



UNION ELECTRIC COMPANY

Callaway Plant

July 10, 1987

ULNRC-1542

Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, DC 20555

REQUEST TO REVIEW INTERPRETATION TO LEAVE LEAK
CHASES PLUGGED DURING AN ILRT
(Ref.: NRC Open Item 483/87008-03)

Callaway Plant's containment liner has leak chases in the following areas:

- 1) on the floor plate over all welds
- 2) on the liner wall covering some welds of the liner and liner reinforcing inserts.

Many of the leak chase channels are not accessible and cannot be vented during a containment Integrated Leak Rate Test (ILRT). Some of the test plugs for the leak chases are under embedded plates, some were covered with the final concrete finishing, some have structural steel preventing access to the plugs and some are in Very High Radiation Areas (in the instrument tunnel, under the reactor vessel).

It is the interpretation of Union Electric that the combined liner butt weld along with the associated pre-tested channel fillet welds and leak test connections constitute the actual containment boundary in post accident conditions. Concurrence with this interpretation is requested based on the following:

- 1) All leak chases installed were leak tested during initial installation of the containment liner. According to construction specification C-151A and the applicable design drawings, a Halogen Leak test per T1040 or T1050 or an Air Test per T1030 of Section V of the applicable ASME code was performed. This initial leak test verified the satisfactory installation of all Leak Channels.
- 2) All leak channels are a minimum of 3/16 inch channel or angle with 3/16 inch seal welds to attach to the liner plate. (The welds were tested as described above.) This construction is sufficient to retain the accident pressure of 48.1 psig (Pa).

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- 3) All test connections consist of 1/4 inch NPT square head plugs. ANSI B16.14 and B16.4 rate the plugs at 400 psig at 140°F and 250 psig at 400°F. This is sufficient to seal against an accident pressure of 48.1 psig.

The above factors indicate that the leak chases are acceptable for retaining design accident pressure.

Additionally, the accident condition of all these leak chases will be with the test plugs installed (the leak chase NOT vented). Consequently, performing an ILRT with the test plugs installed will test the containment boundary in its accident condition.

If the leak chases are all leak tight, they will then be pressure tested by the ILRT. If, however, a leak chase were not leak tight, the ILRT will also be testing the liner weld underneath the leak chase. Therefore, taking credit for the leak chase integrity during the ILRT will be consistent with the intent of 10CFR50 Appendix J to test the containment boundary in its post-accident condition.

DB DLB TMD
ACP/DES/TMD/DLB/TMD/lak

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cc: USNRC Region III
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