Verify flow through the reactor coolant vent system vent paths.	R	

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

	Test		Frequency	USAR Section Reference
17.	DELETED			
18.	Shutdown Cooling	1. Verify required shutdown cooling loops are OPERABLE and one shutdown cooling loop is IN OPERATION.	S (when shutdown cooling is required by TS 2.8).	
		2. Verify correct breaker alignment and indicated power is available to the required shutdown cooling pump that is not IN OPERATION.	W (when shutdown cooling is required by TS 2.8).	

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
19.	Refueling Water Level	Verify refueling water level is ≥ 23 ft. above the top of the reactor vessel flange.	Prior to commencing, and daily during CORE ALTERATIONS and/or REFUELING OPERATIONS inside containment.	
20.	Spent Fuel Pool Level	Verify spent fuel pool water level is ≥ 23 ft. above the top of irradiated fuel assemblies seated in the storage racks.	Prior to commencing, and weekly during REFUELING OPERATIONS in the the spent fuel pool.	
21.	Containment Penetrations	Verify each required containment penetration is in the required status.	Prior to commencing, and weekly during CORE ALTERATIONS and/or REFUELING OPERATIONS in containment.	
22.	Spent Fuel Assembly Storage	Verify by administrative means that initial enrichment and burnup of the fuel assembly is in accordance with Figure 2-10.	Prior to storing the fuel assembly in Region 2 (including peripheral cells).	
23.	P-T Limit Curve	Verify RCS Pressure, RCS temperature, and RCS heatup and cooldown rates are within the limits specified by the P-T limit Figure(s) shown in the PTLR.	This test is only required during RCS heatup and cooldown operations and RCS inservice leak and hydrostatic testing. While these operations are occurring, this test shall be performed every 30 minutes.	
24.	Spent Fuel Cask Loading	Verify by administrative means that initial enrichment and burnup of the fuel assembly is in accordance with Figure 2-11.	Prior to placing the fuel assembly in a spent fuel cask in the spent fuel pool.	
25.	River Level	Verify water level is within limits by measurement at least once per 24 hours, when the water level is less than 1004 feet and greater than or equal to 976 feet 9 inches above mean sea levels.	D	9.8

[1] The provisions of Technical Specification 3.0.1 and 3.0.5 do not apply.
[2] Whenever the system is at or above operating temperature and pressure.
[3] Not applicable to primary to secondary LEAKAGE.
[4] Verify primary to secondary LEAKAGE is ≤ 150 gallons per day through any one SG. This surveillance is not required to be performed until 12 hours after establishment of steady state operation.
[5] Tests shall be performed in accordance with applicable section(s) of ANSI N510-1980.

Technical Specification Bases Markups
(For Information Only)

[Word-processor mark-ups using "double underline/strikeout" feature for "new text/deleted text" respectively.]

3.0 SURVEILLANCE REQUIREMENTS

3.2 Equipment and Sampling Tests (continued)

The spent fuel storage-decontamination areas air treatment system is designed to filter the building atmosphere to the auxiliary building vent during refueling operations. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. In-place testing is performed to confirm the integrity of the filter system. The charcoal adsorbers are periodically sampled to insure capability for the removal of radioactive iodine.

The Safety Injection (SI) pump room air treatment system consists of charcoal adsorbers which are installed in normally bypassed ducts. This system is designed to reduce the potential release of radioiodine in SI pump rooms during the recirculation period following a DBA. The in-place and laboratory testing of charcoal adsorbers will assure system integrity and performance.

Pressure drops across the combined HEPA filters and charcoal adsorbers, of less than 9 inches of water for the control room filters (VA-64A & VA-64B) and of less than 6 inches of water for each of the other air treatment systems will indicate that the filters and adsorbers are not clogged by amounts of foreign matter that would interfere with performance to established levels.

If significant painting, fire or chemical release occurs such that the HEPA filters or charcoal adsorbers could become contaminated from the fumes, chemicals or foreign materials, testing will be performed to confirm system performance.

Demonstration of the automatic and/or manual initiation capability will assure the system's availability.

Verifying Reactor Coolant System (RCS) leakage to be within the LCO limits ensures the integrity of the Reactor Coolant Pressure Boundary (RCPB) is maintained. Pressure boundary leakage would at first appear as unidentified leakage and can only be positively identified by inspection. Unidentified leakage is determined by performance of an RCS water inventory balance. Identified leakage is then determined by isolation and/or inspection. Since Primary to Secondary Leakage of 150 gallons per day cannot be measured accurately by an RCS water inventory balance, note ~~"****"~~ footnote 2 for line item 8a on Table 3-5 states that the Reactor Coolant System Leakage surveillance is not applicable to Primary to Secondary Leakage. Primary to secondary leakage is measured by performance of effluent monitoring within the secondary steam and feedwater systems.

3.0 SURVEILLANCE REQUIREMENTS

3.2 Equipment and Sampling Tests (continued)

Table 3-5, Item 8b verifies that primary to secondary LEAKAGE is less or equal to 150 gallons per day through any one SG. Satisfying the primary to secondary LEAKAGE limit ensures that the operational LEAKAGE performance criterion in the Steam Generator Program is met. If this surveillance requirement is not met, compliance with LCO 3.17, "Steam Generator Tube Integrity," should be evaluated. The 150 gallons per day limit is measured at room temperature as described in Reference 5. The operational LEAKAGE rate limit applies to LEAKAGE through any one SG. If it is not practical to assign the LEAKAGE to an individual SG, all the primary to secondary LEAKAGE should be conservatively assumed to be from one SG.

The Surveillance is modified by ~~a Note~~ footnote, which states that the Surveillance is not required to be performed until 12 hours after establishment of steady state operation. For RCS primary to secondary LEAKAGE determination, steady state is defined as stable RCS pressure, temperature, power level, pressurizer and makeup tank levels, makeup and letdown, and RCP seal injection and return flows.

The Surveillance Frequency of daily is a reasonable interval to trend primary to secondary LEAKAGE and recognizes the importance of early leakage detection in the prevention of accidents. The primary to secondary LEAKAGE is determined using continuous process radiation monitors or radiochemical grab sampling in accordance with the EPRI guidelines (Ref. 5).

Table 3-5, Item 25 verifies adequate measurements are taken to ensure that facility protective actions will be taken (and power operation will be terminated) in the event of high and/or low river level conditions. The high river level limit of less than 1004 feet mean sea level is based on the maximum elevation at which facility flood control measures provide protection to safety related equipment (i.e., due to restricted access/egress to the intake structure veranda once the flood barriers are installed prior to river level reaching 1004 feet msl). A continuous watch will be established at 1002 feet mean sea level to provide adequate response time for rising river levels in accordance with the abnormal operating procedure. The river level surveillance requirement specified also ensures sufficient net positive suction head is available for operating the RW pumps. The minimum river level of 976 feet 9 inches provides adequate suction to the RW pumps for cooling plant components. The surveillance frequency of "Daily" is a reasonable interval and models guidance provided in NUREG-0212, Revision 2, "Standard Technical Specifications for Combustion Engineering Pressurized Water Reactors," Section 4.7.6. This surveillance requirement verifies that the Missouri River water level is maintained at a level greater than or equal to 976 feet 9 inches mean sea level. A continuous watch is established to monitor the river level when the river level reaches 980 feet mean sea level to assure no sudden loss of water supply occurs.

References

1) USAR, Section 9.10
2) ASTM D4057, ASTM D975, ASTM D4176, ASTM D2622, ASTM D287, ASTM 6217, ASTM D2709
3) ASTM D975, Table 1
4) Regulatory Guide 1.137
5) EPRI, "Pressurized Water Reactor Primary-to-Secondary Leak Guidelines."

Retyped ("Clean") Technical Specifications Pages

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
1.	Control Element Assemblies	Drop times of all full-length CEA's	Prior to reactor criticality after each removal of the reactor vessel closure head	7.5.3
2.	Control Element Assemblies	Partial movement of all CEA's (Minimum of 6 in)	Q	7
3.	Pressurizer Safety Valves	Verify each pressurizer safety valve is OPERABLE in accordance with the Inservice Testing Program. Following testing, lift settings shall be 2485 psig ±1% and 2530 psig ±1% respectively.	In accordance with the Inservice Testing Program[1]	7
4.	Main Steam Safety Valves	Set Point	R	4
5.	DELETED			
6.	DELETED			
7.	DELETED			
8a.	Reactor Coolant System Leakage[3]	Evaluate	D[2]	4
8b.	Primary to Secondary Leakage[4]	Continuous process radiation monitors or radiochemical grab sampling	D[2]	4
9a	Diesel Fuel Supply	Fuel Inventory	M	8.4
9b.	Diesel Lubricating Oil Inventory	Lube Oil Inventory	M	8.4
9c.	Diesel Fuel Oil Properties	Test Properties	In accordance with the Diesel Fuel Oil Testing Program	8.4
9d.	Required Diesel Generator Air Start Receiver Bank Pressure	Air Pressure	M	8.4

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TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
9e.	Check for and Remove Accumulated Water from Each Fuel Oil Storage Tank	Check for Water and Remove	Q	8.4
10a.	Charcoal and HEPA Filters for Control Room Air Filteration System (CRAFS)	1. In-Place Testing[5] Charcoal adsorbers and HEPA filter banks shall be leak tested and show ≥99.95% Freon (R-11 or R-112) and cold DOP particulates removal, respectively.	On a refueling frequency or every 720 hours of system operation or after each complete or partial replacement of the charcoal adsorber/HEPA filter banks, or after any major structural maintenance on the system housing or following significant painting, fire or chemical releases in a ventilation zone communicating with the system.	9.10
		2. Laboratory Testing[5] Verify, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows methyliodide penetration less than 0.175% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 70%.	On a refueling frequency or every 720 hours of system operation or after any structural maintenance on the HEPA filter or charcoal adsorber housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
10a.	(continued)	3. Overall System Operation		
		a. Each train shall be operated.	Ten continuous hours every month with heaters operating.	
		b. The pressure drop across the combined HEPA filters and charcoal adsorber banks shall be demonstrated to be less than 9 inches of water at system design flow rate.	R	
		c. Fan shall be shown to operate within ± 10% design flow.	R	
		4. Automatic and manual initiation of each train shall be demonstrated.	R	
10b.	Charcoal Adsorbers for Spent Fuel Storage Pool Area	1. In-Place Testing[5] Charcoal adsorbers shall be leak tested and shall show ≥99% Freon (R-11 or R-112) removal.	On a refueling frequency or every 720 hours of system operation, or after each complete or partial replacement of the charcoal adsorber bank, or after any major structural maintenance on the system housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	6.2 9.10
		2. Laboratory Testing Verify, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows methyliodide penetration less than 10% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 95%.	On a refueling frequency or every 720 hours of system operation or after any structural maintenance on the HEPA filter or charcoal adsorber housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
10b.	(continued)	3. Overall System Operation		
		a. Operation of each circuit shall be demonstrated.	Ten hours every month.	
		b. Volume flow rate through charcoal filter shall be shown to be between 4500 and 12,000 cfm.	R	
		4. Manual initiation of the system shall be demonstrated.	R	
10c.	Charcoal Adsorbers for S.I. Pump Room	1. In-Place Testing[5] Charcoal adsorbers shall be leak tested and shall show ≥99% Freon (R-11 or R-112) removal.	On a refueling frequency or every 720 hours of system operation, or after each complete or partial replacement of the charcoal adsorber bank, or after any major structural maintenance on the system housing or following significant painting, fire or chemical release in any ventilation zone communicating with the system.	9.10 6.2
		2. Laboratory Testing Verify, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows methyliodide penetration less than 10% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 95%.	On a refueling frequency or following 720 hours of system operation or after any structural maintenance on the HEPA filter or charcoal adsorber housing or following significant painting, fire or chemical release in a ventilation zone communicating with the system.	
		3. Overall System Operation		
		a. Operation of each circuit shall be demonstrated.	Ten hours every month.	
		b. Volume flow rate shall be shown to be between 3000 and 6000 cfm.	R	

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

		Test	Frequency	USAR Section Reference
10c.	(continued)	4. Automatic and/or manual initiation of the system shall be demonstrated.	R	
11.	Containment Ventilation System Fusible Linked Dampers	1. Demonstrate damper action. 2. Test a spare fusible link.	1 year, 2 years, 5 years, and every 5 years thereafter.	9.10
12.	Diesel Generator Under-Voltage Relays	Calibrate	R	8.4.3
13.	Motor Operated Safety Injection Loop Valve Motor Starters (HCV-311, 314, 317, 320, 327, 329, 331, 333, 312, 315, 318, 321)	Verify the contactor pickup value at ≤85% of 460 V.	R	
14.	Pressurizer Heaters	Verify control circuits operation for post-accident heater use.	R	
15.	Spent Fuel Pool Racks	Test neutron poison samples for dimensional change, weight, neutron attenuation change and specific gravity change.	1, 2, 4, 7, and 10 years after installation, and every 5 years thereafter.	
16.	Reactor Coolant Gas Vent System	1. Verify all manual isolation valves in each vent path are in the open position.	During each refueling outage just prior to plant start-up.	
		2. Cycle each automatic valve in the vent path through at least one complete cycle of full travel from the control room. Verification of valve cycling may be determined by observation of position indicating lights.	R	
		3. Verify flow through the reactor coolant vent system vent paths.	R	

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

	Test		Frequency	USAR Section Reference
17.	DELETED			
18.	Shutdown Cooling	1. Verify required shutdown cooling loops are OPERABLE and one shutdown cooling loop is IN OPERATION.	S (when shutdown cooling is required by TS 2.8).	
		2. Verify correct breaker alignment and indicated power is available to the required shutdown cooling pump that is not IN OPERATION.	W (when shutdown cooling is required by TS 2.8).	
19.	Refueling Water Level	Verify refueling water level is ≥ 23 ft. above the top of the reactor vessel flange.	Prior to commencing, and daily during CORE ALTERATIONS and/or REFUELING OPERATIONS inside containment.	
20.	Spent Fuel Pool Level	Verify spent fuel pool water level is ≥ 23 ft. above the top of irradiated fuel assemblies seated in the storage racks.	Prior to commencing, and weekly during REFUELING OPERATIONS in the the spent fuel pool.	
21.	Containment Penetrations	Verify each required containment penetration is in the required status.	Prior to commencing, and weekly during CORE ALTERATIONS and/or REFUELING OPERATIONS in containment.	
22.	Spent Fuel Assembly Storage	Verify by administrative means that initial enrichment and burnup of the fuel assembly is in accordance with Figure 2-10.	Prior to storing the fuel assembly in Region 2 (including peripheral cells).	
23.	P-T Limit Curve	Verify RCS Pressure, RCS temperature, and RCS heatup and cooldown rates are within the limits specified by the P-T limit Figure(s) shown in the PTLR.	This test is only required during RCS heatup and cooldown operations and RCS inservice leak and hydrostatic testing. While these operations are occurring, this test shall be performed every 30 minutes.	
24.	Spent Fuel Cask Loading	Verify by administrative means that initial enrichment and burnup of the fuel assembly is in accordance with Figure 2-11.	Prior to placing the fuel assembly in a spent fuel cask in the spent fuel pool.	

TABLE 3-5
MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

	Test	Frequency	USAR Section Reference
25. River Level	Verify water level is within limits by measurement at least once per 24 hours, when the water level is less than 1004 feet and greater than or equal to 976 feet 9 inches above mean sea levels.	D	9.8

[1] The provisions of Technical Specification 3.0.1 and 3.0.5 do not apply.
[2] Whenever the system is at or above operating temperature and pressure.
[3] Not applicable to primary to secondary LEAKAGE.
[4] Verify primary to secondary LEAKAGE is ≤ 150 gallons per day through any one SG. This surveillance is not required to be performed until 12 hours after establishment of steady state operation.
[5] Tests shall be performed in accordance with applicable section(s) of ANSI N510-1980.

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3.0 SURVEILLANCE REQUIREMENTS

3.2 Equipment and Sampling Tests (continued)

The spent fuel storage-decontamination areas air treatment system is designed to filter the building atmosphere to the auxiliary building vent during refueling operations. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. In-place testing is performed to confirm the integrity of the filter system. The charcoal adsorbers are periodically sampled to insure capability for the removal of radioactive iodine.

The Safety Injection (SI) pump room air treatment system consists of charcoal adsorbers which are installed in normally bypassed ducts. This system is designed to reduce the potential release of radioiodine in SI pump rooms during the recirculation period following a DBA. The in-place and laboratory testing of charcoal adsorbers will assure system integrity and performance.

Pressure drops across the combined HEPA filters and charcoal adsorbers, of less than 9 inches of water for the control room filters (VA-64A & VA-64B) and of less than 6 inches of water for each of the other air treatment systems will indicate that the filters and adsorbers are not clogged by amounts of foreign matter that would interfere with performance to established levels.

If significant painting, fire or chemical release occurs such that the HEPA filters or charcoal adsorbers could become contaminated from the fumes, chemicals or foreign materials, testing will be performed to confirm system performance.

Demonstration of the automatic and/or manual initiation capability will assure the system's availability.

Verifying Reactor Coolant System (RCS) leakage to be within the LCO limits ensures the integrity of the Reactor Coolant Pressure Boundary (RCPB) is maintained. Pressure boundary leakage would at first appear as unidentified leakage and can only be positively identified by inspection. Unidentified leakage is determined by performance of an RCS water inventory balance. Identified leakage is then determined by isolation and/or inspection. Since Primary to Secondary Leakage of 150 gallons per day cannot be measured accurately by an RCS water inventory balance, note, footnote 2 for line item 8a on Table 3-5 states that the Reactor Coolant System Leakage surveillance is not applicable to Primary to Secondary Leakage. Primary to secondary leakage is measured by performance of effluent monitoring within the secondary steam and feedwater systems.

3.0 SURVEILLANCE REQUIREMENTS

3.2 Equipment and Sampling Tests (continued)

Table 3-5, Item 8b verifies that primary to secondary LEAKAGE is less or equal to 150 gallons per day through any one SG. Satisfying the primary to secondary LEAKAGE limit ensures that the operational LEAKAGE performance criterion in the Steam Generator Program is met. If this surveillance requirement is not met, compliance with LCO 3.17, "Steam Generator Tube Integrity," should be evaluated. The 150 gallons per day limit is measured at room temperature as described in Reference 5. The operational LEAKAGE rate limit applies to LEAKAGE through any one SG. If it is not practical to assign the LEAKAGE to an individual SG, all the primary to secondary LEAKAGE should be conservatively assumed to be from one SG.

The Surveillance is modified by a footnote, which states that the Surveillance is not required to be performed until 12 hours after establishment of steady state operation. For RCS primary to secondary LEAKAGE determination, steady state is defined as stable RCS pressure, temperature, power level, pressurizer and makeup tank levels, makeup and letdown, and RCP seal injection and return flows.

The Surveillance Frequency of daily is a reasonable interval to trend primary to secondary LEAKAGE and recognizes the importance of early leakage detection in the prevention of accidents. The primary to secondary LEAKAGE is determined using continuous process radiation monitors or radiochemical grab sampling in accordance with the EPRI guidelines (Ref. 5).

Table 3-5, Item 25 verifies adequate measurements are taken to ensure that facility protective actions will be taken (and power operation will be terminated) in the event of high and/or low river level conditions. The high river level limit of less than 1004 feet mean sea level is based on the maximum elevation at which facility flood control measures provide protection to safety related equipment (i.e., due to restricted access/egress to the intake structure veranda once the flood barriers are installed prior to river level reaching 1004 feet msl). A continuous watch will be established at 1002 feet mean sea level to provide adequate response time for rising river levels in accordance with the abnormal operating procedure. The river level surveillance requirement specified also ensures sufficient net positive suction head is available for operating the RW pumps. The minimum river level of 976 feet 9 inches provides adequate suction to the RW pumps for cooling plant components. The surveillance frequency of "Daily" is a reasonable interval and models guidance provided in NUREG-0212, Revision 2, "Standard Technical Specifications for Combustion Engineering Pressurized Water Reactors," Section 4.7.6. This surveillance requirement verifies that the Missouri River water level is maintained at a level greater than or equal to 976 feet 9 inches mean sea level. A continuous watch is established to monitor the river level when the river level reaches 980 feet mean sea level to assure no sudden loss of water supply occurs.

References

1) USAR, Section 9.10
2) ASTM D4057, ASTM D975, ASTM D4176, ASTM D2622, ASTM D287, ASTM 6217, ASTM D2709
3) ASTM D975, Table 1
4) Regulatory Guide 1.137
5) EPRI, "Pressurized Water Reactor Primary-to-Secondary Leak Guidelines."