CONTAINMENT SYSTEMS

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of:

1. $\leq L_a$, 0.10 percent by weight of the containment air per 24 hours at P_a, (38.3 psig), or

b. A combined leakage rate of $\leq 0.60\ L_a$ for all penetrations and valves subject to Type B and C tests as identified in Table 3.6-1, when pressurized to P_a

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage exceeding $0.75\ L_a$, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50* using the methods and provisions of ANSI N45.4-1972:

a. A Type-A test (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10-month intervals during shutdown at P_a (38.3 psig).

* Exception to 10 CFR 50 Appendix J.III.D.1(a)

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CFR 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the accident analyses at the peak accident pressure, P_a. As an added conservatism, the measured overall integrated leakage rate is further limited to $\leq 0.75\ L_a$ during performance of the periodic test to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates are consistent with the requirements of Appendix "J" of 10 CFR 50.

The exception to 10 CFR 50 Appendix J.III.D.1(a) allows Type A tests to be conducted on a 40 ± 10-month schedule.

3/4.6.1.3 CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provides assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.

ATTACHMENT B
SAFETY EVALUATION

Proposed Change Request No. 101 amends the Beaver Valley Power Station, Unit No. 1 Technical Specifications, Appendix A surveillance requirement 4.6.1.2a and associated bases 3/4.6.1.2 concerning the Type A test frequency.

Description and Purpose of Change

Currently the third Type A Containment Integrated Leak Rate Test (CILRT) is scheduled for the fifth refueling outage (47 months following the second CILRT), see attached Figure 1 (CILRT Chronological Illustration), which provides the past and future outage schedules. The 10-year inservice inspection is scheduled for the sixth refueling outage, therefore, the third CILRT cannot be performed during the shutdown for the 10-year inservice inspection as required by the present Technical Specification requirements.

Surveillance Requirement 4.6.1.2a has been revised to establish a 40 ±10-month frequency for the Type A CILRT's. An exemption to 10 CFR 50 Appendix J.III.D.1(a) is also requested, as identified by the note applicable to the above surveillance requirement and specified in the applicable bases. This change and exemption will eliminate the need to perform the third CILRT of each set during the shutdown for the 10-year inservice inspection and will allow more flexibility in the scheduling of CILRT's based on a 40 ±10-month frequency.

This change is also consistent with a May 24, 1978 NRC memorandum (E. Case, Acting Director, Office of NRR to R. Minogue, Director, Office of Standards Development) that proposed changes to 10 CFR 50 Appendix J, to establish criteria for the test frequency of CILRT's without reference to the 10-year service period.

Basis

1. Is the probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously analyzed in the Updated Final Safety Analysis Report (UFSAR) increased? No.

   Reason: This change and request for exemption to 10 CFR 50 Appendix J.III.D.1(a) is administrative in nature and will allow the Type A tests to be scheduled without being in conjunction with the 10-year inservice inspection interval. However this change will not change the frequency or acceptance criteria for Type A testing and therefore will not increase the probability of an occurrence or the consequence of an accident or malfunction of equipment as described in the UFSAR. Section 5.6 of the UFSAR will be revised to address the exemption to 10 CFR 50 Appendix J.III.D.1(a).

2. Is the probability for an accident or malfunction of a different type than previously evaluated in the UFSAR created? No

   Reason: This change is administrative in nature and will not change the frequency or acceptance criteria for Type A testing and will not physically affect plant safety related systems, components or structures, therefore, new accidents or malfunctions will not be created.

3. Is the margin of safety defined in the basis for any Technical Specification reduced? No.

   Reason: This change does not effect the margin of safety in Technical Specification Basis 3/4.6.1.2 Containment Leakage. However, the basis will be changed to reflect the revised surveillance requirement due to the exemption to 10 CFR 50 Appendix J.III.D.1(a).

4. Based on the above, is an unreviewed safety question involved? No

   Reason: Past Type-A leak rate results have not indicated an increased leak rate between successive tests, and this test interval should remain adequate for providing the assurance that leak rates will remain within their limits.

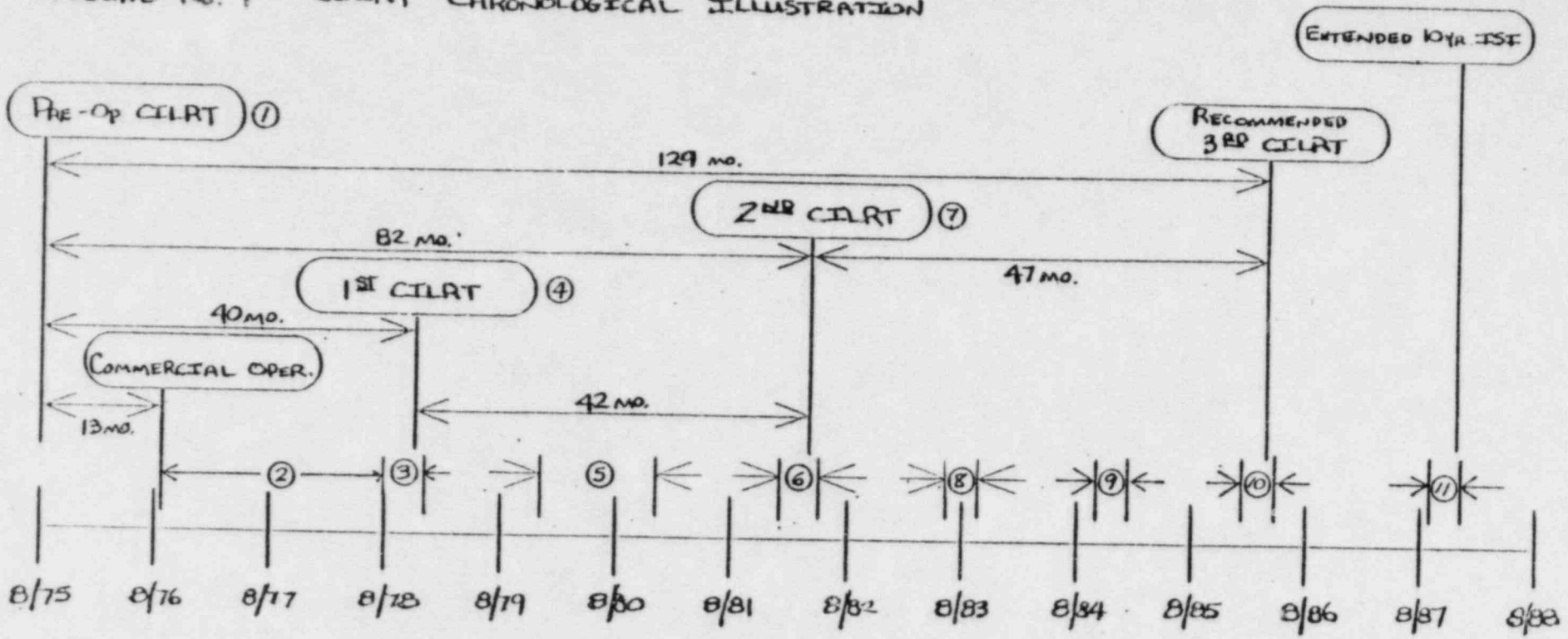
Conclusion

The change to Surveillance Requirement 4.6.1.2.a to establish the frequency for Type A tests to be at 40 ± 10 month intervals, without reference to the ten-year service period is administrative in nature. This change does not involve physical change to any plant safety-related systems, components or structures, will not increase the consequences of an accident previously analyzed, nor create the possibility of a malfunction different than previously evaluated in the UFSAR.

The UFSAR Section 5.6 will require revision to reflect the requested exemption and revised surveillance requirement.

Based on the considerations above, the proposed administrative changes have been determined to be safe and do not involve an unreviewed safety question.

FIGURE No. 1 - CILRT CHRONOLOGICAL ILLUSTRATION



SEE ATTACHED NOTES

NOTES

1. PREOPERATION CILRT COMPLETED 8/15/75.
2. FROM PERIOD 9/76 TO 8/78. BVPS-1 OPERATED 58% OF TIME.
3. MAJOR OUTAGE 8/78 TO 12/78.
4. 1ST CILRT COMPLETED 11/23/78.
5. 1ST REFUELING AND PLANT MODIFICATION OUTAGE 11/79 TO 11/80.
6. 2ND REFUELING OUTAGE 1/82 TO 7/82.
7. 2ND CILRT COMPLETED 5/13/82.
8. 3RD REFUELING OUTAGE 6/83 TO 9/83.
9. 4TH REFUELING OUTAGE, TENTATIVELY 10/84 TO 1/85.
10. 5TH REFUELING OUTAGE, STARTING TENTATIVELY 4/86.
11. 6TH REFUELING AND 10-YEAR ISI, STARTING TENTATIVELY 7/87.