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W3F1-2004-0022

April 19, 2004

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

Subject: Core Operating Limits Report – Cycle 13 Revision 1, Change 2
Waterford Steam Electric Station, Unit 3 (Waterford 3)
Docket No. 50-382
License No. NPF-38

Dear Sir or Madam:

Waterford 3 Technical Specification 6.9.1.11.3 requires submittal of the Core Operating Limits Report (COLR) for each reload cycle. Revision 1, Change 1 of the COLR for Waterford 3 Cycle 13 was submitted on November 19, 2003 by letter W3F1-2003-0097. COLR Cycle 13, Revision 1 Change 1 revised Section 3.2.7, Axial Shape Index (ASI), to implement a 0.03 positive adjustment to the lower limit of the allowed ASI range (changed from -0.22 to -0.19) for $\geq 70\%$ power. The change was necessary due to the upward shift of incore instrumentation due to a modification performed in Refueling Outage 12 and was based on a conservative preliminary assessment of the impact of changes in incore instrumentation (ICI) position on the operation of the Core Operating Limit Supervisory and CPCs.

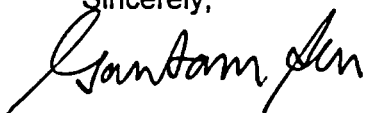
Final detailed analysis on the impact of changes in ICI position have been completed and the attached COLR Cycle 13 Revision 1, Change 2 revises Section 3.2.7, Axial Shape Index (ASI), to reduce the adjustment to the lower limit of the allowed ASI range for $\geq 70\%$ power. The allowed ASI lower limit is changed from -0.19 to -0.21.

If you have any questions concerning this submittal please contact D.L. Bentzinger at (504) 739-6368.

A001

There are no new commitments contained in this submittal.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Sen". The signature is written in a cursive style with a large initial "G" and a long, sweeping underline.

G. Sen
Licensing Manager

GS/TMM/cbh

Attachment(s)

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W3F1-2004-0022

**Waterford 3 Core Operating Limits Report
Cycle 13, Revision 1, Change 2**

ENERGY OPERATIONS

WATERFORD 3

CORE OPERATING LIMITS REPORT

FOR CYCLE 13

REVISION 1, CHG. 2

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WATERFORD 3
CORE OPERATING LIMITS REPORT
CYCLE 13, REVISION 1, CHG. 2

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WATERFORD 3
CORE OPERATING LIMITS REPORT
CYCLE 13, REVISION 1, CHG. 2

I. INTRODUCTION

This CORE OPERATING LIMITS REPORT (COLR) has been prepared in accordance with the requirements of Waterford 3 Technical Specification 6.9.1.11 for Waterford 3 Cycle 13. The core operating limits have been developed using the NRC approved methodologies specified in Section III. This is Revision 1 of the Cycle 13 COLR.

The major changes between the Cycle 13 Revision 0 COLR and the Cycle 12 COLR are listed below:

- The Table of Contents List of Effective Pages was updated.
- The List of Figures were revised to add COLR Figure 8A and to update the List of Effective Figure Pages
- This Introduction section was revised to reflect the changes for Cycle 13.
- The surveillance requirements for Section 3.1.2.9 were changed based on results of a corrective action of Condition Report CR-WF3-2003-02844.
- Clarifying notes were added below Sections 3.1.3.1.a and 3.1.3.1.b regarding the correspondence of these sections to Technical Specifications.
- The title for Section 3.1.3.6 was revised to match references in Section III and the Table of Contents
- Figures 6 & 7 were revised to provide vertical lines from the endpoints of the plotted line to the temperature axis. Also, the equation for the plotted line was added.
- Section 3.2.4.b was revised to allow use of Figure 8A
- Notes below the text of Section 3.2.4 for use with Figures 8, 8A & 9 were updated and new notes were added.
- Figure 8, was revised to incorporate cycle-specific limits for Cycle 13.
- Figure 8A, was added to provide better resolution for the three power ranges in the lower portion of Figure 8.
- Figure 9, was revised to incorporate cycle-specific limits for Cycle 13.
- Section III.7 was revised to add the document date.
- Section III.8 was added in accordance with License Amendment 191.

The changes between the Cycle 13 Revision 1 COLR and the Cycle 13 Revision 0 COLR are listed below:

- Figures 6 & 7 were revised to implement a 0.1 KW/FT reduction for the specified temperature range to account for greater than 500 but less than 600 plugged tubes in Steam Generator #1 (Ref. ER-WF3-2003-0117-000)

The change between the Cycle 13 Revision 1 COLR and the Cycle 13 Revision 1 Chg. 1 COLR is listed below:

- Section 3.2.7, Axial Shape Index, was revised to implement a 0.03 positive bias to the lower limit of the allowed ASI range (changed from -0.22 to -0.19) for $\geq 70\%$ power. This change was necessary due to the upward shift of incore instrumentation due to a modification performed in Refueling Outage 12 (Ref. Westinghouse Letter CWTR-03-190, dated 11/17/03).

The change between the Cycle 13 Revision 1 Chg. 1 COLR and the Cycle 13 Revision 1 Chg. 2 COLR is listed below:

- Cycle 13 Revision 1 Chg. 1 was based on a conservative preliminary assessment of the impact of changes in ICI position on the operation of the COLSS and CPCS. The necessary detailed study has since been completed and the results were transmitted via Westinghouse Letter CWTR-03-197, dated 1/8/04. The maximum required margin penalty was reduced from those installed in COLSS at the beginning of Cycle 13. The suggested change to COLSS constant ASINBP(3) is still conservative to that originally suggested in the Waterford 3, Cycle 13 Startup Test and Setpoints Transmittal, (Ref. NF-03-W-WTFD-40, dated 10/2/03) which assumed no changes in ICI position. Section 3.2.7, Axial Shape Index, was revised to implement a 0.02 negative bias to the lower limit of the allowed ASI range (changed from -0.19 to -0.21) for $\geq 70\%$ power.

CORE OPERATING LIMITS REPORT
AXIAL SHAPE INDEX

3.2.7 The AXIAL SHAPE INDEX (ASI) shall be maintained within the following limits:

COLSS Operable

$-0.21 \leq \text{ASI} \leq +0.26$ for THERMAL POWERS $\geq 70\%$ of RATED THERMAL POWER

$-0.26 \leq \text{ASI} \leq +0.26$ for THERMAL POWERS from 20% to 70% of RATED THERMAL POWER

COLSS Out of Service

$-0.17 \leq \text{ASI} \leq +0.22$ for THERMAL POWERS from 20% to 100% of RATED THERMAL POWER