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April 29, 2003

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

Subject: Duke Energy Corporation
Oconee Nuclear Station
Docket Nos. 50-269, 270, 287
Inservice Testing (IST) Program
Fourth 10 Year Inspection Interval
Response to Request for Additional Information

On June 10, 2002, Duke Energy Corporation (Duke) submitted a revision (revision 26) of the Inservice Testing (IST) Program for Pumps and Valves at Oconee Nuclear Station. Pursuant to the 10CFR 50.55a(f), this revision (revision 26) reflected our IST Program for the Fourth Inservice Inspection Interval beginning July 1, 2002. In accordance with 10CFR 50.55a(f)(4), the IST Program was updated to meet the provisions of the latest approved editions of the applicable ASME codes and standards. Also, in accordance with 10CFR 50.55a(f)(5), the IST Program contained a listing of "test requirements determined to be impractical by the licensee" (i.e. Relief Requests) and the basis for these determinations.

During review of this submittal, a number of questions were generated by the NRC Staff, and communicated to Oconee Site personnel by E-mail. Attachment 1 of this letter includes these questions and the Oconee responses. Attachment 2 includes replacement pages for the individual pages of the June 10, 2002 submittal which were amended to incorporate changes where appropriate. Based on telephone conversations with the Staff, it is our understanding that these responses and program amendments satisfactorily address all of the Staff's questions and comments to date relative to the Oconee IST program for the Fourth Inservice Inspection Interval.

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If there are any questions or further information is needed you may contact R. P. Todd at (864) 885-3418.

Very truly yours,

R. A. Jones
Site Vice President

Attachments

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U. S. Nuclear Regulatory Commission
April 29, 2003

Attachment 1

Questions/comments concerning the
Oconee Nuclear Station
Fourth Inservice Inspection Interval
Inservice Testing (IST) Program for Pumps and Valves
Submittal dated June 10, 2002,
Effective July 1, 2002.

Questions/comments concerning the Oconee IST Relief Requests

1. Relief request ON-SRP-HPI-01

The Relief Request references ISTB paragraph 5.2.3(c) as the test requirement then discusses quarterly pump testing in the basis for relief section. Paragraph 5.2.3(c) is associated with the biennial comprehensive pump test and does not address quarterly pump testing. The reviewer can not tell what requirement the licensee is asking relief from. The reviewer notes that the comprehensive pump test can be performed while the unit is shutdown and that ISTB 5.2.2 requires that Group B tests be conducted with the pump operating at a specified reference point.

The licensee withdraws this Relief Request.

2. Relief request ON-SRP-HPI-02

The Relief Request references ISTB paragraph 4.7.4 c as the test requirement. ISTB 4.7.4c does not contain a requirement to obtain one vibration measurement during each inservice test.

The licensee withdraws this Relief Request.

3. Relief request ON-GRV-15

4 of the valves (1/2RC0164, 1/2RC165) associated with this relief request are identified as active valves on the data sheets.

If the valves are not exercised what confidence does the licensee have that the valve will indicate correctly if the valve is repositioned, ie: that a normally closed valve will still indicate closed if the valve is open or a normally open valve will still indicate open if the valve is closed. Passive valves are not required to be stroke tested but observation locally every 2 years to verify valve operation seems to be a reasonable requirement.

The licensee withdraws this Relief Request.

4. Relief request ON-GRV-16

No valves are identified in the program as requiring this relief. The reviewer does not understand why a relief request that is not needed would be submitted with the program.

If a valve is required to change obturator position to accomplish the required function(s) it is an active valve and should meet the requirements as specified in the code.

Relief Request ON-GRV-16 applies to the following valves: 1/2/3LP-1, 1/2/3LP-9, 1/2/3LP-10, 1/2/3LP-21, 1/2/3LP-22, 1/2/3LP-103. The valve table has been appropriately revised.

The following is an example of how this relief applies.
Valves LP-21 and LP-22 are normally open valves. These valves must remain open to allow the LPI pumps to take suction from the BWST to mitigate Chapter 15 accidents. Once the sump recirculation phase of the accident is entered, these valves must close. We consider these valves active and they are stroke timed from the open to closed position and remote position indication tests are performed for both the open and closed positions. The valves are not stroke timed from the closed to open position even though the code implies that this direction should be timed per Section ISTC 4.2.2. This paragraph in the code states that a valve should be tested "to the position(s) required to fulfill its function(s)." It does not seem logical to perform a close to open stroke time test on a valve that is normally open. It is cases like this where this relief would be applied.

5. General Comment: The licensee does not indicate whether the basis for the reliefs is acceptable level of quality and safety, hardship or unusual difficulty, or impracticality.

The relief requests have been revised to indicate the basis for the relief. The revised relief requests are included for your review.

QUESTIONS/COMMENTS ON RELIEF REQUESTS ON-GRP-01 and ON-GRP-02

1. ON-GRP-01

Palo Verde was granted relief to use smooth running pump criteria on specific components not as a generic relief request. What pumps are considered smooth running and what are the vibration levels?

Is using the predictive maintenance program to monitor safety related pumps considered a commitment to the NRC with respect to this relief request and will it be identified in the commitment tracking system?

The licensee test alternative states: Vibration parameters that WOULD have reference values < 0.05 ips ..... The reviewer does not understand why the word WOULD is used. Either the reference value is or isn't less than 0.05 ips.

The licensee is aware that Palo Verde was granted relief to use smooth running pump criteria on specific components and not as a generic relief. However, it is reasonable that generic relief could be granted if applied to specific vibration points rather than pumps. The nomenclature smooth running pump' is somewhat misleading; it should more appropriately be defined as smooth point' criteria in any given pump. Generic relief is being requested for specific vibration parameters that are extremely smooth within any pump. This approach limits the number of times relief must be requested realizing that specific vibration baseline parameters can vary above and below 0.05 inches per second following pump maintenance.

As requested, the following is a list of pumps within the IST program that have vibration points that are currently less than 0.05 inches per second:

Building Spray Pump 1B	Pump Outboard Vertical	0.0473 ips
Building Spray Pump 2A	Pump Outboard Vertical	0.0394 ips
Building Spray Pump 3B	Pump Outboard Vertical	0.0473 ips
	Pump Outboard Horizontal	0.0430 ips
SSF HVAC SW Pump 2	Pump Outboard Vertical	0.0293 ips
SSF D/E SW Pump	Pump Inboard Horizontal	0.0404 ips
	Pump Inboard Vertical	0.0221 ips
	Pump Outboard Horizontal	0.0224 ips
	Pump Outboard Vertical	0.0237 ips
Unit 1 Turbine Driven EFW	Pump Outboard Vertical	0.0410 ips
Motor Driven EFW 1A	Pump Outboard Axial	0.0370 ips
Motor Driven EFW 1B	Pump Outboard Axial	0.0413 ips
	Pump Inboard Vertical	0.0463 ips
Motor Driven EFW 2A	Pump Inboard Vertical	0.0404 ips
Motor Driven EFW 2B	Pump Inboard Vertical	0.0326 ips
Motor Driven EFW 3A	Pump Outboard Vertical	0.0389 ips
	Pump Inboard Vertical	0.0273 ips
	Pump Outboard Horizontal	0.0492 ips
	Pump Outboard Axial	0.0312 ips
Motor Driven EFW 3B	Pump Inboard Horizontal	0.0468 ips
	Pump Inboard Vertical	0.0305 ips
SSF D/E FO Transfer Pump	Motor Outboard Axial	0.0240 ips
	Motor Inboard Horizontal	0.0076 ips
	Motor Inboard Vertical	0.0209 ips
	Pump Inboard Horizontal	0.0048 ips
	Pump Inboard Vertical	0.0056 ips
	Pump Outboard Horizontal	0.0049 ips
	Pump Outboard Vertical	0.0035 ips
	Pump Outboard Axial	0.0046 ips
HPI Pump 1A (Quarterly)	Motor Inboard X direction	0.0394 ips

HPI Pump 1A (Comp)	Motor Outboard X direction	0.0401 ips
	Motor Outboard Y direction	0.0382 ips
	Motor Inboard X direction	0.0438 ips
HPI Pump 1B (Quarterly)	Motor Inboard X direction	0.0380 ips
HPI Pump 1B (Comp)	Motor Inboard X direction	0.0209 ips
	Motor Inboard Y direction	0.0280 ips
HPI Pump 2A	Motor Inboard X direction	0.0500 ips
	Motor Outboard X direction	0.0480 ips
	Motor Inboard Y direction	0.0450 ips
	Motor Outboard Y direction	0.0470 ips
HPI Pump 2A (Comp)	Motor Inboard Y direction	0.0310 ips
HPI Pump 2C	Motor Outboard Y direction	0.0483 ips
	Motor Inboard X direction	0.0331 ips
	Motor Inboard X direction	0.0466 ips
HPI Pump 2C (Comp)	Motor Inboard X direction	0.0331 ips
HPI Pump 3A	Motor Inboard Y direction	0.0497 ips
	Motor Inboard X direction	0.0445 ips
HPI Pump 3A (Comp)	Motor Inboard X direction	0.0247 ips
	Motor Inboard Y direction	0.0480 ips
HPI Pump 3B	Motor Outboard Y direction	0.0408 ips
	Motor Inboard X direction	0.0382 ips
HPI Pump 3B (Comp)	Motor Outboard Y direction	0.0224 ips
	Motor Inboard Y direction	0.0352 ips
HPI Pump 3C	Motor Outboard X direction	0.0463 ips
	Motor Inboard X direction	0.0323 ips
HPI Pump 3C (Comp)	Motor Inboard X direction	0.0319 ips
Unit 2 SSF RC M/U Pump	Inboard Horizontal	0.0460 ips
Unit 3 SSF RC M/U Pump	Inboard Horizontal	0.0480 ips

LPI Pump 1A	Pump Inboard Vertical	0.0459 ips
	Pump Outboard Horizontal	0.0306 ips
	Pump Outboard Vertical	0.0323 ips
LPI Pump 1A (Comp)	Pump Inboard Vertical	0.0459 ips
	Pump Outboard Horizontal	0.0306 ips
	Pump Outboard Vertical	0.0323 ips
LPI Pump 1C	Pump Inboard Vertical	0.0497 ips
LPI Pump 2B	Pump Outboard Horizontal	0.0378 ips
LPI Pump 2C	Pump Outboard Horizontal	0.0419 ips
LPI Pump 3B	Pump Outboard Vertical	0.0319 ips
	Pump Inboard Vertical	0.0297 ips
	Pump Outboard Horizontal	0.0490 ips
LPI Pump 3C	Pump Outboard Horizontal	0.0459 ips
LPSW Pump A (Unit 1/2)	Pump Inboard Horizontal	0.0245 ips
	Pump Inboard Vertical	0.0276 ips
	Pump Outboard Horizontal	0.0285 ips
	Pump Outboard Vertical	0.0331 ips
	Pump Outboard Axial	0.0286 ips
LPSW Pump B (Unit 1/2)	Pump Inboard Horizontal	0.0254 ips
	Pump Inboard Vertical	0.0304 ips
	Pump Outboard Horizontal	0.0276 ips
	Pump Outboard Vertical	0.0452 ips
	Pump Outboard Axial	0.0445 ips
LPSW Pump C (Unit 1/2)	Pump Inboard Horizontal	0.0213 ips
	Pump Inboard Vertical	0.0237 ips
	Pump Outboard Horizontal	0.0290 ips
	Pump Outboard Axial	0.0261 ips
LPSW Pump 3A	Pump Inboard Horizontal	0.0211 ips
	Pump Inboard Vertical	0.0293 ips
	Pump Outboard Horizontal	0.0255 ips
	Pump Outboard Vertical	0.0366 ips
	Pump Outboard Axial	0.0181 ips
LPSW Pump 3B	Pump Inboard Horizontal	0.0261 ips
	Pump Inboard Vertical	0.0366 ips

Pump Outboard Horizontal	0.0184 ips
Pump Outboard Vertical	0.0266 ips
Pump Outboard Axial	0.0297 ips

For those points listed above, the alert value is limited by the multiplier (2.5 times the baseline) as opposed to the hard limit of 0.325 ips. Normal variation in machine behavior and data collection could result in an unnecessary entrance into the alert condition for vibration points with very low baseline values (less than 0.05 ips).

ON-GRP-01 has been modified to more specifically define the additional monitoring activities associated with IST pumps. This additional monitoring is considered an NRC commitment. Reference to the Predictive Maintenance Program has been removed from ON-GRP-01. The revised version of ON-GRP-01 is attached for review.

As mentioned by the reviewer, the word "WOULD" has been removed from the "Test Alternative" section of the relief request.

For clarification, the licensee is requesting to apply the following alert and required action limits for the points listed above and any future baseline vibration measurement values that are less than 0.05 ips:

Baseline Value	Alert	Required Action
< 0.05 ips	0.125 ips	0.3 ips

2. ON-GRP-02

The licensee justification deals in generalities not specifics and is not persuasive. The 1.03 upper limit is a consensus standard arrived at by ASME, the industry and NRC. If the licensee believes the Code should be changed to reflect an acceptance criteria of 1.07 this should be pursued through ASME. If the licensee has a technical basis to say that the 1.03 acceptance criteria is not appropriate for individual components this could be pursued through the relief request process.

The licensee withdraws this Relief Request.

OCONEE FOURTH TEN YEAR INTERVAL QUESTIONS/COMMENTS

1. **Section 1.2 (page 3 of 27) does not reference Subsection ISTA. Should ISTA be referenced in this Section? ISTA is a still a requirement even if it is not referenced.**

Yes. ISTA is still applicable to the Inservice Testing Program. The Program Document has been revised to include a reference to ANSI/ASME OM-1995 Standard, OMa-1996 addenda, Subsection ISTA.

2. **Justification for deferral ON-CF-01 states that the valves are tested open and closed on a refueling frequency. The valve table states that the valves are FS open to close and PS closed to open at cold shutdown and FS closed to open at refueling.**

The licensee concludes that the reference to the partial stroke test in the valve table should be deleted since there is no longer a requirement for such testing with respect to Category C check valves.

As stated in Subsection ISTC 4.5.2 (and reiterated within the JFD), open and close tests need only be performed at an interval when it is practical to perform both tests. Additionally, open and close tests are not required to be performed at the same time if they are both performed within the same interval. Clearly, the required test frequency defaults to the interval (Q, CS, RF) in which both tests (open to closed and closed to open) can be performed. When the situation arises such that a valve can be tested in one direction more frequently than the other direction, ONS has chosen to continue testing at the more frequent interval for that particular direction when possible. Tests in both directions will be performed at the less frequent interval as required. Tests specified with Q or CS frequencies are also performed during each RF. However, redundant tests are not listed in the valve table. The guidance provided in the valve table is used by station personnel for planning and scheduling purposes, thereby necessitating the need for the specification of each test frequency.

3. **Justification for deferral ON-CF-02 states that the valves are tested open and closed on a refueling frequency. The valve table states that the valves are FS open to closed and PS closed to open at cold shutdown and FS closed to open at refueling.**

See response to Question 2.

4. **Justification for deferral ON-FDW-02 states the function of the valves is to close to preclude diversion of flow. The alternative states the valves are tested to their required open and closed safety positions. The description of the valves (TDEFW pump discharge) leads the reviewer to the conclusion that the valves are also required to open during an accident.**

As stated in deferral ON-FDW-02, the valves have only a function to close. The Turbine Driven Emergency Feedwater Pump (TDEFW) at ONS is not credited for any UFSAR Chapter 15

accident mitigation function. Therefore, the TDEFW pump discharge check valves have no required safety function to open. The JFD has been revised and included for your review.

5. **Justification for deferral ON-FDW-04 states the function of the valves is close or remain closed during an accident. The alternative states that the valves are sample disassembled to assure the safety function to OPEN as well as to assure the ability to close. The valve table states the valves are sample disassembled and checked open to closed. The reviewer believes the test direction should state both for SD.**

The licensee agrees that both directions should be specified within the valve table. The valve table has been revised accordingly.

6. **Justification for deferral ON-FO-01 states that the valve is sample disassembled to assure the safety function to OPEN as well as to assure the ability to close. The valve table states the valve is sample disassembled and checked open to closed. The reviewer believes the test direction should state both for SD.**

The licensee agrees that both directions should be specified within the valve table. The valve table has been revised accordingly.

7. **Justification for deferral ON-HP-05 states the valves are tested to the open and closed positions during cold shutdown and tested to the open position quarterly. The valve table states the valves are FS closed to open quarterly, FS open to closed at cold shutdown, and FS open to closed at refueling.**

As discussed in the response to Question 2, ONS has chosen to continue testing at a more frequent interval than required by the code where possible.

8. **Justification for deferral ON-HP-06 states the function of the valves is to close to prevent excessive flow to the LDST and that the valves will be tested to the closed position during cold shutdown. The valve table defines the test direction as both. This implies that the valves have a safety function to open also.**

The function of the valves as stated in the JFD is correct. The licensee agrees that the full stroke (FS) from the closed to open is not required by IST. The valve table has been revised to only show a full stroke test from the open to closed position during cold shutdown.

9. **Justification for deferral ON-HP-11 does not specify that the valves will be FS to the open position on a refueling frequency. The valve table does identify that the valves are FS to the open position.**

The JFD has been revised to state that the valves are FS to the open position during refueling. The revised JFD is included for your review.

10. **Justification for deferral ON-HP-12 states that the valves are sample disassembled to assure the safety function to open and close. The valve table states the valves are sample disassembled and checked open to closed. The reviewer believes the test direction should state both for SD.**

The licensee agrees that both directions should be specified within the valve table. The valve table has been revised accordingly.

11. **Justification for deferral ON-HP-13 states that the valves are sample disassembled to assure the safety function to open and close. The valve table states the valves are sample disassembled and checked open to closed. The reviewer believes the test direction should state both for SD.**

The licensee agrees that both directions should be specified within the valve table. The valve table has been revised accordingly.

12. **Justification for deferral ON-HP-14 states that the valves are sample disassembled to assure the safety function to open and close. The valve table states the valves are sample disassembled and checked open to closed. The reviewer believes the test direction should state both for SD.**

The licensee agrees that both directions should be specified within the valve table. The valve table has been revised accordingly.

13. **Justification for deferral ON-HP-15 states that the valves are sample disassembled to assure the safety function to open and close. The valve table states the valves are sample disassembled and checked open to closed. The reviewer believes the test direction should state both for SD.**

The licensee agrees that both directions should be specified within the valve table. The valve table has been revised accordingly.

14. **Justification for deferral ON-HP-16 states that the valves are tested to the open and closed position each refueling outage and the valves are tested to the closed position during each cold shutdown. The valve table states that the valves are FS and PS closed to open on a refueling frequency. The table does not identify FS open to closed as a refueling requirement and the justification does not address PS on a refueling basis.**

As discussed in the response to Question 2, ONS has chosen to continue testing at a more frequent interval than required by the code where possible.

The licensee concludes that the reference to the partial stroke test in the valve table should be deleted since there is no longer a requirement for such testing with respect to Category C check valves.

15. **Justification for deferral ON-HP-17 states the valves are tested to the open and closed position each refueling outage and tested to the open position quarterly. The valve table does not identify FS closed to open as a refueling frequency requirement.**

As discussed in the response to Question 2, ONS has chosen to continue testing at a more frequent interval than required by the code where possible.

16. **Justification for deferral ON-HP-21 does not state the test frequency. The valve table identifies the frequency as cold shutdown.**

The JFD has been revised to identify the test frequency as cold shutdown. The revised JFD is included for your review.

17. **Justification for deferral ON-HP-22 states that the valves are tested to the open and closed position each refueling outage and the valves are tested to the closed position during each cold shutdown. The valve table states that the valves are FS closed to open on a refueling frequency and FS open to closed on a cold shutdown frequency.**

As discussed in the response to Question 2, ONS has chosen to continue testing at a more frequent interval than required by the code where possible.

18. **Justification for deferral ON-LP-06 states that the valves are tested to the open and closed positions at refueling and tested to the partially open position at cold shutdown. The valve table identifies that the valves are FS open to close at cold shutdown.**

The valve table has been revised to indicate that the valves are FS open to close at refueling.

19. **Justification for deferral ON-LP-09 states the test to the open position will be performed each refueling outage. The valve table does not identify FS closed to open as a refueling frequency requirement.**

As discussed in the response to Question 2, ONS has chosen to continue testing at a more frequent interval than required by the code where possible.

20. **Justification for deferral ON-LPSW-03 states he valves are sample disassembled during refueling to assure the safety function to open as well as assure the capability to close. The valve table states the valves are sample disassembled and checked open to closed. The reviewer believes the test direction should state both for SD.**

The licensee agrees that both directions should be specified within the valve table. The valve table has been revised accordingly.

21. **Justification for deferral ON-LPSW-05 does not identify that the valves are also PS monthly closed to open.**

The JFD has been revised to indicate that a partial stroke test is performed monthly. The revised JFD is included for your review.

22. Justification for deferral ON-MS-01does not identify that the valves are also PS quarterly open to closed.

The PS test has been discontinued since issuance of this document. The valves are actually FS each quarter but not timed due to the reasons listed on the JFD. The valve table has been revised accordingly.

23. Justification for deferral ON-RC-02 does not identify that the valves are also tested to the open and closed positions during refueling.

The licensee acknowledges the fact that the tests performed during refueling are not identified on the JFD although indicated within the valve table. The JFD is used to justify deferral of quarterly testing to the next available opportunity (cold shutdown in this case). The JFD does so in the Basis for Deferral. The additional test (during RF) is necessary due to reference value differences depending upon system conditions.

24. Justification for deferral ON-SSF-02 states that the valves are tested to the open and closed positions at refueling and that the valves are additionally tested to the open position each cold shutdown. The valve table does not identify that the valves are FS closed to open at refueling. The Justification for deferral identifies the valves as SSF-1HP0399 etc. The reviewer could not find valves with these identifiers in the valve tables, but did find valves identified as 1HP0399SSF etc. The reviewer assumes that these are the valves referenced in the justification (This is a general comment for all valves listed as SSF-XXXX in the justifications for deferral).

Valves SSF-XXXX in the JFDs are the same valves that are listed as XXXXSSF in the valve table. Both the valve table and the JFD have been revised to delete the SSF designation for consistency. The title of the JFD will remain as an indicator for ONS personnel that these valves are associated with the Standby Shutdown Facility. The revised JFDs are included for your review.

As discussed in the response to Question 2, ONS has chosen to continue testing at a more frequent interval than required by the code where possible.

U. S. Nuclear Regulatory Commission
April 29, 2003

Attachment 2

Replacement Pages for
Oconee Nuclear Station
Fourth Inservice Inspection Interval
Inservice Testing (IST) Program for Pumps and Valves
Submittal dated June 10, 2002,
Effective July 1, 2002.

ON-GRP-01 (Revised)

ON-GRP-02 (The licensee withdraws this Relief Request.)

ON-SRP-HPI-01 (The licensee withdraws this Relief Request.)

ON-SRP-HPI-02 (The licensee withdraws this Relief Request.)

ON-GRV-03 (Revised)

ON-GRV-12 (Revised)

ON-GRV-15 (The licensee withdraws this Relief Request.)

ON-GRV-16 (Revised)

ON-FDW-02 (Revised)

ON-HP-11 (Revised)

ON-HP-21 (Revised)

ON-LPSW-05 (Revised)

ON-SSF-01 (Revised)

ON-SSF-02 (Revised)

ON-SSF-03 (Revised)

ON-SSF-04 (Revised)

Pump Generic Relief Request

Item Number ON-GRP-01

Category Type Smooth Running Pumps

Function Various

Test Requirement OMa-1996 ISTB paragraph 6.2 states that if deviations fall within the alert range of Table ISTB 5.2.1-1, the frequency of testing specified in paragraph ISTB 5.1 shall be doubled until the cause of the deviation is determined and the condition corrected. Likewise, if deviations fall within the required action range of Table ISTB 5.2.1-1, the pump shall be declared inoperable until either the cause of the deviation has been determined and the condition corrected, or an analysis of the pump is performed and new reference values are established.

Basis for Relief This is a request for authorization of a proposed test alternative which provides an acceptable level of quality and safety pursuant to 10CFR50.55a(a)3(i).

The repeatability of pump vibration readings at ONS is in the range of 0.05 ips due to hydraulic flow noise in this amplitude range and the repeatability of the vibration instruments. When vibration velocities are less than 0.05 ips, changes have been shown to be non-significant.

At vibration velocities less than 0.05 ips, flow noise and instrument repeatability can significantly affect reference values. Candidates for "smooth-running" status will be analyzed per ISTB paragraph 4.3 to verify that use of this relief request will not prevent the detection of significant pump degradation.

For displacement reference values less than 0.5 mils, it is noted that the Section XI code in effect for the third interval IST Program sets the Alert Range at >1.0 mil and the Required Action Range at >1.5 mil. This implies a minimum reference value of 0.5 mils, which is equivalent to 0.047 ips for 1800 rpm pumps and 0.094 ips for 3600 rpm pumps. The effective reference values proposed for smooth-running pumps are roughly equal to the implied Section XI reference values for 1800 rpm pumps and more conservative than the implied reference values for 3600 rpm pumps. Without this relief request, the Alert Ranges for some smooth running pumps will be reduced by a factor of 10.

In the vibration monitoring program, recently acquired data is compared with previous data to detect any indicated degradation of equipment condition. If degradation indicates the reliability of operating equipment may be negatively affected, or if acceptance criteria is no longer being met, appropriate corrective action is taken. Corrective action may include: continuing trending of the degraded condition, if the

condition is not considered to be immediately threatening to the equipment and can be corrected during a time window convenient to plant operation; additional testing or monitoring to confirm the suspected degraded condition; inspection and repair of the equipment as necessary; changes to preventive maintenance procedures or schedules; or design changes.

ONS expends considerable resources on preventive and predictive maintenance. One result of these efforts is pumps that run very smoothly. To continue to impose Code-mandated Alert and Required Action values on smooth-running pumps unnecessarily penalizes ONS for achieving this high level of performance.

Test Alternative

Vibration parameters that have reference values ≤ 0.05 ips may be considered "smooth-running". The Alert and Required Action values for these parameters will be determined as if their reference value is 0.05 ips; that is, the Alert Range will be > 0.125 ips to 0.3 ips, and the Required Action Range will be > 0.3 ips.

In addition to the Code-mandated parameter monitoring (developed head, flow, overall vibration, etc.), additional pump vibration spectrum band monitoring will be performed. If any parameters are outside normally expected ranges, an evaluation will be performed and appropriate corrective actions will be taken.

Before being treated as "smooth-running" under this relief request, each candidate pump parameter will be reviewed to verify that testing performed under the provisions of this relief request will not prevent the detection of significant pump degradation.

This alternative will be utilized for the remainder of the current 120 month interval.

Pump Generic Relief Request

Item Number	ON-GRP-02
Category Type	Comprehensive Test Hydraulic Acceptance Criteria
Function	Various
Test Requirement	Licensee withdraws this request
Basis for Relief	Licensee withdraws this request
Test Alternative	Licensee withdraws this request.

Pump Specific Relief Request

Item Number:	ON-SRP-HPI-01
Pump(s):	SSF RC Makeup Pumps (positive displacement) 1,2,3HPIPU0005
Function:	The licensee withdraws this request
Test Requirement:	The licensee withdraws this request
Basis for Relief:	The licensee withdraws this request
Test Alternative:	The licensee withdraws this request

Pump Specific Relief Request

Item Number:	ON-SRP-HPI-02
Pump(s):	SSF RC Makeup Pump (positive displacement) 3HPIPU0005
Function:	The licensee withdraws this request
Test Requirement:	The licensee withdraws this request
Basis for Relief:	The licensee withdraws this request
Test Alternative:	The licensee withdraws this request

Generic Relief Request

Item Number: ON-GRV-03

Category Type: Fail-Safe Valves

Test Requirement: ISTC 4.2.6: "Valves with fail-safe actuators shall be tested by observing the operation of the actuator upon loss of valve actuating power in accordance with the exercising frequency of paragraph ISTC 4.2.1."

Basis for Relief: Testing by loss of actuator power results in hardship and unusual difficulty without a compensating increase in the level of quality and safety. First, loss of actuator power generally involves maintenance action to interrupt power, which must subsequently be restored and verified. This greatly increases the manpower requirements for testing and increases possibility for human error in returning the component to service. Second, by ISTC 3.4, a subsequent post maintenance test is required to verify return to acceptable operation. Third, some components, especially pneumatic valves, have two modes of "loss of actuator power": they can lose pneumatic power by loss of instrument air or they can lose electrical power to control solenoids. Therefore, to test all modes of failure at least three tests would be required on some valves.

The net result is a significant increase in manpower and time to perform the tests, an increase in radiation exposure for valves in radiation areas, and an increase in the possibility of improper return to service.

Alternate Testing: Fail safe valves will be tested using normal controls. Where both normal controls and engineered safeguard (ESG) control switches exist, the ESG switches will be used. The action of the switch is the same as if the actuator power is removed. Fail/Safe valves installed have pneumatic or mechanical devices to fail the valve in the safe direction. Response to I.E. Notice 88-14 and recent analysis has shown all valves installed to fail in the safe direction and/or mechanical means have been provided and incorporated into procedures to reposition the valve. This test alternative will be imposed for the time period of the current ten year interval.

Generic Relief Request

Item Number:	ON-GRV-12
Category Type (s):	**All safety and relief valves set-pressure testing.**
Flow Diagram (s):	All applicable
Function (s):	Provide over-pressure protection to associated systems.
Test Requirement:	ASME OMa-1996, Appendix I Sections I 8.1.1(h), I 8.1.2 (h) and I 8.1.3 (g), Time Between Valve Openings; A minimum of 10 minutes shall elapse between successive openings.
Basis for Relief:	For these valves, the requirement for waiting 10 minutes between successive openings has been modified by the ASME Code Committees in conjunction with safety and relief valve industry experts and is reflected in a change made to the ASME O&M 1995 Edition (OMb-1997, Appendix I). Data and research has proven that the effect on thermal equilibrium and set-point is negligible between successive openings. The impact of waiting 10 minutes between successive openings is an unnecessary increase in manpower and radiation exposure with no increase in level of safety or test accuracy.
Code Alternative:	For all safety and relief valves, a minimum of 5 minutes shall elapse between successive valve openings. This test alternative provides an acceptable level of quality and safety and will be imposed for the time period of the current ten year interval.

Generic Relief Request

Item Number:	ON-GRV-15
Category Type:	**Valves with passive safety functions and remote position indications.**
Test Requirement:	The licensee withdraws this request
Basis for Relief:	The licensee withdraws this request
Alternate Testing:	The licensee withdraws this request

Generic Relief Request

Item Number: ON-GRV-16

Category Type: **Valves which are maintained in one position to satisfy a safety function (i.e. passive safety function) and then must change position during an event to fulfill another safety function (i.e. active safety function).**

Test Requirement: Although Table ISTC 3.6-1 of OMa-1996 Subsection ISTC clearly describes testing requirements based on valve function (i.e. active versus passive), Section ISTC 4.2.2 appears to imply that exercise testing of a valve is required for passive functions of active valves.

Basis for Relief: Per Section ISTC 1.1 of OMa-1996 Subsection ISTC, the basis of Inservice Testing is to assess the operational readiness of active or passive valves which are required to perform a specific function in shutting down a reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident. To this end, a valve which has a single active function to change position is monitored to ensure its operational readiness to fulfill such a function. Likewise, the position indication of a valve which simply has a passive function to remain in a certain position is monitored. Thus, the code has no requirements or provisions for monitoring the ability of passive valves to change position. As recognized by the code, the degradation of a valve to move to its passive position is inconsequential since the valve is maintained during normal operations in such a position to meet its passive safety function. As previously stated, Section ISTC 4.2.2 does not appear to recognize that certain valves may have a passive function and an active function. For example, Section ISTC 4.2.2 requires that a valve be full stroke exercised during plant operation to the positions required to fulfill its function(s). This would imply that a valve with a passive function in one direction and active function in the other direction would be required to be monitored for degradation during cycling to either position. However, as previously stated and as recognized by the code, any potential degradation of a valve to change position to meet its passive safety function is inconsequential. Obviously, since it is a passive function, there is no necessity for a valve to move to its passive position to perform a specific function in shutting down a reactor to the cold shutdown condition, in maintaining the cold shutdown condition, or in mitigating the consequences of an accident. Likewise, there should be no requirement to monitor the ability of a valve to move to its passive position.

Alternate Testing: For valves which are maintained in one position to satisfy a safety function (i.e. passive safety function) and then must change position during an event to fulfill another safety function (i.e. active safety function), the following testing is to be performed:

- Testing of the passive function of the valve will be performed identically to the testing specified within Table ISTC 3.6-1 of OMa-1996 for a passive valve.
- Testing of the active function of the valve will be performed identically to the testing specified within Table ISTC 3.6-1 of OMa-1996 for an active valve.

The proposed alternative provides an acceptable level of quality and safety and will be imposed for the duration of the current 10 year interval.

Justification for Deferral

Item Number: ON-FDW-02

Valve: TDEFWP Discharge Header Check Valves
1FDW0311, 2FDW0311, 3FDW0311
1FDW0312, 2FDW0312, 3FDW0312

Valve Category: C

Function: These valves close to preclude diversion of flow when the TDEFDW pump is not running and MDEFDW pumps are running.

Test Requirement: Verify proper valve movement to the open and closed position every three months as required per OMa-1996, Subsection ISTC 4.5. Open and close tests are not required to be performed at the same time if performed within the same interval.

Basis for Deferral: The Emergency Feedwater pumps must supply water to the steam generators in order to test these valves to their proper position. The Emergency feedwater pumps supply unheated condensate to the steam generators. Therefore, testing these valves at power would create undue thermal stresses on the steam generator tubes and nozzles. In addition, testing these valves by supplying the steam generators with unheated condensate would place the plant in a feedwater transient which could cause a reactor trip.

Test Alternative & Frequency: An alternative test frequency based on the requirements within OMa-1996 Subsection ISTC 4.5 is followed.

Per OMa-1996 Subsection ISTC, the valves will be tested to assure the safety function to close as well as to assure the capability to open during cold shutdown.

Justification for Deferral

Item Number: ON-HP-11

Valve: HPI Pump Discharge Check Valve
1HP0105, 2HP0105, 3HP0105
1HP0109, 2HP0109, 3HP0109
1HP0113, 2HP0113, 3HP0113

Code Category: C

Function: These valves shall open as a result of its pump starting and delivering flow. The valves shall close to prevent reverse flow.

Test Requirement: Verify proper valve movement to the open and closed position every three months as required per OMa-1996, Subsection ISTC 4.5. Open and close tests are not required to be performed at the same time if performed within the same interval.

Basis for Deferral: These valves cannot be tested at power or at cold shutdown due to the possibility of RCS overpressurization.

Test Alternative & Frequency: Per OMa-1996 Subsection ISTC 4.5, open and close tests need only be performed at an interval when it is practical to perform both tests.

Per OMa-1996 Subsection ISTC 4.5.4 (c), the valves are full stroke exercised to the open and closed positions during refueling.

Additionally, the valves are tested to the closed position and partially open position every three months.

Justification for Deferral

Item Number: ON-HP-21

Valve: Letdown Storage Tank Inlet Stop Check Valve
1HP0078, 2HP0078, 3HP0078

Code Category: C

Function: Normally, these valves are at least partially open during power operation since at least one HPI Pump's minimum flow, RCP seal return flow and RCS letdown flow is passing through the valve. Assuming an accident and LOOP, the valves would likely close and have to reopen after emergency power is aligned to allow HPI minimum flow to be recirculated to the pump suction piping via the LDST.

Test Requirement: Verify proper valve movement to the open and closed position every three months as required per Oma-1996 Subsection ISTC 4.5. Open and close tests are not required to be performed at the same time if performed within the same interval.

Basis for Deferral: These valves cannot be closed during power operation. Closing the valves would isolate the operating HPI Pump's minimum flow, RCP seal return flow and RCS letdown flow to the LDST.

Test Alternative & Frequency: An alternative test frequency based on the requirements within OMa-1996 Subsection ISTC 4.5 is followed for the closed test.

Per OMa-1996 Subsection ISTC 4.5, open and close tests need only be performed at an interval when it is practical to perform both tests. The valves are tested to assure the safety function to open as well as to assure the capability to close during cold shutdown.

Additionally, the valves are tested to the open position every three months.

Justification for Deferral

Item Number:	ON-LPSW-05
Valve:	RBCU Cooling Coil Outlet Isolation Valves 1LPS0018, 2LPS0018, 3LPS0018 1LPS0021, 2LPS0021, 3LPS0021 1LPS0024, 2LPS0024, 3LPS0024
IST Valve Category:	B
Function:	These valves shall open to allow LPSW flow through the RBCU cooling coils.
Test Requirement:	Verify proper valve movement to the open position every three months as required per OMa-1996 Subsection ISTC 4.2.
Basis for Deferral:	From a system review performed to meet the concerns addressed within Generic Letter 96-06, the potential for a water hammer within the LPSW piping with the outlet isolation valves closed was identified. The operability evaluation performed to address the potential water hammer concluded that closing these valves at power operation is not allowed by Technical Specifications. Since these valves can not be (fully) closed, it is not possible to test these valves at power operation.
Test Alternative & Frequency	An alternative test frequency based on the requirements within OMa-1996 Subsection ISTC 4.2 is followed. Per OMa-1996 Subsection ISTC 4.2, the valves are tested to the partially open position monthly. Per OMa-1996 Subsection ISTC 4.2, the valves are tested to the open position during cold shutdown.

Justification for Deferral

Item Number:	ON-SSF-01
Valve:	SSF Steam Generator Feedwater Control Valve 1CCW0269, 2CCW0269, 3CCW0269
Code Category:	B
Function:	In an SSF emergency these valves can be throttled open from SSF Control Room to allow Auxiliary Feedwater from several sources to feed the "A" Steam Generator.
Test Requirement:	Verify proper valve movement to the open and closed position every three months as required per OMa-1996 Subsection ISTC 4.2.
Basis for Deferral:	During power operation, Technical Specifications require emergency feedwater train separation. Testing these valves at power would violate Technical Specifications.
Test Alternative & Frequency	An alternative test frequency based on the requirements within OMa-1996 Subsection ISTC 4.2 is followed. Per OMa-1996 Subsection ISTC 4.2, the valves are tested to the open and closed positions during cold shutdown.

Justification for Deferral

Item Number: ON-SSF-02

Valve: RC Makeup to RCP, HPI Boundary Check
1HP0399, 2HP0399, 3HP0399
1HP0400, 2HP0400, 3HP0400
1HP0401, 2HP0401, 3HP0401
1HP0402, 2HP0402, 3HP0402

Code Category: C

Function: In an SSF emergency these valves open to allow flow from the RC Makeup System to the RC Pump Seal Supply.

Test Requirement: Verify proper valve movement to the open and closed position every three months as required per OMa-1996, Subsection ISTC 4.5. Open and close tests are not required to be performed at the same time if performed within the same interval.

Basis for Deferral: Testing of these valves at Power Operation would result in injecting Spent Fuel Pool Water into the RC Pump Seals. This could result in Power Transients, Uncontrolled Reactivity Changes, Reactor Trips or Extensive Cleanup Requirements, particularly near the end of cycle.

Testing these valves to the closed position can only be accomplished by local leak rate testing since there is no other means to simulate reverse flow in the line.

Test Alternative & Frequency An alternative test method based on the guidelines within NUREG-1482 and the requirements within OMa-1996 Subsection ISTC is followed for the closure test. The valves are tested in the closed position each refueling outage during the local leak rate test for each penetration. This alternative is consistent with Section 4.1.4 of NUREG-1482 which states, "If no other practical means is available, it is acceptable to verify that check valves are capable of closing by performing leak rate testing at each reactor refueling outage...The NRC has determined that the need to set up [leak rate] test equipment is adequate justification to defer backflow testing of a check valve until a refueling outage."

Per OMa-1996 Subsection ISTC 4.5, open and close tests need only be performed at an interval when it is practical to perform both tests. Therefore, the test to the open position will be performed each refueling outage.

Additionally, the valves are tested to the open position each cold shutdown.

Justification for Deferral

Item Number:	ON-SSF-03
Valve:	RC Make Up Discharge to RC Pump Seals Block 1HP0398, 2HP0398, 3HP0398
Code Category:	B
Function:	These valves are normally closed to prevent Spent Fuel Pool Flow from the RC Makeup System to the RC Pump Seals. In an SSF emergency, they open on command from the SSF to allow the RC Makeup System to supply emergency RC Pump seal water.
Test Requirement:	Verify proper valve movement to the open position every three months as required per OMa-1996, Subsection ISTC 4.2.
Basis for Deferral:	Testing these valves could result in overpressurization of the SSF RC Makeup pump suction piping should leakage from the HPI system exist past the downstream check valves.
Test Alternative & Frequency	An alternative test frequency based on the requirements within OMa-1996, Subsection ISTC 4.2 is followed. Per OMa-1996, Subsection ISTC 4.2, the valves are tested to the open position during cold shutdown.

Justification for Deferral

Item Number:	ON-SSF-04
Valve:	RCS Letdown to Spent Fuel Pool Inside Containment Isolation 1HP0426, 2HP0426, 3HP0426
Code Category:	A
Function:	During an SSF Event, these valves shall be capable of opening, and closing as needed to control flow through their corresponding Unit's SSF RC letdown line so that pressurizer level is maintained within an acceptable range.
Test Requirement:	Verify proper valve movement to the open and closed position every three months as required per OMa-1996, Subsection ISTC 4.2.
Basis for Deferral:	This valve is the first normally closed valve from the reactor coolant system. While this valve is open, any leakage past the second boundary would result in a loss of reactor coolant to the Spent Fuel Pool.
Test Alternative & Frequency	An alternative test frequency based on the requirements within OMa-1996, Subsection ISTC 4.2. Per OMa-1996, Subsection ISTC 4.2, the valves are tested to the open and closed positions during cold shutdown.