



Gary R. Peterson
Vice President

Duke Power
Catawba Nuclear Station
4800 Concord Road
York, SC 29745
(803) 831-4251 OFFICE
(803) 831-3221 FAX

November 21, 2000

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Duke Energy Corporation
Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414
McGuire Nuclear Station, Units 1 and 2
Docket Numbers 50-369 and 50-370
Statement of Catawba and McGuire Position Regarding
Testing of Welded Joints on Containment Penetrations

On November 14, 2000, a conference call was held among various representatives of Catawba Nuclear Station and the NRC's Office of Nuclear Reactor Regulation (ONRR) and Region II. The purpose of this conference call was to discuss an issue related to testing of welded joints on certain containment penetrations. Attachment 1 to this letter lists the individuals who participated in the conference call. The purpose of this letter is to formally docket the Catawba and NRC position concerning this issue as stated in the conference call. Since this issue is also applicable to McGuire Nuclear Station, this letter is being submitted on both the Catawba and the McGuire dockets.

Background

On November 10, 1987, the NRC issued License Amendments 32 and 23 for Catawba Units 1 and 2, respectively. These amendments modified the TS in place at the time to allow full power operation with the Upper Head Injection (UHI) System removed. The amendments in part revised then-existing Technical Specifications (TS) Table 3.6-1, Secondary Containment Bypass Leakage Paths, to reflect the sealing of the UHI related containment penetrations, and then-existing TS Table 3.6-2, Containment Isolation Valves, to reflect the removal of containment isolation valves associated with the UHI containment penetrations. The NRC issued similar license amendments for McGuire Units 1 and 2 on May 13, 1986 (License Amendments 57 and 38 for McGuire Units 1 and 2, respectively).

A001

When the UHI Systems were removed from Catawba Units 1 and 2, the UHI containment penetrations' process piping was cut and capped, and the associated piping and valves were removed. When the UHI Systems were removed from McGuire Units 1 and 2, the inside process piping was capped and the abandoned piping was downgraded. For both sites, the guard pipe was left in its original configuration with one end open to containment atmosphere and the other end in the auxiliary building seal welded to the process pipe.

Catawba and McGuire TS Surveillance Requirement (SR) 3.6.3.8 require verification that the combined leakage rate for all reactor building bypass leakage paths is less than or equal to $0.07 L_a$ when pressurized to greater than or equal to P_a . The SR is modified by a note which states that penetrations not individually testable shall be determined to have no visible leakage when tested with soap bubbles. For penetrations not individually testable, this SR is performed for these penetrations during SR 3.6.1.1 Type A tests (the SR 3.6.1.1 Type A test is the Integrated Leak Rate Test (ILRT), which is conducted on a performance-based frequency not to exceed once every ten years).

On November 12, 2000, while preparing to perform the ILRT on Catawba Unit 1 during the End-of-Cycle 12 Refueling Outage, the affected penetrations (Catawba penetrations M406 and M407) were identified as missing from the list of penetrations requiring a soap bubble test. A review of plant configuration drawings for Unit 1 was made and it was determined that while the process piping was cut and capped on both sides of the penetration, the area between the process pipe and the guard pipe of these penetrations is still exposed to containment atmosphere conditions. It was subsequently determined that the soap bubble test should continue to be applied to examine the weld of the guard pipe to the flued head which is outside of the reactor building wall. The soap bubble test was determined to be necessary because a leak in this weld was considered to be bypass leakage. It was determined that the requirement to perform a soap bubble test of the above described welds was inadvertently deleted when the UHI penetrations were cut and capped following the removal of the UHI System. The determination that the soap bubble test was necessary was based on language contained in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports For Nuclear Power Plants, LWR Edition." Branch

Technical Position (BTP) CSB 6-3, "Determination of Bypass Leakage Paths in Dual Containment Plants," (Revision 2 dated July 1981) states that welded joints on penetrations (e.g., guard pipes) which pass through both the primary and secondary containment barriers should be considered potential bypass leakage paths around the leakage collection and filtration systems of the secondary containment. The BTP goes on to state that provisions should be made to permit preoperational and periodic leakage rate testing in a manner similar to the Type B or C tests of Appendix J to 10 CFR Part 50 for each bypass leakage path described in the BTP. An acceptable alternative for local leakage rate testing for welded joints would be to conduct a soap bubble test of the welds concurrently with the integrated (Type A) leakage test of the primary containment required by Appendix J. Any detectable leakage determined in this manner would require repair of the joint.

On November 13, 2000, at 2130 hours, after reviewing completed procedures and configuration drawings, Catawba personnel determined that SR 3.6.3.8 was not being met for penetrations M406 and M407 on Unit 2, based on the BTP guidance. At that time, Catawba made a decision that enforcement discretion would be necessary to allow Unit 2 to continue operation. As an intermediate corrective action, the welds in Unit 2 penetrations M406 and M407 were subjected to a dye penetrant test. The test results showed that there were no problems with either of the welds.

On November 14, 2000, at 1030 hours, Catawba and NRC personnel participated in the above-described conference call. The NRC stated during this conference call that the statement concerning welded joints on containment penetrations in BTP CSB 6-3 was no longer the officially held position within the NRC. The NRC acknowledged that the BTP was outdated in certain respects and was in need of revision. In particular, Item 5c on welded joints needed to be deleted and Item 7 needed revision to delete the reference to soap bubble testing for welded joints. The NRC indicated that requiring such a test of individual welds would be tantamount to requiring local leak rate testing on individual sections of the steel containment vessel itself.

Summary of NRC Position

The NRC stated that BTP CSB 6-3 was outdated and in need of revision concerning the requirement to conduct a soap bubble test

U.S. Nuclear Regulatory Commission
Page 4
November 21, 2000

of welded joints on containment penetrations. The NRC indicated that testing of the welded joints was not required and that no enforcement discretion was necessary on this issue.

Summary of Catawba and McGuire Position

Catawba and McGuire concur with the NRC position that it is not necessary to perform a soap bubble test of the welds on the capped UHI penetrations or of the welds on penetrations of a similar design. Catawba plans to eliminate the performance of soap bubble testing of the welds on penetrations of this type in the future. At present, McGuire still performs soap bubble testing of the welds on the UHI penetrations; however, McGuire will evaluate whether this practice will be discontinued.

It is being requested that if the NRC disagrees with the position statements as set forth in this letter, that the NRC inform Catawba and McGuire of this fact in writing at your earliest opportunity.

If there are any questions concerning this information, please contact L.J. Rudy at (803) 831-3084.

Very truly yours,


Gary R. Peterson

Attachment

LJR/s

U.S. Nuclear Regulatory Commission
Page 5
November 21, 2000

xc (with attachment):

L.A. Reyes
U.S. Nuclear Regulatory Commission
Regional Administrator, Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303

D.J. Roberts
Senior Resident Inspector (CNS)
U.S. Nuclear Regulatory Commission
Catawba Nuclear Station

S.M. Shaeffer
Senior Resident Inspector (MNS)
U.S. Nuclear Regulatory Commission
McGuire Nuclear Station

C.P. Patel (addressee only)
NRC Senior Project Manager (CNS)
U.S. Nuclear Regulatory Commission
Mail Stop O-8 H12
Washington, D.C. 20555-0001

F. Rinaldi (addressee only)
NRC Senior Project Manager (MNS)
U.S. Nuclear Regulatory Commission
Mail Stop O-14 E21
Washington, D.C. 20555-0001

Attachment 1

List of Individuals Participating in November 14, 2000 Conference
Call

Duke Energy Corporation, Catawba Nuclear Station

R.A. Jones, Station Manager
R.L. Sweigart, Safety Assurance Manager
G.D. Gilbert, Regulatory Compliance Manager
L.J. Rudy, Regulatory Compliance
J.A. Kammer, Mechanical Systems Engineering Supervisor

NRC

R.L. Emch, Jr., ONRR
C.P. Patel, ONRR
J.C. Pulsipher, ONRR
R.C. Haag, Region II
R.L. Franovich, Region II