Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379

J. L. Wilson
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November 17, 1992

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) - REQUEST FOR CLARIFICATION REGARDING CONCURRENT USE OF AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) CODE CASES N-416 AND N-498

References: 1. NRC letter to TVA dated April 9, 1992, "Request for Relief From the American Society of Mechanical Engineers (ASME), Section XI, Hydrostatic Pressure Test Requirements for Replacement of the Feedwater Nozzle Transition Pieces, Sequoyah Nuclear Plant, Units 1 and 2 (TAC Nos. 82994 and 82995)"

2. TVA letter to NRC dated March 23, 1992, "Sequoyah Nuclear Plant (SQN) - Request for Relief From the American Society of Mechanical Engineers (ASME), Section XI, Hydrostatic Pressure Test Requirements"

In the Reference 2 letter, TVA requested relief for the ASME hydrostatic pressure test requirements for replacement of eight feedwater nozzle transition pieces on SQN's Unit 1 and Unit 2 steam generators. TVA noted in the Reference 2 letter that ASME code Case N-416 was considered by TVA for application to SQN's feedwater nozzle replacement (code Case N-416 allows the postmodification hydrostatic test to be deferred until the next regularly scheduled system hydrostatic test, sometimes referred to as the 10-year hydrostatic test). TVA elected not to invoke code Case N-416 because TVA anticipated incorporation of code Case N-498 into SQN's ASME Section XI program following NRC approval (at that time authorization of code Case N-498 by NRC was pending approval). The incorporation of code Case N-498 would provide for reduced pressure tests in lieu of the 10-year hydrostatic pressure test requirements. TVA recognized that incorporation of code Case N-416 could preempt the use of code Case N-498.

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In the Reference 1 letter, NRC provided the staff's evaluation of TVA's Reference 2 relief request that determined code relief was not necessary for this condition. The staff determined that code Case N-416 was applicable to TVA's request. In addition, the staff concluded that in contrast to TVA's submittal, the use of code Case N-498 would not preempt the conditions stated in code Case N-416. In subsequent telephone conference calls with NRC, TVA requested clarification of NRC's interpretation regarding the joint use of code Cases N-416 and N-498. TVA was assured that the use of code Case N-416 would not preclude the use of code Case N-498 and that specific relief from the 10-year feedwater system hydrostatic tests, as it relates to replacement of SQN's feedwater nozzles, would not be necessary.

During subsequent conversations with NRC, TVA was verbally informed that NRC now considers that the use of code Case N-416 would preclude the use of the code Case N-498 (i.e., invoking code Case N-416 would not exempt TVA from the 10-year feedwater system hydrostatic test even if code Case N-498 is applied).

In view of NRC's last stated position on this matter, TVA is submitting a request for relief from the 10-year feedwater system hydrostatic test requirement. TVA believes that compliance with the ASME hydrostatic test requirements for SQN's feedwater system would result in hardship and unusual difficulty without a compensating increase in the level of quality and safety. This request for relief is contained in Enclosure 1.

In a related issue, TVA has reviewed and evaluated five other cases similar to the feedwater nozzle replacement where piping repairs or replacements were previously performed and either code Case N-416 was invoked or relief from the postmodification hydrostatic test requirement was granted by the staff. In most cases, the staff's evaluation referred to future periodic system hydrostatic testing that would be required sometime during the 10-year in-service inspection interval. TVA is submitting new relief requests for each of the five cases where previous code repairs or replacements were performed at SQN; this is based on the current direction from the staff that would disallow concurrent use of code Cases N-498 and N-416 and situations for which TVA considers conducting a system hydrostatic test presents unusual hardship without a compensating level of quality and safety. Enclosure 2 contains each of the five new requests for relief. These relief requests are associated with SQN's main steam (ASME Class 2), feedwater (ASME Class 2), and reactor coolant (ASME Class 1) systems.

Enclosure 1 and Enclosure 2 relief requests are being submitted in accordance with 10 CFR 50.55a(a)(3). Since these relief requests are associated with pressure-test activities in SQN's Unit 1 Cycle 6 refueling outage (scheduled to begin April 2, 1993, and end June 5, 1993), TVA requests that NRC's response be provided as soon as

possible to support TVA's outage schedule. However, should NRC decide that performance of a repair or replacement will still allow for invoking code Case N-498, the relief requests in Enclosures 1 and 2 need not be processed. TVA will then elect to invoke code Case N-498.

Please direct questions concerning this issue to D. V. Goodin at (615) 843-7734.

Sincerely,

J. L. Wilson

Enclosures
cc (Enclosures):
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ENCLOSURE 1

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

IN-SERVICE PRESSURE TEST (ISPT) PROGRAM

RELIEF REQUEST FOR REPLACEMENT OF EIGHT FEEDWATER

NOZZLE TRANSITION PIECES ON SEQUOYAH NUCLEAR PLANT (SQN)

UNITS 1 AND 2 STEAM GENERATORS (S/Gs)

REQUEST FOR RELIEF ISPT-5

Unit: Units 1 and 2

System: Main feedwater system (3)

TVA Drawing: Final Safety Analysis Report (FSAR) Figure 10.4.7-2

Component: S/G nozzle transition pieces

Class: Class 2

Function: Provides feedwater to the S/G

Code Requirement: The 1977 Edition, Summer 1978 Addenda, of the American Society of Mechanical Engineers (ASME) Section XI code, Table IWC-2500-1, Item C7.21, requires a system hydrostatic test be performed in accordance with IWC-5222 each inspection interval (i.e., 10 years).

Background: In March 1992, TVA conducted modifications on both SQN units to replace the ASME Class 2 S/G nozzle transition pieces. The replacement of the S/G nozzle transition pieces involved piping and welds that cannot be isolated from the S/G, main steam, and feedwater piping. Therefore, a hydrostatic pressure test of the entire S/G would have been required to comply with the code requirement. In accordance with the guidance provided in the Reference 2 letter below, code Case N-416 was invoked. This action deferred the postmodification testing until the next regularly scheduled system hydrostatic test (i.e., 10-year hydrostatic test).

Basis for Relief: Performance of a 10-year hydrostatic test of SQN's feedwater system presents an undue hardship for the following reasons:

1. The performance of a feedwater system hydrostatic test requires the pressurization of the feedwater lines from the feedwater check valves, through the entire secondary side of the S/G and the main steam line up to the main steam isolation valve. This is an unusual plant configuration that would require extensive preparations from both physical and system operation standpoints. In addition, installation of temporary supports on the main steam lines would be necessary for the increased static water load.

2. The main steam safety-relief valves are set at pressures ranging from 1064 to 1117 pounds per square inch (psig). For code Class 2 components with design temperatures greater than 200 degrees Fahrenheit, the code requires a test pressure of 1.25 times the lowest-relief valve settings, which protects that component. The required test pressure for this repair

would therefore be 1330 psig. This test pressure would require the removal or gagging of the main steam safety valves, and the installation of a temporary relief valve set at the maximum allowed test pressure.

3. Performance of a hydrostatic test would extend critical path outage time by two days.

Alternate Testing

In lieu of a 10-year feedwater system hydrostatic pressure test, TVA will perform a visual examination (VT-2) of the feedwater ASME Class 2 piping while the system is maintained at nominal operating pressure. Insulated portions of the section will be pressurized for a minimum period of 4 hours before the VT-2, while noninsulated portions of the system will be pressurized for 10 minutes before the VT-2.

The structural integrity of the new feedwater welds and piping following the replacement of the S/G nozzle transition pieces was verified by radiographic examination and supplemented ultrasonic examination of the final weld. This sequence of nondestructive examination is designed to detect any existing fabrication-induced flaws. These feedwater welds are also included in TVA's augmented in-service inspection program. In addition, pursuant to IWA-5242, a visual examination (VT-2) was performed in conjunction with a system leakage test in accordance with IWA-5211(a).

References:

1. TVA letter to NRC dated March 23, 1992

2. NRC letter to TVA dated April 9, 1992

ENCLOSURE 2

FIVE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

IN-SERVICE PRESSURE TEST (ISPT) PROGRAM

RELIEF REQUESTS FOR PREVIOUS REPAIRS AND/OR REPLACEMENTS

ON SEQUOYAH NUCLEAR PLANT FEEDWATER, MAIN STEAM,

AND REACTOR COOLANT SYSTEMS

REQUEST FOR RELIEF ISPT-6

Unit: Unit 2

System: Main steam system (1)

TVA Drawing: FSAR Figure 10.3.2-1

Component: Loop 1 main steam isolation valve (MSIV) warming line

Class: Class 2

Function: Allows prewarming and pressurization of the main steam piping downsteam of the MSIV during unit start-up

Impractical Requirement: The 1977 Edition, Summer 1978 Addenda, of the American Society of Mechanical Engineers (ASME) Section XI code, Table IWC-2500-1, Item C7.21, requires a system hydrostatic test be performed in accordance with IWC-5222 each inspection interval (i.e., 10 years).

Background: During the Cycle 1 ice-weighing outage on Unit 2 (May 14-29, 1982), it became necessary to remove a portion of the Loop 1 MSIV warming line to provide physical access to perform machining operations on a feedwater check valve. The line in question is a 2-inch, Schedule 80, American Society for Testing and Materials A-106, Grade B, carbon-steel-socket welded line that was installed to Class 2 requirements of American National Standards Institute B31.7, 1969 Edition and 1970 Addenda. The line begins just upstream of MSIV FCV-1-4 and ties into the main steam check valve 1-623. Removal of the MSIV warming line involved piping and welds that cannot be isolated from the S/G and the main steam piping. Therefore, a hydrostatic pressure test of the entire S/G would be required to comply with the code requirement. By letter dated May 27, 1982, TVA requested relief from the hydrostatic test requirement. In the Reference 2 letter below, NRC staff provided approval of TVA's relief request. Although these letters do not specifically reference a 10-year hydrostatic pressure test of SQN's main steam system, current NRC direction regarding the application of code Case N-498 would require performance of a 10-year system hydrostatic pressure test of SQN's main steam system.

Basis for Relief: Performance of a 10-year hydrostatic pressure test presents an undue hardship for the following reasons:

1. The performance of a main steam system hydrostatic test requires pressurization of the feedwater lines from the feedwater check valves, through the entire secondary

side of the S/G and the main steam line up to the main steam isolation valve. This is an unusual plant configuration that would require extensive preparations from both physical and system operation standpoints. In addition, installation of temporary supports on the main steam lines would be necessary for the increased static water load.

2. The main steam safety-relief valves are set at pressures ranging from 1064 to 1117 pounds per square inch (psig). For code Class 2 components with design temperatures greater than 200 degrees Fahrenheit, the code requires a test pressure of 1.25 times the lowest-relief valve settings, which protects that component. The required test pressure for this repair would therefore be 1330 psig. This test pressure would require the removal or gagging of the main steam safety valves, and the installation of a temporary relief valve set at the maximum allowed test pressure.

3. Performance of a hydrostatic test would extend critical path outage time by two days.

Alternative Testing:

In lieu of a 10-year main steam system hydrostatic pressure test, TVA will perform a visual examination (VT-2) of the main steam ASME Class 2 piping while the system is maintained at nominal operating pressure. Insulated portions of the system will be pressurized for a minimum period of 4 hours before the VT-2, while noninsulated portions of the system will be pressurized for 10 minutes before the VT-2.

At the time of repair in 1982, a system leakage test and visual inspection (VT-2) of the subject welds were performed at operating temperature and pressure in conjunction with a system pressure test of the S/Gs. The subject welds have been exposed to over four fuel cycles and no evidence of leakage has been detected.

References:

1. TVA letter to NRC dated May 27, 1982

2. NRC letter to TVA dated May 27, 1982

REQUEST FOR RELIEF I9PT-7

Unit: Units 1 and 2

System: Feedwater system (3)

TVA Drawing: FSAR Figure 10.4.7-2

Component: Two 2" bypass line around feedwater check valves 3-508, 509, 510, and 511

Class: Class 2

Function: Provides suction for the S/G wet lay-up recirculation system

Impractical Requirement: The 1977 Edition, Summer 1978 Addenda, of the American Society of Mechanical Engineers (ASME) Section XI code, Table IWC-2500-1, Item C7.21, requires a system hydrostatic test be performed in accordance with IWC-5222 each inspection interval (i.e., 10 years).

Background: In 1984, a 2-inch bypass line was installed around each of the four feedwater check valves on each unit. Installation of the 2-inch bypass line involved piping and welds that cannot be isolated from the S/G, main steam, and feedwater piping. Therefore, a hydrostatic pressure test of the entire S/G would be required to comply with the code requirement. By letter dated December 16, 1983, TVA requested relief from the hydrostatic test requirement. In the Reference 2 letter below, NRC staff provided approval of TVA's relief request. These letters make reference to, and were predicated on, future performance of a 10-year hydrostatic pressure test of SQN's feedwater system. Since current NRC direction would preclude the application of code Case N-498 to SQN's feedwater system, a hydrostatic pressure test of SQN's feedwater system would be required sometime during the first 10-year interval.

Basis for Relief: Performance of a 10-year hydrostatic pressure test presents an undue hardship for the following reasons:

1. The performance of a feedwater system hydrostatic test requires the pressurization of the feedwater lines from the feedwater check valves, through the entire secondary side of the S/G and the main steam line up to the main steam isolation valve. This is an unusual plant configuration that would require extensive preparations from both physical and system operation standpoints. In addition, installation of temporary supports on the main steam lines would be necessary for increased static water load.

2. The main steam safety-relief valves are set at pressures ranging from 1064 to 1117 pounds per squa. inch (psig). For code Class 2 components with design temperatures greater than 200 degrees Fahrenheit, the code requires a test pressure of 1.25 times the lowest-relief valve settings, which protects that component. The required test pressure for this repair would therefore be 1330 psig. This test pressure would require the removal or gagging of the main steam safety valves, and the installation of a temporary relief valve set at the maximum allowed test pressure.

3. Performance of a hydrostatic test would extend critical path outage time by two days.

Alternative Testing: In lieu of a 10-year feedwater system hydrostatic pressure test, TVA will perform a visual examination (VT-2) of the feedwater ASME Class 2 piping while the system is maintained at nominal operating pressure. Insulated portions of the system will be pressurized for a minimum period of 4 hours before the VT-2, while noninsulated portions of the system will be pressurized for 10 minutes before the VT-2.

At the time of repair in 1984, a system leakage test and visual inspection (VT-2) of the subject welds were performed at operating temperature and pressure in conjunction with a system pressure test of the S/Gs. The subject welds have been exposed to over three fuel cycles and no evidence of leakage has been detected.

References:

1. TVA letter to NRC dated December 16, 1983

2. NRC letter to TVA dated April 12, 1984

REQUEST FOR RELIEF ISPT-8

Unit: Units 1 and 2

System: Feedwater system (3)

TVA Drawing: FSAR Figure 10.4.7-2

Component: Feedwater drain valves 3-512, 513, 516, 517, 520, 521, 524, and 525

Class: Class 2

Function: These 1 1/2-inch valves are provided to facilitate system draining for Maintenance activities

Impractical Requirement: The 1977 Edition, Summer 1978 Addenda of the American Society of Mechanical Engineers (ASME) Section XI code, Table IWC-2500-1, Item C7.21, requires a system hydrostatic test be performed in accordance with IWC-5222 each inspection interval (i.e., 10 years).

Background: In 1984, eight 1 1/2-inch drain valves were removed from the feedwater system and welded pipe caps were installed on the associated lines. Removal of the 1 1/2-inch feedwater drain valves involved piping and welds that cannot be isolated from the S/G, main steam, and feedwater piping. Therefore, a hydrostatic pressure test of the entire S/G would be required to comply with the code requirement. By letters dated July 30 and September 18, 1984, TVA requested relief from the hydrostatic test requirement. In the Reference 3 letter below, NRC staff provided approval of TVA's relief request. These letters make reference to, and were predicated on, future performance of a 10-year hydrostatic pressure test of SQN's feedwater system. Since current NRC direction would preclude application of code Case N-498 to SQN's feedwater system, a hydrostatic pressure test of SQN's feedwater system would be required sometime during the first 10-year interval.

Basis for Relief: Performance of a 10-year hydrostatic pressure test presents an undue hardship for the following reasons:

1. The performance of a feedwater system hydrostatic test requires the pressurization of the feedwater lines from the feedwater check valves, through the entire secondary side of the S/G and the main steam line up to the main steam isolation valve. This is an unusual plant configuration that would require extensive preparations from both physical and system operation standpoints. In addition, installation of temporary supports on the main steam lines would be necessary for increased static water load.

2. The main steam safety-relief valves are set at pressures ranging from 1064 to 1117 psig. For code Class 2 components with design temperatures greater than 200 degrees Fahrenheit, the code requires a test pressure of 1.25 times the lowest-relief valve settings, which protects that component. The required test pressure for this repair would therefore be 1330 psig. This test pressure would require the removal or gagging of the main steam safety valves, and the installation of a temporary relief valve set at the maximum allowed test pressure.

3. Performance of a hydrostatic test would extend critical path outage time by two days.

Alternative Testing: In lieu of a 10-year feedwater system hydrostatic pressure test, TVA will perform a visual examination (VT-2) of the feedwater ASME Class 2 piping while the system is maintained at nominal operating pressure. Insulated portions of the system will be pressurized for a minimum period of 4 hours before the VT-2, while noninsulated portions of the system will be pressurized for 10 minutes before the VT-2.

At the time of repair in 1984, the eight repair welds were surface examined in accordance with the construction code requirements and leak tested at operating pressure. The units have completed more than three fuel cycles since the repair without indication of leakage at these welds.

References:

1. TVA letter to NRC dated July 30, 1984

2. TVA letter to NRC dated September 18, 1984

3. NRC letter to TVA dated October 15, 1984

REQUEST FOR RELIEF ISPT-9

Unit: Unit 1

System: Main steam (1)

TVA Drawing: FSAR Figure 10.3.2-1

Component: S/G nitrogen lay-up isolation valves 1-532, 1-534, 1-536, and 1-538

Class: Class 2

Function: These 2-inch valves provide isolation between the main steam warming line and the nitrogen lay-up piping

Impractical Requirement: The 1977 Edition, Summer 1978 Addenda, of the American Society of Mechanical Engineers (ASME) Section XI code, Table IWC-2500-1, Item C7.21, requires a system hydrostatic test be performed in accordance with IWC-5222 each inspection interval (i.e., 10 years).

Background: During fuel Cycle 4, four 2-inch warming-line valves were replaced in the Class 2 main steam system. Removal of the warming-line valves involved piping and welds that cannot be isolated from the S/G, main steam, and feedwater piping. Therefore, a hydrostatic pressure test of the entire S/G would be required to comply with the code requirement. TVA invoked ASME Code Case N-416 that allowed the hydrostatic test to be deferred until the next regularly scheduled system hydrostatic test. Current NRC direction regarding the concurrent use of code Cases N-416 and N-498 would require performance of a 10-year system hydrostatic pressure test of SQN's main steam system.

Basis for Relief Performance of a 10-year hydrostatic pressure test presents an undue hardship for the following reasons:

1. The performance of a main steam system hydrostatic test requires the pressurization of the feedwater lines from the feedwater check valves, through the entire secondary side of the S/G and the main steam line up to the main steam isolation valve. This is an unusual plant configuration that would require extensive preparations from both physical and system operation standpoints. In addition, installation of temporary supports on the main steam lines would be necessary for the increased static water load.

2. The main steam safety-relief valves are set at pressures ranging from 1064 to 1117 psig. For code Class 2 components with design temperatures greater than 200 degrees Fahrenheit, the code requires a test pressure of 1.25 times the lowest-relief valve settings, which protects that component. The required test pressure for this repair would therefore be 1330 psig. This test pressure would require the removal or gagging of the main steam safety valves, and the installation of a temporary relief valve set at the maximum allowed test pressure.

3. Performance of a hydrostatic test would extend critical path outage time by two days.

Alternative Testing: In lieu of a 10-year main steam system hydrostatic pressure test, TVA will perform a visual examination (VT-2) of the main steam ASME Class 2 piping while the system is maintained at nominal operating pressure. Insulated portions of the system will be pressurized for a minimum period of 4 hours before the VT-2, while noninsulated portions of the system will be pressurized for 10 minutes before the VT-2.

At the time of repair in 1990, a system leakage test and visual inspection (VT-2) of the subject welds were performed at operating temperature and pressure in conjunction with a system pressure test of the S/Gs. The subject welds have been exposed to more than one fuel cycle and no evidence of leakage has been detected.

References: TVA invoked ASME code Case N-416 and consequently no correspondence was required.

REQUEST FOR RELIEF ISPT-10

Unit: Units 1 and 2

System: Reactor coolant system (RCS) (68)

TVA Drawing: FSAR Figure 5.1-1

Component: RCS piping connections to the upper head injection (UHI) system and the resistance temperature device (RTD) bypass manifold.

Class: Class 1

Function: The UHI system piping was originally installed to provide passage of cooling water from the vessel head plenum directly to the top of the fuel assemblies during a postulated "loss of coolant accident." The RTD bypass manifold piping was originally installed to extract and combine RCS flow from the hot-leg and cold-leg piping in order to obtain an average RCS temperature (T_{ave}).

Impractical Requirement: The 1977 Edition, Summer 1978 Addenda, of the ASME Section XI code, Table IWB-2500-1, Item B15.51, requires a system hydrostatic test be performed in accordance with IWB-5222 each inspection interval (i.e., 10 years).

Background: In 1990, RCS modifications were performed to remove SQN's UHI system and the RTD bypass manifolds. These modifications involved sections of piping and welds that cannot be isolated from the rest of the RCS; therefore, a hydrostatic test of the entire RCS would be required to comply with the code requirement. In response to this hardship, TVA requested relief from the postmodification RCS hydrostatic test that was subsequently evaluated and approved by the staff in a May 11, 1990, letter. The staff noted in their evaluation that the RCS welds associated with the UHI and RTD modifications would be subjected to hydrostatic test pressures near the end of SQN's 10-year in-service inspection interval. Since that time, alternative rules provided in code Case N-498 were approved on May 13, 1991. Code Case N-498 would allow system leakage tests on Class 1 piping as an alternative to hydrostatic pressure tests. Current NRC direction, however, would preclude TVA's use of code Case N-498 for SQN's RCS system for the UHI and RTD bypass modifications. Consequently, a hydrostatic test of SQN's RCS would be required sometime during SQN's first 10-year in-service inspection interval.

Basis for Relief: Performance of a 10-year system hydrostatic test represents an undue hardship for the following reasons:

1. The performance of a low-temperature and high-pressure test (cold hydrostatic pressure test) would require pressurization of the secondary side of the S/Gs in order to prevent overpressurization of the S/G tubes. These measures result in unusual plant configuration and require substantial unit downtime to perform.

2. The performance of a high-temperature and low-pressure test (hot hydrostatic pressure test) during start-up (i.e., Mode 3) presents a problem with lifting of the RCS pressurizer safety valves. The lowest pressure allowed by the code is 1.02 times the RCS operating pressure. For SQN, this is equal to 1.02 times 2235 psig, or 2280 psig. The setpoint for the RCS pressurizer safety valves is 2485 psig ±1 percent. The leak-tight pressure for these valves has been certified by the vendor at approximately 10 percent below the setpoint pressure, or 2236 psig. Above this pressure, the valves begin to discharge small amounts of steam prior to full lift. According to the manufacturer, this discharge could become excessive, and the proper reseating of the relief valves would not be possible. In such a case, it would be necessary to cool the unit back down and depressurize the RCS to repair the valves. Gagging or removal of the valves for installation of a blind flange is precluded by Technical Specification (TS) 3/4.4.3. This TS requires these valves to be operable in Modes 1, 2, and 3.

3. For personnel safety reasons, it is impractical to perform the visual examination of the RCS piping following a four-hour hold period at the high-temperature/low-pressure (500 degrees Fahrenheit) condition. Paragraph IWA-5245 of the ASME Section XI code recognizes the high-temperature levels that would be encountered by examination personnel and thereby allows the RCS temperature to be lowered (following the four-hour hold time) to 200 degrees Fahrenheit for performance of the visual examination (VT-2). The provision for lowering the RCS temperature will require several start-up tests to be performed again during the second power ascension. This places the plant in transition from heatup to cooldown and requires two to three additional days of outage time for reperforming start-up tests.

Alternative Testing:

In lieu of a 10-year RCS hydrostatic pressure test, TVA will perform a visual examination (VT-2) of the ASME Class 1 piping while the system is maintained at nominal operating pressure. Insulated portions of the system will be pressurized for a minimum period of 4 hours before the VT-2, while noninsulated portions of the system will be pressurized for 10 minutes before the VT-2.

At the time of repair in 1990, the welds were examined in accordance with the construction code requirements. The units have completed more than one fuel cycle since the repair without indication of leakage at these welds.

References:

1. TVA letter to NRC dated September 29, 1989

2. NRC letter to TVA dated May 11, 1990