

ACCIDENT ANALYSES

## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
15.0	<u>TRANSIENT ANALYSES</u>	15.0-1
→(DRN 00-592) 15.0.1	IDENTIFICATION OF CAUSES AND FREQUENCY CLASSIFICATION	15.0-1
←(DRN 00-592) 15.0.2	SYSTEMS OPERATION	15.0-2
15.0.3	CORE AND SYSTEM PERFORMANCE	15.0-3
15.0.4	BARRIER PERFORMANCE	15.0-9
15.0.5	RADIOLOGICAL CONSEQUENCES	15.0-9
15.0	REFERENCES	15.0-11
15.1	<u>INCREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM (TURBINE PLANT)</u>	15.1-1
15.1.1	MODERATE FREQUENCY INCIDENTS	15.1-1
15.1.2	INFREQUENT INCIDENTS	15.1-11
15.1.3	LIMITING FAULTS	15.1-18
15.1	REFERENCES	15.1-35
15.2	<u>DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM (TURBINE PLANT)</u>	15.2-1
15.2.1	MODERATE FREQUENCY INCIDENTS	15.2-1
15.2.2	INFREQUENT INCIDENTS	15.2-8
15.2.3	LIMITING FAULTS	15.2-14
15.2	REFERENCES	15.2-21
15.3	<u>DECREASE IN REACTOR COOLANT FLOW RATE</u>	15.3-1
15.3.1	MODERATE FREQUENCY INCIDENTS	15.3-1
15.3.2	INFREQUENT INCIDENTS	15.3-2
15.3.3	LIMITING FAULTS	15.3-5

## CHAPTER 15

## TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Title</u>	<u>Page</u>
15.3	REFERENCES	15.3-13
15.4	<u>REACTIVITY AND POWER DISTRIBUTION ANOMALIES</u>	15.4-1
15.4.1	MODERATE FREQUENCY INCIDENTS	15.4-1
15.4.2	INFREQUENT EVENTS	15.4-21
15.4.3	LIMITING FAULTS	15.4-21
15.4	REFERENCES	15.4-35
15.5	<u>INCREASE IN REACTOR COOLANT SYSTEM INVENTORY</u>	15.5-1
15.5.1	MODERATE FREQUENCY INCIDENTS	15.5-1
15.5.2	INFREQUENT INCIDENTS	15.5-4
15.5.3	LIMITING FAULTS	15.5-5
15.6	<u>DECREASE IN REACTOR COOLANT SYSTEM INVENTORY</u>	15.6-1
15.6.1	MODERATE FREQUENCY INCIDENTS	15.6-1
15.6.2	INFREQUENT INCIDENTS	15.6-1
15.6.3	LIMITING FAULTS	15.6-1
15.6	REFERENCES	15.6-26
15.7	<u>RADIOACTIVE RELEASE FROM A SUBSYSTEM OR COMPONENT</u>	15.7-1
15.7.1	MODERATE FREQUENCY INCIDENTS	15.7-1
15.7.2	INFREQUENT INCIDENTS	15.7-1
15.7.3	LIMITING FAULTS	15.7-1
15.7	REFERENCES	15.7-10
15.8	<u>ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS)</u>	15.8-1
15.9	<u>MISCELLANEOUS</u>	
15.9.1	MODERATE FREQUENCY INCIDENTS	

WSES-FSAR-UNIT-3

CHAPTER 15

TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Title</u>	<u>Page</u>
APPENDIX 15A	SUPPLEMENTAL INFORMATION FOR CHAPTER 15 IN RESPONSE TO WATERFORD SES - 3 SER (NUREG-0787) OPEN ITEMS 8 THROUGH 11	15A-1
APPENDIX 15B	CONTAINMENT LEAKAGE AND DOSE CALCULATION MODELS	15B-1
→	(DRN 05-543, R14)	
APPENDIX 15C	SUPPLEMENTAL INFORMATION FOR CHAPTER 15 IN RESPONSE TO WATERFORD SES - 3 SER (NUREG-0787) SUPPLEMENT NO. 1 CONFIRMATORY ITEMS 15.3.1 AND 15.3.2 (DELETED)	15C-1
APPENDIX 15D	SUPPLEMENTAL CYCLE SPECIFIC EVENT ANALYSES (DELETED)	15D-1
←	(DRN 05-543, R14)	

CHAPTER 15

LIST OF EVENTS

- 15.1 INCREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM
- 15.1.1.1 Decrease in Feedwater Temperature
- 15.1.1.2 Increase in Feedwater Flow
- 15.1.1.3 Increase in Main Steam Flow
- 15.1.1.4 Inadvertent Opening of S.G.A. Dump. Valve or S.G. Safety Valve
- 15.1.2.1 Decrease in Feedwater Temperature with Single Active Failure (SAF)\*
- 15.1.2.2 Increase in Feedwater Flow with SAF\*
- 15.1.2.3 Increase in Main Steam Flow with SAF\*
- 15.1.2.4 Inadvertent Opening of S.G. ADV's or Safety Valves with SAF\*
- 15.1.3.1 Steam System Piping Failures Post Trip Return - To-Power  
→(DRN 02-1479)
- 15.1.3.2 Steam System Piping Failures Inside and Outside Containment - Modes 3 and 4 with all CEAs on the Bottom
- ←(DRN 02-1479)
- 15.1.3.3 Steam System Piping Failure: Pre-Trip Power Excursion Analysis
- 15.2 DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM
- 15.2.1.1 Loss of External Load
- 15.2.1.2 Turbine Trip
- 15.2.1.3 Loss of Condenser Vacuum
- 15.2.1.4 Loss of Normal AC Power
- 15.2.2.1 Loss of External Load with SAF\*
- 15.2.2.2 Turbine Trip with SAF\*
- 15.2.2.3 Loss of Condenser Vacuum with SAF\*
- 15.2.2.4 Loss of Normal AC Power with SAF\*
- 15.2.2.5 Loss of Normal Feedwater Flow
- 15.2.3.1 Feedwater System Pipe Breaks

LIST OF EVENTS (Cont'd)

- 15.2.3.2                    Loss of Normal Feedwater Flow with SAF\* in the Steam Bypass System
- 15.3                    DECREASE IN REACTOR COOLANT FLOW RATE
- 15.3.1.1                    Partial Loss of Forced Reactor Coolant Flow
- 15.3.2.1                    Total Loss of Forced Reactor Coolant Flow
- 15.3.2.2                    Partial Loss of Forced Reactor Coolant Flow with SAF\*
- 15.3.3.1                    Single Reactor Coolant Pump Shaft Seizure/Sheared Shaft
- 15.3.3.2                    Single reactor Coolant Pump Shaft Seizure with Stuck Open  
Secondary Safety Valve
- 15.4                    REACTIVITY AND POWER DISTRIBUTION ANOMALIES
- 15.4.1.1                    Uncontrolled CEA Withdrawal from Subcritical Conditions
- 15.4.1.2                    Uncontrolled CEA Withdrawal from Low Power Conditions
- 15.4.1.3                    Uncontrolled CEA Withdrawal at Power
- 15.4.1.4                    CEA Misoperation
- 15.4.1.5                    CVCS Malfunction (Inadvertent Boron Dilution)
- (DRN 02-1479)
- 15.4.1.6                    Start of an Inactive Reactor Coolant System Pump - Modes  
3, 4 or 5 with all CEAs on the Bottom
- 15.4.1.7                    Uncontrolled CEA Withdrawal from a Subcritical Condition -  
Modes 3, 4, or 5 with all CEAs on the Bottom
- ←(DRN 02-1479)
- 15.4.2                    NOT APPLICABLE
- 15.4.3.1                    Inadvertent Loading of a Fuel Assembly into the Improper Position
- 15.4.3.2                    CEA Ejection
- 15.5                    INCREASE IN REACTOR COOLANT INVENTORY
- 15.5.1.1                    CVCS Malfunction
- 15.5.1.2                    Inadvertent Operation of the ECCS during Power Operation
- 15.5.2.1                    CVCS Malfunction with Component SAF\*

LIST OF EVENTS (Cont'd)

15.6	<u>DECREASE IN REACTOR COOLANT INVENTORY</u>
15.6.1	NOT APPLICABLE
15.6.2	NOT APPLICABLE
15.6.3.1	<u>Primary Sample or Instrument Line Break</u>
15.6.3.2	<u>Steam Generator Tube Rupture</u>
15.6.3.3	<u>LOCA</u>
15.6.3.4	<u>Inadvertent Opening of Pressurizer Safety Valve</u>
15.7	<u>RADIOACTIVE RELEASE FROM A SUBSYSTEM OR COMPONENT</u>
15.7.1	NOT APPLICABLE
15.7.2	NOT APPLICABLE
→(DRN 04-704, R14) 15.7.3.1	Deleted
15.7.3.2	Deleted
←(DRN 04-704, R14)	
15.7.3.3	<u>Postulated Radioactive Releases due to Liquid Containing Tank Failures</u>
15.7.3.4	<u>Design Basis Fuel Handling Accident</u>
15.7.3.5	<u>Spent Fuel Cask Drop Accidents</u>
15.9	<u>MISCELLANEOUS</u>
15.9.1.1	<u>Asymmetric Steam Generator Transient</u>

\*(SAF) incident with a concurrent single failure of an active component.

# WSES-FSAR-UNIT-3

## CHAPTER 15

### ACCIDENT ANALYSES

#### LIST OF TABLES

<u>Table</u>	<u>Title</u>
15.0-1	Chapter 15 Subsection Designation
15.0-2	Chapter 15 Initiating Events
→(DRN 05-543, R14)	
15.0-3	Reactor Protective System Trips Used In The Safety Analysis
15.0-4	Chapter 15 Initial Conditions
15.1-1	Sequence of Events for an Increase in Main Steam Flow
15.1-2	Assumptions for the Increased Main Steam Flow Event
15.1-3	Sequence of Events for the Inadvertent Opening of a Steam Generator Atmospheric Dump Valve
15.1-4	Assumptions for the Inadvertent Opening of a Steam Generator Atmospheric Dump Valve
←(DRN 05-543, R14)	
15.1-5	Mass Release - Inadvertent Opening of Steam Generator Atmospheric Dump Valve
→(DRN 04-704, R14)	
15.1-6	Deleted
15.1-7	Deleted
←(DRN 04-704, R14)	
→(DRN 05-543, R14)	
15.1-8	Sequence of Events for the Increased Main Steam Flow in Combination with a Loss of Offsite Power (Typical NSSS Response)
15.1-8A	Sequence of Events for the Increased Main Steam Flow In Combination with a Loss of Offsite Power (worst DNB Performance Case)
15.1-8B	Initial Conditions for the Increased Main Steam Flow in Combination with a Loss of Offsite Power
15.1-8C	Sequence of Events for the HFP IOADV with LOOP Event
15.1-8D	Assumption Table for the HFP IOADV with LOOP Event
←(DRN 05-543, R14)	
15.1-9	Mass Release - Inadvertent Opening of Steam Generator Atmospheric Dump Valve With Concurrent Loss of Offsite Power
15.1-10	Parameters Used in Evaluating the Radiological Consequences of a Postulated Inadvertent Opening of a Steam Generator Atmospheric Dump Valve With Concurrent Loss of Offsite Power
15.1-11	Radiological Consequences Due to a Postulated Inadvertent Opening of a Steam Generator Atmospheric Dump Valve With Concurrent Loss of Offsite Power

WSES-FSAR-UNIT-3

CHAPTER 15

ACCIDENT ANALYSES

LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.1-12	Sequence of Events For the Return to Power Steam Line Break Hot Full Power, Loss of Offsite Power, Inside Containment
15.1-13	Sequence of Events For the Return to Power Steam Line Break Hot Full Power, no Loss of Offsite Power, Inside Containment
15.1-14	DELETED
15.1-14A	Sequence of Events for the Return to Power Steam Line Break Hot Zero Power, Loss of Offsite Power, Inside Containment
15.1-14B	Sequence of Events for the Return to Power Steam Line Break Hot Zero Power, no Loss of Offsite Power, Inside Containment
15.1-15	Assumptions For the Return to Power Steam Line Break Hot Full Power, Loss of Offsite Power, Inside Containment
15.1-15A	Assumptions for the Return to Power Steam Line Break Hot Full Power, no Loss of Offsite Power, Inside Containment
15.1-16	Assumptions For the Return to Power Steam Line Break Hot Zero Power, Loss of Offsite Power, Inside Containment
15.1-16A	Assumptions for the Return to Power Steam Line Break Hot Zero Power, no Loss of Offsite Power, Inside Containment
15.1-17	Parameters Used in Evaluating the Radiological Consequences of a Main Steam Line Break Accident
15.1-18	Zero Power Steam Line Break Secondary System Mass Releases
←(DRN 05-543, R14)	
15.1-19	Zero Power Steam Line Break Steam Generator Liquid Volume Fractions and Emergency Feedwater Flowrate to the Intact Steam Generator
15.1-20	Radiological Consequences Due to a Postulated Main Steam Line Break
15.1-21	Assumption for Large Steam Line Breaks During Mode 3 Operation With and Without Concurrent Loss of Offsite Power
→(DRN 05-543, R14)	
15.1-22	Sequence of Events for a Large Steam Line Break* During Mode 3 Operation With Concurrent Loss of Offsite Power
15.1-23	Reactor Protection System Trips and Transient Effects Considered for Pretrip Power Excursion Main Steam System Piping Failures
15.1-24	Sequence of Events for the Steam System Piping Failure Event Outside Containment Pretrip Power Excursion With Loss of Offsite Power

←(DRN 05-543, R14)



# WSES-FSAR-UNIT-3

## CHAPTER 15

### ACCIDENT ANALYSES

#### LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
→(DRN 05-543, R14) 15.1-24A	Sequence of Events for the Steam System Piping Failure Event Inside Containment Pretrip Power Excursion with Loss of Offsite Power
←(DRN 05-543, R14) 15.1-25	Key Parameters Assumed for the Steam Piping Failures Event Inside Containment Pre-Trip Power Excursions
15.1-26	Key Parameters Assumed for the Steam Piping Failures Event Outside Containment Pre-Trip Power Excursions
→(DRN 04-704, R14) 15.1-27	Parameters Used in Evaluating the Radiological Consequences of a Postulated Increased Main Steam Flow Event with a Concurrent Loss of Offsite Power
15.1-28	Radiological Consequences Due to a Postulated Increased Main Steam Flow Event with a Concurrent Loss of Offsite Power
←(DRN 04-704, R14) 15.2-1	Sequence of Events For the Loss of Condenser Vacuum
→(DRN 05-543, R14) 15.2-2	Deleted
15.2-3	Deleted
15.2-4	Deleted
15.2-4a	Deleted
15.2-5	Deleted
←(DRN 05-543, R14) 15.2-6	Sequence of Events For the Loss of Normal Feedwater
15.2-7	Assumptions For the Loss of Normal Feedwater Analysis
→(DRN 02-1713, R12-B; 05-543, R14) 15.2-8	Sequence of Events For the Large Feedwater System Pipe Break
←(DRN 05-543, R14) 15.2-9	Assumptions For the Large Feedwater System Pipe Break
→(DRN 05-543, R14) 15.2-9a	Assumptions For the Limiting Small Feedwater System Pipe Break
←(DRN 05-543, R14) 15.2-9b	Sequence of Events for the Limiting Small Feedwater System Pipe Break
←(DRN 02-1713, R12-B) →(DRN 05-543, R14) 15.2-10	Sequence of Events For the Loss of Feedwater Flow With Active Failure in the Steam Bypass System
→(DRN 04-704, R14) 15.2-11	Parameters Used in Evaluating the Radiological Consequences of a Feedwater Line Break
15.2-12	Radiological Consequences of a Design Basis Feedwater Line Break
←(DRN 04-704, R14)	

WSES-FSAR-UNIT-3

CHAPTER 15

ACCIDENT ANALYSES

LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
15.2-13	Assumptions for the Loss of Feedwater Flow with Active Failure in the Steam Bypass System
15.3-1	Sequence of Events For the Total Loss of Forced Reactor Coolant Flow
←(DRN 05-543, R14)	
15.3-2	Assumed Initial Conditions For the Total Loss of Forced Reactor Coolant Flow
→(DRN 05-543, R14)	
15.3-3	Sequence of Events For the RCP Sheared Shaft Event with a Loss of AC Power at Time of Trip
←(DRN 05-543, R14)	
→(DRN 00-119, R11)	
15.3-4	Assumed Initial Conditions For the Single Reactor Coolant Pump Shaft Seizure With Loss of Offsite Power (Barrier Performance)
←(DRN 00-119, R11)	
→(DRN 00-119, R11; 05-543, R14)	
15.3-4a	Deleted
←(DRN 00-119, R11; 05-543, R14)	
15.3-4b	Deleted
→(DRN 00-119, R11)	
15.3-5	Deleted
←(DRN 00-119, R11)	
15.3-5a	Deleted
→(DRN 00-119, R11)	
15.3-6	Deleted
←(DRN 00-119, R11)	
→(DRN 05-543, R14)	
15.3-7	Assumed Initial Conditions for the RCP Event with a Loss of AC Power at Time of Trip
←(DRN 05-543, R14)	
15.4-1	Sequence of Events For the Uncontrolled CEA Withdrawal From Subcritical Power Conditions
→(DRN 05-543, R14)	
15.4-2	Assumptions For the Uncontrolled CEA Withdrawal from Subcritical Conditions
15.4-3	Sequence of Events For the Uncontrolled CEA Withdrawal at Hot Zero Power
15.4-4	Assumptions For the Uncontrolled CEA Withdrawal at HZP
15.4-5	Deleted
15.4-6	Deleted
15.4-7	Sequence of Events For CEA Withdrawal at Power
15.4-8	Assumptions For CEA Withdrawal at Power

WSES-FSAR-UNIT-3

CHAPTER 15

ACCIDENT ANALYSES

LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
→(DRN 02-1479, R12) 15.4-9 ←(DRN 05-543, R14)	Assumptions For the CEA Drop Event
15.4-10	Deleted
15.4-11	Deleted
15.4-12	Deleted
→(DRN 05-543, R14) 15.4-13 ←(DRN 05-543, R14)	Sequence of Events For the CEA Drop Event
15.4-14	Deleted
15.4-15	Deleted
15.4-16 ←(DRN 02-1479, R12)	Deleted
15.4-17	Assumptions for the Mode 5 Partially Drained Inadvertent Boron Dilution Analysis
→(DRN 03-1610, R13) 15.4-18 ←(DRN 03-1610, R13)	Deleted
→(DRN 03-1610, R13) 15.4-18(a)	Deleted
15.4-18(b) ←(DRN 03-1610, R13)	Deleted
→(DRN 05-543, R14) 15.4-19	CEA Ejection Sequence of Events (Full Power)
15.4-20	Deleted
15.4-21	Deleted
15.4-22	Deleted
15.4-23	Assumptions For the CEA Ejection Full Power
15.4-24	Assumptions For the CEA Ejection Peak RCS Pressure Case
15.4-25	Deleted
15.4-26	Deleted
15.4-27	CEA Ejection Peak RCS Pressures Sequence of Events

# WSES-FSAR-UNIT-3

## CHAPTER 15

### ACCIDENT ANALYSES

#### LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
→(DRN 06-1062, R15) 15.4-28	CEA Ejection Results (Full Power)
←(DRN 06-1062, R15) 15.4-29	Deleted
15.4-30	Deleted
←(DRN 05-543, R14) →(DRN 00-119, R11)	
15.4-31	Parameters Used in Evaluating the Radiological Consequences of a CEA Ejection Accident
→(DRN 05-543, R14) 15.4-32	Deleted
←(DRN 05-543, R14) 15.4-33	Radiological Consequences of a Postulated CEA Ejection Accident
←(DRN 00-119, R11) →(DRN 00-119, R11; 05-543, R14)	
15.4-34	Deleted
15.4-35	Deleted
15.4-36	Deleted
←(DRN 00-119, R11) →(DRN 03-1610, R13)	
15.4-37	Maximum Difference in Measured Symmetric Instrument Power for Representative Worst Case Undetectable Misload During Power Ascension Testing
15.4-38 Undetectable	Maximum Power Peaking Factors Occurring for Representative Worst Case Misload
←(DRN 03-1610, R13) 15.5-1	Assumptions For the CVCS Malfunction Analysis
15.5-2	Sequence of Events For the CVCS Malfunction Event
→(DRN 01-301, R10) 15.6-1	Sequence of Events For a Letdown Line Break Outside Containment
←(DRN 01-301, R10) 15.6-2	Assumptions For Letdown Line Break Outside Containment
15.6-3	Parameters Used in Evaluating the Radiological Consequences of a Letdown Line Rupture
15.6-4	Radiological Consequences of a Letdown Line Rupture in the Reactor Auxiliary Building
→(DRN 05-1201, R14) 15.6-5	Deleted.
←(DRN 05-1201, R14)	

# WSES-FSAR-UNIT-3

## CHAPTER 15

### ACCIDENT ANALYSES

#### LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
→(DRN 05-1201, R14) 15.6-6 ←(DRN 05-1201, R14)	Deleted
15.6-7	Deleted
15.6-8	Deleted
→(DRN 05-1201, R14) 15.6-9 ←(DRN 05-1201, R14)	Deleted
15.6-10 ←(DRN 05-1201, R14)	Deleted
15.6-11	Intentionally Deleted
15.6-12 →(DRN 00-0551, R10)	Time Sequence of Important Events for Large LOCA (Seconds After Break)
15.6-12a ←(DRN 00-0551, R10) →(DRN 05-543, R14)	Sequence of Events for Small Break LOCA (Time, Seconds After Break)
15.6-13 ←(DRN 05-543, R14)	General System Parameters and Initial Conditions (Large Break LOCA Spectrum Analysis)
→(DRN 00-0551, R10) 15.6-13a ←(DRN 00-0551, R10)	General System Parameters and Initial Conditions (For the Small Break LOCA ECCS Performance Analysis)
→(DRN 05-543, R14) 15.6-13b ←(DRN 05-543, R14)	Deleted
→(DRN 00-0551, R10) 15.6-13c ←(DRN 00-0551, R10)	General System Parameters and Initial Conditions (For the Inadvertent Opening of a Pressurizer Safety Valve)
→(DRN 05-543, R14) 15.6-14 ←(DRN 05-543, R14)	Peak Clad Temperatures and Oxidation Percentages For the Large Break Analysis
→(DRN 00-0551, R10) 15.6-14a ←(DRN 00-0551, R10)	Peak Cladding Temperatures and Oxidation Percentages for Small Breaks
15.6-15	Large Break Spectrum
15.6-16	Variables Plotted as a Function of Time for Each Large Break in the Spectrum

# WSES-FSAR-UNIT-3

## CHAPTER 15

### ACCIDENT ANALYSES

#### LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
15.6-16a	Variables Plotted as a Function of Time for Each Small Break
15.6-17	Additional Variables Plotted as a Function of Time For the Cycle 2 Worst Large Break
15.6-18	Parameters Used in Evaluating the Radiological Consequences of a Loss-of-Coolant Accident
→(DRN 05-1551, R14)	
15.6-18a	Parameters Used in Evaluating the Radiological Consequences of a Small Break Loss-of-Coolant Accident
15.6-18b	Radiological Consequences of a Small Break Loss-of-Coolant Accident
←(DRN 05-1551, R14)	
15.6-19	Leakage Sources From ESF Systems to Reactor Auxiliary Building
→(DRN 05-1551, R14)	
15.6-20	Deleted
←(DRN 05-1551, R14)	
15.6-21	Sequence of Events for an Inadvertent Opening of a Pressurizer Safety Valve
15.6-22	Variable Plotted as a Function of Time for an Inadvertent Opening of a Pressurizer Safety Valve
15.6-23	Results of LOCA Analysis for an Inadvertent Opening of a Pressurizer Safety Valve
→(DRN 05-543, R14)	
15.6-24	Sequence of Events Steam Generator Tube Rupture With LOOP
15.6-25	Assumptions for 3716 MWt SGTR with LOOP
←(DRN 05-543, R14)	
15.6-26	Assumptions Steam Generator Tube Rupture With a Loss of Offsite Power (Radiological Consequences Case)
15.6-27	Integrated Parameter Values Steam Generator Tube Rupture With a Loss of Offsite Power (Radiological Consequences Case)
15.6-28	Radiological Consequences Steam Generator Tube Rupture With a Loss of Offsite Power (Radiological Consequences Case)
15.7-1	Assumptions For Waste Gas Decay Tank Release Accident
15.7-2	Radiological Releases and Exposures as a Result of a Waste Gas Decay Release Accident
15.7-3	Assumptions for Liquid Tank Rupture (Release to Atmosphere)

WSES-FSAR-UNIT-3

CHAPTER 15

ACCIDENT ANALYSES

LIST OF TABLES (Cont'd)

<u>Table</u>	<u>Title</u>
15.7-4	Maximum Isotopic Inventories in Equipment Classified as Non-Safety, Non-Seismic (Curies) Waste Management System
15.7-5	Radiological Exposures as a result of Liquid Waste System Failure
15.7-6	Parameters Used in Evaluating the Radiological Consequences of a Fuel Handling Accident
15.7-7	Radiological Consequences of a Postulated Fuel Handling Accident in the Fuel Handling Building
15.7-8	Information Needed to Evaluate Containment Isolation Capability During Refueling Accident
→(DRN 05-543, R14)	
15.9-1	Sequence of Events For the ASGT
15.9-2	Assumptions for the ASGT Event
←(DRN 05-543, R14)	
15A.1-1	Summary Significant Differences Between CESEC-III and CESERC-I
15A.1-2	Comparison of Results Steam-Generator Tube rupture With LOP
→(DRN 04-704, R14)	
15B-3	Effective Dose Equivalent Weighting Factors (ICRP30)
15B-4	Power's 10% Natural Deposition Model
←(DRN 04-704, R14)	
15A.1-3	Comparison of Results Full Power Steam Line Break, Inside Containment, With Loss of Offsite Power, HPSI Pump Failure, Automatic Actuation of Auxiliary Feedwater
15A.2-1	Affected Steam Generator Liquid Inventory at Low Level Trip
15B-1	Isotope Properties
15B-2	ICRP 30 Isotope Properties
15C.1-1	Assumptions for the Analysis of the Limiting Small Feedwater System Pipe Break
15C.1-2	Assumptions For the Reanalysis of the Limiting Small Feedwater System Pipe Break
15C.1-3	Sequence of Events for the Reanalysis of the Limiting Small Feedwater System Pipe Break
15D.1-1	Deleted
15D.1-2	Deleted
→(DRN 05-1201, R14)	
15D.2-1	Deleted
15D.2-2	Deleted
←(DRN 05-1201, R14)	

# WSES-FSAR-UNIT-3

## CHAPTER 15

### ACCIDENT ANALYSIS

#### LIST OF FIGURES

#### Figure

#### Title

→(DRN 05-543, R14)

15.0-1 Deleted

←(DRN 05-543, R14)

15.1-1 Increased Main Steam Flow Core Power vs. Time

→(DRN 05-543, R14)

15.1-2 Increased Main Steam Flow Core Average Heat Flux vs. Time

15.1-3 Increased Main Steam Flow Reactor Coolant System Pressure vs. Time

15.1-4 Increased Main Steam Flow Minimum DNBR vs. Time

15.1-5 Increased Main Steam Flow Reactor Coolant System Temperatures vs. Time

15.1-6 Increased Main Steam Flow Pressurizer Level vs. Time

←(DRN 05-543, R14)

15.1-7 Increased Main Steam Flow Steam Generator Pressure vs. Time

→(DRN 05-543, R14)

15.1-8 Increased Main Steam Flow Total Steam Flow vs. Time

←(DRN 05-543, R14)

15.1-9 Increased Main Steam Flow Feedwater Flow vs. Time

15.1-10 Increased Main Steam Flow Feedwater Enthalpy vs. Time

→(DRN 05-543, R14)

15.1-11 Increased Main Steam Flow Steam Generator Liquid Mass vs. Time

←(DRN 05-543, R14)

15.1-12 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve Core Power vs. Time

15.1-13 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve Core Heat Flux vs. Time

15.1-14 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve RCS Pressure vs. Time

15.1-15 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve Reactor Coolant Temperature vs. Time

15.1-16 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve Pressurizer Water Volume vs Time

15.1-17 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve Steam Generator Pressure vs. Time

15.1-18 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve Total Main Steam Flow vs. Time

15.1-19 Inadvertent Opening of a Steam Generator Atmospheric Dump Valve Steam Generator Fluid Mass vs. Time



## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.1-19A	Inadvertent Opening of a Steam Generator Atmospheric Dump Valve DNBR vs. Time
15.1-20	Increased Main Steam Flow with Concurrent Single Failure Core Power vs. Time (Typical NSSS Response)
15.1-21	Increased Steam Flow with Concurrent Single Failure Core Heat Flux vs. Time (Typical NSSS Response)
15.1-22	Increased Main Steam Flow with Concurrent Single Failure RCS Pressure vs. Time (Typical NSSS Response)
←(DRN 05-543, R14)	
15.1-23	Increased Main Steam Flow with Concurrent Single Failure Minimum Hot Channel DNBR vs. Time
→(DRN 05-543, R14)	
15.1-24	Increased Main Steam Flow with Concurrent Single Failure Reactor Coolant Temperatures vs. Time (Typical NSSS Response)
15.1-25	Increased Main Steam Flow with Concurrent Single Failure Pressurizer Liquid Volume vs. Time (Typical NSSS Response)
15.1-26	Increased Main Steam Flow with Concurrent Single Failure Steam Generator Pressure vs. Time (Typical NSSS Response)
15.1-27	Increased Main Steam Flow with Concurrent Single Failure Main Steam Flow vs. Time (Typical NSSS Response)
15.1-28	Increased Main Steam Flow with Concurrent Single Failure Feedwater Flow vs. Time (Typical NSSS Response)
15.1-29	Increased Main Steam Flow with Concurrent Single Failure Feedwater Enthalpy vs. Time (Typical NSSS Response)
15.1-30	Increased Main Steam Flow with Concurrent Single Failure Steam Generator Liquid Mass vs. Time (Typical NSSS Response)
15.1-31	Deleted
15.1-31a	Increased Main Steam Flow with Concurrent Single Failure Total Integrated Safety Valve Flow vs. Time (Typical NSSS Response)
15.1-32	Increased Main Steam Flow with Concurrent Single Failure Core Flow vs. Time (Typical NSSS Response)
15.1-32a	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Core Power vs. Time
15.1-32b	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Core Heat Flux vs. Time
←(DRN 05-543, R14)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.1-32c	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power RCS Pressure vs. Time
15.1-32d	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Minimum Hot Channel DNBR vs. Time
15.1-32e	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Reactor Coolant Temperatures vs. Time
15.1-32f	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Pressurizer Liquid Volume vs. Time
15.1-32g	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Steam Generator Pressure vs. Time
15.1-32h	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Main Steam Flow vs. Time
15.1-32i	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Feedwater Flow vs. Time
15.1-32j	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Feedwater Enthalpy vs. Time
15.1-32k	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Steam Generator Liquid Mass vs. Time
15.1-32l	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Total Integrated Safety Valve Flow vs. Time
15.1-32m	HFP Inadvertent Opening of an Atmospheric Dump Valve with a Concurrent Loss of AC Power Core Flow vs. Time
15.1-33	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Core Power vs. Time
15.1-34	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Core Heat Flux vs. Time
15.1-35	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Pressurizer Pressure vs. Time
15.1-36	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Reactor Coolant System Temperatures vs. Time
15.1-37	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power, Steam Generator Pressure vs. Time
15.1-38	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Reactivity vs. Time

←(DRN 05-543, R14)

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.1-38a	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Pressurizer Level vs. Time
15.1-38b	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Steam Flow vs. Time
15.1-38c	Return-to-Power Steam Line Break Inside Containment, Hot Full Power SLB, Loss of Offsite Power Feedwater Flow vs. Time
15.1-38d	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Steam Generator Mass vs. Time
15.1-38e	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Integrated Safety Injection Flow vs. Time
15.1-38f	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power Reactor Vessel vs. Time
15.1-38g	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, Loss of Offsite Power DNBR vs. Time
←(DRN 05-543, R14)	
15.1-39	Deleted
15.1-40	Deleted
15.1-41	Deleted
15.1-42	Deleted
15.1-43	Deleted
15.1-44	Deleted
15.1-45	Deleted
15.1-46	Deleted
→(DRN 05-543, R14)	
15.1-47	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Core Power vs. Time
15.1-48	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Core Heat Flux vs. Time
15.1-49	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Pressurizer Pressure vs. Time
15.1-50	Deleted
←(DRN 05-543, R14)	

# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.1-51	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Reactor Coolant System Temperature vs. Time
15.1-52	Deleted
15.1-53	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Steam Generator Pressure vs. Time
15.1-54	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Steam Flow vs. Time
15.1-55	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Feedwater Flow vs. Time
15.1-56	Deleted
15.1-57	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Steam Generator Mass vs. Time
15.1-58	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Reactivity vs. Time
15.1-58a	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Pressurizer Level vs. Time
15.1-58b	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Integrated Safety Injection Flow vs. Time
15.1-58c	Return-to-Power Steam Line Break Inside Containment, Hot Full Power, No Loss of Offsite Power Reactor Vessel Upper Head Level vs. Time
15.1-59	Deleted
15.1-60	Deleted
15.1-61	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Core Power vs. Time
15.1-62	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Core Heat Flux vs. Time
15.1-63	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Pressurizer Pressure vs. Time
15.1-64	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Reactor Coolant System Temperature vs. Time
15.1-65	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Pressurizer Level vs. Time

←(DRN 05-543, R14)

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.1-66	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Steam Generator Pressure vs. Time
15.1-67	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Steam Flow vs. Time
15.1-68	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Feedwater Flow vs. Time
15.1-69	Deleted
15.1-70	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Steam Generator Mass vs. Time
15.1-71	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Reactivity vs. Time
15.1-72	Deleted
15.1-72a	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Integrated Safety Injection Flow vs. Time
15.1-72b	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power Reactor Vessel Level vs. Time
15.1-72c	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, Loss of Offsite Power DNBR vs. Time
15.1-72d	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Core Power vs. Time
15.1-72e	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Core Heat Flux vs. Time
15.1-72f	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Pressurizer Pressure vs. Time
15.1-72g	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Reactor Coolant System Temperatures vs. Time
15.1-72h	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Pressurizer Pressure vs. Time
15.1-72i	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Reactivity vs. Time
15.1-72j	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Pressurizer Level vs. Time
15.1-72k	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Steam Flow vs. Time

←(DRN 05-543, R14)

# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.1-72l	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Feedwater Flow vs. Time
15.1-72m	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Steam Generator Mass vs. Time
15.1-72n	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Integrated Safety Injection Flow vs. Time
15.1-72o	Return-to-Power Steam Line Break Inside Containment, Hot Zero Power, No Loss of Offsite Power Reactor Vessel Upper Head Level vs. Time
15.1-73	Deleted
15.1-74	Deleted
15.1-75	Deleted
→(DRN 03-220, R12-B)	
15.1-75a	Deleted
←(DRN 03-220, R12-B; 05-543, R14)	
15.1-76	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Core Power vs. Time
15.1-77	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Reactor Coolant System Pressure vs. Time
15.1-78	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Reactor Coolant Temperature vs. Time
15.1-79	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Pressurizer Water Volume vs. Time
15.1-80	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Steam Generator Pressure vs. Time
15.1-81	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Steam Mass Release From Break vs. Time
15.1-82	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Feedwater Flow vs. Time
15.1-83	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Feedwater Enthalpy vs. Time
15.1-84	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Steam Generator Liquid Inventory vs. Time
15.1-85	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Reactivity vs. Time

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15.1-86	Main Steam Line Break Modes 3 & 4 With Loss of AC Power Integrated Steam Mass Release From Break vs. Time
→(DRN 05-543, R14)	
15.1-87	Inside Containment Steam Line Break, Pre-Trip Power Excursion Core Power vs. Time
15.1-88	Inside Containment Steam Line Break, Pre-Trip Power Excursion Core Heat Flux vs. Time
15.1-89	Inside Containment Steam Line Break, Pre-Trip Power Excursion Reactor Coolant System Temperatures vs. Time
15.1-90	Inside Containment Steam Line Break, Pre-Trip Power Excursion Reactor Coolant System Pressure vs. Time
15.1-91	Inside Containment Steam Line Break, Pre-Trip Power Excursion Reactivity vs. Time
15.1-92	Inside Containment Steam Line Break, Pre-Trip Power Excursion Steam Generator Pressure vs. Time
15.1-93	Inside Containment Steam Line Break, Pre-Trip Power Excursion DNBR vs. Time
15.1-94	Inside Containment Steam Line Break, Pre-Trip Power Excursion Steam Generator Level vs. Time
15.2-1	Loss of Condenser Vacuum Core Power vs. Time
←(DRN 05-543, R14)	
15.2-2	Loss of Condenser Vacuum Core Average Heat Flux vs. Time
15.2-3	Loss of Condenser Vacuum Pressurizer Pressure vs. Time
→(DRN 05-543, R14)	
15.2-3a	Loss of Condenser Vacuum RCS Pressure vs. Time
←(DRN 05-543, R14)	
15.2-4	Loss of Condenser Vacuum Minimum DNBR vs. Time
→(DRN 05-543, R14)	
15.2-5	Loss of Condenser Vacuum Core Coolant Temperatures vs. Time
←(DRN 05-543, R14)	
15.2-6	Loss of Condenser Vacuum Pressurizer Water Volume vs. Time
→(DRN 05-543, R14)	
15.2-7	Loss of Condenser Vacuum SG Pressure vs. Time
15.2-8	Loss of Condenser Vacuum Total Steam Flowrate per SG vs. Time
15.2-9	Loss of Condenser Vacuum Feedwater Flowrate per SG vs. Time
←(DRN 05-543, R14)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15.2-10	Loss of Condenser Vacuum Feedwater Enthalpy vs. Time
15.2-11	Loss of Condenser Vacuum Secondary Liquid Mass vs. Time
→(DRN 05-543, R14)	
15.2-12	Loss of Condenser Vacuum Primary Safety Valve Flowrate vs. Time
15.2-13	Loss of Condenser Vacuum SG Safety Valve Flowrate vs. Time
15.2-14	Deleted
15.2-15	Deleted
15.2-16	Deleted
15.2-17	Deleted
15.2-18	Deleted
15.2-19	Deleted
15.2-20	Deleted
15.2-21	Deleted
15.2-22	Deleted
15.2-23	Deleted
15.2-24	Deleted
15.2-25	Deleted
15.2-25a	Deleted
15.2-25b	Deleted
15.2-25c	Deleted
15.2-25d	Deleted
15.2-25e	Deleted
15.2-25f	Deleted
15.2-25g	Deleted
15.2-25h	Deleted
15.2-25i	Deleted
15.2-25j	Deleted
←(DRN 05-543, R14)	



WSES-FSAR-UNIT-3  
CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15.2-26	Loss of Normal Feedwater Flow Core Power vs. Time
→(DRN 05-543, R14)	
15.2-27	Loss of Normal Feedwater Flow Core Heat Flux vs. Time
15.2-28	Loss of Normal Feedwater Flow Reactor Coolant System Pressure vs. Time
15.2-29	Loss of Normal Feedwater Flow Reactor Coolant System Temperatures vs. Time
←(DRN 05-543, R14)	
15.2-30	Loss of Normal Feedwater Flow Pressurizer Water Volume vs. Time
15.2-31	Loss of Normal Feedwater Flow Steam Generator Pressure vs. Time
→(DRN 05-543, R14)	
15.2-32	Loss of Normal Feedwater Flow Secondary Steam Flowrate vs. Time
15.2-33	Loss of Normal Feedwater Flow Feedwater Flowrate per Steam Generator vs. Time
←(DRN 05-543, R14)	
15.2-34	Loss of Normal Feedwater Flow Feedwater Enthalpy vs. Time
15.2-35	Loss of Normal Feedwater Flow Secondary Liquid Mass vs. Time
→(DRN 05-543, R14)	
15.2-36	Loss of Normal Feedwater Flow Safety Valve Flowrate per Steam Generator vs. Time
15.2-36a	Loss of Normal Feedwater Flow Minimum DNBR vs. Time
→(DRN 02-1713, R12-B)	
15.2-37	Feedwater System Pipe Break (Large) Core Power vs. Time
15.2-38	Feedwater System Pipe Break (Large) Core Heat Flux vs. Time
15.2-39	Feedwater System Pipe Break (Large) RCS Pressure vs. Time
15.2-40	Feedwater System Pipe Break (Large) Minimum DNBR vs. Time
15.2-41	Feedwater System Pipe Break (Large) RCS Temperature vs. Time
15.2-42	Feedwater System Pipe Break (Large) Pressurizer Water Volume vs. Time
15.2-43	Feedwater System Pipe Break (Large) SG Pressure vs. Time
15.2-44	Feedwater System Pipe Break (Large) Steam Flowrate vs. Time
15.2-45	Feedwater System Pipe Break (Large) Feedwater Flow (Intact Side) vs. Time
15.2-46	Feedwater System Pipe Break (Large) Feedwater Enthalpy (Intact Side) vs. Time
←(DRN 05-543, R14)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.2-47	Feedwater System Pipe Break (Large) SG Liquid Mass vs. Time
15.2-48	Feedwater System Pipe Break (Large) Core Flow (Fraction) vs. Time
15.2-49	Feedwater System Pipe Break P (Large) Pressurizer Safety Valve Flowrate vs. Time
15.2-50	Feedwater System Pipe Break (Large) Secondary Safety Valve Flowrate vs. Time
15.2-51	Feedwater System Pipe Break (Large) Rupture Discharge Flowrate
15.2-52	Feedwater System Pipe Break (Large) SG Water Level vs. Time
←(DRN 02-1713, R12-B)	
15.2-52a	Feedwater System Pipe Break (Large) Rupture Discharge Enthalpy vs. Time
→(DRN 02-1713, R12-B)	
15.2-53	Feedwater System Pipe Break (Large) Reactivity vs. Time
15.2-53a	Deleted
15.2-53a1	Feedwater System Pipe Break (Large) RCS Pressure vs. Break Size
15.2-53a2	Feedwater System Pipe Break (Small) RCS Pressure vs. Break Size
15.2-53b	Feedwater System Pipe Break (Small) RCS Pressure vs. Time
15.2-53c	Feedwater System Pipe Break (Small) SG Pressure vs. Time
15.2-53d	Feedwater System Pipe Break (Small) Pressurizer Water Volume vs. Time
←(DRN 02-1713, R12-B)	
15.2-53e	Feedwater System Pipe Break (Small) Core Power vs. Time
15.2-53f	Feedwater System Pipe Break (Small) Core Heat Flux vs. Time
15.2-53g	Feedwater System Pipe Break (Small) RCS Temperature vs. Time
15.2-53h	Feedwater System Pipe Break (Small) Core Flow (Fraction) vs. Time
15.2-53i	Feedwater System Pipe Break (Small) Steam Flowrate vs. Time
15.2-53j	Feedwater System Pipe Break (Small) Feedwater Flow (Intact Side) vs. Time
15.2-53k	Feedwater System Pipe Break (Small) Feedwater Enthalpy (Intact Side) vs. Time
15.2-53l	Feedwater System Pipe Break (Small) SG Liquid Mass vs. Time
15.2-53m	Feedwater System Pipe Break (Small) SG Water Level vs. Time
←(DRN 05-543, R14)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.2-53n	Feedwater System Pipe Break (Small) Pressurizer Safety Valve Flowrate vs. Time
15.2-53o	Feedwater System Pipe Break (Small) Secondary Safety Valve Flowrate vs. Time
15.2-53p	Feedwater System Pipe Break (Small) Reactivity vs. Time
15.2-53q	Feedwater System Pipe Break (Small) Rupture Discharge Flowrate vs. Time
15.2-53r	Feedwater System Pipe Break (Small) Rupture Discharge Enthalpy vs. Time
15.2-53s	Feedwater System Pipe Break (Small) Minimum DNBR vs. Time
15.2-54	Loss of Normal Feedwater Flow with an Active Failure in the SBCS Core Power vs. Time
15.2-55	Loss of Normal Feedwater Flow with an Active Failure in the SBCS Core Heat Flux vs. Time
15.2-56	Loss of Normal Feedwater Flow with an Active Failure in the SBCS Pressurizer Pressure vs. Time
15.2-57	Loss of Normal Feedwater Flow with an Active Failure in the SBCS RCS Temperature vs. Time
15.2-58	Loss of Normal Feedwater Flow with an Active Failure in the SBCS Pressurizer Water Volume vs. Time
15.2-59	Loss of Normal Feedwater Flow with an Active Failure in the SBCS SG Pressure vs. Time
15.2-60	Loss of Normal Feedwater Flow with an Active Failure in the SBCS Secondary Steam Flowrate vs. Time
15.2-61	Loss of Normal Feedwater Flow with an Active Failure in the SBCS EFW Flowrate per SG vs. Time
15.2-62	Loss of Normal Feedwater Flow with an Active Failure in the SBCS EFW Enthalpy vs. Time
15.2-63	Loss of Normal Feedwater Flow with an Active Failure in the SBCS Secondary Liquid Mass vs. Time
15.2-64	Deleted
15.2-65	Loss of Normal Feedwater Flow with an Active Failure in the SBCS Minimum DNBR vs. Time
15.3-1	Total Loss of Forced Reactor Coolant Flow Core Power vs. Time
15.3-2	Total Loss of Forced Reactor Coolant Flow Core Heat Flux vs. Time
15.3.3	Total Loss of Forced Reactor Coolant Flow Pressurizer Pressure vs. Time
←(DRN 05-543, R14)	

WSES-FSAR-UNIT-3  
CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14) 15.3-4	Total Loss of Forced Reactor Coolant Flow Minimum Hot Channel DNBR vs. Time
15.3-5	Total Loss of Forced Reactor Coolant Flow Reactor Coolant Temperatures vs. Time
15.3-6	Total Loss of Forced Reactor Coolant Flow Core Flow vs. Time
15.3-7 ←(DRN 05-543, R14)	Deleted
15.3-8	Total Loss of Forced Reactor Coolant Flow Steam Generator Pressure vs. Time
→(DRN 05-543, R14) 15.3-9	Total Loss of Forced Reactor Coolant Flow Integrated Steam Generator Safety Valve Flow vs. Time
15.3-10 ←(DRN 05-543, R14)	Total Loss of Forced Reactor Coolant Flow Pressurizer Liquid Volume vs. Time
15.3-11	Sheared Shaft With Loss of Offsite Power Core Power vs. Time
15.3-12	Sheared Shaft with Loss of Offsite Power Core Heat Flux vs. Time
→(DRN 05-543, R14) 15.3-13	Sheared Shaft With Loss of Offsite Power RCS Temperatures vs. Time
15.3-14 ←(DRN 05-543, R14)	Sheared Shaft With Loss of Offsite Power RCS Pressure vs. Time
15.3-15	Sheared Shaft With Loss of Offsite Power Reactivity vs. Time
15.3-16	Sheared Shaft With Loss of Offsite Power Steam Generator Pressure vs. Time
15.3-17	Sheared Shaft With Loss of Offsite Power Pressurizer Liquid Volume vs. Time
→(DRN 05-543, R14) 15.3-18	Sheared Shaft With Loss of Offsite Power Reactor Coolant System Flows vs. Time
15.3-18a ←(DRN 05-543, R14)	Sheared Shaft with Loss of Offsite Power Minimum Hot Channel DNBR vs. Time
15.3-19	Deleted
15.3-20	Deleted
15.3-21	Deleted
15.3-22	Deleted
15.3-23	Deleted

WSES-FSAR-UNIT-3

CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15.3-24	Deleted
15.3-25	Deleted
15.3-26	Deleted
15.3-27	Deleted
15.3-28	Deleted
15.3-29	Deleted
15.3-30	Deleted
15.3-31	Deleted
→ (DRN 05-543, R14) 15.3-32	Deleted
← (DRN 05-543, R14)	
15.4-1	CEA Withdrawal From Subcritical Core Power vs. Time
15.4-2	CEA Withdrawal from Subcritical Core Heat Flux vs. Time
15.4-3	CEA Withdrawal from Subcritical Reactor Coolant System Temperatures vs. Time
15.4-4	CEA Withdrawal from Subcritical Reactor Coolant System Pressure vs. Time
15.4-5	CEA Withdrawal from Subcritical Steam Generator Pressure vs. Time
15.4-6	CEA Withdrawal from Subcritical Reactivity vs. Time
15.4-7	CEA Withdrawal from Subcritical Peak Linear Heat Rate vs. Time
15.4-8	CEA Withdrawal at Low Power Core Power vs. Time
15.4-9	CEA Withdrawal at Low Power Core Heat Flux vs. Time
15.4-10	CEA Withdrawal at Low Power Reactor Coolant System Temperatures vs. Time
15.4-11	CEA Withdrawal at Low Power Reactor Coolant System Pressure vs. Time
15.4-11a	CEA Withdrawal at Low Power Steam Generator Pressure vs. Time
15.4-11b	CEA Withdrawal at Low Power Reactivity vs. Time

# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14) 15.4-12	Deleted
15.4-13	Deleted
15.4-14	Deleted
15.4-15	Deleted
15.4-16	Deleted
15.4-17	Deleted
15.4-18	Deleted
15.4-19	Deleted
15.4-20	Deleted
15.4-21	Deleted
15.4-22	Deleted
15.4-23	Deleted
15.4-24	Deleted
15.4-25 ←(DRN 05-543, R14)	CEA Withdrawal at Power Core Heat Flux vs. Time
15.4-26	CEA Withdrawal at Power Peak Linear Heat Generation Rate vs. Time
15.4-27	CEA Withdrawal at Power Reactor Coolant System Pressure vs. Time
15.4-28	CEA Withdrawal at Power Core Power vs. Time
15.4-29	CEA Withdrawal at Power Minimum DNBR vs. Time
15.4-30	CEA Withdrawal at Power Reactor Coolant Temperature vs. Time
15.4-31	CEA Withdrawal at Power Pressurizer Water Volume vs. Time
15.4-32	CEA Withdrawal at Power Steam Generator Pressure vs. Time
15.4-33	CEA Withdrawal at Power Steam Flow vs. Time
15.4-34	CEA Withdrawal at Power Feedwater Flow vs. Time
15.4-35	CEA Withdrawal at Power Feedwater Enthalpy vs. Time

# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15.4-36	CEA Withdrawal at Power Steam Generator Liquid Mass vs. Time
15.4-37	CEA Withdrawal at Power Secondary Safety Valve Flow vs. Time
→(DRN 02-1479, R12)	
15.4-38	CEA Misoperation Single CEA Drop Core Power vs. Time
→(DRN 05-543, R14)	
15.4-39	CEA Misoperation Single CEA Drop Core Average Heat Flux vs. Time
←(DRN 05-543, R14)	
15.4-40	CEA Misoperation Single CEA Drop Reactivities vs. Time
15.4-41	CEA Misoperation Single CEA Drop RCS Temperatures vs. time
→(DRN 05-543, R14)	
15.4-42	CEA Misoperation Single CEA Drop System Pressure vs. Time
←(DRN 05-543, R14)	
15.4-43	CEA Misoperation Single CEA Drop Steam Generator Pressure vs. Time
15.4-44	CEA Misoperation Single CEA Drop Pressurizer Level vs. Time
15.4-45	Deleted
15.4-46	Deleted
15.4-47	Deleted
15.4-48	Deleted
15.4-49	Deleted
15.4-50	Deleted
15.4-51	Deleted
15.4-52	Deleted
15.4-53	Deleted
15.4-54	Deleted
15.4-55	Deleted
←(DRN 02-1479, R12)	

# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 02-1479, R12) 15.4-56	Deleted
15.4-57 ←(DRN 02-1479, R12)	Deleted
15.4-58	Deleted
→(DRN 02-1479, R12; 05-543, R14) 15.4-59 ←(DRN 05-543, R14)	Deleted
15.4-60	Deleted
15.4-61 ←(DRN 02-1479, R12) →(DRN 03-1610, R13)	Deleted
15.4-62	Deleted
15.4-63	Deleted
15.4-64	Deleted
15.4-65	Deleted
15.4-65a	Deleted
15.4-65b ←(DRN 03-1610, R13)	Deleted
→(DRN 05-543, R14) 15.4-66	Deleted
15.4-67	HFP Ejection Core Power vs. Time
15.4-68	HFP Ejection Peak Core Power vs. Time
15.4-69	HFP Ejection Core Heat Flux vs. Time
15.4-70	HFP Ejection Peak Core Heat Flux vs. Time
15.4-71	HFP Ejection Hot & Average Channel Fuel & Clad Temperatures vs. Time
15.4-72	HFP Ejection Reactivity Components vs. Time
15.4-73	CEA Ejection RCS Pressure vs. Time for Peak RCS Pressure
15.4-74	Deleted
15.4-75 ←(DRN 05-543, R14)	Deleted



# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.4-76	Deleted
15.4-77	Deleted
15.4-78	Deleted
15.4-79	Deleted
15.4-80	Deleted
15.4-81	Deleted
15.4-82	Deleted
15.4-83	Deleted
15.4-84	Deleted
15.4-85	Deleted
←(DRN 05-543, R14)	
15.4-86	Deleted
→(DRN 05-543, R14)	
15.4-87	Deleted
15.4-88	Deleted
15.4-89	Deleted
15.4-90	Deleted
15.4-91	Deleted
15.4-92	Deleted
15.4-92a	Deleted
15.4-93	Deleted
15.4-94	Deleted
15.4-95	Deleted
15.4-96	Deleted
15.4-97	Deleted
←(DRN 05-543, R14)	
→(DRN 03-1610, R13)	
15.4-98	Locations of Incore Neutron Detectors
15.4-99	Power Distribution for Representative Worst Case Undetectable Misload
←(DRN 03-1610, R13)	

WSES-FSAR-UNIT-3

CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15.5-1	CVCS Malfunction Core Power vs. Time
15.5-2	CVCS Malfunction Core Average Heat Flux vs. Time
15.5-3	CVCS Malfunction Coolant System Pressure vs. Time
15.5-4	CVCS Malfunction Core Coolant Temperatures vs. Time
15.5-5	CVCS Malfunction Reactivity vs. Time
15.5-6	CVCS Malfunction Pressurizer Steam Volume vs. Time
15.5-7	CVCS Malfunction Steam Generator Pressure vs. Time

→(DRN 05-543, R14)

15.6-1	Deleted
15.6-2	Deleted
15.6-3	Deleted
15.6-4	Deleted
15.6-5	Deleted
15.6-6	Deleted
15.6-7	Deleted
15.6-8	Deleted
15.6-9	Deleted
15.6-10	Deleted
15.6-11	Deleted
15.6-12	Deleted
15.6-13	Deleted
15.6-14	Deleted
15.6-15	Deleted
15.6-16	Deleted

←(DRN 05-543, R14)

WSES-FSAR-UNIT-3

CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14) 15.6-17	Deleted
15.6-18	Deleted
15.6-19	Deleted
15.6-20	Deleted
15.6-21	Deleted
15.6-22	Deleted
15.6-23	Deleted
15.6-24	Deleted
15.6-25	Deleted
15.6-26	Deleted
15.6-27	Deleted
15.6-28	Deleted
15.6-29	Deleted
15.6-30	Deleted
15.6-31	Deleted
←(DRN 05-543, R14)	
15.6-32	Deleted
15.6-33	Deleted
15.6-34	Deleted
15.6-35	Deleted

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.6-35A	SGTR with LOOP Core Power vs. Time
15.6-35B	SGTR with LOOP Core Heat
15.6-35C	Deleted
15.6-35D	SGTR with LOOP RCS Pressure vs. Time
15.6-35E	Deleted
15.6-35F	SGTR with LOOP RCS Temperature vs. Time
15.6-35G	Deleted
15.6-35H	SGTR with LOOP Pressurizer Water Volume vs. Time
15.6-35I	SGTR with LOOP RCS Inventory vs. Time
15.6-35J	Deleted
15.6-35K	SGTR with LOOP SG Pressure vs. Time
15.6-35L	SGTR with LOOP Feedwater Flowrate per SG vs. Time
15.6-35M	Deleted
15.6-35N	SGTR with LOOP Primary to Secondary Leak Rate vs. Time
15.6-35O	Deleted
15.6-35P	SGTR with LOOP SG Liquid Mass vs. Time
15.6-35Q	SGTR with LOOP Integrated Steam Mass Through ADVs vs. Time
15.6-35R	SGTR with LOOP Integrated Primary to Secondary Leak Flow vs. Time
15.6-36	Deleted
15.6-37	Deleted
15.6-38	Deleted
15.6-39	Deleted
15.6-40	Deleted
15.6-41	Deleted
15.6-42	Deleted
15.6-43	Deleted
←(DRN 05-543, R14)	

WSES-FSAR-UNIT-3

CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.6-44	Deleted
15.6-45	Deleted
15.6-46	Deleted
15.6-47	Deleted
15.6-48	Deleted
15.6-49	Deleted
15.6-50	Deleted
15.6-51	Deleted
15.6-52	Deleted
15.6-53	Deleted
15.6-54	Deleted
15.6-55	Deleted
15.6-56	Deleted
15.6-57	Deleted
15.6-58	Deleted
15.6-59	Deleted
15.6-60	Deleted
15.6-61	Deleted
15.6-62	Deleted
←(DRN 05-543, R14)	
15.6-63	Deleted
15.6-64	Deleted
15.6-65	Deleted
15.6-66	Deleted
15.6-67	Deleted

WSES-FSAR-UNIT-3

CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15.6-68	Deleted
15.6-69	Deleted
15.6-70	Deleted
15.6-71	Deleted
15.6-72	Deleted
15.6-73	Deleted
15.6-74	Deleted
15.6-75	Deleted
15.6-76	Deleted
15.6-77	Deleted
15.6-78	Deleted
15.6-79	Deleted
15.6-80	Deleted
15.6-81	Deleted
15.6-82	Deleted
15.6-83	Deleted
15.6-84	Deleted
15.6-85	Deleted
15.6-86	Deleted
15.6-87	Deleted
15.6-88	Deleted
15.6-89	Deleted
15.6-90	Deleted
15.6-91	Deleted
→(DRN 05-543, R14)	
15.6-92	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Core Power
←(DRN 05-543, R14)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.6-93	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Pressure in Center Hot Assembly Node
15.6-94	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Leak Flow Rate
15.6-95	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Hot Assembly Flow Rate (Below and Above Hot Spot)
15.6-96	Deleted
15.6-97	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Hot Assembly Quality
15.6-98	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Containment Pressure
15.6-99	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Mass Added to Core During Reflood
15.6-100	Large Break LOCA ECCS Performance Analysis 1.0 DEG/PD Break Peak Cladding Temperature
15.6-101	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Core Power
15.6-102	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Pressure in Center Hot Assembly Node
15.6-103	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Leak Flow Rate
15.6-104	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Hot Assembly Flowrate (Above and Below Hot Spot)
15.6-105	Deleted
15.6-106	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Hot Assembly Quality
15.6-107	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Containment Pressure
15.6-108	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Mass Added to Core During Reflood
15.6-109	Large Break LOCA ECCS Performance Analysis 0.8 DEG/PD Break Peak Cladding Temperature
→(DRN 06-1062, R15)	
15.6-109a	Deleted
15.6-109b	Deleted
←(DRN 05-543, R14; 06-1062, R15)	

# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14; 06-1062, R15)	
15.6-109c	Deleted
15.6-109d	Deleted
15.6-109e	Deleted
15.6-109f	Deleted
15.6-109g	Deleted
15.6-109h	Deleted
15.6-109i	Deleted
15.6-109j	Deleted
15.6-109k	Deleted
←(DRN 06-1062, R15)	
15.6-109l	Deleted
15.6-110	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Core Power
15.6-111	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Pressure Center Hot Assembly Node
15.6-112	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Leak Flow Rate
15.6-113	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Hot Assembly Flowrate (Above and Below Hot Spot)
15.6-114	Deleted
15.6-115	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Hot Assembly Quality
15.6-116	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Containment Pressure
15.6-117	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Mass Added to Core During Reflood
15.6-118	Large Break LOCA ECCS Performance Analysis 0.6 DEG/PD Break Peak Cladding Temperature
←(DRN 05-543, R14)	



## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 06-1062, R15)	
15.6-118a	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Mid Annulus Flow Rate
15.6-118b	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Quality Above and Below Core
15.6-118c	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Core Pressure Drop
15.6-118d	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Safety Injection Flow Rate Into Intact Discharge Legs
15.6-118e	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Water Level in Downcomer During Reflood
15.6-118f	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Hot Spot Gap Conductance
15.6-118g	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Maximum Local cladding Oxidation Percentage
15.6-118h	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Fuel Centerline, Fuel Average, Cladding, and Coolant Temperature at the Hot Spot
15.6-118i	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Hot Spot Heat Transfer Coefficient
15.6-118j	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Hot Pin Pressure
15.6-118k	Large Break LOCA ECCS Performance Analysis, 0.6 DEG/PD Break Core Bulk Channel Flow Rate
←(DRN 06-1062, R15)	
15.6-119	Deleted
15.6-120	Deleted
15.6-121	Deleted
15.6-122	Deleted
15.6-123	Deleted
15.6-124	Deleted
15.6-125	Deleted
15.6-126	Deleted
15.6-127	Deleted

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 06-1062, R15)	
15.6-127a	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Core Power
15.6-127b	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Pressure in Center Hot Assembly Node
15.6-127c	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Leak Flow Rate
15.6-127d	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Hot Assembly Flow Rate (Below and Above Hot Spot)
15.6-127e	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Hot Assembly Quality
15.6-127f	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Containment Pressure
15.6-127g	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Mass Added to Core During Reflood
15.6-127h	Large Break LOCA ECCS Performance Analysis, 0.4 DEG/PD Break Peak Cladding Temperature
←(DRN 06-1062, R15)	
→(DRN 05-543, R14)	
15.6-128	Large Break LOCA ECCS Performance Analysis Peak Cladding Temperature versus Break Area
←(DRN 05-543, R14)	
→(DRN 00-0551)	
15.6-129	Deleted
15.6-130	Deleted
15.6-131	Deleted
15.6-132	Deleted
15.6-133	Deleted
15.6-134	Deleted
15.6-135	Deleted
15.6-136	Deleted
15.6-137	Deleted
15.6-138	Deleted
15.6-139	Deleted
15.6-140	Deleted
←(DRN 00-0551)	

WSES-FSAR-UNIT-3

CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→ (DRN 00-0551)	
15.6-141	Deleted
15.6-142	Deleted
15.6-143	Deleted
15.6-144	Deleted
15.6-145	Deleted
15.6-146	Deleted
15.6-147	Deleted
15.6-148	Deleted
15.6-149	Deleted
15.6-150	Deleted
16.6-151	Deleted
15.6-152	Deleted
← (DRN 00-0551)	
→ (DRN 05-543, R14)	
15.6-153	Deleted
15.6-154	Deleted
15.6-155	Deleted
15.6-156	Deleted
→ (DRN 00-0551)	
15.6-157	Deleted
← (DRN 00-0551)	
15.6-158	Deleted
15.6-159	Deleted
→ (DRN 00-0551)	
15.6-160	Deleted
← (DRN 05-543, R14)	
15.6-161	Deleted
15.6-162	Deleted
15.6-163	Deleted
15.6-164	Deleted
15.6-165	Deleted
15.6-166	Deleted
← (DRN 00-0551)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 00-0551) 15.6-167	Deleted
15.6-168 ←(DRN 00-0551)	Deleted
→(DRN 05-543, R14) 15.6-169	Deleted
15.6-170	Deleted
15.6-171	Deleted
15.6-172	Deleted
→(DRN 00-0551) 15.6-173	Deleted
←(DRN 00-0551)	
15.6-174	Deleted
15.6-175	Deleted
→(DRN 00-0551) 15.6-176	Deleted
←(DRN 05-543, R14)	
15.6-177	Peak Cladding Temperature vs. Break Size for the Small Break LOCA Analysis
15.6-178 ← (DRN 00-0551)	Inadvertent Opening of a Pressurizer Safety Valve Normalized Total Core Power
15.6-179	Inadvertent Opening of a Pressurizer Safety Valve Inner Vessel Pressure
15.6-180	Inadvertent Opening of a Pressurizer Safety Valve Leak Flow Rate
15.6-181	Inadvertent Opening of a Pressurizer Safety Valve Inner Vessel Inlet Flow Rate
15.6-182	Inadvertent Opening of a Pressurizer Safety Valve Inner Vessel Two-Phase Mixture Height
15.6-183	Inadvertent Opening of a Pressurizer Safety Valve Heat Transfer Coefficient at Hot Spot
15.6-184	Inadvertent Opening of a Pressurizer Safety Valve Coolant Temperature at Hot Spot
15.6-185	Inadvertent Opening of a Pressurizer Safety Valve Clad Surface Temperature at Hot Spot
→(DRN 05-543, R14) 15.6-186	Deleted
←(DRN 05-543, R14)	

# WSES-FSAR-UNIT-3

## CHAPTER 15

### LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14)	
15.6-187	Deleted
15.6-188	Deleted
15.6-189	Deleted
15.6-190	Deleted
15.6-191	Deleted
15.6-192	Deleted
15.6-193	Deleted
15.6-194	Deleted
15.6-195	Deleted
15.6-196	Deleted
15.6-197	Deleted
15.6-198	Deleted
15.6-199	Deleted
15.6-200	Deleted
15.6-201	Deleted
15.6-202	Deleted
15.6-203	Deleted
15.6-204	Deleted
15.6-205	Deleted
→(DRN 00-0551; 06-1062, R15)	
15.6-206	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Core Power
15.6-207	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Inner Vessel Pressure
15.6-208	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Break Flow Rate
15.6-209	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Inner Vessel Inlet Flow Rate
←(DRN 00-0551; 05-543, R14; 06-1062, R15)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→ (DRN 00-0551; 05-543, R14; 06-1062, R15)	
15.6-210	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Inner Vessel Two-Phase Mixture Level
15.6-211	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Heat Transfer Coefficient at Hot Spot
15.6-212	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Coolant Temperature at Hot Spot
15.6-213	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.06 ft <sup>2</sup> /PD Break Cladding Temperature at Hot Spot
15.6-214	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Core Power
15.6-215	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Inner Vessel Pressure
15.6-216	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Break Flow Rate
15.6-217	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Inner Vessel Inlet Flowrate
15.6-218	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Inner Vessel Two-Phase Mixture Level
15.6-219	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Heat Transfer Coefficient at Hot Spot
15.6-220	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Coolant Temperature at Hot Spot
15.6-221	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.05 ft <sup>2</sup> /PD Break Cladding Temperature at Hot Spot
← (DRN 00-0551; 06-1062, R15)	
→ (DRN 05-256, R13-B)	
15.6-222	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Core Power
15.6-223	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Inner Vessel Pressure
15.6-224	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Break Flowrate
15.6-225	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Inner Vessel Inlet Flowrate
15.6-226	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Inner Vessel Two-Phase Mixture Level
← (DRN 05-256, R13-B; 05-543, R14)	

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-256, R13-B; 05-543, R14)	
15.6-227	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Heat Transfer Coefficient at Hot Spot
15.6-228	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Coolant Temperature at Hot Spot
15.6-229	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Cladding Temperature at Hot Spot
←(DRN 05-256, R13-B)	
15.6-230	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Steam Generator No. 1 Pressure
15.6-231	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Steam Generator No. 2 Pressure
15.6-232	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Steam Generator No. 1 Secondary Flowrate
15.6-233	Waterford-3 Small Break LOCA ECCS Performance Analysis 0.055 ft <sup>2</sup> /PD Break Steam Generator No. 2 Secondary Flowrate
15.9-1	Asymmetric Steam Generator Transient Core Power vs. Time
15.9-2	Asymmetric Steam Generator Transient Core Average Heat Flux vs. Time
15.9-3	Asymmetric Steam Generator Transient RCS Temperatures vs. Time
15.9-4	Asymmetric Steam Generator Transient System Pressure vs. Time
15.9-5	Asymmetric Steam Generator Transient Steam Generator Pressure vs. Time
15.9-6	Asymmetric Steam Generator Transient DNBR vs. Time
←(DRN 05-543, R14)	
15A.1-1	Steam Generator Tube Rupture With a Concurrent Loss of Normal AC Power RCS Pressure vs. Time
15A.1-2	Steam Generator Tube Rupture With LOP Reactor Vessel Liquid Volume vs. Time
15A.1-3	Full Power Steam Line Break, IC LOP, HPSI Pump Failure, Stuck CEA, Automatic Actuation of AFW Reactor Coolant System Pressure vs. Time
15A.1-4	Full Power Steam Line Break, IC, LOP, HPSI Pump Failure, Stuck CEA, Automatic Actuation of AFW Reactor Vessel Liquid Volume vs. Time
15A.2-1	Steam Generator Heat Transfer Characteristics
15A.2-2	Discharge Enthalpy vs. Steam Generator Liquid Inventory
15A.2-3	Steam Generators

## CHAPTER 15

## LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
15A.2-4	Maximum RCS Pressure vs. Break Area
15A.3-1	Full Power Main Steam Line Break Maximum Post-Trip Reactivity vs. Time of Loss of Offsite Power
15A.3-2	Full Power Main Steam Line Break Minimum Post-Trip DNBR vs. Time of Loss of Offsite Power
15A.4-1	Minimum DNBR vs. Time Increased Main Steam Flow With Loss of Offsite Power
15B-1	Containment Leakage Dose Model
→(DRN 05-543, R14)	
15C.1-1	Deleted
15C.1-2	Deleted
15C.1-3	Deleted
15C.1-4	Deleted
15C.1-5	Deleted
←(DRN 05-543, R14)	
15C.1-6	Deleted
15C.1-7	Deleted
15C.1-8	Deleted
15C.1-9	Deleted
15D.1-1	Deleted
15D.1-2	Deleted
15D.1-3	Deleted
15D.1-4	Deleted
15D.1-5	Deleted
15D.1-6	Deleted
15D.1-7	Deleted
→(DRN 05-543, R14)	
15D.2-1	Deleted
15D.2-2	Deleted
←(DRN 05-543, R14)	



CHAPTER 15

LIST OF FIGURES (Cont'd)

<u>Figure</u>	<u>Title</u>
→(DRN 05-543, R14) 15D.2-3	Deleted
15D.2-4	Deleted
15D.2-5	Deleted
15D.2-6	Deleted
15D.2-7 ←(DRN 05-543, R14)	Deleted

WSES-FSAR-UNIT-3  
UPDATE REFERENCE LIST  
Chapter 15

<u>Section</u>	<u>Cross References</u>
<u>Revision 12-B</u>	
15-ix	ER-W3-2002-0603-009/DRN 02-1713
15-xxii	
15-xxiii	
15.2.3.1	
Table 15.2-8 Sh 1 & 2	
Table 15.2-9	
Table 15.2-9a	
Table 15.2-9b Sh 1 & 2	
Figure 15.2-37 thru 15.2-53d	
Appendix 15C (all)	
15-xix	ER-W3-2003-0059-000/DRN 03-220
15.6.3.1	
Table 15.6-1	
Table 15.6-2	
Table 15.6-3	
Table 15.6-4	
Figure 15.1-75a	
Figure 15.6-1	
15.6.3.1	ER-W3-2002-0628-000/DRN 02-1742
15.6.3.2.3.4	ER-W3-2001-0424-000/DRN 03-99
<u>Revision 12-C</u>	
Section 15.7.3.4.1	ER-W3-2002-0319-000/DRN 03-179
<u>Revision 13</u>	
Table 15.6-13a Sht 1	ER-W3-2003-0117-000/DRN 03-1964
Table 15.6-13a Sht 2	
Table 15.6-13b	
TOC Page 15-xi	ER-W3-2003-0585-000/DRN 03-1610
TOC Page 15-xii	
TOC Page 15-xiii	
TOC Page 15-xxvii	
TOC Page 15-xxix	
Section 15.4.3.1.1.1	

WSES-FSAR-UNIT-3  
UPDATE REFERENCE LIST  
Chapter 15

<u>Section</u>	<u>Cross References</u>
<u>Revision 13</u>	
Section 15.4.3.1.1.2	
Section 15.4.3.1.2.1	
Table 15.4-18	ER-W3-2003-0585-000/DRN 03-1610
Table 15.4-18a	
Table 15.4-18b	
Table 15.4-37	
Table 15.4-38	
Table 15.4-62	
Table 15.4-63	
Table 15.4-64	
Table 15.4-65a	
Table 15.4-65b	
Table 15.4-98	
Table 15.4-99	
Section 15.0.3.1.12	ER-W3-2003-0654-000/DRN 04-524
Section 15.1.2.4.2	
<u>Revision 13-B</u>	
Section 15.6.3.3.3.2	ER-W3-2004-271/DRN 04-632
Section 15.6.3.3.3.2.1	
Section 15.6.3.3.3.2.3	
Section 15.6	
Table 15.6-12a	
Table 15.6-13a Sht. 1	
Table 15.6-13a Sht. 2	
Table 15.6-14a	
Figure 15.6-222	
Figure 15.6-223	
Figure 15.6-224	
Figure 15.6-225	
Figure 15.6-226	
Figure 15.6-227	
Figure 15.6-228	
Figure 15.6-229	

WSES-FSAR-UNIT-3  
UPDATE REFERENCE LIST  
Chapter 15

<u>Section</u>	<u>Cross References</u>
<u>Revision 14</u>	
Sections, Tables and Figures	ER-W3-2001-1149-000 DRN 05-543 ER-W3-2001-1149-000 DRN 05-560 ER-W3-2001-1149-007 DRN 05-13 ER-W3-2001-1149-014 DRN 05-1201 ER-W3-2002-0110-001 DRN 04-1098 ER-W3-2004-0276-000 DRN 04-704 ER-W3-2004-0276-002 DRN 05-645 ER-W3-2005-0019-000 DRN 05-359 ER-W3-2005-0145-000 DRN 05-791 ER-W3-2005-0500-000 DRN 05-1551
<u>Revision 15</u>	
Table of Contents	ER-W3-2005-0447-004/DRN 06-1062
Section 15.0	
Table 15.0-4	
Section 15.1.1.3.1	
Section 15.1.1.4.1	
Section 15.1.2.3.1	
Section 15.1.2.4.1	
Section 15.1.3.1.1	
Section 15.1.3.2.1	
Section 15.1.3.3.1	
Section 15.2.1.3.1	
Section 15.2.2.5.1	
Section 15.2.3.1	
Section 15.2.3.2.1	
Section 15.3.2.1.1	
Section 15.3.3.1.1	
Section 15.4.1.1.1	
Section 15.4.1.2.1	
Section 15.4.1.3.1	
Section 15.4.1.4.1	
Section 15.4.1.5.1	
Section 15.4.1.6.1	
Section 15.4.1.7.1	
Section 15.4.3.2.1	
Section 15.4.3.2.3	
Table 15.4-19	
Table 15.4-23	
Table 15.4-28	

WSES-FSAR-UNIT-3  
UPDATE REFERENCE LIST  
Chapter 15

<u>Section</u>	<u>Cross References</u>
<u>Revision 15 (Cont'd)</u>	
Figure 15.4-67	ER-W3-2005-0447-004/DRN 06-1062 (Continued)
Figure 15.4-68	
Figure 15.4-69	
Figure 15.4-70	
Figure 15.4-71	
Figure 15.4-72	
Section 15.5.1.1	
Section 15.5.2.1.1	
Section 15.6.3.1.1	
Section 15.6.3.2.1.1	
Section 15.6.3.2.1.4	
Section 15.6.3.3.3.1.1	
Section 15.6.3.3.3.1.3	
Section 15.6.3.3.3.2.1	
Section 15.6.3.3.3.2.3	
Section 15.6: References	
Table 15.6-12	
Table 15.6-12a	
Table 15.6-13	
Table 15.6-13a Sh. 1	
Table 15.6-13a Sh. 2	
Table 15.6-14	
Table 15.6-14a	
Figure 15.6-92	
Figure 15.6-93	
Figure 15.6-94	
Figure 15.6-95	
Figure 15.6-97	
Figure 15.6-98	
Figure 15.6-99	
Figure 15.6-100	
Figure 15.6-101	
Figure 15.6-102	
Figure 15.6-103	
Figure 15.6-104	
Figure 15.6-106	
Figure 15.6-107	
Figure 15.6-108	
Figure 15.6-109	
Figure 15.6-109a	
Figure 15.6-109b	

WSES-FSAR-UNIT-3  
UPDATE REFERENCE LIST  
Chapter 15

Section

Cross References

Revision 15 (Cont'd)

Figure 15.6-109c  
Figure 15.6-109d  
Figure 15.6-109e  
Figure 15.6-109f  
Figure 15.6-109g  
Figure 15.6-109h  
Figure 15.6-109i  
Figure 15.6-109j  
Figure 15.6-109k  
Figure 15.6-110  
Figure 15.6-111  
Figure 15.6-112  
Figure 15.6-113  
Figure 15.6-115  
Figure 15.6-116  
Figure 15.6-117  
Figure 15.6-118  
Figure 15.6-118a  
Figure 15.6-118b  
Figure 15.6-118c  
Figure 15.6-118d  
Figure 15.6-118e  
Figure 15.6-118f  
Figure 15.6-118g  
Figure 15.6-118h  
Figure 15.6-118i  
Figure 15.6-118j  
Figure 15.6-118k  
Figure 15.6-127a  
Figure 15.6-127b  
Figure 15.6-127c  
Figure 15.6-127d  
Figure 15.6-127e  
Figure 15.6-127f  
Figure 15.6-127g  
Figure 15.6-127h  
Figure 15.6-128  
Figure 15.6-177  
Figure 15.6-206  
Figure 15.6-207  
Figure 15.6-208

ER-W3-2005-0447-004/DRN 06-1062 (Continued)

WSES-FSAR-UNIT-3  
UPDATE REFERENCE LIST  
Chapter 15

Section

Cross References

Revision 15 (Cont'd)

Figure 15.6-209

ER-W3-2005-0447-004/DRN 06-1062 (Continued)

Figure 15.6-210

Figure 15.6-211

Figure 15.6-212

Figure 15.6-213

Figure 15.6-214

Figure 15.6-215

Figure 15.6-216

Figure 15.6-217

Figure 15.6-218

Figure 15.6-219

Figure 15.6-220

Figure 15.6-221

Figure 15.6-222

Figure 15.6-223

Figure 15.6-224

Figure 15.6-225

Figure 15.6-226

Figure 15.6-227

Figure 15.6-228

Figure 15.6-229

Figure 15.6-230

Figure 15.6-231

Figure 15.6-232

Figure 15.6-233

Section 15.9.1.1.1

Table 15.9-2

Revision 301

Section 15.1.2.3.5.1

EC-5000081470

Section 15.1.2.3.5.2

Section 15.1.2.4.5.2

Section 15.1.3.3.5.1.2

Table 15.1-10 Sh. 1

Table 15.1-10 Sh. 2

Table 15.1-17 Sh. 1

Table 15.1-17 Sh. 2

Table 15.1-27 Sh. 1

Table 15.1-27 Sh. 2

WSES-FSAR-UNIT-3  
UPDATE REFERENCE LIST  
Chapter 15

<u>Section</u>	<u>Cross References</u>
<u>Revision 301 (Cont'd)</u>	
Section 15.2.3.1.3.1.5.2	EC-5000081470 (Cont'd)
Table 15.2-11 Sh. 1	
Table 15.2-11 Sh. 2	
Section 15.3.3.1.4.2	
Section 15.3.3.1.4.3	
Section 15.3.3.1.5	
Table 15.3-4 Sh. 1	
Section 15.4.3.2.5.1.2	
Section 15.4.3.2.5.1.4	
Table 15.4-31 Sh. 1	
Table 15.4-31 Sh. 2	
Section 15.6.3.1.5.1	
Section 15.6.3.1.5.1.2	
Section 15.6.3.1.5.1.5	
Section 15.6.3.1.5.2	
Section 15.6.3.3.5.1.1	
Section 15.6.3.3.5.1.2	
Section 15.6.3.3.6	
Table 15.6-3 Sh. 1	
Table 15.6-18 Sh. 2	
Table 15.6-18 Sh. 3	
Table 15.6-18A Sh. 1	
Table 15.6-18A Sh. 2	
Section 15.7.3.4.2.1	
Section 15.7.3.4.5.1	
Table 15.7-6 Sh. 1	
Table 15.7.6 Sh. 2	
Section 15B.1.1.1	
Section 15B.1.2	
Section 15B.1.3	
Section 15B.1.4	
Section 15B.3.1	
Section 15B.4: References	
Section 15.6.3.3.6	EC-3277
Section 15B.1.3	
Section 15B.1.4	



## WSES-FSAR-UNIT-3

### UPDATE REFERENCE LIST

#### Chapter 15

<u>Section</u>	<u>Cross References</u>
----------------	-------------------------

<u>Revision 302</u>	
---------------------	--

Section 15.6.3.3.3.1	EC-9533
Section 15.6.3.3.3.1.1	
Section 15.6.3.3.3.1.2	
Section 15.6.3.3.3.1.3	
Section 15.6.3.3.3.2.1	
Section 15.6.3.3.3.2.3	
Section 15.6: References	
Table 15.6-12	
Table 15.6-12a	
Table 15.6-13	
Table 15.6-13a Sh. 1	
Table 15.6-14	
Table 15.6-14a	
Table 15.6-15	
Figures 15.6-92 thru 15.6-128	
Figures 15.6-129 thru 15.6-176	
Figure 15.6-177	
Figure 15.6-206 thru 15.6-233	
Section 15.0	
Section 15.1.3.1.3.1	
Section 15.1.3.1.3.2	
Section 15.1.3.1.3.3	
Table 15.1-13	

<u>Revision 304</u>	
---------------------	--

Section 15.0	EC-13881
Section 15.0.3.1.1	
Section 15.0.3.1.11	
Section 15.0.3.3.2	
Section 15.0.3.3.3	
Section 15.0.5	
Section 15.0: References	
Table 15.0-1	
Table 15.0-2 Sh. 1	
Table 15.0-2 Sh. 2	
Table 15.0-3	
Section 15.1.1.3.3.1	
Section 15.1.1.3.3.3	
Section 15.1.1.4.3.3	
Section 15.1.2.3.3.3	

## WSES-FSAR-UNIT-3

### UPDATE REFERENCE LIST

#### Chapter 15

##### Section

##### Cross References

##### Revision 304 (Cont'd)

Section 15.1.2.4.3.1  
Section 15.1.2.4.3.3  
Section 15.1.3.3.3.1  
Section 15.1.3.3.3.3  
Table 15.1-1  
Table 15.1-8  
Table 15.1-8A  
Table 15.1-8C  
Table 15.1-24  
Table 15.1-24A  
Figure 15.1-4  
Figure 15.1-19a  
Figure 15.1-23  
Figure 15.1.32d  
Figure 15.1-93  
Section 15.2.1.2.1  
Section 15.2.1.3.2  
Section 15.2.1.3.3.1  
Section 15.2.1.3.3.3  
Section 15.2.2.5.3.1  
Section 15.2.2.5.3.3  
Section 15.2.3.1.3.1.1  
Section 15.2.3.1.3.1.3  
Figure 15.2-4  
Figure 15.2-36a  
Figure 15.2-40  
Figure 15.2-53s  
Figure 15.2-65  
Section 15.3.2.1.2  
Section 15.3.3.1.3.3  
Table 15.3-1  
Table 15.3-3  
Table 15.3-7  
Figure 15.3-4  
Figure 15.3-18a  
Section 15.4.1.1.3  
Section 15.4.1.2.3  
Section 15.4.1.3.3  
Section 15.4.1.4.2.1  
Section 15.4.1.4.2.2  
Table 15.4-1  
Table 15.4-3

EC-13881 (Continued)

# WSES-FSAR-UNIT-3

## UPDATE REFERENCE LIST

### Chapter 15

<u>Section</u>	<u>Cross References</u>
<u>Revision 304 (Cont'd)</u>	
Table 15.4-7	EC-13881 (Continued)
Table 15.4-13	
Figure 15.4-7a	
Figure 15.4-11d	
Figure 15.4-29	
Figure 15.4-44b	
Section 15.5.1.1.3	
Section 15.5.1.1.4	
Section 15.5.2.1.2	
Section 15.5.2.1.3	
Table 15.5-1	
Table 15.5-2	
Section 15.6.3.1.3.3	
Section 15.6.3.2.1.2	
Section 15.6.3.2.1.3	
Figure 15.6-1d	
Figure 15.6-35S	
Table 15.9-1	
Figure 15.9-6	
Figure 15.4-98	
<u>Revision 305</u>	
Section 15.7.3.4.1	EC-28875
Section 15.7.3.5.1	EC-30504
<u>Revision 306</u>	
Section 15.7.3.4.1	EC-14275
Section 15.7.3.5.1	
Section 15.6.3.2.1.2	EC-34230
Section 15.6.3.2.1.3	
Table 15.6-24	
<u>Revision 307</u>	
Section 15.0	EC-8458
Section 15.0.3.1	
Section 15.0.3.1.4	
Section 15.0.3.3.3	
Section 15.0.5	
Section 15.0 References	
Table 15.0-2 Sheet 1 of 2	
Table 15.0-3	
Table 15.0-4	
Section 15.1.1.3.1	
Section 15.1.1.4.1	
Section 15.1.2.3.1	
Section 15.1.2.4.1	
Section 15.1.2.4.3.1	

## WSES-FSAR-UNIT-3

### UPDATE REFERENCE LIST

#### Chapter 15

##### Section

##### Cross References

##### Revision 307 (Continued)

Section 15.1.2.4.5.2  
Section 15.1.3.1.1  
Section 15.1.3.1.3.2  
Section 15.1.3.1.3.3  
Table 15.1-12  
Table 15.1-13  
Table 15.1-14A  
Table 15.1-14B  
Table 15.1-15  
Table 15.1-15A  
Table 15.1-16  
Table 15.1-16A  
Figure 15.1-33  
Figure 15.1-34  
Figure 15.1-35  
Figure 15.1-36  
Figure 15.1-37  
Figure 15.1-38  
Figure 15.1-38a thru  
Figure 15.1-38g  
Figure 15.1-47  
Figure 15.1-48  
Figure 15.1-49  
Figure 15.1-51  
Figure 15.1-53  
Figure 15.1-54  
Figure 15.1-55  
Figure 15.1-57  
Figure 15.1-58  
Figure 15.1-58a  
Figure 15.1-58b  
Figure 15.1-58c  
Figure 15.1-61 thru  
Figure 15.1-68  
Figure 15.1-70  
Figure 15.1-71  
Figure 15.1-72a thru  
Figure 15.1-72o  
Section 15.1.3.2.1  
Section 15.1.3.2.3.2  
Section 15.1.3.2.3.3  
Table 15.1-21  
Table 15.1-22  
Section 15.1.3.3.1  
Section 15.1.3.3.2  
Section 15.1.3.3.3.2  
Section 15.1.3.3.3.3  
Table 15.1-24  
Table 15.1-24a  
Table 15.1-25  
Table 15.1-26  
Figure 15.1-87 thru  
Figure 15.1-94

##### EC-8458 (Continued)

# WSES-FSAR-UNIT-3

## UPDATE REFERENCE LIST

### Chapter 15

#### Section

#### Cross References

#### Revision 307 (Continued)

Section 15.2.1.3.1  
Section 15.2.1.3.3.2  
Section 15.2.1.3.3.3  
Section 15.2.1.4.2  
Section 15.2.2.5.1  
Section 15.2.2.5.3.3  
Section 15.2.3.1  
Section 15.2.3.1.2  
Section 15.2.3.1.3.1.3  
Section 15.2.3.1.4.1  
Section 15.2.3.1.4.3.1  
Section 15.2.3.1.4.4  
Section 15.2.3.2.1  
Section 15.2.3.2.3.2  
Section 15.2 References  
Table 15.2-1  
Table 15.2-2  
Table 15.2-6  
Table 15.2-7  
Table 15.2-8  
Table 15.2-9  
Table 15.2-9a  
Table 15.2-9b  
Table 15.2-10  
Table 15.2-13  
Figure 15.2-1 thru Figure 15.2-3  
Figure 15.2-3a  
Figure 15.2-4 thru Figure 15.2-13  
Figure 15.2-26 thru  
Figure 15.2-36  
Figure 15.2-36a  
Figure 15.2-37 thru  
Figure 15.2-52  
Figure 15.2-52a  
Figure 15.2-53  
Figure 15.2-53a.1  
Figure 15.2-53a.2  
Figure 15.2-53b thru  
Figure 15.2-53s  
Figure 15.2-54 thru  
Figure 15.2-63  
Figure 15.2-65  
Section 15.3.2.1.1  
Section 15.3.3.1.1  
Section 15.4.1.1.1  
Section 15.4.1.2.1  
Section 15.4.1.3.1  
Section 15.4.1.4.1  
Section 15.4.1.5.1  
Section 15.4.1.6.1  
Section 15.4.1.7.1  
Section 15.4.3.2.1  
Section 15.5.1.1

#### EC-8458 (Continued)

# WSES-FSAR-UNIT-3

## UPDATE REFERENCE LIST

### Chapter 15

<u>Section</u>	<u>Cross References</u>
----------------	-------------------------

<u>Revision 307 (Continued)</u>	
---------------------------------	--

Section 15.5.2.1.1	EC-8458 (Continued)
--------------------	---------------------

Section 15.6.3.1.2	
--------------------	--

Section 15.6.3.2.1.1	
----------------------	--

Section 15.6.3.3.3.1	
----------------------	--

Section 15.6.3.3.3.1.3	
------------------------	--

Section 15.6.3.3.3.2.1	
------------------------	--

Section 15.6.3.3.3.2.3	
------------------------	--

Table 15.6-12	
---------------	--

Table 15.6-12a	
----------------	--

Table 15.6-13	
---------------	--

Table 15.6-13a Sheet 1 of 2	
-----------------------------	--

Table 15.6-14	
---------------	--

Table 15.6-14a	
----------------	--

Figure 15.6-92 thru	
---------------------	--

Figure 15.6-100	
-----------------	--

Figure 15.6-100a thru	
-----------------------	--

Figure 15.6-100k	
------------------	--

Figure 15.6-101 thru	
----------------------	--

Figure 15.6-127	
-----------------	--

Figure 15.6-127a thru	
-----------------------	--

Figure 15.6-127h	
------------------	--

Figure 15.6-128 thru	
----------------------	--

Figure 15.6-177	
-----------------	--

Figure 15.6-206 thru	
----------------------	--

Figure 15.6-241	
-----------------	--

Section 15.9.1.1.1	
--------------------	--

Section 15.9.1.1.3.3	
----------------------	--

Table 15.9-1	
--------------	--

Table 15.9-2	
--------------	--

Figure 15.9-1 thru Figure 15.9-6	
----------------------------------	--

Section 15.7.3.4.2.1	EC-38571
----------------------	----------

Section 15.7.3.4.2.2	
----------------------	--

Section 15.7.3.4.5.1	
----------------------	--

Section 15.7.3.4.6	
--------------------	--

Table 15.7-6 Sheet 1 of 2	
---------------------------	--

Section 15.1.2.3.5.1	EC-40444
----------------------	----------

Section 15.1.2.3.5.2	
----------------------	--

Section 15.1.2.4.5.2	
----------------------	--

Section 15.1.3.3.4	
--------------------	--

Section 15.1.3.3.5.1.1	
------------------------	--

Section 15.1.3.3.5.1.2	
------------------------	--

Table 15.1-10 Sheet 1 of 2	
----------------------------	--

Table 15.1-17 Sheet 2 of 3	
----------------------------	--

Table 15.1-27 Sheet 1 of 2	
----------------------------	--

Section 15.2.3.1.3.1.5.1.1	
----------------------------	--

Table 15.2-11 Sheet 1 of 2	
----------------------------	--

Section 15.3.3.1.4.2	
----------------------	--

Table 15.3-4 Sheet 1 of 2	
---------------------------	--

Section 15.4.3.2.5.1.1	
------------------------	--

Section 15.4.3.2.5.1.2	
------------------------	--

# WSES-FSAR-UNIT-3

## UPDATE REFERENCE LIST

### Chapter 15

<u>Section</u>	<u>Cross References</u>
<u>Revision 307 (Continued)</u>	
Table 15.4-31 Sheet 1 of 2	EC-40444 (Continued)
Section 15.6.3.2.1.2	
Section 15.6.3.3.6	
Table 15.6-3 Sheet 1 of 2	
Table 15.6-18A Sheet 1 of 3	
Table 15.6-26 Sheet 1 of 2	
<u>Revision 309</u>	
Section 15.4.3.1.2	LBD CR 16-002
Section 15.0.2	LBD CR 15-039
Section 15.0.3.2	
Section 15.0.3.3	
Section 15.1.1.2	
Section 15.1.1.3	
Section 15.1.1.3.3.3	
Section 15.1.1.3.5	
Section 15.1.1.4.3.3	
Section 15.1.2.3.1	
Section 15.1.2.3.3	
Section 15.1.2.4.1	
Section 15.1.2.4.3	
Section 15.1.2.4.4	
Section 15.1.3.1.1	
Section 15.1.3.1.2	
Section 15.1.3.2.3.1	
Section 15.1.3.2.3.2	
Section 15.1.3.2.3.3	
Section 15.1.3.3.1	
Section 15.1.3.3.2	
Section 15.1.3.3.3.3	
Table 15.1-1	
Table 15.1-8	
Table 15.1-8A	
Table 15.1-8B	
Table 15.1-8C	
Table 15.1-8D	
Table 15.1-9	
Table 15.1-10 Sheet 1 of 2	
Table 15.1-13	
Table 15.1-24	
Table 15.1-24A	
Figure 15.1-23	
Section 15.2.1.3.1	
Section 15.2.1.3.3.3	
Section 15.2.2.5.1	
Section 15.2.2.5.3.3	
Section 15.2.3.1	
Section 15.2.3.1.3	
Section 15.2.3.1.3.1.3	
Section 15.2.3.1.4.4	
Section 15.2.3.2.1	
Section 15.2.3.2.3.3	

## WSES-FSAR-UNIT-3

Table 15.2-1

<u>Section</u>	<u>Cross Reference</u>
<u>Revision 309 (Continued)</u>	LBDCR 15-039
Table 15.2-6	
Table 15.2-8	
Table 15.2-9b	
Table 15.2-10	
Section 15.3.2.1.1	
Section 15.3.2.1.2	
Section 15.3.2.1.4.3	
Section 15.3.3.1.1	
Section 15.3.3.1.3	
Table 15.3-1	
Table 15.3-2	
Table 15.3-7	
Section 15.4.1.1.1	
Section 15.4.1.1.3	
Section 15.4.1.2.1	
Section 15.4.1.3.1	
Section 15.4.1.3.3	
Section 15.4.1.6.3	
Section 15.4.1.7.3	
Section 15.4.3.1.1.1	LBDCR 16-002
Section 15.4.3.2.1	LBDCR 15-039
Section 15.4.3.2.3	
Table 15.4-4	
Table 15.4-19	
Table 15.4-23	
Table 15.4-24	
Table 15.4-27	
Table 15.4-28	
Table 15.6-24	
Section 15.9.1.1.1	
Section 15.9.1.1.3.3	
Table 15.9-1	
Table 15.9-2	