June 13, 2000

Dr. Robert C. Mecredy
Vice President, Nuclear Operations
Rochester Gas and Electric Corporation
89 East Avenue
Rochester, NY 14649

SUBJECT: REQUESTS FOR RELIEF FROM THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE (ASME CODE) SECTION XI REQUIREMENTS FOR THE R. E GINNA NUCLEAR POWER PLANT FOURTH 10-YEAR INTERVAL OF THE PUMP AND VALVE INSERVICE TESTING PROGRAM (TAC NO. MA7265)

Dear Dr. Mecredy:

By letter dated November 24, 1999, as supplemented April 20, 2000, you requested 15 relief requests for the fourth 10-year interval inservice testing (IST) program for pumps and valves.

Pursuant to 10 CFR 50.55a, the NRC staff reviewed the proposed relief requests against the requirements of Section XI of the 1989 Edition of the ASME Code. The results are provided in the enclosed safety evaluation.

Relief is granted for VR-7, VR-8, VR-9, and VR-10 for the fourth 10-year interval pursuant to 10 CFR 50.55a(f)(6)(i). In making this determination, the staff has considered the impracticality of performing the required testing and the burden on the licensee if the requirements were imposed.

The proposed alternative to the Code requirements described in GR-2 is authorized pursuant to 10 CFR 50.55a(a)(3)(i) based on the alternative providing an acceptable level of quality and safety. The alternative is authorized for the fourth 10-year interval.

The proposed alternatives to the Code requirements described in PR-1, GR-1, VR-3, VR-4, VR-5, and VR-6 are authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the specified requirements of these sections would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Relief is not required for the testing proposed in VR-12.

The proposed alternatives to the Code requirements described in VR-1 and VR-2 are approved pursuant to 10 CFR 50.55a(f)(4)(iv) for the fourth 10-year interval. These alternatives meet the requirements of the 1995 OM Code, paragraph Section Inservice Testing C (ISTC) 4.5.4(c), which has been incorporated by reference into 10 CFR 50.55a (64 FR 51370).

Relief Request VR-11 has been withdrawn by your letter of April 20, 2000.

The reliefs granted are authorized by law and will not endanger life or property, or the common defense and security and are otherwise in the public interest giving due consideration to the burden upon the licensee if the requirements were imposed on the facility.

Sincerely,

/RA/

Marsha Gamberoni, Acting Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-244

Enclosure: Safety Evaluation

cc w/encl: See next page

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE INSERVICE TESTING PROGRAM, FOURTH 10-YEAR INTERVAL

ROCHESTER GAS AND ELECTRIC CORPORATION

R. E. GINNA STATION NUCLEAR POWER PLANT

DOCKET NUMBER 50-244

1.0 INTRODUCTION

The *Code of Federal Regulations*, 10 CFR 50.55a, requires that inservice testing (IST) of certain American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 pumps and valves be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code (ASME Code) and applicable addenda, except where alternatives have been authorized or relief has been requested by the licensee and granted by the Commission pursuant to paragraphs (a)(3)(i), (a)(3)(ii), or (f)(6)(i) of 10 CFR 50.55a. In proposing alternatives or requesting relief, the licensee must demonstrate that: (1) the proposed alternatives provide an acceptable level of quality and safety; (2) compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety; or (3) conformance is impractical for its facility. Section 50.55a authorizes the Commission to approve alternatives and to grant relief from ASME Code requirements upon making the necessary findings. NRC guidance contained in Generic Letter (GL) 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," provides alternatives to the Code requirements which are acceptable. Further guidance is given in GL 89-04, Supplement 1, and NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants."

In a letter dated November 24, 1999, Rochester Gas and Electric Corporation (the licensee), submitted the fourth 10-year interval IST program for pumps and valves. The program contained 15 relief requests. A conference call was conducted with the licensee on March 13, 2000, to clarify the information provided in the IST program. As a result of the call, the licensee submitted supplemental information in a letter dated April 20, 2000.

The fourth 10-year IST interval for R. E. Ginna Nuclear Power Plant began on January 1, 2000, and is scheduled to end December 31, 2009. The IST program was developed in accordance with the requirements of the 1989 Edition of the ASME Code by implementation of the 1987 ASME/ANSI Operations and Maintenance (OM) Standards Part 1, Part 6, and Part 10 (OM-1, OM-6, and OM-10) for IST of safety and relief devices, pumps, and valves.

The NRC's findings with respect to authorizing alternatives and granting or denying the IST program relief requests are given below.

2.0 PUMP RELIEF REQUEST

2.1 Relief Request PR-1

The licensee requests relief from the flow rate measurement requirement of OM-6 paragraph 4.6.5 for the diesel fuel oil transfer pumps. The Code requires that when measuring flow rate, a rate or quantity meter which is installed in the pump test circuit be used. The licensee proposes an alternative to determine the flow rate by calculation of day tank level versus time. This alternative testing method was authorized for the third 10-year interval in the staff's safety evaluation (SE) dated April 15, 1991.

2.1.1 Licensee's Basis for Requesting Relief

The licensee states:

> Measurement of diesel fuel oil transfer pump flow rate is determined by observing the rate of change in the diesel generator day tanks as they are being filled. A graduated sight glass located on the day tank is the only practical means available to calculate flow rates.

2.1.2 Alternative Testing

The licensee proposes:

> Flow rate will be determined by calculation of day tank level increase vs. time utilizing the accuracy documented in design analysis DA-EWR-4526-ME-20.

2.1.3 Evaluation

The licensee requests relief from the flow rate measurement requirement of OM-6 paragraph 4.6.5 for the diesel fuel oil transfer pumps. The Code requires that when measuring flow rate, a rate or quantity meter which is installed in the pump test circuit be used. The licensee proposes an alternative to determine the flow rate by calculation of day tank level versus time.

There are no installed instruments on the diesel fuel oil transfer system that allow a direct measurement of the flow rate when testing these pumps. The pump flow rate can be calculated by measuring the change in day tank level or volume and the pump operation time required to make that change. The accuracy of this method is documented in design analysis DA-EWR-4526-ME-20. This method determines a flow rate for a pump that can be used to evaluate the pump hydraulic condition.

Calculated pump flow rates that are sufficiently accurate and repeatable can be used in conjunction with pump differential pressure measurements to monitor pump hydraulic condition and degradation and should provide reasonable assurance of the pump's operational readiness. Requiring the licensee to install flow rate instrumentation would be costly and result in hardship without a compensating increase in the level of quality and safety.

2.1.4 Conclusion

The licensee's proposed alternative to the requirements of OM-6 paragraph 4.6.5 for the diesel fuel oil transfer pumps is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the Code requirements would result in a hardship without a compensating increase in the level of quality and safety.

3.0 VALVE RELIEF REQUESTS

3.1 Relief Request GR-1

The licensee requests relief from the leak rate testing requirements of OM-10 paragraph 4.2.2.3 for the Event V pressure isolation valves. The licensee proposes to test the valves in accordance with the Technical Specifications (TS).

This alternative was previously approved for the licensee's third 10-year interval in the staff's SE dated April 1, 1991.

3.1.1 Licensee's Basis for Requesting Relief

The licensee states:

> Leakage testing, including testing requirements is governed by plant Technical Specifications. Testing criteria utilized meets the intent of OM-10 leak rate testing. Per NUREG 1482, Section 4.1.1, testing of the pair of valves would be acceptable if the configuration does not require two valves and the safety analysis for such a configuration would credit either of the two valves. Since individual testing of two sets of check valves is not possible due to lack of test connections and since testing of these valves with their adjacent MOVs [motor operated valves] is specified adequately by Technical Specifications, it is impractical to perform separate leak rate tests.

3.1.2 Alternative Testing

The licensee proposes:

> These valves will be leak rate tested in accordance with RCS [Reactor Coolant System] Pressure Isolation Valve leak rate testing per Technical Specification 3.4.14.

3.1.3 Evaluation

The licensee requests relief from the leak rate testing requirements of OM-10 paragraph 4.2.2.3 for 12 pressure isolation valves. Valves 853A and 853B are single check valves in the residual heat removal system. Valves 867A, 867B, 878G, and 878J are independent Event V check valves. Valves 878H and 877B are paired Event V check valves with an adjacent MOV (878C). Valves 878F and 877A are also paired Event V check valves with an adjacent MOV (878A). Event V pressure isolation valves are defined as two check valves in series at a low pressure/ RCS interface whose failure may result in a loss-of-coolant accident that bypasses containment. The licensee proposes to leak test these valves in accordance with the TSs, rather than in accordance with the Code requirements.

The licensee's valve configuration contains individually-testable check valves in series and also paired check valves with an associated downstream MOV. The paired check valves cannot be individually tested. However, these pairs of check valves can be tested in series with the associated MOV. In this instance, the check valve pair is considered the first pressure isolation valve and the associated downstream MOVs is considered the second pressure isolation valve.

Staff guidance provided in Section 4.1.1 of NUREG-1482, states that testing of a pair of valves is acceptable if the configuration does not require two valves and the safety analysis for such a configuration would credit either of the two valves. With the pair acting as one valve and the MOV acting as the second, the requirement that each pressure isolation valve be individually leak tested is satisfied.

The licensee's TS 3.4.14 identify these valves as pressure isolation valves which must be leak rate tested. The TS establish the maximum permissible leakage rates, test pressure requirements, test frequency requirements, and the required action if the leak rate limit is exceeded. The leak rate testing specified in the TS meets the intent of OM-10, Paragraph 4.2.2.3 and will provide an adequate method to verify the leak tight integrity of the valves.

Considering the time, cost, and radiation exposure to licensee personnel, it would be burdensome to require the licensee to perform leak rate testing in accordance with the Code and would not result in a compensating increase in the level of quality and safety.

3.1.4 Conclusion

The licensee's proposed alternative to the requirements of OM-10, paragraph 4.2.2.3 for 12 pressure isolation valves is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the Code requirements would result in a hardship without a compensating increase in the level of quality and safety.

3.2 Relief Request GR-2

The licensee requests relief from the corrective actions of OM-10 paragraph 4.2.1.9(b) for all power-operated valves with stroke times which do not meet the acceptance criteria of paragraph 4.2.1.8. The licensee proposes to analyze, within 96 hours, data from valves with stroke times which do not meet the acceptance criteria, rather than immediately retesting the valves as required by the Code. If the stroke times exceed the limiting values of full stroke, the valves will be immediately declared inoperable.

3.2.1 Licensee's Basis for Requesting Relief

The licensee states:

> During its third interval IST Program (based on the 1986 Edition of ASME Section XI), RG&E has implemented an alternate approach with regard to stroke time acceptance criteria for power-operated valves. This approach has resulted in the highly reliable and repeatable assessment of stroke time performance. In lieu of simply utilizing the OM-10 paragraph 4.2.1.8 acceptance criteria and the OM-10 paragraph 4.2.1.9 corrective actions, which RG&E believes would result in imprudent delays associated with retesting

and then analyzing within 96 hours when assessing the condition of power-operated valves, RG&E has established two sets of stroke time limits with independent corrective actions. RG&E's methodology immediately requires an analysis within our Corrective Action Program, rather than delaying the analysis by first specifying a required test.

The first stroke time limit criteria against which measured stroke time data is assessed is the ACTION LIMIT which incorporates the OM-10, Paragraph 4.2.1.8 acceptance criteria. If any of the ACTION limiting values are exceeded, corrective action documentation is submitted and the data shall be analyzed within 96 hours to verify that the measured stroke time represents acceptable valve operation. The second stroke time limit criteria against which measured stroke time data is assessed is the LIMITING VALUE which incorporates either the design-basis operability stroke time value which ensures safety function performance or the owner-established limiting value of full-stroke time, whichever is <u>less</u>. If any of the LIMITING VALUES are exceeded, the valve is immediately declared inoperable and the appropriate Technical Specification action statement is entered, if applicable.

RG&E believes this stroke time assessment approach provides an acceptable level of quality and safety which has been demonstrated by ten years of successful and safe operation of its power-operated valve population and is conservative with respect to OM-10 paragraphs 4.2.1.8 and 4.2.1.9 when taken as a whole.

3.2.2 <u>Alternative Testing</u>

The licensee proposes:

Power-operated valves with measured stroke times that do not meet the ACTION LIMIT stroke time acceptance criteria will be documented in accordance with the Ginna Station Corrective Action Program and the data shall be analyzed within 96 hours to verify that the measured stroke time represents acceptable valve operation. If, following analysis, the measured stroke time that was found to have exceeded the ACTION LIMIT does not represent acceptable valve operation, the valve shall immediately be declared inoperable.

3.2.3 <u>Evaluation</u>

The Code, OM-10 paragraph 4.2.1.9(b), requires that valves with measured stroke times which do not meet the acceptance criteria of paragraph 4.2.1.8 be immediately retested or declared inoperable. If the valve is retested and the second set of data also does not meet the acceptance criteria, the data shall be analyzed within 96 hours to verify that the new stroke time represents acceptable valve operation, or the valve shall be declared inoperable. If the second set of data meets the acceptance criteria, the cause of the initial deviation shall be analyzed and the results documented in the record of tests.

Based on the stroke time acceptance criteria of the Code, the licensee proposes to establish two sets of stroke time limits, Action Limit and Limiting Value, for all power-operated valves. The Action Limit incorporates the acceptance criteria of OM-10, paragraph 4.2.1.8. If the measured stroke time exceeds the Action Limit, the data is analyzed within 96 hours in the licensee's corrective action program. The valve is not retested. A Limiting Value is established

as either the design basis operability stroke time or the owner-defined limiting value of full stroke. If this limit is exceeded, the valve is immediately declared inoperable and the appropriate TS action statement is entered.

The licensee's proposed alternative deviates from the Code requirements in that valves with stroke times that do not meet the acceptance criteria are not immediately retested before analysis of the data. The staff finds that this approach is more conservative than what is required by the Code because after the first anomalous stroke, the data is analyzed rather than waiting for a retest and analyzing at a later date. However, by not performing a retest, gaining more information from the stroke time is precluded. There is a concern that the valve may be in an intermediate condition where it degrades after every stroke and this trend will not be observed. The licensee's analysis is expected to address these types of conditions.

The licensee's proposed alternative to the corrective action requirements of OM-10 paragraph 4.2.1.9(b) provides an acceptable level of quality and safety and is conservative with regard to the Code requirements.

3.2.4 Conclusion

The proposed alternative to the stroke time corrective action requirements of OM-10 paragraph 4.2.1.9(b) for all power-operated valves is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the fourth 10-year interval based on the alternative providing an acceptable level of quality and safety.

3.3 Relief Request VR-1

The licensee requests relief from the testing requirements of OM-10, paragraph 4.3.2.1 which states that check valves shall be exercised at least once every 3 months except as provided by paragraphs 4.3.2.2, 4.3.2.3, 4.3.2.4, and 4.3.2.5. Paragraph 4.3.2.4(c) states that disassembly every refueling outage may be used to verify valve operability. The licensee proposes an alternative to establish a check valve sample disassembly and inspection plan for the two valves in the emergency diesel generator fuel oil system.

This alternative was previously approved for the licensee's third 10-year interval in the staff's SE dated April 1, 1991.

3.3.1 Licensee's Basis for Requesting Relief

The licensee states:

> During any mode of plant operation there is no practical means to exercise these valves. Valve closure cannot be verified due to system design. To perform a closure verification would require disassembly of mechanical joints in the piping, which would place the diesel in an inoperable condition.

3.3.2 Alternative Testing

The licensee proposes:

One valve will be disassembled, full-stroke exercised and inspected once every 18 months on a rotating basis. If that valve fails, the remaining valve will be disassembled, full-stroke exercised and inspected for operability at that same time. (re: Generic Letter 89-04, Attachment 1 - Position 2)

3.3.3 Evaluation

The valves for which the licensee requests relief, 5960A and 5960B, open to provide a flow path for overflow from the fuel oil day tank to the fuel oil storage tank. These valves close to prevent reverse flow into the fuel oil day tank during recirculation of the fuel oil storage tank. The Code, OM-10 paragraph 4.3.2.1, requires that check valves be exercised at least once every 3 months except as provided by paragraphs 4.3.2.2, 4.3.2.3, 4.3.2.4, and 4.3.2.5. As an alternative to demonstrating valve obturator movement, the Code allows disassembly every refueling outage to determine operability of the valves (OM-10, paragraph 4.3.2.4(c)). The licensee proposes to disassemble and inspect one of the two valves every refueling outage. The valve tested will alternate every refueling outage.

The staff Position 2 of GL 89-04 allows for the employment of a sample disassembly and inspection plan for groups of identical valves in similar applications. The sample disassembly and inspection plan involves grouping similar valves and testing one valve in each group during each refueling outage. Guidelines for this plan are stated in Appendix A of NUREG-1482. The sampling technique requires that each valve in the group be the same design and have the same service conditions, including valve orientation. Additionally, at each disassembly, the licensee must verify that the disassembled valve is capable of full stroking and that the internals of the valve are structurally sound. Also, if the disassembly is to verify the full-stroke capability of the valve, the disk should be manually exercised.

A different valve in the group is required to be disassembled, inspected, and manually full-stroke exercised at each successive refueling outage until the entire group has been tested. If the disassembled valve is not capable of being full-stroke exercised or there is binding or failure of the valve internals, the remaining valves in that group must also be disassembled, inspected, and manually full-stroke exercised during the same outage. Once this is complete, the sequence of disassembly is repeated.

The 1995 ASME OM Code, paragraph ISTC 4.5.4(c), allows a sample disassembly examination program to be used to verify valve obturator movement. The Code requires that grouping of check valves for the sample disassembly examination program be technically justified and requires a periodic examination of one valve from the group.

The licensee's proposed alternative is consistent with Position 2 of GL 89-04 and paragraph ISTC 4.5.4(c) of the 1995 ASME OM Code, which has been incorporated by reference into 10 CFR 50.55a (64 FR 51370), and therefore, provides an acceptable level of quality and safety. The regulation at 10 CFR 50.55a(f)(4)(iv) allows the use of requirements in subsequent editions of the Code (i.e., for Ginna's fourth 10-year interval, editions after the 1989 edition of the Code) that have been incorporated by reference into 10 CFR 50.55a, with NRC staff approval.

3.3.4 Conclusion

The proposed alternative to the requirements of OM-10 paragraph 4.3.2.4(c), is approved pursuant to 10 CFR 50.55a(f)(4)(iv) for the fourth 10-year interval. This alternative meets the requirements of the 1995 OM Code, paragraph ISTC 4.5.4(c), which has been incorporated by reference into 10 CFR 50.55a (64 FR 51370).

3.4 Relief Request VR-2

The licensee requests relief from the testing requirements of OM-10, paragraph 4.3.2.1 which states that check valves shall be exercised at least once every 3 months except as provided by paragraphs 4.3.2.2, 4.3.2.3, 4.3.2.4, and 4.3.2.5. Paragraph 4.3.2.4(c) states that disassembly every refueling outage may be used to verify valve operability. The licensee proposes an alternative to establish a check valve sample disassembly and inspection plan for the two valves in the standby auxiliary feedwater (AFW) system.

This alternative was previously approved for the licensee's third 10-year interval in the staff's SE dated April 1, 1991.

3.4.1 Licensee's Basis for Requesting Relief

The licensee states:

> Full-stroke exercising cannot be accomplished during power operation or cold shutdown as this would introduce Service Water to the Standby Auxiliary Feedwater (AWF) System. Service Water does not meet water purity requirements for the system or steam generators. Service Water would be supplied to steam generators during the required quarterly pump tests if exercising valves 9627A and B was performed.

3.4.2 Alternative Testing

The licensee proposes:

> Partial stroke exercising will be performed each quarter. One valve will be disassembled, full-stroke exercised and inspected once every 18 months on a rotating basis. If that valve fails, the remaining valve will be disassembled, full-stroke exercised and inspected for operability at that same time. (re: Generic Letter 89-04 - Position 2).

3.4.3 Evaluation

The valves for which the licensee requests relief, 9627A and 9627B, function as service water suction check valves. These valves close to prevent reverse flow from the standby AFW system piping back into the service water system and open to provide a flow path for service water to the standby AFW system pumps. The Code, OM-10, paragraph 4.3.2.1, requires that check valves be exercised at least once every 3 months except as provided by paragraphs 4.3.2.2, 4.3.2.3, 4.3.2.4, and 4.3.2.5. As an alternative to demonstrating valve obturator movement, the Code allows disassembly every refueling outage to determine operability of the valves (OM-10, paragraph 4.3.2.4(c)). The licensee proposes to partial-stroke exercise both

valves quarterly and also disassemble and inspect one of the two valves every refueling outage. The valve tested will alternate every refueling outage.

The staff Position 2 of GL 89-04 allows for the employment of a sample disassembly and inspection plan for groups of identical valves in similar applications. The sample disassembly and inspection plan involves grouping similar valves and testing one valve in each group during each refueling outage. Guidelines for this plan are stated in Appendix A of NUREG-1482. The sampling technique requires that each valve in the group be the same design and have the same service conditions, including valve orientation. Additionally, at each disassembly, the licensee must verify that the disassembled valve is capable of full stroking and that the internals of the valve are structurally sound. Also, if the disassembly is to verify the full-stroke capability of the valve, the disk should be manually exercised.

A different valve in the group is required to be disassembled, inspected, and manually full-stroke exercised at each successive refueling outage until the entire group has been tested. If the disassembled valve is not capable of being full-stroke exercised or there is binding or failure of the valve internals, the remaining valves in that group must also be disassembled, inspected, and manually full-stroke exercised during the same outage. Once this is complete, the sequence of disassembly is repeated.

The 1995 ASME OM Code, paragraph ISTC 4.5.4(c), allows a sample disassembly examination program to be used to verify valve obturator movement. The Code requires that grouping of check valves for the sample disassembly examination program be technically justified and requires a periodic examination of one valve from the group.

The licensee's proposed alternative is consistent with Position 2 of GL 89-04 and paragraph ISTC 4.5.4(c) of the 1995 ASME OM Code, which has been incorporated by reference into 10 CFR 50.55a (64 FR 51370), and therefore, provides an acceptable level of quality and safety. The regulation at 10 CFR 50.55a(f)(4)(iv) allows the use of requirements in subsequent editions of the Code (i.e., for Ginna's fourth 10-year interval, editions after the 1989 edition of the Code) that have been incorporated by reference into 10 CFR 50.55a, with NRC staff approval.

3.4.4 Conclusion

The proposed alternative to the requirements of OM-10 paragraph 4.3.2.4(c), is approved pursuant to 10 CFR 50.55a(f)(4)(iv) for the fourth 10-year interval. This alternative meets the requirements of the 1995 OM Code, paragraph ISTC 4.5.4(c), which has been incorporated by reference into 10 CFR 50.55a (64 FR 51370).

3.5 Relief Request VR-3

The licensee requests relief from the stroke time measurement and evaluation requirements of OM-10 paragraphs 4.2.1.8 and 4.2.1.9 for three power operated valves in the station service water system. The licensee proposes to test these valves on a quarterly basis during AFW pump testing. Acceptable valve operation will be based on locally verifying that the valve has de-energized and tripped open, verifying the presence of a steady stream of water from the affected floor drain funnel, and verifying that the associated main control board annunciator alarms.

3.5.1 Licensee's Basis for Requesting Relief

The licensee states:

> These are rapid acting valves. These valves automatically actuate on high differential pressure across the supply strainer. Measurement of stroke times during manual actuation, for testing, is not practical and would not produce consistent, meaningful or trendable results. Stroke timing of these valves using conventional methods would be extremely difficult and unrepeatable. It would be necessary to disassemble the respective differential pressure switch in order to control actuation of these valves and as a result of the disassembly, stroke timing during power operation would require rendering these valves inoperable and entering an LCO [Limiting Condition for Operation] from which prompt restoration would be impractical. On a quarterly basis, these valves are tested during Auxiliary Feedwater pump testing. This testing includes strainer cleaning, strainer isolation, high differential pressure simulation, verification of valve operation and flow observation. Failure of these valves to stroke in conjunction with a clogged strainer would result in a lack of pressure at the bearing cooler inlet and a high DP alarm, to which an operator would be dispatched who would manually trip the respective valve.

3.5.2 Alternative Testing

The licensee proposes:

> These valves will be stroke tested during associated auxiliary feedwater pump testing by closing the valve downstream of the strainer. Acceptable valve operation will be based on:
>
> - Verifying locally that the valve has de-energized and tripped open
> - Verifying the presence of a steady stream of water from the affected floor drain funnel
> - Verifying that the associated main control board annunciator alarms

3.5.3 Evaluation

The licensee requests relief from the stroke time measurement and evaluation requirements of OM-10 paragraphs 4.2.1.8 and 4.2.1.9 for three rapid-acting solenoid-operated valves in the station service water system. These valves, 4324, 4325, and 4326, are normally closed and are required to open to provide a path of cooling water flow to the AFW pump bearings to prevent pump damage when the supply strainer in the normal cooling path becomes clogged. There are no control switches that effect a full-stroke open or closed for these valves. Also, there is no remote valve position indication or other positive means to determine valve position. Without concise methods of initiating valve movement or determining when the stroke is completed, it is difficult to obtain repeatable stroke time data to monitor for degradation. The licensee states that in order to stroke time the valves, it would be necessary to disassemble them which would render them inoperable and require entrance into an LCO. This would be a hardship for the licensee and doing so may compromise a level of quality and safety. Instead of conforming to the Code-required testing, the licensee proposes an alternative that is consistent with the guidance in NUREG-1482, Section 4.2.8.

As stated in NUREG-1482, Section 4.2.8, if the licensee cannot time the stroke of a solenoid-operated valve by the conventional method using position indication, the alternative testing proposes a method to time the stroke of the valve or otherwise monitor for degrading conditions to give adequate assurance of operational readiness. The licensee has proposed to stroke the valves during the quarterly AFW pump testing. Acceptable valve operation will be based on locally verifying that the valve has de-energized and tripped open, verifying the presence of a steady stream of water from the affected floor drain funnel, and verifying that the associated main control board annunciator alarms. The quarterly verification, while not measuring stroke time or monitoring for degradation, does provide an indication that each solenoid valve is moving to its safety position by verifying disk movement. On this basis, the staff finds the licensee's proposed alternative to be acceptable.

3.5.4 Conclusion

The licensee's proposed alternative to the requirements of OM-10, paragraphs 4.2.1.8 and 4.2.1.9 for the station service water system valves 4324, 4325, and 4326 is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the Code requirements would result in a hardship without a compensating increase in the level of quality and safety.

3.6 Relief Request VR-4

For the pressurizer safety relief valves, the licensee requests relief from OM-1 paragraph 7.3.1.1(g). This provision of the Code requires the operation and electrical characteristics of position indicators be determined prior to maintenance of safety valves. The licensee proposes to remotely verify the valves' position indication during refueling outages by simulating actuation using existing calibration procedures.

This alternative was authorized for the third 10-year interval in the staff's SE dated April 15, 1991, and November 4, 1993.

3.6.1 Licensee's Basis for Requesting Relief

The licensee states:

> These valves are mechanical spring-actuated valves with an externally-mounted LVDT [linear variable differential transformer] stem position indicator. The position indicator must be removed in order to permit removal of the safeties each refueling outage for shipment to an off-site vendor for set pressure testing. It would be necessary to intentionally challenge RCS pressure limits to actuate these safety valves in order to perform position indication testing prior to removal for set pressure testing. Also, if these safety valves were actuated for a position indication test following re-installation, they would again need to be retested to ensure the set pressure has not been adversely affected. This involves increased testing and unnecessary radiation exposure to testing personnel. In accordance with plant administrative procedures, channel checks for pressurizer safety valve position indication are performed once per shift and validated by comparison with tailpipe temperature indication.

3.6.2 Alternative Testing

The licensee proposes:

> These valves will be simulated to actuate using existing station calibration procedures. The procedure utilizes movement of the valve's coil (up/down) and verifies position via an alarm in the Control Room. Calibration of these position indicators is governed by plant calibration procedures and is performed on a refueling basis. These procedures verify that the proper clearance is obtained to ensure obturator motion is accurately represented.

3.6.3 Evaluation

The pressurizer safety relief valves, 434 and 435, provide overpressurization protection for the RCS and pressurizer. The Code, OM-1 paragraph 7.3.1.1(g), requires the operation and electrical characteristics of position indicators be determined prior to maintenance of safety valves. The licensee proposes an alternative to remotely verify the valves' position indication during refueling outages by simulating actuation using existing calibration procedures.

These valves are mechanically actuated in response to pressurizer pressure. It would be necessary to intentionally challenge RCS pressure limits to actuate the valves to perform position indication testing prior to removal for set pressure testing. Actuating the valves for position indication verification following set pressure testing would necessitate a retest of the valve's set relief pressure. This would unnecessarily expose the test personnel to radiation and result in a hardship without a compensating increase in the level of quality and safety.

The licensee proposed an alternative to verify the valves' remote position indication by moving the valves' coils and observing the appropriate response of the control room indication. Although this procedure does not verify actual valve obturator position, it gives reasonable assurance that valve position is accurately indicated. The staff's SE dated November 4, 1993, determined that the procedural controls employed for the verification of the position indication accurately reflects the obturator position and will provide reasonable assurance of the valves' operational readiness.

3.6.4 Conclusion

The licensee's proposed alternative to the requirements of OM-1 paragraph 7.3.1.1(g) for the pressurizer safety relief valves is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the Code requirements would result in a hardship without a compensating increase in the level of quality and safety.

3.7 Relief Request VR-5

The licensee requests relief from the quarterly exercise requirements of OM-10 paragraph 4.3.2.1 for two check valves in the safety injection system. The licensee proposes to part-stroke the valves quarterly and full-stroke the valves once every three refueling outages.

This alternative was authorized for the third 10-year interval by the staff's SE dated April 9, 1997.

3.7.1 Licensee's Basis for Requesting Relief

The licensee states:

> Full-stroke open and close exercising during normal power operation cannot be accomplished since system pressures required to perform the test are not enough to overcome RCS pressure. A test method that permits and confirms full-stroke exercising of these check valves during cold shutdown has been implemented at Ginna Station. To perform the test, the plant must be maintained in an off-normal condition with a risk for nitrogen injection and possible entrainment in the RCS. The performance of this test also involves added personnel radiological exposure. Additionally, this test method requires extensive planning and setup and substantially impacts refueling outage schedule at the start of the shutdown.
>
> As a result of the implementation of this check valve test method, the need for periodic disassembly to satisfy Code requirements no longer exists thereby eliminating the potential for improper reassembly. The maintenance history of these check valves documents that the valves have been found in excellent mechanical condition upon disassembly. With an excellent mechanical condition baseline verified by periodic part-stroke (quarterly) and full-stroke testing, the operability of check valves 842A and 842B will continue to be ensured.

3.7.2 Alternative Testing

The licensee proposes:

> These valves will be part-stroke exercised quarterly using the SI test header.
>
> Full-stroke exercising of 842A and 842B will be performed in conjunction with full-stroke exercising of 867A and 867B [as described in VR-6] at a frequency of once every 3 refueling outages.

3.7.3 Evaluation

The check valves for which the licensee requests relief, 842A and 842B, open to provide flow from the safety injection accumulators to the RCS. The Code, OM-10, paragraph 4.3.2.1, requires that check valves be exercised once every 3 months. OM-10, paragraph 4.3.2.2(e) states that if exercising is not practicable during plant operation or cold shutdowns, it may be limited to full stroking during refueling outages. The licensee proposes an alternative to the Code requirements to part stroke the valves quarterly and full stroke the valves once every three refueling outages.

Full-stroke exercising the valves quarterly during power operations is not practical because the accumulators are not capable of overcoming normal operating RCS pressure. The check valves cannot be tested by discharging the accumulators into the RCS during cold shutdowns because of the risk associated with low temperature overpressurization of the RCS. However, the licensee has developed a test method that permits full-stroke exercising the valves. The licensee states that to perform the test, the plant must be maintained in an off-normal condition with the risk of nitrogen injection and possible entrainment in the RCS and that performance of

the test involves added personnel radiological exposure. The licensee also indicates that this test method requires extensive planning and setup and substantially impacts the refueling outage schedule at the start of the shutdown. For these reasons, performing the test every refueling outage would be a hardship.

For the third 10-year interval program, the licensee was authorized by an October 20, 1992, SE, to disassemble the valves once every 6 years. The licensee states that the mechanical condition of the valves' internals has been found to be excellent when disassembled. The valves have only experienced flow during testing such that degradation and wear are minimal.

The proposed alternative to part stroke the valves quarterly and full stroke the valves once every three refueling outages will provide reasonable assurance of the operational readiness of the safety injection system check valves. The staff considers valve exercising produced by fluid flow to be a better indicator of valve operational readiness than disassembly and inspection.

3.7.4 Conclusion

The licensee's proposed alternative to the requirements of OM-10 paragraph 4.3.2.1 for the safety injection accumulator check valves, 842A and 842B, is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the Code requirements would result in a hardship without a compensating increase in the level of quality and safety.

3.8 Relief Request VR-6

The licensee requests relief from the quarterly exercise requirements of OM-10 paragraph 4.3.2.1 for two check valves in the safety injection system. The licensee proposes to part-stroke the valves each refueling outage and full-stroke the valves once every three refueling outages.

This alternative was authorized for the third 10-year interval by the staff's SE dated April 9, 1997.

3.8.1 Licensee's Basis for Requesting Relief

The licensee states:

> Full-stroke or part-stroke open and close exercising during normal power operation cannot be accomplished since system pressures required to perform the test are not enough to overcome RCS pressure. A test method that permits and confirms full-stroke exercising of these check valves during cold shutdown has been implemented at Ginna Station. To perform the test, the plant must be maintained in an off-normal condition with a risk for nitrogen injection and possible entrainment in the RCS. The performance of this test also involves added personnel radiological exposure. Additionally, this test method requires extensive planning and setup and substantially impacts refueling outage schedule at the start of the shutdown.
>
> As a result of the implementation of this check valve test method, the need for periodic disassembly to satisfy Code requirements no longer exists thereby eliminating the potential for improper reassembly. The maintenance history of these check valves

documents that these valves are found in excellent mechanical condition upon disassembly. With an excellent mechanical condition baseline verified by periodic part-stroke and full-stroke testing, the operability of check valves 867A and 867B will continue to be ensured.

3.8.2 Alternative Testing

The licensee proposes:

> These valves will be part-stroke exercised each refueling outage using actual SI flow into the RCS.
>
> Full-stroke exercising of 867A and 867B will be performed in conjunction with full-stroke exercising of 842A and 842B at a frequency of once every three refueling outages.

3.8.3 Evaluation

The check valves for which the licensee requests relief, 867A and 867B, open to provide flow from the safety injection accumulators or the safety injection pumps to the RCS cold legs. The Code, OM-10 paragraph 4.3.2.1, requires that check valves be exercised once every 3 months. OM-10 paragraph 4.3.2.2(e) states that if exercising is not practicable during plant operation or cold shutdowns, it may be limited to full-stroking during refueling outages. The licensee proposes an alternative to the Code requirements to part-stroke the valves each refueling outage and full stroke the valves once every three refueling outages.

Full-stroke exercising the valves quarterly during power operations is not practical because the accumulators and the safety injection pumps are not capable of overcoming normal operating RCS pressure. The check valves cannot be tested by establishing safety injection pump flow or discharging the accumulators into the RCS during cold shutdowns because of the risk associated with low temperature overpressurization of the RCS. However, the licensee has developed a test method that permits full-stroke exercising the valves. The licensee states that to perform the test, the plant must be maintained in an off-normal condition with the risk of nitrogen injection and possible entrainment in the RCS and that performance of the test involves added personnel radiological exposure. The licensee also indicates that this test method requires extensive planning and setup and substantially impacts the refueling outage schedule at the start of the shutdown. For these reasons, performing the test every refueling outage would be a hardship.

For the third 10-year interval program, the licensee was authorized by an October 20, 1992, SE, to disassemble the valves once every 6 years. The licensee states that the mechanical condition of the valves' internals has been found to be excellent when disassembled. The valves have only experienced flow during testing such that degradation and wear are minimal.

The proposed alternative to part stroke the valves each refueling outage and full stroke the valves once every three refueling outages will provide reasonable assurance of the operational readiness of the safety injection system check valves. The staff considers valve exercising produced by fluid flow to be a better indicator of valve operational readiness than disassembly and inspection.

3.8.4 Conclusion

The licensee's proposed alternative to the requirements of OM-10 paragraph 4.3.2.1 for the safety injection check valves, 867A and 867B, is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the Code requirements would result in a hardship without a compensating increase in the level of quality and safety.

3.9 Relief Request VR-7

The licensee requests relief from the stroke time acceptance criteria and corrective action requirements of OM-10, paragraphs 4.2.1.8 and 4.2.1.9, for four valves in the overpressure protection nitrogen supply system. The licensee proposes to verify the valves' operational readiness by observing proper operation of the power operated relief valves (PORV) when they are tested during plant shutdown.

This alternative was authorized for the third 10-year interval in the staff's SE dated April 15, 1991.

3.9.1 Licensee's Basis for Requesting Relief

The licensee states:

> These are rapid acting valves whose design prohibits visual observance of stroking. These valves do not have remote position indicators. PORV stroke times are affected by stroke times of 8616A, 8616B, 8619A, and 8619B.

3.9.2 Alternative Testing

The licensee proposes:

> Valve stroke testing is performed during plant shutdown in conjunction with PORV overpressure protection testing. Valve stroking parameters will be considered acceptable if associated PORV cycling is acceptable.

3.9.3 Evaluation

The valves for which the licensee requests relief, 8616A, 8616B, 8619A, and 8619B, open to provide nitrogen to cycle the PORVs which provide RCS overpressure protection. The Code states that the valves' stroke times shall be measured and provides requirements for stroke time acceptance criteria and corrective actions (OM-10, paragraphs 4.2.1.8 and 4.2.1.9). The licensee has requested an alternative to these requirements and proposes to verify the valves' operational readiness by observing proper operation of the PORVs when they are tested during plant shutdown.

These valves are totally enclosed solenoid-operated valves which have no externally visible indication of valve position. It is impractical to measure the stroke times of these valves because there is no way to determine when the valve receives an actuation signal or when it completes its travel. These are rapid-acting valves which normally stroke almost instantly and when they do not operate properly, they most commonly fail to operate at all.

These valves function to admit nitrogen to the pressurizer PORVs to open them, therefore, it can be indirectly verified that each valve has actuated by monitoring the operation of the pressurizer PORVs. Measuring the stroke times of a PORV provides indication of solenoid operated valve degradation since any significant increase in solenoid valve stroke time would result in longer PORV stroke times and may result in the PORV exceeding its stroke time limit.

The full-stroke times of these solenoid valves cannot be measured unless significant system modifications, such as replacing the valves with ones having disk position indication, are made to permit this testing. Replacing these valves to permit stroke time measurements would provide little additional information above that generated by the proposed alternative testing.

3.9.4 Conclusion

Relief from the requirements of OM-10 paragraphs 4.2.1.8 and 4.2.1.9 is granted pursuant to 10 CFR 50.55a(f)(6)(i) for the fourth 10-year interval for valves 8616A, 8616B, 8619A, and 8619B. The alternative testing method provides reasonable assurance of the valves' operational readiness. The staff considered the impracticality of complying with the Code, and the burden on the licensee if those requirements were imposed, in granting relief.

3.10 Relief Request VR-8

The licensee has requested relief from the test sequence requirements of OM-1 paragraph 7.3.2.2 for valve 392A in the chemical and volume control system charging flowpath. The licensee proposes to verify each refueling outage that the valve will open and pass the required flow at design differential pressure.

This alternative was authorized for the third 10-year interval in the staff's SE dated April 15, 1991.

3.10.1 Licensee's Basis for Requesting Relief

The licensee states:

> Paragraph 7.3.2.2 of OM-1 requires that certain typical bench testing be performed on relief valves. This valve is a welded in-line air-operated valve which also performs a relief function at a specific differential pressure. The bench tests listed in this paragraph cannot practically be performed on valve 392A.

3.10.2 Alternative Testing

The licensee proposes:

> Valve 392A will be tested in place each refueling outage by verifying that it will open and pass the required flow at design differential pressure.

3.10.3 Evaluation

The licensee has requested relief from the test sequence requirements of OM-1 paragraph 7.3.2.2 for valve 392A in the chemical and volume control system. This pressure relief valve's

function is to protect the charging header from overpressure. It opens at a set differential pressure across the valve to provide a flowpath from the charging system to the RCS loop B hot leg. The valve recloses after the differential pressure has decreased below the setpoint. Although the valve functions as a relief valve, it is welded into the system piping and cannot be removed from the system to be bench tested in accordance with the Code. This makes complying with the requirements of paragraph 7.3.2.2 impractical.

As an alternative to the Code-required testing, the licensee proposes to verify each refueling outage that the valve will open and pass the required flow at design differential pressure. This alternative provides reasonable assurance of the valve's operational readiness. It would be burdensome to require the licensee to replace this valve or make system modifications that permit valve removal for bench testing to comply with the Code requirements.

3.10.4 Conclusion

Relief from the requirements of OM-1 paragraph 7.3.2.2 for valve 392A is granted pursuant to 10 CFR 50.55a(f)(6)(i) for the fourth 10-year interval. The alternative testing method provides reasonable assurance of the valve's operational readiness. The staff considered the impracticality of complying with the Code, and the burden on the licensee if those requirements were imposed, in granting relief.

3.11 Relief Request VR-9

The licensee has requested relief from the valve obturator movement requirements of OM-10 paragraph 4.3.2.4 for the AFW check valves. This relief request only applies to the situation where an inservice test is scheduled when the plant is in an outage. At this time, there is insufficient pressure in the steam generators (SGs) to support check valve closure testing. The licensee proposes to defer the closure test until the requisite test conditions exist, but prior to exceeding 5% reactor power.

3.11.1 Licensee's Basis for Requesting Relief

The licensee states:

> Plant Technical Specifications require the Auxiliary Feedwater System to be operable prior to progressing from Mode 4 to Mode 3. If a quarterly test came due during an outage, testing of these valves would be necessary to prove system operability at this time. Testing of the pumps and testing of the valves to prove opening capability can be performed at this time. However, at this condition there is insufficient pressure in the steam generators to perform a reverse flow verification of these valves. Relief is requested from paragraph 4.3.2.4 of OM-10 until plant startup, yet prior to exceeding 5% reactor power, at which time steam generator pressure will be sufficient to perform a reverse flow verification.

3.11.2 Alternative Testing

The licensee proposes:

> During startup from cold shutdown or refueling outages when plant conditions do not exist to perform a reverse flow verification together with the normal pump operability test, the reverse flow verification will be performed prior to exceeding 5% reactor power, when the required plant conditions exist.

3.11.3 Evaluation

The AFW check valves, 3998, 4000C, 4000D, 4003, and 4004, open to allow AFW flow to the SGs. The valves close to prevent reverse flow, thereby preventing steam binding of the AFW pumps.

The licensee has requested relief from the valve obturator closure verification requirement of OM-10 paragraph 4.3.2.4 for situations where an inservice test is scheduled when the plant is in an outage. At this time, there is insufficient pressure in the SGs to support check valve closure testing. The licensee proposes to defer the closure test until the requisite test conditions exist, but prior to exceeding 5% reactor power.

These valves are tested quarterly in conjunction with the quarterly test of the AFW pumps. The prompt closure test verifies that acceptable differential pressure (SG pressure relative to decaying pump discharge pressure) exists across the valves once the pump is secured and flow is terminated. When progressing from Mode 4 to Mode 3, the differential pressure across the valves is insufficient to provide reliable indication of the prompt closure capability of the check valves. For this reason, the valve obturator closure verification requirement of OM-10 paragraph 4.3.2.4 is impractical when the plant is in an outage, or starting up from one. Deferring valve obturator closure verification until the necessary test conditions exist, as proposed by the licensee, will provide reasonable assurance of the valves' operational readiness.

3.11.4 Conclusion

Relief from the requirements of OM-10 paragraph 4.3.2.4 for valves 3998, 4000C, 4000D, 4003, and 4004 is granted pursuant to 10 CFR 50.55a(f)(6)(i) for the fourth 10-year interval. Relief is granted only for situations where an inservice test is scheduled when the plant is in an outage. The alternative testing method provides reasonable assurance of the valves' operational readiness. The staff considered the impracticality of complying with the Code, and the burden on the licensee if those requirements were imposed, in granting relief.

3.12 Relief Request VR-10

The licensee has requested relief from the valve obturator movement requirements of OM-10 paragraph 4.3.2.4 for the standby AFW check valves. This relief request only applies to the situation where an inservice test is scheduled when the plant is in an outage. At this time, there is insufficient pressure in the SGs to support check valve closure testing. The licensee proposes to defer the closure test until the requisite test conditions exist, but prior to exceeding 5% reactor power.

3.12.1 Licensee's Basis for Requesting Relief

The licensee states:

> Plant Technical Specifications require the Standby Auxiliary Feedwater System to be operable prior to progressing from Mode 4 to Mode 3. If a quarterly test came due during an outage, testing of these valves would be necessary to prove system operability at this time. Testing of the pumps and testing of the valves to prove opening capability can be performed at this time. However, at this condition there is insufficient pressure in the steam generators to perform a reverse flow verification of these valves. Relief is requested from paragraph 4.3.2.4 of OM-10 until plant startup, yet prior to exceeding 5% reactor power, at which time the steam generator pressure will be sufficient to perform flow verification.

3.12.2 Alternative Testing

The licensee proposes:

> During startup from cold shutdown or refueling outages when plant conditions do not exist to perform a reverse flow verification together with the normal pump operability test, the reverse flow verification will be performed prior to exceeding 5% reactor power, when the required plant conditions exist.

3.12.3 Evaluation

The standby AFW check valves, 9704A, 9704B, 9705A, and 9705B, open to allow standby AFW flow to the SGs. The valves close to prevent reverse flow, thereby preventing steam binding of the standby AFW pumps.

The licensee has requested relief from the valve obturator closure verification requirement of OM-10 paragraph 4.3.2.4 for situations where an inservice test is scheduled when the plant is in an outage. At this time, there is insufficient pressure in the SGs to support check valve closure testing. The licensee proposes to defer the closure test until the requisite test conditions exist, but prior to exceeding 5% reactor power.

These valves are tested quarterly in conjunction with the quarterly test of the standby AFW pumps. The prompt closure test verifies that acceptable differential pressure (SG pressure relative to decaying pump discharge pressure) exists across the valves once the pump is secured and flow is terminated. When progressing from Mode 4 to Mode 3, the differential pressure across the valves is insufficient to provide reliable indication of the prompt closure capability of the check valves. For this reason, the valve obturator closure verification requirement of OM-10 paragraph 4.3.2.4 is impractical when the plant is in an outage, or starting up from one. Deferring valve obturator closure verification until the necessary test conditions exist, as proposed by the licensee, will provide reasonable assurance of the valves' operational readiness.

3.12.4 Conclusion

Relief from the requirements of OM-10 paragraph 4.3.2.4 for valves 9704A, 9704B, 9705A, and 9705B is granted pursuant to 10 CFR 50.55a(f)(6)(i) for the fourth 10-year interval. Relief is granted only for situations where an inservice test is scheduled when the plant is in an outage. The alternative testing method provides reasonable assurance of the valves' operational readiness. The staff considered the impracticality of complying with the Code, and the burden on the licensee if those requirements were imposed, in granting relief.

3.13 Relief Request VR-11

This relief request has been withdrawn by the licensee's letter dated April 20, 2000.

3.14 Relief Request VR-12

OM-10 paragraph 4.2.2.1 requires that Category A valves be leakage tested. Paragraph 4.2.2.2 specifically applies to containment isolation valves (CIVs) and states that CIVs shall be leakage tested in accordance with the requirements of 10 CFR Part 50, Appendix J. The licensee's proposed alternative is consistent with the Code-required leakage testing for CIV and therefore relief is not required.

3.14.1 Licensee's Basis for Requesting Relief

The licensee states:

> Fire Service Water penetration 307 contains check valve 9229 which is located inside Containment. 9229 is leak tested; however, it cannot be assured that all water has been drained from the valve seat prior to Appendix J testing. Its location with respect to the penetration and the fire service water header inside Containment and the lack of available drain lines prohibit the complete draining of residual water downstream of the check valve, although RG&E does blow air into the line to remove virtually all of the water. RG&E estimates that it would cost a significant amount to install the necessary drain line to ensure downstream line drainage prior to the Appendix J test, and this would not result in a compensating increase in quality or safety. Since the containment temperature is expected to evaporate any water in this line, the post-accident condition and the tested condition cannot be guaranteed to be identical.
>
> Upstream AOV 9227 is fully tested and normally closed during power operation. Closure of AOV 9227 meets all requirements for Ginna Station Technical Specification 3.6.3 if check valve 9229 were declared inoperable.

3.14.2 Alternative Testing

The licensee proposes:

> RG&E will continue to try and remove as much water as possible before testing 9229 to Appendix J. Furthermore, RG&E increases the test pressure slightly above design pressure (60.3-61.3 psig versus 60 psig) to compensate for the small amount of water

anticipated to remain on the valve disk. RG&E will continue to prompt closure test 9229 quarterly which demonstrates that the valve will close when required.

3.14.3 Evaluation

The valve for which the licensee has requested relief, 9229, is a 4-inch check valve in the fire service water system inside the containment building and provides containment isolation. The Code, OM-10 Paragraph 4.2.2.2 states that CIVs shall be leakage tested in accordance with the requirements of 10 CFR Part 50, Appendix J. The licensee's proposed alternative is consistent with the Code-required leakage testing for CIVs and, therefore, relief is not required.

The evaluation of this relief request is not applicable to the testing requirements for local leak rate testing of this valve pursuant to 10 CFR Part 50, Appendix J. The licensee's April 20, 2000, letter states that the information provided in Relief Request VR-12 is consistent with testing procedures developed as a result of NRC approval of the 10 CFR Part 50, Appendix J, Option B test program. However, if the licensee determines that a modification to its Appendix J program is needed and has not been requested, actions should be taken as appropriate.

3.14.4 Conclusion

Relief from the requirements of OM-10 is not required.

4.0 CONCLUSION

Relief is granted for VR-7, VR-8, VR-9, and VR-10 for the fourth 10-year interval pursuant to 10 CFR 50.55a(f)(6)(i). In making this determination, the staff has considered the impracticality of performing the required testing and the burden on the licensee if the requirements were imposed. The relief is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest.

The proposed alternative to the Code requirements described in GR-2 is authorized pursuant to 10 CFR 50.55a(a)(3)(i) based on the alternative providing an acceptable level of quality and safety. The alternative is authorized for the fourth 10-year interval.

The proposed alternatives to the Code requirements described in PR-1, GR-1, VR-3, VR-4, VR-5, and VR-6 are authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the fourth 10-year interval. Compliance with the specified requirements of these sections would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The proposed alternatives to the Code requirements described in VR-1 and VR-2 are approved pursuant to 10 CFR 50.55a(f)(4)(iv) for the fourth 10-year interval. These alternatives meet the requirements of the 1995 OM Code, paragraph ISTC 4.5.4(c), which has been incorporated by reference into 10 CFR 50.55a (64 FR 51370).

Relief Request VR-11 has been withdrawn by the licensee's letter of April 20, 2000.

Relief is not required for the testing proposed in VR-12.

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