PSEG Nuclear LLC
P.O. Box 236, Hancocks Bridge, New Jersey 08038-0236

PSEG
Nuclear LLC

10 CFR 50.55a

LR-N06-0394
October 12, 2006

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Hope Creek Generating Station
Facility Operating License No. NPF-57
NRC Docket No. 50-354

Subject: Inservice Testing (IST) Program - Third Ten Year Interval

In accordance with 10 CFR 50.55a, "Codes and standards," paragraphs a(3)(i) and a(3)(ii), PSEG Nuclear LLC (PSEG), hereby requests NRC approval of the attached requests for the third 10-year interval inservice testing program for the Hope Creek Generating Station.

The requests propose alternatives to the requirements of the ASME OM Code - 2001 through 2003 addenda. Where applicable, the requests are identified by the same request number for the second interval. As noted in the attachments, four of the requests are approved for the current 10-year interval. Gaps in the numerical sequencing are the result of requests which are not required for the third interval. The third 10-year interval will begin on December 23, 2006. The details of the 10 CFR 50.55a request(s) are enclosed.

PSEG requests approval of requests P-01 and P-02 by January 4, 2007 and of the remainder of the requests by April 13, 2007.

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If you have any questions or require additional information, please contact Paul Duke at 856-339-1466.

Respectfully,

Jamie Mallon
Licensing Manager

Attachments:

1. 10 CFR 50.55a Request P-01
2. 10 CFR 50.55a Request P-02
3. 10 CFR 50.55a Request P-04
4. 10 CFR 50.55a Request V-02
5. 10 CFR 50.55a Request V-04
6. 10 CFR 50.55a Request V-07

cc: S. Collins, Regional Administrator - NRC Region I
S. Bailey, Project Manager - Hope Creek, USNRC
NRC Senior Resident Inspector - Hope Creek
K. Tosch, Manager IV, NJBNE

Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(ii)

Hardship or Unusual Difficulty
without Compensating Increase in Level of Quality or Safety

System:
High Pressure Coolant Injection System

ASME Code Components Affected:
10P204
10P217

Component/System Function:
High Pressure Coolant Injection Pump
High Pressure Coolant Injection Booster Pump

The HPCI pump is an ECCS component that is also used to maintain reactor vessel vessel inventory following reactor isolation and coincident failure of the non-ECCS RCIC system.

The HPCI Booster pump is integral with HPCI pump in that they are driven off the same turbine and ensures that the minimum net positive suction head requirements of the HPCI pump are maintained for the design accident flow rates.

Applicable Code Edition and Addenda:
ASME OM Code 2001 through 2003 Addenda

OM Code Category:
Group B Pumps

Applicable Code Requirement:
Subsection ISTB, Paragraph ISTB-3510, "General," Subparagraph (a), "Accuracy," flow instrument accuracy shall be within ±2% of full scale as defined in Table ISTB-3500-1.

Reason for Request:
The permanently installed flow instrument 1BJFIC-R600-E41 does not meet the 2 percent acceptable instrument accuracy specified in Table ISTB- 3500-1. The table below lists the actual instrument loop accuracy. This loop accuracy has been calculated from the transmitter to the indicator in the main control room.

Pump testing requires operation of the HPCI turbine, adding heat to the suppression pool throughout the test. Use of temporary field instrumentation would create an unusual difficulty since speed and flow must be set and

controlled at the reference values from the main control room. Use of temporary field instrumentation would require additional communication with personnel in the field, prolonging the test, while the test duration is severely limited due to heat addition to the suppression pool.

As indicated in the table below, the installed instrumentation has a full-scale range of 6000 gpm, which only slightly exceeds the pump flow reference value of 5600 gpm (full scale equals 1.07 times reference) with an accuracy of +3.83% and -0.67% of full scale. This results in flow rate measurements accurate to +4.1% or -0.72% of indicated flow at reference conditions (5600 gpm), which is more conservative than the 6% required accuracy allowed by the combination of instrument full-scale range and accuracy allowed in Subsection ISTB. The current instrumentation provides sufficient repeatability to allow for an evaluation of the pump hydraulic condition and detect pump degradation. Installation of a new flow rate instrument would constitute a hardship and a burden without a compensating increase in plant safety since it would be expensive and would not provide better indication accuracy or readability.

Supporting Data Table

Instrument Number: 1BJFIC-R600

Actual Instrument Range: 0-6000 gpm

Actual Gauge (Loop) Accuracy: +3.83 / -0.67% of full scale

Test Reference Value: 5600 gpm

Code Allowable Instrument Range: 16,800 gpm
(3X ref. value)
Code Allowable Instrument Tolerance: +/-336 gpm
(2% full scale at 3x reference value)

Actual Instrument Tolerance +229.8 gpm/ -40.2 gpm

Actual Indicated Accuracy: +4.1/ -0.72%
(at reference value)

Proposed Alternative and Basis for Use:

NUREG-1482, Rev.1, Section 5.5.1, "Range and Accuracy of Analog Instruments," states; When the range of a permanently installed analog instrument is greater than three times the reference value, but the accuracy of the instrument is more conservative than that required by the Code, the staff may grant relief when the combination of the range and accuracy yields a reading that is as at least equivalent to that achieved using instruments that meet the Code

requirements (i.e., up to +/-6 percent for Group A and B tests, and +/-1.5 percent for pressure and differential pressure instruments for Preservice and Comprehensive tests). The instruments identified on the above Table are permanent plant instrumentation that satisfy the guidance provided in NUREG-1482, Rev.1, Section 5.5.1.

Proposed Alternative Testing:

Using the provisions of this 10 CFR 50.55a Request, as an alternative to the requirements of ISTB-3510(b)(1), the permanent plant instrument yields a reading that is as at least equivalent to that achieved using instruments that meet the Code requirements as described in NUREG-1482, Rev.1, Section 5.5.1.

The existing permanently installed flow instrumentation is acceptable for pump inservice testing.

Duration of Proposed Alternative:

The proposed alternative identified in this 10 CFR 50.55a Request shall be utilized during the Third Ten Year IST Interval.

Precedents:

Hope Creek

The proposed alternative was previously authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for Interval 2 per NRC SER dated March 18, 1999 (TAC MA0425 and MA1430) and Interval 1 (P-6) per NRC SER dated September 27, 1990 (TAC 65730).

The circumstances and basis for the previous NRC approval have not changed. The HPCI Booster and Injection pumps are Group B Standby System pumps and as such the aging factors applicable to these Code components since the approval of the prior 10 CFR 50.55a Request are insignificant. Although technology exists to use more precise temporary flow instrumentation, the combination of the range and accuracy of the existing permanent plant instrumentation more than meets the minimum Code requirements.

References:

NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants"

Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(i)

--Alternative Provides Acceptable Level of Quality and Safety--

System:
Reactor Core Isolation Cooling

ASME Code Components Affected:
10P203

Component/System Function:
Reactor Core Isolation Cooling Pump

While not credited as an ECCS component, the RCIC pump is safety-related and supplies demineralized makeup water to the reactor vessel in the event that the reactor vessel is isolated.

Applicable Code Edition and Addenda:
ASME OM Code 2001 through 2003 Addenda

OM Code Category:
Group B Pumps

Applicable Code Requirement:
Subsection ISTB, Paragraph ISTB-3510, "General," Subparagraph (a), "Accuracy," flow instrument accuracy shall be within ±2% of full-scale as defined in Table ISTB-3500-1

Reason for Request:
The permanently installed flow instrument 1 BDFIC-R600-E51 does not meet the 2 percent acceptable instrument accuracy specified in Table ISTB- 3500-1. The table below lists the actual instrument loop accuracy. This loop accuracy has been calculated from the transmitter to the indicator in the main control room.

Pump testing requires operation of the RCIC turbine, adding heat to the suppression pool throughout the test. Installation of temporary field instrumentation is not preferable since speed and flow must be set and controlled at the reference values from the main control room. Use of temporary field instrumentation would require additional communication with personnel in the field, prolonging the test, while the test duration is limited due to heat addition to the suppression pool.

As indicated in the table below, the installed instrumentation has a full-scale range of 700 gpm, which only slightly exceeds the pump flow reference value of 600 gpm (full scale equals 1.17 times reference) with an accuracy of +2.49% and

-2.49% of full scale. This results in flow rate measurements accurate to +2.9% or -2.9% of indicated flow at reference conditions (600 gpm), which is more conservative than the 6% required accuracy allowed by the combination of instrument full-scale range and accuracy allowed in Subsection ISTB. The current instrumentation provides sufficient repeatability to allow for an evaluation of the pump hydraulic condition and detect pump degradation.

Supporting Data Table:

Instrument Number: 1 BDFIC-R600

Actual Instrument Range: 0-700 gpm

Actual Gauge (Loop) Accuracy: +2.49 / -2.49% of full scale

Test Reference Value: 600 gpm

Code Allowable Instrument Range: 1,800 gpm
(3X ref. value)

Code Allowable Instrument Tolerance: ±36 gpm
(2% of full scale at 3x reference value)

Actual Instrument Tolerance: 17.43 gpm / -17.43 gpm

Actual Indicated Accuracy: +2.9/ -2.9%
(at reference value)

Proposed Alternative and Basis for Use:

NUREG-1482, Rev.1, Section 5.5.1, "Range and Accuracy of Analog Instruments," states; When the range of a permanently installed analog instrument is greater than three times the reference value, but the accuracy of the instrument is more conservative than that required by the Code, the staff may grant relief when the combination of the range and accuracy yields a reading that is as at least equivalent to that achieved using instruments that meet the Code requirements (i.e., up to +/-6 percent for Group A and B tests, and +/-1.5 percent for pressure and differential pressure instruments for Preservice and Comprehensive tests). The instruments identified on the above Table are permanent plant instrumentation that satisfy the guidance provided in NUREG-1482, Rev.1, Section 5.5.1.

Proposed Alternative Testing:

Using the provisions of this 10 CFR 50.55a Request, as an alternative to the requirements of ISTB-3510(b)(1), the permanent plant instrument yields a

reading that is as at least equivalent to that achieved using instruments that meet the Code requirements as described in NUREG-1482, Rev.1, Section 5.5.1.

The existing permanently installed flow instrumentation is acceptable for pump inservice testing.

Duration of Proposed Alternative:

The proposed alternative identified in this 10 CFR 50.55a Request shall be utilized during the Third Ten Year IST Interval.

Precedents:

Hope Creek

The proposed alternative was previously authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for Interval 2 per NRC SER dated March 18, 1999 (TAC MA0425 and MA1430) and Interval 1 (P-6) per NRC SER dated September 27, 1990 (TAC 65730).

The circumstances and basis for the previous NRC approval have not changed. The RCIC Pump is a Group B Standby System pump and as such the aging factors applicable to this Code component since the approval of the prior 10 CFR 50.55a Request are insignificant. Although technology exists to use more precise temporary flow instrumentation, the combination of the range and accuracy of the existing permanent plant instrumentation more than meets the minimum Code requirements.

References:

NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants"

Proposed Alternative In Accordance with 10CFR50.55a(a)(3)(ii)

--Hardship or Unusual Difficulty without Compensating Increase in Level of Quality and Safety--

System:
Various

ASME Code Components Affected:
Code Class 2 and 3 pumps in the IST Program.

Component/System Function:
Various

Applicable Code Edition and Addenda:
OM Code-2001 Edition through ASME OMb Code-2003

OM Code Category:
Group A and Group B

Applicable Code Requirement:
ISTB-6200, "Corrective Action," Subparagraph ISTB-6200(a), "Alert Range," states, "If the measured test parameter values fall within the alert range of Table ISTB-5100-1, Table ISTB-5200-1, ISTB-5300-1, or ISTB-5300-2, as applicable, the frequency of testing specified in ISTB- 3400 shall be doubled until the cause of the deviation is determined and the condition is corrected."

Reason for Request:
ISTB-6200(a), Alert Range," refers to actions required for a pump in the Alert Range and does not recognize the use of analysis similar to that of ISTB-6200(b), "Action Range". There is no specific reference as to whether or not analysis can be used for a pump in the Alert Range to return the pump testing frequency to "normal". There is no specific reference to ISTB-6200(c).

In comparison, ISTB-6200(b), "Action Range," specifically acknowledges the use of analysis and requires new reference values be established in accordance with ISTB-6200(c), "New Reference Values".

OM Code paragraph ISTB-6200(c), "New Reference Values," states:

> In cases where the pump's test parameters are within either the alert or required action ranges of Table ISTB-5100-1, Table ISTB-5200-1, ISTB-5300-1, or ISTB-5300-2, as applicable, and the pump's continued use at the changed values is supported by analysis, a new set of reference values may be established. This analysis shall include verification of the

pumps operational readiness. The analysis shall include both a pump level and system evaluation of operational readiness, the cause of the change in pump performance, and an evaluation of all trends indicated by available data. The results of the analysis shall be documented in the record of tests.

Verbatim compliance with ISTB-6200(a) requires doubling the test frequency until the cause is determined and the condition corrected. If the cause is determined by analysis and the pumps continued use at the changed values is acceptable as permitted by ISTB-6200(c), then increased testing represents a hardship and should not be required until the condition is corrected.

Proposed Alternative and Basis for Use:

HCGS proposes to use the provisions of ISTB-6200(c), for measured parameters associated with pumps in the ISTB-6200(a) Alert Range. Specifically, if the evaluation, per the guidelines specified in ISTB-6200(c), supports an analysis which demonstrates pump operational readiness and continued use, then the frequency of testing will not be doubled until the condition is corrected. If the results of the evaluation and analysis are inconclusive or do not demonstrate pump operational readiness then the test frequency shall be doubled until the cause of the deviation is determined and the condition corrected.

Proposed Alternative Testing:

HCGS proposes to use the provisions of ISTB-6200(c), for measured parameters associated with pumps in the ISTB-6200(a) Alert Range.

Therefore, pursuant to 10 CFR 50.55a(a)(3)(ii), HCGS requests authorization of the proposed alternative to the specific ISTB Code requirements identified in this 10CFR50.55a Request.

Duration of Proposed Alternative:

The proposed alternative identified in this 10CFR50.55a Request shall be utilized during the Third Ten Year IST Interval.

Precedents:

None

References:

OM Code-2001 Edition through ASME OMb Code-2003, Paragraph ISTB-6200, "Corrective Action"

Proposed Alternative In Accordance with 10 CFR 50.55a(a)(3)(i)

--Alternative Provides Acceptable Level of Quality and Safety--

System:

Main Steam and Automatic Depressurization

ASME Code Components Affected:

1SNPSV-F013A, B, C, D, E
1ABPSV-F013F, G, H, J, K, L, M, P, R

Component/System Function:

These valves have a safety function in the open position to provide overpressure protection for the main steam header and the reactor vessel. Additionally, valves 1SNPSV-F013A-E also serve an ECCS function in the Automatic Depressurization System (ADS) to depressurize the reactor vessel in the event of a small break LOCA coincident with a failure of the High Pressure Coolant Injection (HPCI) system.

Applicable Code Edition and Addenda:

ASME OM Code 2001 through 2003 Addenda

OM Code Category:

C

Applicable Code Requirement:

Paragraph I-3310 of Mandatory Appendix I specifies the periodic testing requirements of ASME Class 1 main steam pressure relief valves with auxiliary actuating devices. The frequency of the required testing is specified in paragraph I-1320 of Mandatory Appendix I.

Mandatory Appendix I requires that these main steam relief valves be periodically tested at least once every five years, with a minimum of 20% of the valves tested within any 24 months, where the 20% shall be previously untested valves, if they exist.

The Code required periodic testing for these valves includes, in part: seat tightness determination; set pressure determination; determination of electrical characteristics and pressure integrity of solenoid valve(s); determination of pressure integrity and stroke capability of air actuator; and determination of operation and electrical characteristics of position indicators.

Reason for Request:

Hope Creek UFSAR 5.2.2.4.2.1.3 discusses the testing frequency of the safety relief valves (SRVs). This section states that Hope Creek "can achieve optimum

SRV operability by disassembly of the pilot section of at least 50 percent of the operating SRVs after each cycle." PSE&G implements the appropriate inspection guidance specified in General Electric SIL No. 196.

The SIL recommends that refurbishment of the pilot disc and seat be performed at least once every other outage or every three years, whichever comes first, or if the "as received" condition indicates that a sticking pilot disc to seat condition exists (SIL 196, Supplement 14, recommended action #2).

Based on SIL recommendations, it is evident that the concern associated with SRV operation centers on the pilot portion of the valve, and its ability to perform its intended function. A review of NRC Information Notices 82-41, 83-39, 83-82, 86-12 and 88-30 supports this conclusion, indicating that the pilot portions of these valves require diligent testing.

Hope Creek Technical Specification Surveillance Requirement (SR) 4.4.2.2 requires that at least one half (1/2) of the safety relief valve pilot stage assemblies be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored per manufacturer's recommendations at least once per 18 months. Additionally, those removed shall be rotated such that all 14 safety relief valve pilot stage assemblies are removed, set pressure tested, and reinstalled or replaced with spares at least once per 40 months.

Hope Creek Technical Specification SR 4.4.2.3 requires that the safety relief valve main (mechanical) stage assemblies be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested at least once every five years.

The Hope Creek Main Steam SRVs are of a two-stage design. The first stage (pilot stage) utilizes a spring loaded pilot disc to sense the set pressure and a pressure loaded stabilizer disc to sense the reseat pressure. Spring force (preload force) is applied to the pilot disc by means of a pilot rod. Thus, the adjustment of the spring preload force will determine the set pressure of the valve. The second stage (main stage) is tightly seated by the combined forces exerted by the preload spring on the main disc and the system internal pressure acting over the area of the disc. In the closed position, the static pressures will be equal in the valve inlet nozzle and in the chamber over the main stage. This pressure equalization is made possible by the internal passages provided (i.e., piston ring gap, vent hole, drain groove and stabilizer disc seat). When the system pressure increases to the valve set pressure, pilot stage operation will vent the chamber over the main stage piston to the downstream of the valve via internal porting. This venting produces a differential pressure across the main stage piton in the direction tending to unseat the valve.

The main stage piston is sized such that the resultant opening force is greater than the combined spring preload and the system pressure seating force.

Proposed Alternative and Basis for Use:

The true setpoint adjustment (and operability determination) of the valve is contained within the pilot portion of the SRV. By applying the SRV testing frequency required by Mandatory Appendix I to the pilot portion (achieved by meeting Technical Specification 4.4.2.2), set point accuracy and pilot sticking verification can be maintained, providing an acceptable level of safety. Testing of the main body (mechanical portion), which contains only the main disc, piston rings and a preload spring that is non-adjustable, at the Mandatory Appendix I specified frequency will not result in a significant increase in the level of safety. Testing of the mechanical portion of all 14 SRVs to provide verification of blowdown and flow rates is conducted every 5 years when the valves are tested as a complete assembly per Technical Specification 4.4.2.3.

Proposed Alternative Testing:

The Hope Creek Main Steam SRVs will be tested in accordance with Technical Specifications 4.4.2.2 and 4.4.2.3. One-half (1/2) of the SRVs pilot stages will be removed and set pressure tested or replaced with previously tested assemblies every 18 months. In the event the "asfound" setpoint fails the setpoint testing, sample expansion of the other pilot valves will be conducted in accordance with paragraph I- 1320(c) of Mandatory Appendix I. All 14 main stages (with the entire assembly) will be removed, tested and reinstalled or replaced every 5 years. Hope Creek anticipates that this maintenance activity will occur in a single outage every 5 years.

Duration of Proposed Alternative:

The proposed alternative identified in this 10 CFR 50.55a Request shall be utilized during the Third Ten Year IST Interval.

Precedents:

The proposed alternative was previously authorized pursuant to 10 CFR 50.55a(a)(3)(i) for Interval 2 per NRC SER dated March 18, 1999 (TAC MA0425 and MA1430)

The proposed alternative was previously authorized pursuant to 10 CFR 50.55a(a)(3)(i) for Interval 1 per NRC SER dated January 27, 1994 (TAC No. M86733).

References:

Hope Creek UFSAR 5.2.2.4.2.1.3

General Electric Service Information Letter 196 (SIL 196)

NRC Information Notices 82-41, 83-39, 83-82, 86-12 and 88-30

Hope Creek Technical Specification SRs 4.4.2.2 and 4.4.2.3

Proposed Alternative In Accordance with 10 CFR 50.55a(a)(3)(i)

--Alternative Provides Acceptable Level of Quality and Safety--

System:

Main Steam and Automatic Depressurization

ASME Code Components Affected:

1SNPSV-F013A, B, C, D, E
1ABPSV-F013F, G, H, J, K, L, M, P, R

Component/System Function:

Depressurization of the Reactor Coolant System (RCS) to allow for low pressure coolant injection.

Applicable Code Edition and Addenda:

ASME OM Code 2001 through 2003 Addenda

OM Code Category:

C

Applicable Code Requirement:

Mandatory Appendix I, Subparagraph I-3410(d). Each valve that has been maintained or refurbished in place, removed for maintenance and testing, or both, and reinstalled, shall be remotely actuated at reduced system pressure to verify open and close capability of the valve prior to resumption of electric power generation. Set pressure testing verification is not required.

Reason for Request:

This 10 CFR 50.55a request requests authorization of the proposed alternative to the requirements to actuate ADS/SRV valves after reinstallation to verify their open and close capability as stated in Mandatory Appendix I, Subparagraph I-3410(d). This 10 CFR 50.55a request contends that in-situ testing imposes unnecessary challenges on the subject valves and has been linked to SRV degradation (e.g., pilot and/or valve leakage). Pilot degradation, while not a concern with respect to the ADS safety function, could, if severe enough, lead to SRV setpoint drift, spurious SRV actuation and/or failure to properly reseat. If any of these valves fail to re-close after testing, the plant would be placed in a LOCA condition requiring plant shutdown in accordance with Technical Specifications (TS) 3.4.2.1.b. In addition, an earlier study (i.e., BWR Owner's Group Evaluation of NUREG-0737, Item II.K.3.16, Reduction of Challenges and Failures of Relief Valves) recommends that the number of ADS openings be reduced as much as possible. This evaluation further contends that adequate demonstration of ADS/SRV operability is still provided through the remaining existing tests and inspections. Overall, this change should reduce SRV leakage

and improve ADS/SRV leakage and improve ADS/SRV reliability by reducing the potential for spurious SRV actuation.

Adequacy of Testing

HCGS believes that the in-situ testing of the ADS/SRVs is not necessary because the remaining ADS surveillance tests and SRV inspections provide the necessary assurance of ADS valve operability. These tests and inspections of the ADS/SRVs are described below.

A. ADS Logic System Functional Test
This test, performed during each refueling cycle, verifies the ECCS logic functions to actuate the ADS on Low Reactor Water Level - Level 1, and High Drywell Pressure. Verification of ADS from the start of the automatic initiation logic to, but not including, instrument gas/accumulator solenoids is demonstrated. It is important to note that the TS Bases for this functional test does not require actual stroking of the ADS/SRV. Refer to TS 4.5.1.d.2.a.

B. Steam Relief Valve Cycling Testing
This test, performed each refueling outage, verifies proper operation of the ADS solenoid valves, air operators, and pilot assembly in accordance with TS 4.0.5.

C. ADS Accumulator Leak Test
This test, performed during each refueling cycle and each time maintenance is performed on the ADS valve, verifies that ADS instrument gas/accumulator leakage is low enough to ensure that there will be sufficient pneumatic pressure for design basis ADS/SRV operation. The ADS design basis calls for two ADS/SRV actuations at 70% of the maximum drywell pressure (62 psig) to depressurize the reactor pressure vessel down to the Residual Heat Removal (RHR) Shutdown Cooling operating pressure range. Refer to UFSAR Section 5.2.2.4.1.

D. SRV Setpoint/Leakage Testing
These functional tests and inspections are performed on at least 50% of the SRV pilot stage assemblies during each refueling outage. These tests verify the pilot valve and setpoint spring assembly open and close at the required set-pressure, and that leakage is within strict vendor specified criteria. Refer to TS 4.4.2.2 and UFSAR Section 5.5.5.10.

E. Main Disc Exercise Test
SRV main disc actuation and leakage is also verified when the entire valve assembly is shipped to the certified test facility. In addition, the testing verifies, at least once every five years, that all the SRV main discs can freely open as specified in TS Surveillance Requirement 4.4.2.3.

Proposed Alternative and Basis for Use:

These combined tests described above verify the required ADS critical component performance requirements. This 10 CFR 50.55a request will only change the requirement to verify that the opening of the SRV pilot disc results in opening of the main disc. However, this ADS/SRV subcomponent function is considered to be extremely reliable based upon the simplicity of this aspect of the SRV design and is supported by Hope Creek and industry ADS/SRV valve performance history.

Proposed Alternative Testing:

Perform ADS/SRV exercise testing utilizing the testing methods and at the frequencies specified in items A through E above.

Duration of Proposed Alternative:

The proposed alternative identified in this 10 CFR 50.55a Request shall be utilized during the Third Ten Year IST Interval.

Precedents:

Hope Creek

The proposed alternative was previously authorized pursuant to 10 CFR 50.55a(a)(3)(i) for Interval 2 per NRC SER dated February 18, 1999 (TAC No. MA4542). Associated TS changes were approved per NRC SER dated February 10, 1999 (TAC No. MA2259)

References:

Hope Creek Technical UFSAR Section 5.2.2.4.1
Hope Creek Technical Specification SRs 4.4.2.2; 4.4.2.3; and 4.5.1.d.2.a

Proposed Alternative In Accordance with 10 CFR 50.55a(a)(3)(i)

--Alternative Provides Acceptable Level of Quality and Safety--

System:

Safety Auxiliaries Cooling Water
Auxiliary Building Chilled Water

ASME Code Components Affected:

Power-Operated Valves that are used for System Control and have a Safety Function:

1EGPCV-2393A
1EGPCV-2393B
1EGPCV-2499A
1EGPCV-2499B
1GJTV-9634A
1GJTV-9634B
1GJTV-9637A
1GJTV-9637B
1GJTV-9667A
1GJTV-9667B
1GJTV-9762A
1GJTV-9762B
1GJTV-9768A
1GJTV-9768B

Component/System Function:

System control with an associated failsafe position feature.

Applicable Code Edition and Addenda:

ASME OM Code 2001 through 2003 Addenda

OM Code Category:

B

Applicable Code Requirement:

ISTA-3130, "Application of Codes Cases," ISTA-3130(b) states, Code Cases shall be applicable to the edition and addenda specified in the test plan.

1. OM Subsection ISTC, Paragraph ISTC-5131, Pneumatically Operated Valves Stroke Testing

2. OM Subsection ISTC, Paragraph ISTC-5132, Stroke Test Acceptance Criteria

3. OM Subsection ISTC, Paragraph ISTC-5133(b), Stroke Test Corrective Action

Reason for Request:

NUREG-1482, Revision 1, Section 4.2.9 states in part; Control valves that perform a safety or fail-safe function must be tested in accordance with the Code provisions for IST to monitor the valves for degrading conditions.

The NRC staff recommends that licensees should apply ASME Code Case OMN-8, as accepted in RG 1.192, if concerns exist regarding IST of control valves with fail-safe functions.

Code Case OMN-8 states that stroke-time testing need not be performed for POVs when the only safety-related function of those valves is to fail safe. Any abnormality or erratic action experienced during valve exercising should be recorded in the test record and an evaluation should be performed.

RG 1.192 allows licensees with an applicable Code of record to implement ASME Code Case OMN-8 in lieu of the Code provisions for Valve Stroke Testing, Stroke Time Acceptance Criteria and Stroke Test Corrective Action, without the need to submit a relief request.

Licensees with a Code of record that is not applicable to the acceptance of this Code Case may submit a request for relief to apply the Code Case consistent with the indicated conditions to provide an acceptable level of quality and safety.

The Code of record for HCGS Third 10-Year IST Interval is OM Code-2001 Edition through 2003 Addenda. The latest applicable Code for OMN-8, as stated in the Code Case, is OM Code-1995.

Proposed Alternative and Basis for Use:

Pursuant to the guidelines provided in NUREG-1482, Revision 1, Section 4.2.9, HCGS proposes to implement Code Case OMN-8 in lieu of the Code provisions for Valve Stroke Testing, Stroke Time Acceptance Criteria and Stroke Test Corrective Action specified in ISTC-5130. Code Case OMN-8 has been determined by the NRC to provide an acceptable level of quality and safety as documented in RG 1.192.

ASME Code Case OMN-8 states that stroke-time testing need not be performed for these valves when the only safety-related function of the valves is to fail safe. OM Code Committee is in the process of revising the applicability of this Code Case to the later approved OM Code editions and addenda.

Proposed Alternative Testing:

Using the provisions of this 10 CFR 50.55a request as an alternative to the AOV stroke-time testing requirements of ISTC-5130 provides an acceptable level of quality for the determination of valve operational readiness. Code Case OMN-8 should be considered acceptable for use with OM Code-2001 through 2003 Addenda as the Code of record. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), HCGS requests authorization of the proposed alternative to the specific ISTC Code requirements identified in this 10CFR 50.55a request.

These valves shall be exercised in accordance with the Subsection ISTC requirements and the failsafe position on a loss of power shall be verified. Any abnormality or erratic action experienced during valve exercising shall be evaluated per the Corrective Action Program.

Duration of Proposed Alternative:

The proposed alternative identified in this 10 CFR 50.55a Request shall be utilized during the Third Ten Year IST Interval.

Precedents:

None for HCGS.

References:

NUREG-1482, Revision 1, Section 4.2.9, "Control Valves with a Safety Function."

Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code," Table 1, "Acceptable OM Code Cases"