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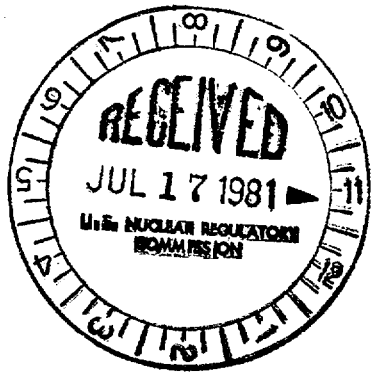
Docket No. 50-313



Mr. William Cavanaugh, III
Senior Vice President,
Energy Supply
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Dear Mr. Cavanaugh:

In our letter of May 15, 1981, we issued Amendment No. 55 to Facility Operating License No. DPR-51 for Arkansas Nuclear One, Unit No. 1 (ANO-1). We also reviewed the status of our review of ANO-1 with respect to our generic concerns of purging and venting of containments. Item 4, "Containment Leakage Due to Seal Deterioration" was still left open because we had not completed the development of Technical Specifications (TSs) for the leakage testing requirements of purge/vent valves. We have now established our position for leakage testing in Enclosure 1 and consider it appropriate that TSs be proposed for ANO-1. Therefore, we request that you propose TS changes incorporating the test requirements together with the details of your proposed test program within 45 days of receipt of this letter.

In closing, you may have noted the similarity of the generic concerns of purging and venting of containment with Item II.E.4.2 of NUREG-0737, TMI Action Plan. Except for Positions 5, 6 & 7 of Item II.E.4.2, the review of the remaining outstanding positions of Item II.E.4.2 will be completed by this purge and vent review. Our schedule of the purge and vent review agrees with the schedule for Item II.E.4.2.

Thus, your assistance in completing the remaining purge and vent items is necessary to complete Item II.E.4.2. For the generic purge and vent concerns a recently developed sample TS is provided for your consideration as Enclosure 2. We request that you review your existing TSs against the sample provided herein. For any areas in which your existing TSs need expansion, you are requested to provide a TS change request within 60 days of receipt of this letter.

Sincerely,
"ORIGINAL SIGNED BY
JOHN F. STOLTZ"
AUG 5 1981
John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

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Enclosures:
1. Position for Leakage Testing
2. Sample TSs

cc w/enclosures:
See next page

*See previous white for concurrence

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SURNAME	GVissing/cb	EReeves*	JStolz		
DATE	7/15/81	7/ /81	7/15/81		

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John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:
1. Position for Leakage Testing
2. Sample TSs

cc w/enclosures:
See next page

OFFICE		ORB#4:DL	ORB#1:DL	C-ORB#4:DL		
SURNAME		GVissing/cb	EReeves	JStolz		
DATE		7/7/81	7/13/81	7/ /81		

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Enclosure 1

PURGE/VENT VALVE LEAKAGE TESTS

The long term resolution of Generic Issue B-24, "Containment Purging During Normal Plant Operation," includes, in part, the implementation of Item B.4 of Branch Technical Position (BTP) CSB 6-4. Item B.4 specifies that provisions should be made for leakage rate testing of the (purge/vent system) isolation valves, individually, during reactor operation. Although Item B.4 does not address the testing frequency, Appendix J to 10 CFR Part 50 specifies a maximum test interval of 2 years.

As a result of the numerous reports on unsatisfactory performance of the resilient seats for the isolation valves in containment purge and vent lines (addressed in OIE Circular 77-11, dated September 6, 1977), Generic Issue B-20, "Containment Leakage Due to Seal Deterioration," was established to evaluate the matter and establish an appropriate testing frequency for the isolation valves. Excessive leakage past the resilient seats of isolation valves in purge/vent lines is typically caused by severe environmental conditions and/or wear due to frequent use. Consequently, the leakage test frequency for these valves should be keyed to the occurrence of severe environmental conditions and the use of the valves, rather than the current requirements of 10 CFR 50, Appendix J.

It is recommended that the following provision be added to the Technical Specifications for the leak testing of purge/vent line isolation valves:

> "Leakage integrity tests shall be performed on the containment isolation valves with resilient material seals in (a) active purge/vent systems (i.e., those which may be operated during plant operating Modes 1 through 4) at least once every three months and (b) passive purge systems (i.e., those which must be administratively controlled closed during reactor operating Modes 1 through 4) at least once every six months."

By way of clarification, the above proposed surveillance specification is predicated on our expectation that a plant would have a need to go to cold shutdown several times a year. To cover the possibility that this may not occur, a maximum test interval of 6 months is specified. However, it is not our intent to require a plant to shutdown just to conduct the valve leakage integrity tests. If licensees anticipate long duration power operations with infrequent shutdown, then installation of a leak test connection that is accessible from outside containment may be appropriate. This will permit simultaneous testing of the redundant valves. It will not be possible to satisfy explicitly the guidance of Item B.4 of BTP CSB 6-4 (which states that valves should be tested individually), but at least some testing of the valves during reactor operation will be possible.

It is intended that the above proposed surveillance specification be applied to the active purge/vent lines, as well as passive purge lines: i.e., the purge lines that are administratively controlled closed during reactor operating modes 1-4. The reason for including the passive purge lines is that B-20 is concerned wtih the potential adverse effect of seasonal weather conditions on the integrity of the isolation valves. Consequently, passive purge lines must also be included in the surveillance program.

The purpose of the leakage integrity tests of the isolation valves in the containment purge and vent lines is to identify excessive degradation of the resilient seats for these valves. Therefore, they need not be conducted with the precision required for the Type C isolation valve tests in 10 CFR Part 50, Appendix J. These tests would be performed in addition to the quantitative Type C tests required by Appendix J and would not relieve the licensee of the responsibility to conform to the requirements of Appendix J. In view of the wide variety of valve types and seating materials, the acceptance criteria for such tests should be developed on a plant-specific basis.

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.1.7 The containment purge supply and exhaust isolation valves may be open for safety-related reasons or shall be closed. The containment vent line isolation valves may be open for safety-related reasons or shall be closed.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:
(For plants with valves closed by technical specification)

With one containment purge supply and/or one exhaust isolation valve open, close the open valve(s) within one hour or be in at least HOT STANDY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

(For plants with valves that may be opened by technical specifications)

1. With one containment purge supply and/or one exhaust isolation or vent valve inoperable, close the associated OPERABLE valve and either restore the inoperable valve to OPERABLE status within 72 hours or lock the OPERABLE valve closed.

2. Operation may then continue until performance of the next required valve test provided that the OPERABLE valve is verified to be locked closed at least once per 31 days.

3. Otherwise, be in at least HOT STANDBY within the next six hours and in COLD SHUTDOWN within the following 30 hours.

4. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 The __ -inch containment purge supply and exhaust isolation valves and the __ -inch vent line isolation valves shall be determined closed at least once per 31 days.

4.6.1.7.2 The valve seals of the purge supply and exhaust isolation valves and the vent line isolation valves shall be replaced at least one per __ years.

CONTAINMENT SYSTEMS

3/4 4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves specified in Table 3.6-1 shall be OPERABLE with isolation times as shown in Table 3.6-1.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valves(s) specified in Table 3.6-1 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 The isolation valves specified in Table 3.6-1 shall be demonstated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test, and verification of isolation time.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.2 Each isolation valve specified in Table 3.6-1 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

4.6.3.3 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

4.6.3.4 The containment purge and vent isolation valves shall be demonstated OPERABLE at intervals not to exceed ___ months. Valve OPERABILITY shall be determined by verifying that when the measuued leakage rate is added to the leakage rates determined pursuant to Specification 4.6.1.2.d for all other Type B and C penetration, the combined leakage rate is less than or equal to 0.60La. However, the leakage rate for the containment purge and vent isolation valves shall be compared to the previously measured leakage rate to detect excessive valve degradation.