

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

CHAPTER 4

REACTOR

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.1	SUMMARY DESCRIPTION	4.1-1
4.2	FUEL SYSTEM DESIGN	4.2-1
4.3	NUCLEAR DESIGN	4.3-1
4.4	THERMAL AND HYDRAULIC DESIGN	4.4-1
4.4.7	COMBINED LICENSE INFORMATION	4.4-1
4.5	REACTOR MATERIALS	4.5-1
4.6	FUNCTIONAL DESIGN OF REACTIVITY CONTROL SYSTEMS	4.6-1

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

LIST OF TABLES

Number

Title

None

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

LIST OF FIGURES

Number

Title

None

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

CHAPTER 4

REACTOR

4.1 SUMMARY DESCRIPTION

This **section** of the referenced DCD is incorporated by reference with no departures or supplements.

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

4.2 FUEL SYSTEM DESIGN

This **section** of the referenced DCD is incorporated by reference with no departures or supplements.

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

4.3 NUCLEAR DESIGN

This **section** of the referenced DCD is incorporated by reference with no departures or supplements.

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

4.4 THERMAL AND HYDRAULIC DESIGN

This **section** of the referenced DCD is incorporated by reference with the following departures and/or supplements.

4.4.7 COMBINED LICENSE INFORMATION

STD COL 4.4-2

Replace the second paragraph in DCD **Subsection 4.4.7** with the following:

Following selection of the actual plant operating instrumentation and calculation of the instrumentation uncertainties of the operating plant parameters as discussed in DCD **Subsection 7.1.6**, the design limit DNBR values will be calculated. The calculations will be completed using the RTDP with these instrumentation uncertainties and confirm that either the design limit DNBR values as described in DCD **Section 4.4** remain valid or that the safety analysis minimum DNBR bounds the new design limit DNBR values plus DNBR penalties, such as rod bow penalty. This will be completed prior to fuel load.

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

4.5 REACTOR MATERIALS

This **section** of the referenced DCD is incorporated by reference with no departures or supplements.

**Shearon Harris Nuclear Power Plant Units 2 and 3
COL Application
Part 2, Final Safety Analysis Report**

4.6 FUNCTIONAL DESIGN OF REACTIVITY CONTROL SYSTEMS

This **section** of the referenced DCD is incorporated by reference with no departures or supplements.