



Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321
TELEPHONE (402) 825-3811

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April 13, 1988

U.S. Nuclear Regulatory Commission
Document Control Desk
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- Reference:
1. Letter from W. O. Long to G. A. Trevors, dated January 13, 1988, "Cooper Nuclear Station (CNS) Inservice Testing (IST) Program (TAC 54682)".
 2. Letter from G. A. Trevors to NRC, dated June 8, 1987, "Periodic Verification of Leak Tight Integrity of Pressure Isolation Valves - Generic Letter 87-06".

Subject: Inservice Test Program
Cooper Nuclear Station
NRC Docket No. 50-298, DPR-46

Gentlemen:

Reference 1 transmitted the staff's Safety Evaluation for the second 10-Year IST Program for Cooper Nuclear Station (CNS) and identified certain anomalies, listed in Appendix C, for the District to address by either correcting the IST Program or submitting appropriate relief requests. A listing of these anomalies is contained in the Attachment 1 to this letter, along with the District's response for the disposition of each anomaly. Revised and new relief requests referred to in the responses are also attached for your review.

As described in the responses, the District is continuing to evaluate several of the items regarding their final resolution and the need for additional relief. In most cases, the items involve a significant increase in the scope of the IST Program and require additional time to decide upon various testing options and implementation requirements (i.e., modifications, test procedures, and equipment). These evaluations will be completed and the applicable relief requests and program revisions will be submitted by July, 1988.

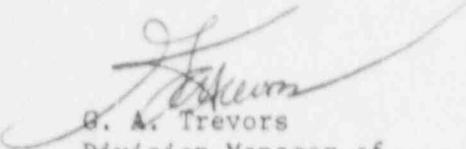
A revision to add valve MS-CV-20 to Relief Request RV-28 is also attached for review and approval. This check valve performs the same function as the other valves listed in the relief request, but was inadvertently omitted in the original submittal.

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Finally, a discrepancy was noted during review of the Technical Evaluation Report (TER) that was an enclosure to Reference 1. The last paragraph on page 4 of the TER states that Pressure Isolation Valves (PIVs) are currently tested in accordance with Section XI. The paragraph goes on to state that valves performing both a containment isolation function and a pressure isolation function are tested both to Appendix J and Section XI. However, this is not consistent with the District's position with respect to testing PIVs as documented in Table 1 to Reference 2. This discrepancy is noted for your information.

If you have any questions, please call.



G. A. Trevors
Division Manager of
Nuclear Support

GAT:ss

Attachments

cc: U.S. Nuclear Regulatory Commission
Regional Office, Region IV

NRC Resident Inspector
Cooper Nuclear Station

Attachment 1

RESPONSE TO IST PROGRAM ANOMALIES IDENTIFIED IN REVIEW

The anomalies noted during staff review are listed below, along with the District response.

1. The licensee has not included the reactor equipment cooling pumps, REC-1A, -1B, -1C, and -1D, and the diesel generator fuel oil transfer pumps, DG-FOT-1A and -1B, in the request for relief from measuring bearing temperature annually. The licensee should be required to address this item. (See Item 3.1.1.)

Response

Relief Request RP-01 applies to all pumps in the program. The reactor equipment cooling pumps and diesel generator fuel oil transfer pumps have been added to the program such that RP-01 now applies to these pumps, also. Relief Request RP-01 is being re-submitted for staff review and approval due to minor revisions to the Basis for Relief and Alternate Test paragraphs.

2. The licensee should be required to measure vibration in accordance with Section XI during pump tests until an IST Program revision has been provided to and approved by the NRC staff that is in agreement with the requirements of ANSI/ASME OM-6, Draft 8, as stated in Item 3.1.2. The licensee should also be required to measure vibration on the reactor equipment cooling pumps, REC-1A, -1B, -1C, and -1D, and the diesel generator fuel oil transfer pumps, DG-FOT-1A and -1B. (See Item 3.1.2.)

Response

As stated above, reactor equipment cooling pumps REC-1A, -1B, -1C, and -1D, and diesel generator fuel oil transfer pumps, DG-FOT-1A and -1B have been added to the program. Vibration measurements are taken during testing for all pumps in the IST Program. The District is evaluating the use of ANSI/ASME OM-6, Draft 8, as guidance for pump vibration acceptability and will submit any applicable IST Program revisions by July, 1988.

3. The licensee should be required to conduct the tests of the high pressure coolant injection pump, HP-1, in accordance with Section XI. The licensee has not identified the request for relief, RP-05, in the high pressure coolant injection section of the body of the pump testing program. (See Item 3.3.1.)

Response

Testing of the high pressure coolant injection pump, HP-1, will be performed in accordance with Section XI. The applicable pump test procedure will be revised, accordingly. Relief Request RP-05 has been withdrawn.

4. The licensee should provide the NRC staff with a relief request that describes how inlet pressure measurements are taken and how lubricant level is observed on the submerged service water pumps, SW-1A, -1B, -1C, and -1D. (See the body of the pump testing program, service water system, and Item 3.4.1.)

Response

A Relief Request, RP-08, addressing the measurement of the inlet pressure to the service water pumps is contained in Attachment 2. Observation of the lubricant level is not practical for these pumps due to a lack of installed instrumentation. Furthermore, the service water pumps are cooled by their process fluid. The general pump test procedure will be revised to include discussion of lubricant level observation when applicable.

5. The licensee should be required to test the reactor equipment cooling pumps, REC-1A, -1B, -1C, and -1D, in accordance with Section XI. (See items 3.5.1, 3.1.1, and 3.1.2.)

Response

The reactor equipment cooling pumps will be tested in accordance with Section XI. The District is evaluating the need for any relief requests in performing this testing. Applicable relief requests, if necessary, will be submitted by July, 1988. Relief Request RP-06 has been withdrawn.

6. The licensee should be required to test the diesel fuel oil transfer pumps, DG-FOT-1A and -1B, in accordance with Section XI. (See items 3.6.1, 3.1.1, and 3.1.2.)

Response

The diesel fuel oil transfer pumps will be tested in accordance with Section XI. The District is evaluating the need for any relief requests in performing this testing. Applicable relief requests, if necessary, will be submitted by July, 1988. Relief Request RP-07 has been withdrawn.

7. The licensee should be required to comply with Section XI, paragraphs IWV-3426 and -3427, when leak testing containment isolation valves. (See Item 4.1.1.1.)

Response

The District will comply with Section XI, paragraphs IWV-3426 and -3427 when leak testing containment isolation valves. The general valve testing procedure, 3.9, will be revised to include these requirements.

8. The licensee has included valve RHR-CV-23, reactor vessel head spray supply check, in Technical Justification TJV-03 but has not included this valve in the body of the valve testing program. The licensee stated at the working meeting that this valve was scheduled to be removed from the system during the outage in the fall of 1986 and that if it was not removed, it would be included in the IST Program. This item will require further verification.

Response

Valve RHR-CV-23 was removed from the the system during the Fall 1986 Outage.

9. Technical Justification TJV-03 states that valves RHR-MO-32 and -33, reactor vessel head spray supply isolations, can be exercised only during cold shutdowns and then goes on to state that they will be exercised during refueling outages. It is the reviewer's opinion that this inconsistency is a typographical error and that these valves will be exercised during cold shutdowns as described in the body of the valve testing program. It should also be noted that the licensee has identified these valves as passive valves. The licensee should be required to correct this item. (See Appendix A, Item 1.1.)

Response

Valves RHR-MO-32 and -33 were removed from the system during the Fall 1986 Outage. The removal of these valves is discussed in the Safety Evaluation to Amendment No. 103 to the Cooper Nuclear Station Facility Operating License dated November 10, 1986. Technical Justification TJV-03 has been deleted from the IST Program.

10. The licensee should be required to continue the disassembly/inspection program on valve RHR-CV-20, service water emergency core flooding supply check, during each refueling outage. (See Item 4.3.1.2.)

Response

Disassembly/inspection of valve RHR-CV-20 will be performed each refueling outage pending approval of revised Relief Request RV-17 (Attachment 2). RV-17 proposes to perform the inspection at least once every two years during a refueling outage.

11. The licensee has incorrectly identified the residual heat removal system pressure maintenance supply check valves as core spray system valves in Relief Request RV-15. The licensee should be required to correct this item.

Response

Relief Request RV-15 will be revised to correctly identify the residual heat removal pressure maintenance supply check valves. Additional revisions will be made to RV-15 to clarify the basis for relief and the alternate test method. Relief Request RV-15 will be submitted for review by July, 1988.

12. The licensee has failed to describe how valve HPCI-CV-15, high pressure coolant injection turbine exhaust check, is full-stroke exercised quarterly during extended shutdowns when no steam is available to operate the turbine. The licensee should be required to correct this item. (See the body of the valve testing program, High Pressure Coolant Injection section.)

Response

The system containing HPCI-CV-15, high pressure coolant injection, is out of service when the plant is shut down and, therefore, is not required to be exercised per paragraph IWV-3416. The plant Technical Specifications do not require the system to be operable when reactor pressure is less than or equal to 113 psig. During plant startup, Technical Specification 3.5.C.3 allows surveillance testing to be conducted within 48 hours of achieving 150 psig reactor steam pressure to verify system operability.

13. The licensee should be required to continue the disassembly/inspection program on valve HPCI-CV-11, high pressure coolant injection torus suction check, during each refueling outage. (See Item 5.5.2.2.)

Response

Disassembly/inspection of valve HPCI-CV-11 will be performed each refueling outage pending approval of revised Relief Request RV-20 (Attachment 2). RV-20 proposes to perform the inspection at least once every two years during a refueling outage.

14. The licensee has incorrectly identified reactor core isolation cooling valve RCIC-LVSC-42 as the RCIC turbine drain to the torus when it is the RCIC barometric condenser vacuum pump discharge to the torus. The licensee should be required to correct this item. (See Relief Request RV-25 and the body of the valve testing program, Reactor Core Injection Cooling section.)

Response

Relief Request RV-25 has been revised to correctly identify valve RCIC-LVSC-42 and is attached for review.

15. The licensee should be required to continue the disassembly/inspection program on valve RCIC-CV-11, reactor core isolation cooling torus suction check, during each refueling outage. (See Item 4.6.2.2.)

Response

Disassembly/inspection of valve RCIC-CV-11 will be performed each refueling outage pending approval of revised Relief Request RV-23 (Attachment 2). RV-23 proposes to perform the inspection at least once every two years during a refueling outage.

16. The licensee has incorrectly identified the relief request that applies to the main steam isolation valves in the body of the valve testing program, Main Steam section. The applicable relief request is Relief Request RV-04 instead of Relief Request RV-05. The licensee should be required to correct this item. (Also see Item 4.8.1.1.)

Response

The IST Program will be revised to identify the correct relief request that applies to the main steam isolation valves.

17. The licensee should be required to measure the stroke time of valves CRD-CV-126 and -127, control rod scram inlet and outlet, or to provide a relief request that explains why it cannot be done. (See Item 4.11.2.1.)

Response

Relief Request RV-06 will be revised to include a discussion on why it is impractical to stroke time these valves and will propose an alternate test method. Relief Request RV-06 will be submitted for review by July, 1988.

18. The licensee should be required to include valve CRD-CV-138, control rod drive cooling water header check (137 valves), in the IST Program because this valve performs a safety-related function by having to shut during a control rod scram to prevent diversion of scram water flow away from the scram flow path in the event the cooling water header became depressurized. (See Section 4.11.)

Response

The CRD-CV-138, control rod drive cooling water header check valve for all 137 control rod drive mechanisms will be added to the IST Program. The District is evaluating the need for any relief requests in performing this testing. Applicable relief requests, if necessary, will be submitted by July, 1988.

19. The licensee has incorrectly identified the diesel generator service water supply check valves in Relief Request RV-09. The correct valve numbers should be SW-CV-35CV, -36CV, -37CV, and -38CV. The licensee should be required to correct this item. (See Item 4.12.1.1.)

Response

Relief Request RV-09 has been revised to correctly identify the diesel generator service water supply check valves. The revised RV-09 is included in Attachment 2.

20. The licensee should be required to test valves SW-MO-37, reactor building and diesel generator supply header cross connection, SW-MO-117, turbine building service water supply, SW-MO-886, -887, -888, and -889, reactor equipment cooling system/service water cross connections, and SW-MO-650 and -651, reactor equipment cooling heat exchanger service water outlets, in accordance with the requirements of Section XI. Additionally, the licensee has incorrectly identified these valves as passive in Relief Request RV-32. (See Item 4.13.1.1.)

Response

The IST Program and testing procedures will be revised to incorporate testing of the above valves in accordance with Section XI. Relief Request RV-32 has been withdrawn.

21. The licensee should be required to test the following valves in accordance with Section XI.

REC-MO-694 and -695	Loop A and B Cross Connections
REC-MO-697 and -698	Critical Service Return Header Isolations
REC-MO-700	Non-critical Service Supply Isolation
REC-MO-702 and -709	Containment Cooling Supply and Return Isolations
REC-MO-712 and -713	Reactor Equipment Cooling Heat Exchanger Inlets
REC-MO-711 and -714	Reactor Equipment Cooling Heat Exchanger Outlets
REC-MO-721 and -722	Reactor Equipment Cooling Pump Suction Non-Critical Return
REC-MO-1329	Radwaste Supply Isolation

The licensee has incorrectly described the function of valves REC-MO-697, -698, and -700 in Relief Request RV-13. The licensee should be required to correct this item. (See Item 4.14.1.1.)

Response

The IST Program and testing procedures will be revised to incorporate testing of the above valves in accordance with Section XI. Relief Request RV-13 has been withdrawn.

22. The licensee should be required to verify the closure capability of valve REC-CV-16, non-critical cooling return header check, in accordance with the requirements of Section XI. (See Item 4.14.2.1.)

Response

The District is evaluating the method and frequency of testing for REC-CV-16 and the need for any relief requests in performing this testing. Applicable relief requests, if necessary, will be submitted by July, 1988. Relief Request RV-12 has been withdrawn.

23. The licensee should be required to test valves SGT-249AV, -250AV, -251AV, -252AV, -255AV, and -256AV in accordance with Section XI. The licensee has also incorrectly identified valve SGT-252AV in Relief Request RV-37 as valve SGT-253AV. (See Item 4.16.1.1.)

Response

The IST Program and testing procedures will be revised to incorporate testing of the above valves in accordance with Section XI. Relief Request RV-37 has been withdrawn.

24. The licensee has not provided a request for relief from the valve stroke time trending requirements of Section XI, Paragraph IWV-3417(a), for rapid acting valves in the IST Program, therefore, the licensee should be required to comply with this Code paragraph.

Response

The District is evaluating the need for relief from the stroke time trending requirements of Paragraph IWV-3417(a) for rapid acting valves. Applicable relief requests, if necessary, will be submitted by July, 1988.

25. The licensee has failed to include the diesel generator air start solenoids in the IST Program or to propose any alternate testing for those valves. These valves are safety-related and should be included in the IST Program and tested as closely as possible to the requirements of Section XI. The licensee should be required to comply with this position.

Response

The IST Program and testing procedures will be revised to incorporate testing of the diesel generator air start solenoids. The District is evaluating alternate test methods for determining stroke time measurements of these valves and will submit an applicable relief request by July, 1988.

26. The following relief requests have been determined to be unnecessary because the licensee is meeting the Code requirements. For the sake of clarity, each relief request is listed according to system, relief request number, valve(s) number, and a very brief explanation why the request is unnecessary.

A. Standby Liquid Control System.

A.1 Relief Request RV-19.

A.1.1 Valves SLC-14A and -14B

A.1.1.1 These are the explosive injection valves. This relief request is unnecessary because Section XI, Paragraph IWV-3610, does not require that Category D valves be exercised, only that 20% of the charges be tested every two years.

B. Service Water System.

B.1 Relief Request RV-35.

B.1.1 Valves SW-CV-19, -20, -21, and -22.

B.1.1.1 These are the residual heat removal service water booster pump discharge check valves and are being full-stroke exercised with system flow. This relief request is unnecessary because Section XI, Paragraph IWV-3522, allows the use of system flow to full-stroke exercise check valves.

B.2 Relief Request RV-33.

B.2.1 Valves SW-CV-10, -11, -12, -13, -27, and -28.

B.2.1.1 These are the service water pump discharge check valves and the reactor equipment cooling heat exchanger service water supply check valves. This relief request is unnecessary because Section XI, Paragraph IWV-3522, allows the use of system flow to full-stroke exercise check valves.

C. Diesel Generator Fuel Oil Transfer System.

C.1 Relief Request RV-10.

C.1.1 Valves DG-FOT-10, -11, -12, and -13.

C.1.1.1 These are the diesel generator fuel oil transfer pump discharge check valves and the diesel generator fuel oil transfer header building penetration check valves. This relief request is unnecessary because Section XI, Paragraph IWV-3522, allows the use of system flow to full-stroke exercise check valves.

D. Diesel Generator Starting Air System.

D.1 Relief Request RV-08.

D.1.1 Valves DG-SA-10-CV, -11-CV, -12-CV, -13-CV, -14-CV, -15-CV, -16-CV, -17-CV, -18-CV, -19-CV, -20-CV, and -21-CV.

D.1.1.1 These are the diesel generator starting air compressor discharge check valves, the starting air receiver inlet check valves, and the starting air receiver discharge check valves. This relief request is unnecessary because Section XI, Paragraph IWV-3522, allows the use of system flow to full-stroke exercise check valves.

Response

The District has withdrawn the above relief requests.

Attachment 2

Relief Requests:

RP-01
RP-05 (Withdrawn)
RP-06 (Withdrawn)
RP-07 (Withdrawn)
RP-08
RV-08 (Withdrawn)
RV-09
RV-10 (Withdrawn)
RV-12 (Withdrawn)
RV-13 (Withdrawn)
RV-17
RV-19 (Withdrawn)
RV-20
RV-23
RV-25
RV-28
RV-32 (Withdrawn)
RV-33 (Withdrawn)
RV-35 (Withdrawn)
RV-37 (Withdrawn)

Technical Justification:

TJV-03 (Withdrawn)

RELIEF REQUEST RP-01

Pump: All Pumps
Class: Not Applicable
Function: Not Applicable
Required
Test: Measure bearing temperature annually.

Basis for
Relief:

Bearing temperature measurements will not provide significant additional information regarding bearing condition beyond that already obtained by measuring vibration amplitude. Measurement of vibration amplitude provides more concise and consistent information with respect to pump and bearing condition. Vibration readings are not affected by the temperature of the medium being pumped, thus, the readings are more consistent. The use of vibration amplitude measurements can provide information as to a change in the balance of rotating parts, misalignment of bearings, worn bearings, coupling misalignment, changes in internal hydraulic forces, and general pump integrity prior to the pump condition degrading to the point where the component is jeopardized. Bearing temperature does not always predict such problems. An increase in bearing temperature most often does not occur until the bearing has deteriorated to a point where additional pump damage may occur. Bearing temperatures are also affected by the temperatures of the medium being pumped, which could yield misleading results.

In addition, it is impractical to measure bearing temperatures on many of the pumps in the program. Some specific examples are as follows:

1. Service Water Pumps

There is no installed instrumentation to measure bearing temperature. Also, pump bearings are underwater and, therefore, inaccessible.

2. Standby Liquid Control Pumps

There is no installed instrumentation to measure bearing temperature. The bearings are not accessible for direct measurement due to the location of the bearing within the housing. The bearings are in an oil bath, which is also inaccessible.

3. High Pressure Coolant Injection

Booster Pump - There is no installed instrumentation to measure bearing temperature. The booster pump bearings are anti-friction roller bearings. This type of bearing will not typically show a significant rise in temperature just before failure, as is the case with journal bearings.

Main Pump - Instrumentation to measure thrust and journal bearing temperatures is installed on the main pump. However, the HPCI unit cannot be operated for extended time periods in order to meet the acceptance criteria of IWP-3500, due to suppression pool temperature limiting conditions.

4. Residual Heat Removal Pumps

These pumps utilize lower shaft guide bearings which are lubricated by the medium being pumped. These bearings are in the main flowpath and are therefore exempt per IWP-4310.

Alternative

Tests:

None.

RELIEF REQUEST RP-05

(WITHDRAWN)

RELIEF REQUEST RP-06

(WITHDRAWN)

RELIEF REQUEST RP-07

(WITHDRAWN)

RELIEF REQUEST RP-08

Pump: Service Water Pumps 1A, 1B, 1C, 1D

Class: Class IV, Safety-Related

Function: Emergency Equipment Cooling

Required
Test: Measure pump inlet pressure before starting the pump and during the test. (Table IWP-3100-1)

Basis for
Relief: These pumps are submerged and, as such, have inlet pressures corresponding to that of the static head of the medium in which the pumps reside. There is no practical mechanism for inlet pressure measurement. Since the level of the medium remains essentially constant through the duration of the test, only one measurement is required.

Alternate
Test: A single inlet pressure will be calculated from the height of the liquid above the pump suction during each test.

RELIEF REQUEST RV-08

(WITHDRAWN)

RELIEF REQUEST RV-09

Valves: 10" SW-CV-35CV
10" SW-CV-36CV
10" SW-CV-37CV
10" SW-CV-38CV

Class: ANSI B31.1

Function: Diesel Generators Service Water (DG-SW) inlet supply check valves for engine cooling and diesel generator room cooling units.

Required Test: Exercise to assess operational readiness every quarter.

Basis for Relief: These check valves are in the lines that supply cooling water to the emergency diesels. Diesel temperatures are monitored during monthly testing. Should these valves fail to open or to provide adequate flow for DG cooling, the problem would be observed during this monthly test. Should DG operational temperature exceed specification, corrective action would be required per the surveillance procedure.

There is already a surveillance procedure in place to visually inspect the DG-SW check valves once every three years. This was in response to IE Bulletin 83-03.

Alternative Test: Each valve will be disassembled and visually inspected every three years during a refueling outage.

RELIEF REQUEST RV-10

(WITHDRAWN)

RELIEF REQUEST RV-12

(WITHDRAWN)

RELIEF REQUEST RV-13

(WITHDRAWN)

RELIEF REQUEST RV-17

Valve: 14" RHR-CV-20

Class: 2

Function: The 14" RHR-CV-20 check valve is the emergency Service Water (SW) (river water) supply for core flooding. This valve prevents RHR to SW backflow to help prevent radioactive contamination of the SW System.

Required Test: Exercise each quarter or cold shutdown.

Basis for Relief: Routine exercising with SW flow could potentially allow corrosive materials and sand to be introduced into the Reactor Coolant System via RHR. This could lead to poor water purity, loss of chemical control, fuel degradation, and mechanical fouling of the reactor, associated pumps, piping, and valves. This would lead to reactor and/or system damage. Therefore, RHR-CV-20 cannot be exercised with flow during operations or cold shutdown. The history of previous inspection results justifies decreasing the test frequency to once every two years.

Alternative Tests: At least once every two years during a refueling outage, this valve will be disassembled and manually full-stroke exercised.

RELIEF REQUEST RV-19

(WITHDRAWN)

RELIEF REQUEST RV-20

Valve: 16" HPCI-CV-11

Class: 2

Function: This valve is the HPCI pump suction line check valve from the torus and is normally closed.

Required

Test: Exercise each quarter or cold shutdown.

Basis for

Relief: Partial or full-stroke exercising this valve is not possible with the existing system design. It would necessitate a system design change to permit recirculation to and from the torus.

Also, routine circulation of torus water through the HPCI System could potentially lead to system fouling, corrosion, and degradation. Degradation and damage to the HPCI could lead to a larger problem if the HPCI System was needed for an emergency. In order to preserve the integrity of the HPCI System, this valve will not be exercised with flow on a routine basis. The history of previous inspection results justifies decreasing the test frequency to once every two years.

Alternative

Test: This valve will be disassembled and manually full-stroke exercised at least once every two years during a refueling outage.

RELIEF REQUEST RV-23

Valve: 6" RCIC-CV-11

Class: 2

Function: This valve is the RCIC pump suction line check valve from the torus and is normally closed.

Required
Test: Exercise each quarter or cold shutdown.

Basis for
Relief: Partial or full-stroke exercising this valve is not possible with the existing system design. It would involve a system design change to permit recirculation to and from the torus.

Also, routine circulation of torus water through the RCIC System could potentially lead to system fouling, corrosion, and degradation. Degradation and damage to the RCIC could lead to a larger problem if the RCIC System was needed for an emergency. In order to preserve the integrity of the RCIC System, this valve will not be exercised with flow on a routine basis. The history of previous inspection results justifies decreasing the test frequency to once every two years.

Alternative
Test: This valve will be disassembled and manually full-stroke exercised at least once every two years during a refueling outage.

RELIEF REQUEST RV-25

Valves: 8" RCIC-LVSC-37
2" RCIC-LVSC-42

Class: 2

Function: 8" RCIC-LVSC-37 is a containment isolation stop check valve from the RCIC turbine exhaust to the torus.

2" RCIC-LVSC-42 is the RCIC vacuum pump discharge isolation valve to the torus.

The valve discs are normally closed and the manual operators are locked open to allow free disk movement. They open during monthly RCIC pump operability testing and are required to close for containment isolation.

Required
Test: Exercise each quarter or cold shutdown.

Basis for
Relief: The operators on these valves are manual operators. Should the stop check stems be exercised to the closed position quarterly to verify that the disc is in the closed position, the RCIC System would be rendered inoperable during the time the stems are closed.

Alternative
Test: The above valves will be verified as closed during periodic leak-rate testing.

RELIEF REQUEST RV-28

Valves: 1"-MS-CV-20 1"-MS-CV-26 1"-MS-CV-31
 1"-MS-CV-21 1"-MS-CV-27 1"-MS-CV-32
 1"-MS-CV-22 1"-MS-CV-28 1"-MS-CV-33
 1"-MS-CV-23 1"-MS-CV-29 1"-MS-CV-34
 1"-MS-CV-24 1"-MS-CV-30 1"-MS-CV-35
 1"-MS-CV-25

Class: 2

Function: Check valves required to open for vacuum relief of the Main
 Steam Relief lines to the containment.

Required
Test: Exercise each quarter or cold shutdown.

Basis for
Relief: These vacuum breaker check valves are located inside
 containment. They are inaccessible for mechanical exercising
 during normal station operations.

Exercising these valves each refueling outage would serve to
adequately assess valve operational readiness.

Alternative
Test: Exercising will be performed each refueling outage.

RELIEF REQUEST RV-32

(WITHDRAWN)

RELIEF REQUEST RV-33

(WITHDRAWN)

RELIEF REQUEST RV-35

(WITHDRAWN)

RELIEF REQUEST RV-37

(WITHDRAWN)

TECHNICAL JUSTIFICATION TJV-03

(DELETED)