TABLE OF CONTENTS

Section	Title	Page
CHAPTER 8	ELECTRIC POWER	8.1-1
8.1	Introduction	8.1-1
8.1.1	Utility Grid Description	8.1-1
8.1.2	Onsite Power System Description	8.1-1
8.1.3	Safety-Related Loads	8.1-2
8.1.4	Design Basis	8.1-2
8.1.4.1	Offsite Power System	8.1-2
8.1.4.2	Onsite Power System	8.1-3
8.1.4.3	Design Criteria, Regulatory Guides, and IEEE Standards	8.1-4
8.1.5	Combined License Information	8.1-5
8.2	Offsite Power System	8.2-1
8.2.1	System Description	8.2-1
8.2.1.1	Transmission Switchyard	8.2-1
8.2.1.2	Transformer Area	8.2-2
8.2.2	Grid Stability	8.2-2
8.2.3	Conformance to Criteria	8.2-3
8.2.4	Standards and Guides	8.2-3
8.2.5	Combined License Information for Offsite Electrical Power	8.2-4
8.2.6	References	8.2-4
8.3	Onsite Power Systems	8.3-1
8.3.1	AC Power Systems	8.3-1
8.3.1.1	Description	8.3-1
8.3.1.2	Analysis	8.3-13
8.3.1.3	Raceway/Cable	8.3-13
8.3.1.4	Inspection and Testing	8.3-14
8.3.2	DC Power Systems	8.3-15
8.3.2.1	Description	8.3-15
8.3.2.2	Analysis	8.3-20
8.3.2.3	Physical Identification of Safety-Related Equipment	8.3-21
8.3.2.4	Independence of Redundant Systems	8.3-21
8.3.2.5	Inspection and Testing	8.3-24
8.3.3	Combined License Information for Onsite Electrical Power	8.3-26
8.3.4	References	8.3-26

LIST OF TABLES

Table No.	Title	Page
8.1-1	Criteria and Guidelines for Electric Power Systems (Sheets 1 – 5)	8.1-6
8.3.1-1	Onsite Standby Diesel Generator ZOS MG 02A Nominal Loads (Sheets 1 – 5)	8.3-28
8.3.1-2	Onsite Standby Diesel Generator ZOS MG 02B Nominal Loads (Sheets 1 – 4)	8.3-34
8.3.1-3	Component Data - Main AC Power System (Nominal Values)	8.3-39
8.3.1-4	Post-72 Hours Nominal Load Requirements	8.3-40
8.3.1-5	Indication and Alarm Points Standby Diesel Generators	8.3-41
8.3.2-1	250V DC Class 1E Division A Battery Nominal Load Requirements	8.3-42
8.3.2-2	250V DC Class 1E Division B Battery Nominal Load Requirements	8.3-43
8.3.2-3	250V DC Class 1E Division C Battery Nominal Load Requirements	8.3-44
8.3.2-4	250V DC Class 1E Division D Battery Nominal Load Requirements	8.3-45
8.3.2-5	Component Data - Class 1E DC System (Nominal Values)	8.3-46
8.3.2-6	Component Data - Non-Class 1E DC System EDS1 – EDS4 (Nominal Values) (Sheet 1 of 2)	8.3-47
8.3.2-6	Component Data - Non-Class 1E DC System EDS5 (Nominal Values) (Sheet 2 of 2)	8.3-48
8.3.2-7	Class 1E 250V DC and Class 1E Uninterruptible Power Supplies Failure Modes and Effects Analysis (Sheets 1 – 4)	8.3-49

LIST OF FIGURES

Figure No.	Title	Page
8.3.1-1	AC Power Station One Line Diagram	8.3-53
8.3.1-2	Onsite Standby Diesel Generator Initiating Circuit Logic Diagram	8.3-55
8.3.1-3	Post-72-Hour Temporary Electric Power One Line Diagram	8.3-57
8.3.1-4	Diesel Generator System Piping and Instrumentation Diagram (Sheets 1 – 2)	8.3-59
8.3.1-5	Diesel Engine Skid Mounted System (Sheets 1 – 2)	8.3-63
8.3.2-1	Class 1E DC System One Line Diagram (Sheets 1 – 2)	8.3-67
8.3.2-2	Class 1E 208y/120V UPS One Line Diagram	8.3-71
8.3.2-3	Non-Class 1E DC & UPS System One Line Diagram (Sheets 1 – 3)	8.3-73