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Waterford 3

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A4.05
PR

June 11, 2001

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Change No. 2 to Cycle 11 Core Operating Limits Report

Gentlemen:

Waterford 3 Technical Specification 6.9.1.11.3 requires submittal of the Core Operating Limits Report (COLR) for each reload cycle, including any mid-cycle revisions or supplements. Please find attached Change No. 2 to the Waterford 3 Cycle 11 COLR, Revision 0.

This COLR change involves the removal of an operational restriction implemented in Change No. 1 to Cycle 11 COLR, Revision 0 by 50.59 Evaluation No. 00-068, dated November 9, 2000, prior to restart from RF10. The operational restriction consisted of a revision to COLR Section 3.1.3.7, Figure 5, to restrict insertion of the part-length control element assemblies to no more than 25 percent inserted (112.5 inches withdrawn) for all power levels for the beginning part of Cycle 11. The restriction was implemented to maintain appropriate safety analyses acceptance criteria following the reduction in total pressurizer heater capacity caused by the removal of one heater element and the degradation of three other heaters.

This operational restriction remained in place until the most limiting condition, where the 0% power Moderator Temperature Coefficient (MTC) became more negative than - 0.2 E-4 $\Delta\rho/°F$ at a burnup of 172.31 Effective Full Power Days (EFPD), was met. After this time, the operational restriction was removed by the attached Change No. 2 of COLR Figure 5, and reestablishes the original limits, as specified in Cycle 11 COLR, Revision 0, dated September 22, 2000.

A001

If you have any questions concerning this matter, please contact Ron Williams at (504) 739-6255.

Very truly yours,

A.J. Harris
Director,
Nuclear Safety Assurance

AJH/RLW/cbh
Attachment: Change No. 2 to Cycle 11 Core Operating Limits Report

cc: E.W. Merschoff, NRC Region IV
N. Kalyanam, NRC-NRR
J. Smith
N.S. Reynolds
NRC Resident Inspectors Office

ATTACHMENT 1

Change No. 2 to Cycle 11
Core Operating Limits Report

CYCLE 11 COLR, REVISION 0
CHANGE NO.2 REPLACEMENT PAGES
(6 pages)

Replace the following pages of the Waterford 3 Cycle 11 Core Operating Limits Report Revision 0 with the attached pages. The revised pages are identified by Change No. 2.

Remove Page	Insert Page
----------	Page 1
Page 2	Page 2
Page 3	Page 3
Page 5	Page 5
----------	Page 5a
COLR 3/4 1-28A	COLR 3/4 1-28A

ENTERGY OPERATIONS

WATERFORD 3

CORE OPERATING LIMITS REPORT

FOR CYCLE 11

REVISION 0
CHANGE NO. 2

Prepared by: P.M. Melancon 6/4/01

Reviewed by: R. L. Williams 6/4/01

Approved by: J. B. Holman 6/4/01
Safety & Engineering Analysis

Approved by: M. K. Brandon 6/4/01
Licensing

WATERFORD 3

CORE OPERATING LIMITS REPORT
CYCLE 11, REVISION 0

LIST OF EFFECTIVE PAGES	
Revision 0	Pages 1 – 6, COLR 3/4 1-1 thru COLR 3/4 9-1, & page 33
Change No. 1	Pages 1, 2, 3, 4, 5
Change No. 2	Pages 1, 2, 3, 5, 5a

LIST OF FIGURES

LIST OF EFFECTIVE FIGURE PAGES	
Revision 0	COLR 3/4 1-3A through COLR 3/4 2-6B
Change No. 1	COLR 3/4 1-28A
Change No. 2	COLR 3/4 1-28A

WATERFORD 3

CORE OPERATING LIMITS REPORT
CYCLE 11, REVISION 0, CHANGE NO. 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 11. The core operating limits have been developed using the NRC approved methodologies specified in Section III. This is Revision 0, Change No. 2 of the Cycle 11 COLR.

Rev. 0

The major changes between the Cycle 11 and Cycle 10 COLR are listed below:

- Section 3.1.1.3 Figure 2 lower MTC limit was changed from -3.3×10^{-4} $\Delta\rho/^{\circ}F$ to -4.0×10^{-4} $\Delta\rho/^{\circ}F$.
- The COLR Cycle 10 Section 3.1.1.3 Figures 2A, 2B, and 2C were deleted and the corresponding restrictions were deleted.
- Section 3.2.1 Figure 6 and 7 Peak Linear Heat Generation Rates (kw/ft) were decreased by 0.1 kw/ft.
- Section 3.2.7 ASI values (COLSS operable at $\geq$70% rated thermal power) were reduced to meet the requirements of the Cycle 11 reload.

Change No. 1

In accordance with the 50.59 Evaluation #00-068 for ER-W3-00-0853-00-00, Replacement of Pressurizer Proportional Heaters, Section 3.1.3.7 COLR Figure 5 was revised to restrict the part-length rods to 25 percent inserted (112.5 inches withdrawn) for all power levels until the Moderator Temperature Coefficient (MTC) at 50% power and below is confirmed to be more negative than the limits presented in the table below. This restriction will apply to power levels below 20% because the thermal margin requirements at 20% are used to define and bound those at lower powers. Technical Specifications (TS) 3.1.3.7, Part Length CEA Insertion Limits, is only applicable in Mode 1 above 20% thermal power. However, during Cycle 11 while the restriction is required, administrative controls will be employed to ensure the new COLR Figure is applied at all power levels.

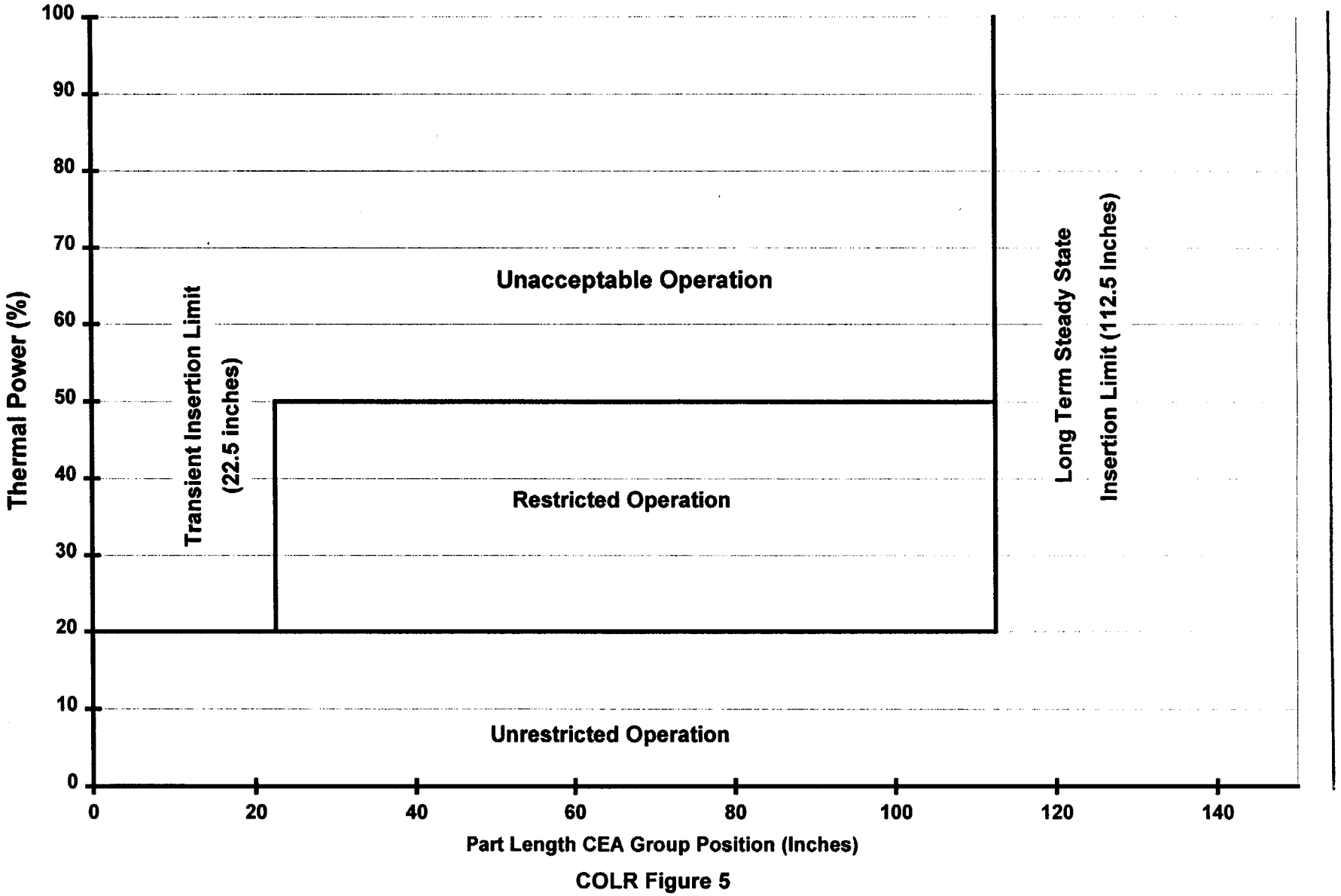
	Power level, % of rated			
	0	20	50	70
MTC limits above which PLR restriction and BERR1 penalty apply, (x10E-4 $\Delta\rho/^{\circ}F$)	-0.2	-0.2	-0.5	-0.7

Change No. 2

50.59 Evaluation #00-068 for ER-W3-00-0853-00-00, Replacement of Pressurizer Proportional Heaters, revised Section 3.1.3.7 COLR Figure 5 to restrict the part-length rods to 25 percent inserted (112.5 inches withdrawn) for all power levels until the Moderator Temperature Coefficient (MTC) at 50% power and below was confirmed to be more negative than the limits presented in the table specified in Change No. 1 above. In accordance with Entergy Operations inter-office memo CEO-2000/00254, the most limiting of the power level conditions was the 0% power case where the MTC becomes more negative than - 0.2 E-4 $\Delta\rho/^{\circ}F$ at a burnup of 172.31 Effective Full Power Days (EFPD). Administrative controls were also implemented to ensure the new COLR Figure was applied at all power levels.

In accordance with Operations Station Log, dated May 21, 2001, and the Reactor Engineer's system log, the current burnup in Cycle 11 is greater than 172.31 EFPD; therefore, it is acceptable to remove the current restrictions on PLCEA position imposed through COLR Change No. 1 and return to using the original restrictions specified in Figure 5 of Cycle 11 COLR Revision 0 that was evaluated in Safety Evaluation #00-061. In addition, the administrative controls implemented through Deviation C to OP-100-014, Technical Specifications and Technical Requirements Compliance, can be removed.

Part Length CEA Group Insertion Limits Versus Thermal Power



COLR Figure 5