

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
<b><u>Chapter 1</u></b>		
Figure 1.2-1 (1)	E-013-018	Equipment List
Figure 1.2-1 (2)	E-013-019	Equipment List
Figure 1.2-1 (3)	E-013-020	Equipment List
Figure 1.2-2	E-036-022	Final Plant Layout, Plot Plan, Plant Area
Figure 1.2-3	E-013-003	Final Plant Layout, Plan A Above Elevs. 568'-6", 574'-10", 577'-6", and 580'-6", Plant Complex
Figure 1.2-4	E-013-004	Final Plant Layout, Plan B Above Elevs. 593'-6", 599'-0", 600'-6", 602'-6", and 605'-6", Plant Complex
Figure 1.2-5	E-013-005	Final Plant Layout, Plan C Above Elevs. 620'-6", 623'-6", and 624'-6", Plant Complex
Figure 1.2-6	E-013-006	Final Plant Layout, Plan D Above Elevs. 638'-6", 642'-0", and 647'-6", Plant Complex
Figure 1.2-7	E-013-007	Final Plant Layout, Plan E Above Elevs. 652'-0" and 654'-6", Plant Complex
Figure 1.2-8	E-013-008	Final Plant Layout, Plan F Above Elevs. 664'-7", 665'-0", and 670'-6", Plant Complex
Figure 1.2-9	E-013-009	Final Plant Layout, Plan G Above Elevs. 689'-6", Plant Complex
Figure 1.2-10	E-013-010	Final Plant Layout, Plan H Roof Plan
Figure 1.2-11	E-013-011	Final Plant Layout, Section A-A
Figure 1.2-12	E-013-012	Final Plant Layout, Section B-B
Figure 1.2-13	E-013-013	Final Plant Layout, Section C-C
Figure 1.2-14 (1)	E-015-016	Final Plant Layout, Circulating Water Pumphouse, Plans and Elevations
Figure 1.2-14 (2)	E-015-017	Final Plant Layout, Circulating Water Pumphouse, Plans and Elevations
Figure 1.2-15	E-015-015	Final Plant Layout, Service Water Pumphouse
Figure 1.2-16	E-015-002	Final Plant Layout, Emergency Service Water Pumphouse Plans and Elevations
Figure 1.2-17	B-015-003	Final Plant Layout, Discharge Tunnel Entrance Structures
Figure 1.2-18	E-036-011	Final Plant Layout, Plot Plan Release Point Designation
Figure 1.2-19		Heat Balance at Rated Power
Figure 1.2-20	D-302-002	System Diagram Symbols
Figure 1.2-21		NSSS (GE) Logic Symbols Used on Functional Control Diagrams
Figure 1.2-22	D-302-001	System Diagram Symbols
Figure 1.2-23		AE (GAI) Logic Symbols Used on Functional Diagrams
<b><u>Chapter 2</u></b>		
Figure 2.1-1		General Area Map
Figure 2.1-2		Area Topography Within 5 Mile Radius

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.1-3		Topograph Within the Plant Site Boundary
Figure 2.1-4		Plant Site Aerial Photograph
Figure 2.1-5		Status of Land and Mineral Rights
Figure 2.1-6		Area Within 10 Miles of PNPP
Figure 2.1-7		1978 Permanent Resident Population
Figure 2.1-8		1980 Permanent Resident Population
Figure 2.1-9		1983 Permanent Resident Population
Figure 2.1-10		1984 Permanent Resident Population
Figure 2.1-11		1985 Permanent Resident Population
Figure 2.1-12		1986 Permanent Resident Population
Figure 2.1-13		1990 Permanent Resident Population
Figure 2.1-14		2000 Permanent Resident Population
Figure 2.1-15		2010 Permanent Resident Population
Figure 2.1-16		2020 Permanent Resident Population
Figure 2.1-17		Area Within 50 Miles of PNPP
Figure 2.1-18		Low Population Zone
Figure 2.2-1		Manufacturing and Storage Facilities Within Five Miles of the Plant
Figure 2.2-2		Land and Water Transportation Routes Within the Vicinity of the Plant
Figure 2.2-3		Natural Gas Pipelines Within the Immediate Environs of the Plant
Figure 2.2-4		Gas and Oil Wells Within Five Miles of the Plant
Figure 2.2-5		Airstrips and Airports in the Vicinity of the Plant
Figure 2.2-6		Selected Air Facilities and Airways in the Region
Figure 2.2-7		Peak Overpressure Versus Scaled Distance for TNT Surface Bursts
Figure 2.3-1		Location of Meteorological Data Monitoring Stations and Regional Topography Within 50 Miles of the Perry Site
Figure 2.3-2		Mean Snowfall for Winter Season - Ohio
Figure 2.3-3 (1)		January to April Monthly Wind Roses for the Perry Site - 10 m and 60 m Levels (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-3 (2)		January to April Monthly Wind Roses for the Perry Site - 10 m and 60 m Levels (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-4 (1)		May to August Monthly Wind Roses for the Perry Site - 10 m and 60 m Levels (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-4 (2)		May to August Monthly Wind Roses for the Perry Site - 10 m and 60 m Levels (5/1/72-4/30/74; 9/1/77-8/31/82)

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.3-5 (1)		Sept. to Dec. Monthly Wind Roses for the Perry Site - 10 m and 60 m Levels (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-5 (2)		Sept. to Dec. Monthly Wind Roses for the Perry Site - 10 m and 60 m Levels (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-6		Annual Wind Roses for the Perry Site 10 m and 60 m Levels for Three-Concurrent and Seven-Site Years
Figure 2.3-7		Cleveland and Erie Annual Wind Roses
Figure 2.3-8		Wind Direction Persistence Probability for One $22\frac{1}{2}^{\circ}$ Sector for PNPP Region
Figure 2.3-9		Offsite and Onsite Maximum Directional Wind Persistence Roses
Figure 2.3-10		Jan. to April Monthly Precipitation Wind Roses for the Perry Site (10 m) (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-11		May to Aug. Monthly Precipitation Wind Roses for the Perry Site (10 m) (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-12		Sept. to Dec. Monthly Precipitation Wind Roses for the Perry Site (10 m) (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-13		Annual Precipitation Wind Roses for the Perry Site (10 m) (5/1/72-4/30/74; 9/1/77-8/31/82)
Figure 2.3-14		Model With Trapezoids Representing Cooling Towers
Figure 2.3-15		Plant Site and Meteorological Tower Location
Figure 2.3-16 (1)		Terrain Elevations Out to 5 Miles from Center of Units 1 and 2
Figure 2.3-16 (2)		Terrain Elevations Out to 5 Miles from Center of Units 1 and 2
Figure 2.3-16 (3)		Terrain Elevations Out to 5 Miles from Center of Units 1 and 2
Figure 2.3-16 (4)		Terrain Elevations Out to 5 Miles from Center of Units 1 and 2
Figure 2.3-17		Region Topographic Map 5 Mile Radius
Figure 2.4-1		Plan-Drainage Area of 2 Streams Close to Plant Site
Figure 2.4-2		Lake Erie Water Levels
Figure 2.4-3	E-743-013	Topography and Storm Drainage System
Figure 2.4-4		Hydrograph of PMF Discharge Into Lake Erie-Major Stream
Figure 2.4-5		Hydrograph of PMF Discharge Into Lake Erie-Minor Stream
Figure 2.4-6		Probable Maximum Flood Profiles-Major Stream
Figure 2.4-7		Plan-Minor Stream
Figure 2.4-8		Profile and Typical Cross Sections-Minor Stream
Figure 2.4-9		Plan-Major Stream

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.4-10		Cross Sections-Major Stream
Figure 2.4-11		Cross Sections and Profiles-Major Stream
Figure 2.4-12		Meteorological Situation for Probable Maximum Lake Level Setup at Perry, Ohio
Figure 2.4-13		Isobar and Isotach Fields for Probable Maximum Lake Level Setup at Perry, Ohio
Figure 2.4-14		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-15		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-16		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-17		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-18		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-19		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-20		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-21		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-22		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-23		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-24		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-25		PMS Isotach Patterns for Maximum Lake Setup at Perry, Ohio
Figure 2.4-26		Lake Erie Outline With PMS Station Locations
Figure 2.4-27		Maximization of Setup With Direction of Fetch Axis
Figure 2.4-28		Hydrographs of One Dimensional PMS Setup and Setdown
Figure 2.4-29		One-Dimensional PMS Setup and Setdown Along Fetch
Figure 2.4-30		Winds at Stations (20, 1) and (40, 1) for Probable Maximum Lake Level Setup
Figure 2.4-31		Winds at Stations (20, 21) and (40, 21) for Probable Maximum Lake Level Setup
Figure 2.4-32		Plan-Location of Lake Erie Shoreline and Bluff Recession Survey Lines
Figure 2.4-33		Cleveland Hydrograph Annual Mean Lake Levels
Figure 2.4-34		Monthly Mean Lake Levels Lake Erie at Cleveland, Ohio
Figure 2.4-35		1937, 1957, 1964, 1972 Top of Bluff Lines
Figure 2.4-36		1876 Top of Bluff
Figure 2.4-37		1798, 1829-30, 1852-1858, 1965-67, 1876, 1917, 1975 Shorelines
Figure 2.4-38 (1)		Bluff Recession Survey Line Profiles

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.4-38 (2)		Bluff Recession Survey Line Profiles
Figure 2.4-39		Shoreline Protection
Figure 2.4-39A		Shore Protection Breakwall
Figure 2.4-40		Ice Thickness Observation Locations
Figure 2.4-41		Ice Survey at Site Shoreline
Figure 2.4-42		Ice Survey at Site Shoreline
Figure 2.4-43		Ice Survey at Site Shoreline
Figure 2.4-44		Ice Survey at Site Shoreline
Figure 2.4-45		Ice Survey at Site Shoreline
Figure 2.4-46		Ice Survey at Site Shoreline
Figure 2.4-47		Meteorological Situation for Probable Maximum Lake Setdown at Perry, Ohio
Figure 2.4-48		Isobar and Isotach Fields for Probable Maximum Lake Level Setdown at Perry, Ohio
Figure 2.4-49		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-50		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-51		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-52		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-53		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-54		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-55		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-56		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-57		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-58		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-59		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-60		PMS Isotach Patterns for Maximum Lake Setdown at Perry, Ohio
Figure 2.4-61		Winds at Stations (20, 1) and (40, 1) for Probable Maximum Lake Level Setdown
Figure 2.4-62		Winds at Stations (20, 21) and (40, 21) for Probable Maximum Lake Level Setdown
Figure 2.4-63		Hydrograph for Probable Maximum Setdown at Perry, Ohio
Figure 2.4-64		Frequency Analysis of Minimum Lake Levels at Cleveland, Ohio
Figure 2.4-65		Frequency Analysis of Minimum Lake Levels at Erie, Pennsylvania
Figure 2.4-66		Well Location Map

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.4-67		Preconstruction Static Groundwater Level Contour Map
Figure 2.4-68		Plot Plan-Porous Concrete Underdrain System
Figure 2.4-69		Plot Plan-Gravity Discharge System
Figure 2.4-70		Cross Sections-Pressure Relief Underdrain System
Figure 2.4-71	D-302-861	Plant Foundation Underdrain System
Figure 2.4-72		Category I Foundation Wall Drainage Provisions
Figure 2.4-73		Groundwater Built-up as a Result of No Pumping
Figure 2.4-74		Permeability Test Setup for Porous Concrete Cylinders
Figure 2.4-75		Reverse Flow Permeameter for Porous Concrete
Figure 2.4-76	D-746-009	Plant Underdrain System Nuclear Island Piezometer Locations
Figure 2.5-1		Regional Physiographic Map
Figure 2.5-2		Precambrian Basement Structures Map
Figure 2.5-3		Glacial Map of Ohio
Figure 2.5-4		Bedrock Geologic Map of Ohio
Figure 2.5-5		Generalized Bedrock Stratigraphic Column of Ohio
Figure 2.5-6		Generalized Bedrock Geologic Map of Northeastern Ohio
Figure 2.5-7		Glacial Map of Northeastern Ohio
Figure 2.5-8		Regional Tectonic Map
Figure 2.5-9		Regional Tectonic Provinces
Figure 2.5-10		Total Bouguer Anomaly Map
Figure 2.5-11		Regional Bouguer Anomaly Map
Figure 2.5-12		Residual Bouguer Anomaly Map
Figure 2.5-13		Residual Bouguer Anomaly Map Trends of Anomalies-Tectonic Provinces
Figure 2.5-14		Residual Total Intensity Magnetic Map of Ohio
Figure 2.5-15		Geologic Time Scale
Figure 2.5-16		Generalized Geologic Cross Section of Northeastern Ohio
Figure 2.5-17		Location of Area Salt Mines and Gas Fields
Figure 2.5-18		Location of Nearby Mineral Rights and Gas Wells
Figure 2.5-19		Near-Site "Big Lime" Stratigraphic Column
Figure 2.5-20		East-West "Big Lime" Stratigraphic Section
Figure 2.5-21		North-South "Big Lime" Stratigraphic Section
Figure 2.5-22		Structural Contour Map of F Unit

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-23		Structural Contour Map of D Unit
Figure 2.5-24		Structural Contour Map of B Unit
Figure 2.5-25		Isopach Map of E Unit
Figure 2.5-26		Isopach Map of D Unit
Figure 2.5-27		Isopach Map of B Unit
Figure 2.5-28		Potential Cavity Increase vs. Initial NaCl Saturation for Oriskany Brine Solution
Figure 2.5-29		Angle of Draw vs. Depth/Width of Mining Operation
Figure 2.5-30		Oil and Gas Fields in Ohio
Figure 2.5-31		Potential Mining Influence Based on Postulated Solution Cavities
Figure 2.5-32 (1)		Comparative Aerial Photographs of the Perry Nuclear Power Plant Site
Figure 2.5-32 (2)		Comparative Aerial Photographs of the Perry Nuclear Power Plant Site
Figure 2.5-32 (3)		Comparative Aerial Photographs of the Perry Nuclear Power Plant Site
Figure 2.5-33		Final Grading Plan for the Perry Nuclear Power Plant
Figure 2.5-34		Site Surficial Deposits Map (Prior to Construction)
Figure 2.5-35		Site Stratigraphic Column
Figure 2.5-36		Structural Contour Map - Top of Chagrin Shale
Figure 2.5-37		Structural Contour Map - Top of Lower Till
Figure 2.5-38		Structural Contour Map - Top of "Big Lime"
Figure 2.5-39		Structural Contour Map - Top of Packer Shell
Figure 2.5-40		Fault and Outcrop Location Map
Figure 2.5-41 (1)		Foundation Bedrock Geologic Map
Figure 2.5-41 (2)		Foundation Bedrock Geologic Map
Figure 2.5-41 (3)		Foundation Bedrock Geologic Map
Figure 2.5-41 (4)		Foundation Bedrock Geologic Map
Figure 2.5-41 (5)		Foundation Bedrock Geologic Map
Figure 2.5-42	Index	Geologic Cross Sections
Figure 2.5-42 (1)		Geologic Cross Sections
Figure 2.5-42 (2)		Geologic Cross Sections
Figure 2.5-42 (3)		Geologic Cross Sections
Figure 2.5-42 (4)		Geologic Cross Sections
Figure 2.5-42 (5)		Geologic Cross Sections
Figure 2.5-42 (6)		Geologic Cross Sections
Figure 2.5-43		Sketch of West Wall Test Pit

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-44		Sketch of West Wall Pit 2
Figure 2.5-45		Geologic Mapping Caisson Excavations
Figure 2.5-46		Lens Of Lower Till Incorporated Within Bedrock
Figure 2.5-47 (1)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (2)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (3)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (4)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (5)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (6)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (7)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (8)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (9)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (10)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (11)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (12)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (13)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (14)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (15)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (16)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (17)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (18)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (19)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (20)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (21)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (22)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (23)		Geologic Map of Tunnel Excavations
Figure 2.5-47 (24)		Geologic Map of Tunnel Excavations
Figure 2.5-48		Tunnel Intersecting Faulting
Figure 2.5-49		Schematic Northwest - Southeast Cross Section
Figure 2.5-50		Intake Tunnel Fault Map
Figure 2.5-51		Discharge Tunnel Fault Map
Figure 2.5-52		Discharge Tunnel Fracture Zone Map
Figure 2.5-53		Site Exploration Plot Plan
Figure 2.5-54		Plant Structures Foundation Grade Materials
Figure 2.5-55		Foundation Overexcavation Plan
Figure 2.5-56		Tectonic Provinces and Earthquakes



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-57		Expansion and Settlement in the Colonies and Eastern United States
Figure 2.5-58		Seismicity Within 50 Mile Radius $M > 1.0$ $I_o \geq 1.0$
Figure 2.5-59		Regional Tectonics - Earthquake Tectonic Provinces
Figure 2.5-60		Regional Tectonics and Earthquakes
Figure 2.5-61		Telemetered Network Station Configuration
Figure 2.5-62		The Anna, Ohio Seismic Zone, Historical Seismicity, Proposed Faults, and Observed LANDSAT Lineaments
Figure 2.5-63		Isoseismal Map of the July 12, 1986 St. Marys' Earthquake
Figure 2.5-64		Focal Mechanism for the July 12, 1986 Earthquake
Figure 2.5-65		Isoseismal Map for Northeastern Ohio for Earthquake of January 31, 1986
Figure 2.5-66		Typical Portable Network Configuration from March to October 1986
Figure 2.5-67		January 31, 1986 Aftershock Sequence
Figure 2.5-68		Focal Mechanism for the January 31, 1986 Earthquake
Figure 2.5-69		Stereo View of the Aftershock Sequence
Figure 2.5-70		Isoseismal Map for the Sharpsburg, Kentucky Earthquake of July 27, 1980
Figure 2.5-71		Dates of Settlement in Eastern Canada
Figure 2.5-72		Configuration of John Carroll University Seismicity Network
Figure 2.5-73		Intensity Attenuation Curves for Eastern North America
Figure 2.5-74		Comparison of Attenuation Models Used to Estimate Site Intensities for Historical Events
Figure 2.5-75		Isoseismal Map - Mississippi Valley Earthquake of 1811 and 1812
Figure 2.5-76		Isoseismal Map - 1886 Charleston Earthquake
Figure 2.5-77		Isoseismal Map - Virginia Earthquake of May 31, 1897
Figure 2.5-78		Isoseismal Map - St. Lawrence Earthquake, March 1, 1925
Figure 2.5-79		Isoseismal Map - United States (Eastern, Attica, New York) Earthquakes, 1929
Figure 2.5-80		Isoseismal Map - Attica, New York Earthquake of August 12, 1929
Figure 2.5-81		Isoseismal Map - Area Affected by Anna, Ohio Earthquake, September 20, 1931
Figure 2.5-82		Isoseismal Map - Area Affected by Anna, Ohio Earthquake September 20, 1931
Figure 2.5-83		Isoseismal Map - Area Affected by Anna, Ohio Earthquake, March 2, 1937
Figure 2.5-84		Isoseismal Map - Area Affected by Anna, Ohio Earthquake, March 2, 1937

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-85		Isoseismal Map - The Lake Erie Earthquake of March 8, 1943
Figure 2.5-86		Isoseismal Map - Cornwall Massena Earthquake of September 5, 1944
Figure 2.5-87		Intensities at the PNPP Site for the January 31, 1986, Earthquake
Figure 2.5-88		Comparison of PNPP-1 OBE and SSE Horizontal Spectra with January 31, 1986, Horizontal Spectra at Reactor Foundation
Figure 2.5-89		Comparison of Design Time History - H1 and January 31, 1986 - (N-S) H2 and January 31, 1986 - (E-W)
Figure 2.5-90		Comparison of January 31, 1986, Low Frequency Horizontal Response Spectra with Response Spectra for MM Intensity V
Figure 2.5-91		Intensity Acceleration Relationships
Figure 2.5-92		Acceleration Time History - Motion H1
Figure 2.5-93		Acceleration Time History - Motion H2
Figure 2.5-94		Acceleration Time History - Vertical Motion
Figure 2.5-95		Vertical Time History - Motion H1
Figure 2.5-96		Displacement Time History - Motion H1
Figure 2.5-97		Vertical Time History - Motion H2
Figure 2.5-98		Displacement Time History - Motion H2
Figure 2.5-99		Velocity Time History - Vertical Motion
Figure 2.5-100		Displacement Time History - Vertical Motion
Figure 2.5-101		Safe Shutdown Earthquake Design Response Spectra - Horizontal Motion
Figure 2.5-102		Safe Shutdown Earthquake Design Response Spectra - Vertical Motion
Figure 2.5-103		Response Spectra - Horizontal Motion H1 (2% and 5% Damping)
Figure 2.5-104		Response Spectra - Horizontal Motion H1 (7% and 10% Damping)
Figure 2.5-105		Response Spectra - Horizontal Motion H2 (2% and 5% Damping)
Figure 2.5-106		Response Spectra - Horizontal Motion H2 (7% and 10% Damping)
Figure 2.5-107		Response Spectra - Horizontal Motion (2% and 5% Damping)
Figure 2.5-108		Response Spectra - Vertical Motion (7% and 10% Damping)
Figure 2.5-109		Observed Response Spectra for Intensity VIII Effects vs. Design Response Spectra
Figure 2.5-110		Site Specific Response Spectra for the Perry Site (5% Damping)
Figure 2.5-111		Operating Basis Earthquake Design Response Spectra - Horizontal Motion
Figure 2.5-112		Operating Basis Earthquake Design Response Spectra - Vertical Motion
Figure 2.5-113		ERTS and SAR Lineaments

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-114		Structure Map of Northeastern Ohio
Figure 2.5-115 (1)		Grain Size Distribution Curves - Lacustrine Sediments
Figure 2.5-115 (2)		Grain Size Distribution Curves - Lacustrine Sediments
Figure 2.5-115 (3)		Grain Size Distribution Curves - Lacustrine Sediments
Figure 2.5-115 (4)		Grain Size Distribution Curves - Lacustrine Sediments
Figure 2.5-115 (5)		Grain Size Distribution Curves - Lacustrine Sediments
Figure 2.5-115 (6)		Grain Size Distribution Curves - Lacustrine Sediments
Figure 2.5-116 (1)		Grain Size Distribution Curves - Upper Till
Figure 2.5-116 (2)		Grain Size Distribution Curves - Upper Till
Figure 2.5-116 (3)		Grain Size Distribution Curves - Upper Till
Figure 2.5-116 (4)		Grain Size Distribution Curves - Upper Till
Figure 2.5-116 (5)		Grain Size Distribution Curves - Upper Till
Figure 2.5-117 (1)		Grain Size Distribution Curves - Lower Till
Figure 2.5-117 (2)		Grain Size Distribution Curves - Lower Till
Figure 2.5-117 (3)		Grain Size Distribution Curves - Lower Till
Figure 2.5-117 (4)		Grain Size Distribution Curves - Lower Till
Figure 2.5-117 (5)		Grain Size Distribution Curves - Lower Till
Figure 2.5-117 (6)		Grain Size Distribution Curves - Lower Till
Figure 2.5-118		Range of Grain Size Distribution Test Results for Upper Till
Figure 2.5-119		Range of Grain Size Distribution Test Results for Lower Till
Figure 2.5-120		Typical Consolidation Test Curves - Lacustrine Sediments
Figure 2.5-121		Typical Consolidation Test Curves - Upper Till
Figure 2.5-122		Typical Consolidation Test Curves - Lower Till
Figure 2.5-123		Schematic Representation of Pressuremeter
Figure 2.5-124		Typical Pressuremeter Test Curves - Lower Till
Figure 2.5-125		Plate Loading Test Configuration
Figure 2.5-126		Typical Plate Loading Test Curve - Lower Till
Figure 2.5-127		Typical Effective Stress Paths - Lacustrine Sediments
Figure 2.5-128		Typical Effective Stress Paths - Upper Till
Figure 2.5-129		Typical Effective Stress Paths - Lower Till
Figure 2.5-130		Typical Effective Stress - Strength Characteristics of Lacustrine Sediments

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-131		Typical Effective Stress - Strength Characteristics of Lower Till
Figure 2.5-132		Typical Effective Stress - Strength Characteristics of Upper Till
Figure 2.5-133		Dynamic Properties of Lacustrine Sediments
Figure 2.5-134		Dynamic Properties of Upper Till
Figure 2.5-135		Dynamic Properties of Lower Till
Figure 2.5-136 (1)		Soil Conservation Service Tests on Lower Till
Figure 2.5-136 (2)		Soil Conservation Service Tests on Lower Till
Figure 2.5-136 (3)		Soil Conservation Service Tests on Lower Till
Figure 2.5-137		Dissolved Salts in Saturation Extract
Figure 2.5-138 (1)		Grain Size Distribution Curves - Chagrin Shale
Figure 2.5-138 (2)		Grain Size Distribution Curves - Chagrin Shale
Figure 2.5-139		Wet-Dry Cycle Slaking Durability Test on Chagrin Shale
Figure 2.5-140		Typical Stress - Strain Characteristics of Shale in Uniaxial Compression
Figure 2.5-141		Deere-Miller Strength - Modulus Classification of Chagrin Shale
Figure 2.5-142		Typical Pressuremeter Test Results in Chagrin Shale
Figure 2.5-143 (1)		Subsurface Stratigraphy and Excavation Sections (Preconstruction)
Figure 2.5-143 (2)		Subsurface Statigraphy and Excavation Sections (Preconstruction)
Figure 2.5-144		Site Seismic Survey
Figure 2.5-145		Warners Creek Thrust Fault from Prosser
Figure 2.5-146		Anticline Produced by Sliding from Van Horn
Figure 2.5-147		Anticline in Shale from Van Horn
Figure 2.5-148		Anticline in Shale from Van Horn
Figure 2.5-149		Anticline in Shale from Van Horn
Figure 2.5-150		Aerial Photograph of Warners (Bates) Creek Fault
Figure 2.5-151		Aerial Photograph of Hell Hollow Faults
Figure 2.5-152		Sketch of Excavated Rock Slope Showing Warners Creek Thrust Fault
Figure 2.5-153		Sketch of Excavated Rock Slope Showing Hell Hollow Fault #1
Figure 2.5-154		Sketch of Excavated Rock Slope Showing Hell Hollow Fault #2
Figure 2.5-155		Sketch of Excavated Rock Slope Showing Hell Hollow Fault #3
Figure 2.5-156		Interpretative Sketch of Hell Hollow Faults Related to Slumping

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-157		Photograph of Warners (Bates) Creek Exposure
Figure 2.5-158		Photographic Enlargement of Fault of Warners (Bates) Creek
Figure 2.5-159		Photographic Enlargement of Fault of Warners (Bates) Creek
Figure 2.5-160		Photographic Enlargement of Tightly Folded Strata at Warners (Bates)
Figure 2.5-161		Photograph of Minor Thrust Fault, 20 ft North of Warners (Bates) Creek Fault
Figure 2.5-162		Photograph of Hell Hollow Fault #1 Prior to Excavation
Figure 2.5-163		Photograph of Hell Hollow Fault #1 After Excavation
Figure 2.5-164		Photographic Enlargement of Hell Hollow Fault #1 After Excavation
Figure 2.5-165		Photograph of Hell Hollow Fault #2 After Excavation
Figure 2.5-166		Photograph of Hell Hollow Fault #3 Prior to Excavation
Figure 2.5-167		Photograph of Hell Hollow Fault #3 After Excavation
Figure 2.5-168		Photograph of Hell Hollow Slump Area Facing South
Figure 2.5-169		Photograph of Hell Hollow Slump Area Facing East
Figure 2.5-170		Representative Records of Pressure vs. Shut-in Time
Figure 2.5-171		Pressure vs. Depth
Figure 2.5-172		Arrival Time vs. Distance
Figure 2.5-173		Seismic Survey Profile
Figure 2.5-174		Typical Backfill Section
Figure 2.5-175		Grain Size Distribution, Class A Fill Design
Figure 2.5-176		Triaxial Compression Test Results, Class A Fill Design Investigation
Figure 2.5-177		Typical Results of High Amplitude Cyclic Torsion Tests, Class A Fill Design Investigations
Figure 2.5-178		Maximum Shear Modular vs. Confining Pressure, Class A Fill Design Investigation
Figure 2.5-179		Range of Grain Size Distribution Test Results for Class A Fill (Bestone Quarry)
Figure 2.5-180		Range of Grain Size Distribution Test Results for Class A Fill (Sidley Quarry)
Figure 2.5-181		Class A Fill - Field Density Tests
Figure 2.5-182		Typical Compaction Curve, Class B Fill
Figure 2.5-183		Range of Grain Size Distribution Test Results for Class B Fill
Figure 2.5-184		Class B Fill - Field Density Tests
Figure 2.5-185		Class B Fill - Field Moisture Tests

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-186		Locations of Permanent Groundwater Observation Piezometers
Figure 2.5-187 (1)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (2)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (3)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (4)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (5)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (6)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (7)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (8)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (9)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (10)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (11)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (12)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (13)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (14)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (15)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (16)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (17)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (18)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (19)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (20)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (21)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (22)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (23)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (24)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (25)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (26)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (27)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (28)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (29)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (30)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (31)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (32)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (33)		Groundwater Observation Piezometric Readings
Figure 2.5-187 (34)		Groundwater Observation Piezometric Readings
Figure 2.5-188 (1)		Groundwater Profiles

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-188 (2)		Groundwater Profiles
Figure 2.5-188 (3)		Groundwater Profiles
Figure 2.5-188 (4)		Groundwater Profiles
Figure 2.5-189		Number of Cycles Required for Initial Liquefaction
Figure 2.5-190		Cycle Stress Developed and Required for Initial Liquefaction in 10 Stress Cycles
Figure 2.5-191		Liquefaction Potential Analysis of Lacustrine Sediments
Figure 2.5-192		Time-Deformation Analysis for Reactor Building Complex
Figure 2.5-193		Deformation Analysis for Emergency Service Water Pumphouse
Figure 2.5-194		Earth Pressure Diagrams for Rigid Subsurface Walls
Figure 2.5-195		Earth Pressure Diagrams for Emergency Service Water Pumphouse Subsurface Walls
Figure 2.5-196		Lateral Pressure - Emergency Service Water Pumphouse
Figure 2.5-197		Shale Heave Gauge Location Plan
Figure 2.5-198		Shale Heave Gauge Detail
Figure 2.5-199 (1)		Shale Heave Gauge Monitoring Data
Figure 2.5-199 (2)		Shale Heave Gauge Monitoring Data
Figure 2.5-200		Shale Extensometer Locations in Emergency Service Water Pumphouse Excavation
Figure 2.5-201		Installation Details, Shale Extensometers
Figure 2.5-202 (1)		Shale Extensometers Monitoring Data
Figure 2.5-202 (2)		Shale Extensometers Monitoring Data
Figure 2.5-202 (3)		Shale Extensometers Monitoring Data
Figure 2.5-202 (4)		Shale Extensometers Monitoring Data
Figure 2.5-202 (5)		Shale Extensometers Monitoring Data
Figure 2.5-202 (6)		Shale Extensometers Monitoring Data
Figure 2.5-203		Settlement Monument Location Plan
Figure 2.5-204 (1)		Reactor Mat Deformation
Figure 2.5-204 (2)		Reactor Mat Deformation
Figure 2.5-205 (1)		Settlement Observation Data
Figure 2.5-205 (2)		Settlement Observation Data
Figure 2.5-205 (3)		Settlement Observation Data
Figure 2.5-205 (4)		Settlement Observation Data
Figure 2.5-205 (5)		Settlement Observation Data
Figure 2.5-205 (6)		Settlement Observation Data
Figure 2.5-206		Building Settlement Monitoring Disks

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2.5-207		Settlement Observation Data
Figure 2.5-208		Settlement Observation Data
Figure 2.5-209		Bluff Stability Analysis
Figure 2.5-210		Stability Analysis of Lake Erie Bluff
Figure 2.5-211		EPRI Seismic Hazard Calculations Results for PNPP
Figure 2.5-212		EPRI Seismic Hazard Calculations Results for PNPP
Figure 2.5-213		Distribution of Felt Reports 1/26/1991 Earthquake
Figure 2.5-214		Total Felt Area of Dec. 28, 1988 (23:28 UT) Microearthquake Mc=2.8
Figure 2.5-215		Isoseismal Map Saguenay Earthquake November 25, 1988
Figure 2D-1		Location Map Perry Nuclear Power Plant
Figure 2D-2 (1)		Geologic Map of Tunnel Excavations
Figure 2D-2 (2)		Geologic Map of Tunnel Excavations
Figure 2D-2 (3)		Geologic Map of Tunnel Excavations
Figure 2D-2 (4)		Geologic Map of Tunnel Excavations
Figure 2D-2 (5)		Geologic Map of Tunnel Excavations
Figure 2D-2 (6)		Geologic Map of Tunnel Excavations
Figure 2D-2 (7)		Geologic Map of Tunnel Excavations
Figure 2D-2 (8)		Geologic Map of Tunnel Excavations
Figure 2D-2 (9)		Geologic Map of Tunnel Excavations
Figure 2D-2 (10)		Geologic Map of Tunnel Excavations
Figure 2D-2 (11)		Geologic Map of Tunnel Excavations
Figure 2D-2 (12)		Geologic Map of Tunnel Excavations
Figure 2D-2 (13)		Geologic Map of Tunnel Excavations
Figure 2D-2 (14)		Geologic Map of Tunnel Excavations
Figure 2D-2 (15)		Geologic Map of Tunnel Excavations
Figure 2D-2 (16)		Geologic Map of Tunnel Excavations
Figure 2D-2 (17)		Geologic Map of Tunnel Excavations
Figure 2D-2 (18)		Geologic Map of Tunnel Excavations
Figure 2D-2 (19)		Geologic Map of Tunnel Excavations
Figure 2D-2 (20)		Geologic Map of Tunnel Excavations
Figure 2D-2 (21)		Geologic Map of Tunnel Excavations
Figure 2D-2 (22)		Geologic Map of Tunnel Excavations
Figure 2D-2 (23)		Geologic Map of Tunnel Excavations
Figure 2D-2 (24)		Geologic Map of Tunnel Excavations
Figure 2D-3		Tunneling Plan



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2D-4		Bedrock Geologic Map of Northeastern Ohio
Figure 2D-5		Glacial Map of Northeastern Ohio
Figure 2D-6		Structural Contour Map - Top of Big Lime
Figure 2D-7		Structural Contour Map - Top of Packer Shell
Figure 2D-8		Isopach Map Of Big Lime And Niagaran Shale
Figure 2D-9		Fault and Outcrop Location Map
Figure 2D-10		Schematic Northwest-Southeast Cross Section, Perry Nuclear Power Plant
Figure 2D-11		TX-Series Boring Plant
Figure 2D-12		Map of Shoreline Survey
Figure 2D-13		Location Map, Video Survey Lake Erie Bottom
Figure 2D-14		Longitudinal Section, Intake Tunnel
Figure 2D-15		Longitudinal Section, Discharge Tunnel
Figure 2D-16		Location Map, Offshore Magnetic Survey
Figure 2D-17		Location Map, Onshore Magnetic Survey
Figure 2D-18		Location Map, Seismic Spreads, Intake Tunnel
Figure 2D-19		Location Map, Seismic Spreads, Discharge Tunnel
Figure 2D-20		Schematic Map, Lake Bottom Fractures
Figure 2D-21		Sketch of Facies Relationships Among the Huron, Chagrin, & Cleveland Shales
Figure 2D-22		Detailed Map, Intake Tunnel Fault
Figure 2D-23		Detailed Map Discharge Tunnel Fault
Figure 2D-24		Detailed Stratigraphic Section, Intake Tunnel East Wall Station 10+30-10+40
Figure 2D-25		Detailed Stratigraphic Section, Discharge Tunnel East Wall Station 11+40-11+46
Figure 2D-26		Detailed Stratigraphic Section, Discharge Tunnel East Wall Station 13+22-13+28
Figure 2D-27		Geologic Structure Map, Intake & Discharge Tunnel Faults
Figure 2D-28		Intake Tunnel Wall Maps, Stations 10+25-10+95
Figure 2D-29		Discharge Tunnel Wall Maps, Stations 13+100-12+00
Figure 2D-30		Discharge Tunnel Wall Maps, Stations 11+40-12+00
Figure 2D-31		Geologic Maps, Intake & Discharge Tunnels
Figure 2D-32		Photographs, Structural Details, Intake Tunnel
Figure 2D-33		Photographs, Structural Details, Discharge Tunnel
Figure 2D-34		Offshore for Shipborne Magnetic Profile 14
Figure 2D-35		Offshore for Shipborne Magnetic Profiles 10 and 12

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2D-36		Offshore for Shipborne Magnetic Profiles 6 and 8
Figure 2D-37		Offshore for Shipborne Magnetic Profiles 2 and 4
Figure 2D-38		Offshore for Shipborne Magnetic Profiles 0 and 3
Figure 2D-39		Offshore for Shipborne Magnetic Profiles 5A and 7
Figure 2D-40		Offshore for Shipborne Magnetic Profiles 9 and 11
Figure 2D-41		Offshore for Shipborne Magnetic Profiles 13 and 15
Figure 2D-42		Offshore for Shipborne Magnetic Profiles 17 and 19
Figure 2D-43		Onshore for Land Magnetic Profile 1S-A
Figure 2D-44		Onshore for Land Magnetic Profile 1S
Figure 2D-45		Onshore for Land Magnetic Profile 1E
Figure 2D-46		Onshore for Land Magnetic Profile 2S
Figure 2D-47		Onshore for Land Magnetic Profile 3S
Figure 2D-48		Onshore for Land Magnetic Profile 3S-A
Figure 2D-49		Borehole Logs - Gamma/Sonic, TX Borings 2, 3, 4, 5, 6, 7
Figure 2D-50		Borehole Logs - Gamma/Sonic, TX Borings 8, 9, 10
Figure 2D D-1		Expansion and Settlement in the Colonies and Eastern United States 1650 - 1890
Figure 2D D-2		Settlement in Canada
Figure 2D D-3		Newspaper Research Matrix
Figure 2D D-4		Seismicity Map
Figure 2D D-5		Felt Report Map: 1850 Oct. 1
Figure 2D D-6		Felt Report Map: 1857 Feb. 28
Figure 2D D-7		Felt Report Map: 1858 Apr. 10
Figure 2D D-8		Felt Report Map: 1885 Jan. 18
Figure 2D D-9		Felt Report Map: 1906 June 27
Figure 2D D-10		Felt Report Map: 1928 Sept. 09
Figure 2D D-11		Felt Report Map: 1943 Mar. 09
Figure 2D D-12		John Carroll University Seismogram: 1943 Mar. 09
Figure 2D D-13		John Carroll University Seismograms: 1951 Dec. 03
Figure 2D D-14		John Carroll University Seismograms: 1955 May 26
Figure 2D D-15		Felt Report Map: 1955 May 26
Figure 2D D-16		Felt Report Map: 1955 June 29
Figure 2D D-17		John Carroll University Seismograms: 1958 May 1

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 2E-1		Site Exploration Plot Plan
<b><u>Chapter 3</u></b>		
Figure 3.2-1		Location of Safety Class Structures
Figure 3.6-1	D-303-601	Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 574'-10"-East
Figure 3.6-2	D-303-602	Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 574'-10"-West
Figure 3.6-3		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 599'-9"-East
Figure 3.6-4		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 599'-9"-West
Figure 3.6-5		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 620'-6"-East
Figure 3.6-6		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 620'-6"-West
Figure 3.6-7	D-304-078	Piping Arrangements for Feedwater in Reactor Building and Steam Tunnel- Historical
Figure 3.6-8		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 642'-0"-East
Figure 3.6-9		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 642'-0"-West
Figure 3.6-10	D-304-691	Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Standby Liquid Control
Figure 3.6-11	D-304-692	Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Standby Liquid Control- Historical
Figure 3.6-12		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 652'-2"-East
Figure 3.6-13		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 652'-2"-West
Figure 3.6-14		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 664'-7"-East
Figure 3.6-15		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Elev. 664'-7"-West
Figure 3.6-16		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Containment Spray
Figure 3.6-17		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Reactor Building, Containment Spray

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.6-18		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Auxiliary Building, Elev. 574'-10"-East
Figure 3.6-19		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Auxiliary Building, Elev. 574'-10"-West
Figure 3.6-20		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Auxiliary Building, Elev. 599'-0"-East
Figure 3.6-21		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Auxiliary Building, Elev. 599'-0"-West
Figure 3.6-22		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Auxiliary Building, Elev. 620'-6"-East
Figure 3.6-23		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Auxiliary Building, Elev. 620'-6"-West
Figure 3.6-24		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Auxiliary Building, Steam Tunnel, Elevs. 614'-6" and 620'-6"
Figure 3.6-25		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 574'-10"- Northwest
Figure 3.6-26		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 574'-10"- Southwest
Figure 3.6-27		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 574'-10"- Center
Figure 3.6-28		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 574'-10"- East
Figure 3.6-29		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 599'-0"-Northwest
Figure 3.6-30		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 599'-0"- Southwest
Figure 3.6-31		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 620'-6"- Northwest
Figure 3.6-32		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 620'-6"- Southwest
Figure 3.6-33		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 620'-6"- Center
Figure 3.6-34		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 639'-6"- Northwest
Figure 3.6-35		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 639'-6"- Southwest

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.6-36		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 654'-6"- Northwest
Figure 3.6-37		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 654'-6"- Southwest
Figure 3.6-38		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Intermediate Building, Elev. 665'-0"- West
Figure 3.6-39		Scope of High Energy, Safe Shutdown and Break Exclusion Piping, for Control Complex, Elev. 574'-10"-East
Figure 3.6-40	D-923-002	Piping Arrangement for CCCW-Control Complex, Elev. 574'-10"-West- Historical
Figure 3.6-41	D-304-804	Piping Arrangement for ESW-Control Complex- Historical
Figure 3.6-42	D-304-802	Piping Arrangement for ESW-Control Complex- Historical
Figure 3.6-43	D-923-005	Piping Arrangement for CCCW-Control Complex, Elev. 679'-6"-East- Historical
Figure 3.6-44	D-923-004	Piping Arrangement for CCCW-Control Complex, Elev. 679'-6"-West- Historical
Figure 3.6-45	D-304-805	Piping Arrangement for ESW-Diesel Generator Building- Historical
Figure 3.6-46	D-304-058	Piping Arrangement for Radwaste Building Auxiliary Steam
Figure 3.6-47	D-304-059	Piping Arrangement for Radwaste Building Auxiliary Steam
Figure 3.6-48		Typical Restraint Force-Deflection Curve
Figure 3.6-49		Break Locations and Restraints - PDA Verification Program
Figure 3.6-50		Jet Characteristics
Figure 3.6-51		Homogeneous Jet Asymptotic Area- Saturated Water and Steam Blowdown
Figure 3.6-52		fl/D Versus Ratio of Width of Jet at Asymptotic Plane to Width of Jet at Break Plane - Steam
Figure 3.6-53		fl/D Versus Ratio of Width of Jet at Asymptotic Plane to Width of Jet at Break Plane - Saturated Water
Figure 3.6-54		Typical Pipe Whip Restraint Configuration
Figure 3.6-55	B-312-641	Penetration Guard Pipe Type "K" Main Steam- Historical
Figure 3.6-56	B-312-639	Penetration Guard Pipe Type "J" RCIC AND RHR- Historical
Figure 3.6-57	B-312-640	Penetration Guard Pipe Details Type "J"
Figure 3.6-58	B-312-650	Penetration Guard Pipe Type "Q" Feedwater- Historical
Figure 3.6-59	B-312-656	Penetration Guard Pipe Type "J" MS Drain- Historical
Figure 3.6-60	B-312-657	Penetration Guard Pipe Type "J" RCIC- Historical
Figure 3.6-61	B-312-663	Penetration Guard Pipe Details Type "J"

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.6-62	B-312-667	Penetration Guard Pipe Type "J" RWCU-Historical
Figure 3.6-63	B-312-668	Penetration Guard Pipe Details Type "J"
Figure 3.6-64	B-312-670	Penetration Guard Pipe Details Type "J" - Historical
Figure 3.6-65 (1)		Main Steam System Piping Postulated Break Locations and Restraint Locations
Figure 3.6-65 (2)		Main Steam System Piping Postulated Break Locations and Restraint Locations
Figure 3.6-65a		Line A - Main Steam Piping Stress Node Locations
Figure 3.6-65b		Line A - Main Steam Piping Stress Node Locations (Sweepolet)
Figure 3.6-65c		Node Point Stress Analysis Diagram - Main Steam Lines C and B
Figure 3.6-65d		Node Point Stress Analysis Diagram - Main Steam Lines C and B (Sweepolet)
Figure 3.6-65e		Node Point Stress Analysis Diagram - Main Steam Line D
Figure 3.6-65f		Node Point Stress Analysis Diagram - Main Steam Line D (Sweepolet)
Figure 3.6-66		Recirculation System Piping Postulated Break Locations and Restraint Locations
Figure 3.6-66a		RHR Suction Line Postulated Break Locations and Restraint Locations
Figure 3.6-66b		Recirculation System Node Diagram (Loop A and B)
Figure 3.6-67		Pipe Rupture Locations Feedwater Inside Containment
Figure 3.6-68		Pipe Rupture Locations LPCI (RHR) Inside Containment
Figure 3.6-69a		Pipe Rupture Locations Low Pressure Core Spray Inside Containment
Figure 3.6-69b		Pipe Rupture Locations High Pressure Core Spray Inside Containment
Figure 3.6-70		Pipe Rupture Locations RCIC Steam - Inside Containment
Figure 3.6-70a		Pipe Rupture Locations RCIC Steam Supply - Outside Containment
Figure 3.6-70b		RCIC Steam Piping Inside Containment Stress Node Locations
Figure 3.6-71		Pipe Rupture Locations Head Spray Fitting Drain to MS "A"
Figure 3.6-72 (1)		CRD Supply - Inside Containment
Figure 3.6-72 (2)		CRD Supply - Inside Containment
Figure 3.6-72 (3)		CRD Supply - Inside Containment
Figure 3.6-73		Pipe Rupture Locations RWCU - Inside Containment
Figure 3.6-74		Pipe Rupture Locations MS Drain Inside Containment
Figure 3.6-75		Pipe Rupture Locations MS Outside Containment

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.6-76		Pipe Rupture Locations FW Outside Containment
Figure 3.6-77		Pipe Rupture Locations MS Drains/LCS Outside Containment
Figure 3.6-78		Pipe Rupture Locations RWCU/RHR To FW Outside Containment
Figure 3.6-79		Pipe Rupture Locations Auxiliary Steam Outside Containment
Figure 3.6-80		Pipe Rupture Locations RWCU Outside Containment
Figure 3.6-81		DELETED
Figure 3.6-82		DELETED
Figure 3.6-83		DELETED
Figure 3.6-84		Jet Impingement Recirculation Jet Striking HPCS
Figure 3.6-85		Jet Impingement Recirculation Jet Striking CRD Lines
Figure 3.6-86		DELETED
Figure 3.6-87		DELETED
Figure 3.6-88		DELETED
Figure 3.6-89		DELETED
Figure 3.6-90		Jet Impingement LPCI "B" Jet Striking HPCS
Figure 3.6-91		Jet Impingement HPCS Jet Striking LPCI "B"
Figure 3.6-92		Jet Impingement MS Jet Striking Shield Building
Figure 3.6-93		DELETED
Figure 3.6-94		DELETED
Figure 3.6-95		Feedwater Break WB9C - Reactor Vessel Side (14" line)
Figure 3.6-96		Feedwater Break WB12C - Reactor Vessel Side (20" line)
Figure 3.6-97		Feedwater Break WB11 - End Cap Break (20" line)
Figure 3.6-98		Feedwater Longitudinal Break at Node 46 In Turbine Building
Figure 3.6-99		Typical Jet Impingement Force Time History (Example is a Feedwater Line Break at the RPV Nozzle)
Figure 3.6-100		Typical Pipe Whip Restraint Force
Figure 3.6-101		Pressure/Forces in Asymmetric Loading Analyses
Figure 3.7-1		Safe Shutdown Earthquake Design Response Spectra - Horizontal Motion
Figure 3.7-2		Safe Shutdown Earthquake Design Response Spectra - Vertical Motion
Figure 3.7-3		Operating Basis Earthquake Design Response Spectra - Horizontal Motion
Figure 3.7-4		Operating Basis Earthquake Design Response Spectra - Vertical Motion

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.7-5		Response Spectra - Horizontal Motion H1 (2% and 5% Damping)
Figure 3.7-6		Response Spectra - Horizontal Motion H1 (7% and 10% Damping)
Figure 3.7-7		Response Spectra - Horizontal Motion H2 (2% and 5% Damping)
Figure 3.7-8		Response Spectra - Horizontal Motion H2 (7% and 10% Damping)
Figure 3.7-9		Response Spectra - Vertical Motion (2% and 5% Damping)
Figure 3.7-10		Response Spectra - Vertical Motion (7% and 10% Damping)
Figure 3.7-11		Seismic Model for the Reactor Building
Figure 3.7-12		Seismic Model for Auxiliary Building
Figure 3.7-13		Seismic Model for Intermediate and Fuel Handling Buildings
Figure 3.7-14		Seismic Model for Control Complex
Figure 3.7-15		DELETED
Figure 3.7-16		Reactor Pressure Vessel and Internals Seismic Model
Figure 3.7-17	D-814-663	Seismic Instrumentation Installation Details
Figure 3.8-1		Typical Section of Reactor Building Complex
Figure 3.8-2		Typical Section Through Ring Grinder of Shield Building Wall
Figure 3.8-3		Typical Reinforced Section for the Shield Building Wall and Dome
Figure 3.8-4		Containment Vessel Personnel Access Airlock Detail
Figure 3.8-5		Containment Vessel Equipment Access Hatch and Shield Structure
Figure 3.8-6		Typical Mechanical Penetration Details for Reactor Building Complex
Figure 3.8-7		Typical Electrical Penetration Details for Reactor Building Complex
Figure 3.8-8	D-411-165	Reinforced Sections of the Shield Building Steam Tunnel Area- Historical
Figure 3.8-9		Analytical Model of Shield Building
Figure 3.8-10		Temperature Profiles Through Shield Building
Figure 3.8-11		Analytical Model of the Shield Steam Tunnel Area
Figure 3.8-12	D-411-130	Reinforcement-Shield Building Steam Tunnel Area- Historical
Figure 3.8-13		Reactor Building Steel Frame Pool Swell Analysis Model
Figure 3.8-14		Typical Detail of Containment Vessel Polar Crane Bracket
Figure 3.8-15		Detail of Fuel Transfer Penetration
Figure 3.8-16 (1)		Containment - Finite Element Model - STRAP
Figure 3.8-16 (2)		Containment - Finite Element Model - STRAP



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.8-17		Containment - Finite Element Model - GHOSH WILSON
Figure 3.8-18		Containment Vessel Embedment Model
Figure 3.8-19		Containment Vessel Embedment Model
Figure 3.8-20		Containment Vessel Equipment Hatch Finite Element Model
Figure 3.8-21		Containment Vessel Airlock Finite Element Model
Figure 3.8-22		Containment Vessel Flat Dome Buckling Program and Wavy Dome Buckling Program
Figure 3.8-23		Bellville Washer Load - Deflection Curve
Figure 3.8-24		General Arrangement of Bio Shield Wall, RPV Pedestal and Mat
Figure 3.8-25	E-018-001	Recirculation Suction Flow Diverter
Figure 3.8-26		RPV Pedestal Embedment Weir Wall Liner Embedment and Reactor Hold Down Area
Figure 3.8-27		Typical Reinforced Section of Weir Mat and Weir Wall
Figure 3.8-28		Drywell Vent Structure, Base Mat Embedment and Transition to Reinforced Concrete
Figure 3.8-29		Typical Reinforced Section Through Drywell Wall
Figure 3.8-30		Details of Drywell Head, Bulkhead Plate and Seal
Figure 3.8-31		Drywell Personnel Access Lock and Shield Door
Figure 3.8-32		Drywell Equipment Access Hatch
Figure 3.8-33		Reactor Building Complex Floor Plan at Elev. 599'-9"
Figure 3.8-34		Reactor Building Complex Floor Plan at Elev. 620'-6" and 630'-1"
Figure 3.8-35		Reactor Building Complex Floor Plan at Elev. 642'-0"
Figure 3.8-36		Reactor Building Complex Floor Plan at Elev. 664'-7"
Figure 3.8-37		Reactor Building Complex Floor Plan at Elev. 689'-6"
Figure 3.8-38		Temperature Profiles Through Foundation Mat
Figure 3.8-39		DELETED
Figure 3.8-40		Temperature Profiles Through Drywell Wall
Figure 3.8-41		Temperature Profiles Through Drywell Top Slab and Fuel Pool Wall
Figure 3.8-42		Drywell Finite Element Model
Figure 3.8-43		Elastic Model for Predicting Thermal Induced Forces
Figure 3.8-44		Drywell Personnel Access Airlock Finite Element Model
Figure 3.8-45		Drywell Equipment Hatch Finite Element Model
Figure 3.8-46		Analytical Model of Drywell Steam Tunnel Area

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.8-47		Drywell Vent Structure Finite Element Model
Figure 3.8-48		Drywell Vent Structure Steam Relief Valve Penetration Finite Element Model
Figure 3.8-49 (1)		RPV Pedestal Finite Element Model
Figure 3.8-49 (2)		RPV Pedestal Finite Element Model
Figure 3.8-49 (3)		RPV Pedestal Finite Element Model
Figure 3.8-49 (4)		RPV Pedestal Finite Element Model
Figure 3.8-49 (5)		RPV Pedestal Finite Element Model
Figure 3.8-49 (6)		RPV Pedestal Finite Element Model
Figure 3.8-49 (7)		RPV Pedestal Finite Element Model
Figure 3.8-50 (1)		Biological Shield Wall Finite Element Model
Figure 3.8-50 (2)		Biological Shield Wall Finite Element Model
Figure 3.8-50 (3)		Biological Shield Wall Finite Element Model
Figure 3.8-50 (4)		Biological Shield Wall Finite Element Model
Figure 3.8-50 (5)		Biological Shield Wall Finite Element Model
Figure 3.8-50 (6)		Biological Shield Wall Finite Element Model
Figure 3.8-51	D-411-157	Reinforcement-Drywell Wall Steam Tunnel Area- Historical
Figure 3.8-52	D-411-159	Reinforced Section of the Drywell Wall Steam Tunnel Area
Figure 3.8-53		DELETED
Figure 3.8-54		DELETED
Figure 3.8-55		DELETED
Figure 3.8-56		DELETED
Figure 3.8-57		DELETED
Figure 3.8-58		DELETED
Figure 3.8-59		DELETED
Figure 3.8-60		DELETED
Figure 3.8-61		DELETED
Figure 3.8-62		DELETED
Figure 3.8-63		DELETED
Figure 3.8-64	E-015-002	Emergency Service Water Pumphouse
Figure 3.8-65	D-736-012	Offshore Intake and Discharge Structures
Figure 3.8-66	D-736-013	Intake and Discharge Tunnel Profiles
Figure 3.8-67		Intake Structure, Discharge Structure and Alternate Emergency Service Water Intake
Figure 3.8-68		Multiport Intake Structures - Caisson Arrangement
Figure 3.8-69		Typical Offshore Elbow and Shaft Transition
Figure 3.8-70		Plan and Profiles - Service Water Tunnels

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.8-71		Typical Tunnel Sections
Figure 3.8-72		Typical Shaft and Elbow in Rock
Figure 3.8-73 (1)		Underdrain Gravity Discharge Manholes
Figure 3.8-73 (2)		Underdrain Gravity Discharge Manholes
Figure 3.8-74		Condensate Storage Tank Support Structure
Figure 3.8-75	D-434-561	Layout - Service Water Valve Pit
Figure 3.8-76	D-426-602	Electrical Manholes
Figure 3.8-77		Finite Element Model for Static Stress Analysis of Tunnels
Figure 3.8-78		Finite Element Model for Seismic Analysis of Tunnels
Figure 3.8-79		Waterproofing Details
Figure 3.8-80	D-415-111	Cassions for Fuel Handling Building-Historical
Figure 3.8-81		Foundation Details of Safety Class Structures
Figure 3.8-82		Typical Section Through Reactor Building Foundation Mat
Figure 3.8-83		Reinforcement Plan of Reactor Building Foundation Mat
Figure 3.8-84		Analytical Model of Reactor Building Complex Foundation Mat
Figure 3.8-85		Weir Mat and Wall Finite Element Model
Figure 3.8-86		Elastic Model for Predicting Thermal Induced Forces of Weir Wall and Mat
Figure 3.8-87		Plan View -Drywell Top Slab (Elev. 664'-7") Reinforcement
Figure 3.8-88		Reinforcing Drawing of Drywell Equipment Hatch Area
Figure 3.8-89		Reinforcing Drawing of Drywell Personnel Lock Area
Figure 3.8-90		Base Mat Shear Key Arrangement - Auxiliary Building
Figure 3.8-91		Base Mat Shear Key Arrangement - Fuel Handling Building
Figure 3.8-92		Base Mat Shear Key Arrangement - Intermediate Building
Figure 3.8-93		Base Mat Shear Key Arrangement - Radwaste Building
Figure 3.8-94		Base Mat Shear Key Arrangement - Control Complex
Figure 3.8-95		Base Mat Shear Key Arrangement - Offgas Building
Figure 3.8-96		Drywell Sump Room Pool Swell Protection Structure
Figure 3.8-97		Drywell T.I.P. Drive Pool Swell Protection Structure
Figure 3.8-98		Drywell Equipment Hatch Pool Swell Protection Structure
Figure 3.8-99		Drywell Personnel Lock Pool Swell Protection Switch

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.8-100		Personnel Air Lock Seal Test System Typical
Figure 3.8-101	D-511-201	Reactor Building Biological Shield Wall Liner Details- Historical
Figure 3.8-102		Reactor Building Basemat: Design Moment vs. Reinforced Section Moment Capacity
Figure 3.8-103		Reactor Building Mat: Design Shear Envelope vs. Mat Shear Capacity
Figure 3.8-104		Main Steam Drywell Wall Embedded Sleeve Detail
Figure 3.8-105		ASHSD 2 Model for Annulus Concrete Design
Figure 3.8-106		ANSYS Thermal Model for Annulus Concrete Design
Figure 3.8-107 (1)		Containment Fix Thermal Stress Model
Figure 3.8-107 (2)		Containment Fix Thermal Stress Model
Figure 3.8-107 (3)		Containment Fix Thermal Stress Model
Figure 3.8-107 (4)		Containment Fix Thermal Stress Model
Figure 3.8-107 (5)		Containment Fix Thermal Stress Model
Figure 3.8-108 (1)		Containment Stiffener Chock Model
Figure 3.8-108 (2)		Containment Stiffener Chock Model
Figure 3.8-108 (3)		Containment Stiffener Chock Model
Figure 3.8-108 (4)		Containment Stiffener Chock Model
Figure 3.8-108 (5)		Containment Stiffener Chock Model
Figure 3.8-109 (1)		Response Spectra Model
Figure 3.8-109 (2)		Response Spectra Model
Figure 3.8-109 (3)		Response Spectra Model
Figure 3.8-109 (4)		Response Spectra Model
Figure 3.8-109 (5)		Response Spectra Model
Figure 3.8-110		Compressible Material Around Penetration
Figure 3.9-1		Horizontal Spectrum RCIC Turbine
Figure 3.9-2		Vertical Spectrum RCIC Turbine
Figure 3.9-3		Horizontal Spectrum SSE Condition for the RHR Heat Exchanger
Figure 3.9-4		Vertical Spectrum SSE Condition for the RHR Heat Exchanger
Figure 3.9-5		Analysis Summary for Main Steam Isolation Valve Accumulator Tank - Tank No. 1, 1B21-A001A, etc.
Figure 3.9-6		Analysis Summary for ADS Safety Relief Valve Accumulator Tank - Tank No. 2, 1B21-A003A, etc.
Figure 3.9-7		Analysis Summary for Control Complex Chilled Water Expansion Tank - Tank No. 3, P47-A002A, etc.

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.9-8		Analysis Summary for Emergency Closed Cooling Surge Tank - Tank No. 4, 1P42-A001A, etc.
Figure 3.9-9		Analysis Summary for Fuel Pool Surge Tank- Tank No. 5, G41-A002A, etc.
Figure 3.9-10		Analysis Summary for Standby Diesel Generator Fuel Oil Storage Tank-Tank No. 6, 1R45-A002A, etc.
Figure 3.9-11		Analysis Summary for HPCS Diesel Generator Fuel Oil Storage Tank - Tank No. 7, 1R45-A004, etc.
Figure 3.9-12		Analysis Summary for Reactor Water Cleanup F/D BW Settling Tank - Tank No. 8, G50-A013A, etc.
Figure 3.9-13		Analysis Summary for Concentrated Waste Tank - Tank No. 9, G50-A006A, etc.
Figure 3.9-14		Analysis Summary for Safety Relief Valve Accumulator Tank - Tank No. 10, 1B21-A004A, etc.
Figure 3.9-15		Analysis Summary for HPCS Diesel Fuel Oil Day Tank - Tank No. 12, 1R45-A005, etc.
Figure 3.9-16		Transient Pressure Differentials Following a Steamline Break (Shroud Support, Core Plate, Upper Shroud)
Figure 3.9-17		Transient Pressure Differentials Following a Steamline Break (Average Channel Wall Bottom, Top Guide)
Figure 3.9-18		Typical Relief Valve Opening Transient Forcing Function
Figure 3.9-19		Reactor Vessel Cutaway
Figure 3.9-20		Reactor Internals Flow Paths
Figure 3.9-21		Fuel Support Pieces
Figure 3.9-22		Jet Pump
Figure 3.9-23		Pressure Nodes Used for Depressurizaion Analysis
Figure 3.9-24 (1)	D-306-081	Feedwater Design Transients
Figure 3.9-24 (2)	D-306-082	Feedwater Design Transients
Figure 3.9-25 (1)	D-306-605	Main Steam Drains Design Transients
Figure 3.9-25 (2)	D-306-606	Main Steam Drains Design Transients
Figure 3.9-26 (1)	B-306-631	Reactor Core Isolation Cooling Design Transients
Figure 3.9-26 (2)	B-306-632	Reactor Core Isolation Cooling Design Transients
Figure 3.9-26 (3)	B-306-633	Reactor Core Isolation Cooling Design Transients
Figure 3.9-26 (4)	B-306-634	Reactor Core Isolation Cooling Design Transients
Figure 3.9-27 (1)	D-306-641	Residual Heat Removal Design Transients
Figure 3.9-27 (2)	D-306-642	Residual Heat Removal Design Transients
Figure 3.9-27 (3)	D-306-643	Residual Heat Removal Design Transients

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.9-27 (4)	D-306-644	Residual Heat Removal Design Transients
Figure 3.9-28 (1)	D-306-701	High Pressure Core Spray Design Transients
Figure 3.9-28 (2)	D-306-702	High Pressure Core Spray Design Transients
Figure 3.9-29 (1)	D-306-705	Low Pressure Core Spray Design Transients
Figure 3.9-29 (2)	D-306-706	Low Pressure Core Spray Design Transients
Figure 3.9-30 (1)	D-306-661	Reactor Water Clean-Up Design Transients
Figure 3.9-30 (2)	D-306-662	Reactor Water Clean-Up Design Transients
Figure 3.9-30 (3)	D-306-663	Reactor Water Clean-Up Design Transients
Figure 3.9-30 (4)	D-306-664	Reactor Water Clean-Up Design Transients
Figure 3.10-1		Typical Vertical Board
Figure 3.10-2		Typical Instrument Rack
Figure 3.10-3		Typical Local Rack
Figure 3.10-4		Typical NEMA-12 Enclosure
Figure 3.11-1		DELETED
Figure 3.11-2		DELETED
Figure 3.11-3		DELETED
Figure 3.11-4		DELETED
Figure 3.11-5		DELETED
Figure 3.11-6		DELETED
Figure 3.11-7		DELETED
Figure 3.11-8		DELETED
Figure 3.11-9		DELETED
Figure 3.11-10	B-022-001	Environmental Zones Lead Sheet
Figure 3.11-11	B-022-002	Environmental Conditions for Auxiliary Building
Figure 3.11-12	B-022-003	Environmental Conditions for Auxiliary Building
Figure 3.11-13	B-022-004	Environmental Conditions for Auxiliary Building
Figure 3.11-14	B-022-005	Environmental Conditions for Auxiliary Building
Figure 3.11-15	B-022-006	Environmental Conditions for Auxiliary Building
Figure 3.11-16	B-022-007	Environmental Conditions for Auxiliary Building
Figure 3.11-16a	B-022-008	Environmental Conditions for Auxiliary Building
Figure 3.11-17	B-022-010	Environmental Conditions for Control Buildings
Figure 3.11-18	B-022-011	Environmental Conditions for Control Buildings
Figure 3.11-19	B-022-012	Environmental Conditions for Control Buildings

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.11-20	B-022-020	Environmental Conditions for Containment Building
Figure 3.11-21	B-022-021	Environmental Conditions for Containment Building
Figure 3.11-22	B-022-022	Environmental Conditions for Containment Building
Figure 3.11-23	B-022-023	Environmental Conditions for Containment Building
Figure 3.11-24	B-022-024	Environmental Conditions for Containment Building
Figure 3.11-25	B-022-025	Environmental Conditions for Containment Building
Figure 3.11-26	B-022-026	Environmental Conditions for Containment Building
Figure 3.11-27	B-022-027	Environmental Conditions for Diesel Generator Areas
Figure 3.11-28	B-022-030	Environmental Conditions for Drywell Area
Figure 3.11-29	B-022-031	Environmental Conditions for Drywell Area
Figure 3.11-30	B-022-032	Environmental Conditions for Drywell Area
Figure 3.11-31	B-022-035	Environmental Conditions for Emergency Service Water Pumphouse
Figure 3.11-32 (1)	B-022-040	Environmental Conditions for Intermediate Building
Figure 3.11-32 (2)	B-022-040	Environmental Conditions for Intermediate Building
Figure 3.11-33	B-022-041	Environmental Conditions for Intermediate Building
Figure 3.11-34	B-022-042	Environmental Conditions for Intermediate Building
Figure 3.11-35	B-022-046	Environmental Conditions for General Areas of the Offgas Building
Figure 3.11-36	B-022-047	Environmental Conditions Heater Bay Fan Room & Outside Around Condensate Storage Tank
Figure 3.11-37	B-022-050	Environmental Conditions for Turbine Building
Figure 3.11-38	B-022-051	Environmental Conditions for Turbine Building
Figure 3.11-39	B-022-068	Drywell and Containment Environmental Zones
Figure 3.11-40	E-022-060	Environmental Zone Map Plan A Above EL. 568'-6" EL. 574'-10", EL. 577'-6", & EL. 580'-6" Plant Complex
Figure 3.11-41	E-022-061	Environmental Zone Map, Plan B Above EL 593-6, 599-0, 600-6, 602-6 & 605-6 Plant Complex
Figure 3.11-42	E-022-062	Environmental Zone Map Plan "C" Above Elevs. 620'-6", 623'-6", and 624'-6", Plant Complex
Figure 3.11-43	E-022-063	Environmental Zone Map Plan "D" Above Elevs. 638'-6", 642'-0", and 647'-6", Plant Complex
Figure 3.11-44	E-022-064	Environmental Zone Map Plan "E" Above Elevs. 652'-0" and 654'-6", Plant Complex
Figure 3.11-45	E-022-065	Environmental Zone Map Plan 'F' Above Elevs. 664'-6", 665'-0", and 670'-6", Plant Complex
Figure 3.11-46	E-022-066	Environmental Zone Map Plan 'G' Above Elev. 689'-6", Plant Complex

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3.11-47	E-022-067	Environmental Zone Map Emergency Service Water Pumphouse Plans and Elevations
Figure 3A-1		Reactor Building Model for Hydrodynamic Analysis Soil Elements
Figure 3A-2		Containment Vessel Model for Hydrodynamic Analysis
Figure 3A-3		RPV Horizontal Model
Figure 3A-4		RPV Vertical Model
Figure 3A-5		Chagrin Shale Dynamic Characteristics
Figure 3A-6		Reactor Building Model for Hydrodynamic Analysis
Figure 3A-7		Reactor Building Model for Hydrodynamic Analysis
Figure 3B-1		Plan at Elevation 599'-9"
Figure 3B-2		Section 1-1 Through Sump
Figure 3B-3		Section 2-2 Through TIP Platform
Figure 3B-4		Plan at Elevation 620'-6"
Figure 3B-5		Suppression Pool Cross Section
Figure 3B-6		Condensation Oscillation Load Spatial Distribution on the Drywell Wall Containment Wall and Basemat
Figure 3B-7		Suppression Pool Chugging Normalized Peak Underpressure Attenuation
Figure 3B-8		Suppression Pool Chugging Normalized Spike Attenuation
Figure 3B-9		Suppression Pool Chugging Spike Duration $d$ as a Function of Location in the Pool
Figure 3B-10		Suppression Pool Chugging Normalized Peak Post-Chug Oscillations
Figure 3B-11		Suppression Pool Chugging Normalized Mean Underpressure Attenuation
Figure 3B-12		Suppression Pool Chugging Normalized Post-Chug Oscillation Attenuation
Figure 3BA-1		Quencher Arrangement Elevation Perry Nuclear Power Plant
Figure 3BA-2		Typical Quencher Plan View F
Figure 3BA-3		Safety/Relief Valve Discharge Locations
Figure 3BA-4		Safety/Relief Valve Discharge Piping Arrangement
Figure 3BA-5		One Safety/Relief Valve Normalized Wall Pressure at 4.5°
Figure 3BA-6		Two Safety/Relief Valves Normalized Wall Pressure at 355.5°
Figure 3BA-7		Eight Safety/Relief Valves Normalized Wall Pressure at 346.5° Azimuth
Figure 3BA-8		Eight Safety/Relief Valves Reference Point 4 (Circumferential Distribution)
Figure 3BA-9		Eight Safety/Relief Valves Reference Point 10 (Circumferential Distribution)



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 3BA-10		Nineteen Safety/Relief Valves Normalized Wall Pressure At 130.5° Azimuth
Figure 3BA-11		Suppression Pool Chugging Normalized Mean Underpressure Attenuation
Figure 3BA-12		Nineteen Safety/Relief Valves Reference Point 10 (Circumferential Distribution)
Figure 3BI-1		Suppression Pool Temperature Profile for Large Breaks (DBA)
<b><u>Chapter 4</u></b>		
Figure 4.2-1		Control Rod Assembly Original Equipment Design
Figure 4.2-2		Control Rod Information Diagram Original Equipment Design
Figure 4.2-3		Control Rod Velocity Limiter
Figure 4.2-4		Control Rod Assembly Marathon Design
Figure 4.3-1		DELETED
Figure 4.3-2		DELETED
Figure 4.3-3		DELETED
Figure 4.3-4		Banked Position Withdrawal Sequence RPCS, Groups 1 Through 4, Sequence A (238-748)
Figure 4.3-5		Banked Position Withdrawal Sequence RPCS Groups 5 Thru 10, Sequence A (238-748)
Figure 4.3-6		Banked Position Withdrawal Sequence, RPCS Groups 1 thru 4, Sequence B (238-748)
Figure 4.3-7		Banked Position Withdrawal Sequence RPCS Groups 5 thru 10, Sequence B (238-748)
Figure 4.3-8		DELETED
Figure 4.3-9		Model for Neutron Transport Analysis of Vessel Fluence, Unit 1
Figure 4.3-9 (2)		DELETED
Figure 4.3-10		DELETED
Figure 4.3-11		DELETED
Figure 4.4-1		DELETED
Figure 4.4-2		Standard Power-Flow Operating Map (Typical)
Figure 4.4-3		DELETED
Figure 4.4-4		DELETED
Figure 4.4-5		DELETED
Figure 4.4-6		DELETED
Figure 4.4-7		DELETED
Figure 4.4-8		DELETED
Figure 4.4-9		DELETED
Figure 4.4-10		DELETED

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 4.4-11		DELETED
Figure 4.4-12		DELETED
Figure 4.4-13		DELETED
Figure 4.4-14		DELETED
Figure 4.4-15		DELETED
Figure 4.4-16		DELETED
Figure 4.4-17		DELETED
Figure 4.4-18		DELETED
Figure 4.4-19		DELETED
Figure 4.6-1		Control Rod to Control Rod Drive Coupling
Figure 4.6-2		Control Rod Drive Unit
Figure 4.6-3		Control Rod Drive Schematic
Figure 4.6-4		Control Rod Drive Unit (Cutaway)
Figure 4.6-5 (1)	D-302-871	Control Rod Drive Hydraulic System
Figure 4.6-5 (2)	D-302-872	Control Rod Drive Hydraulic System
Figure 4.6-6		DELETED
Figure 4.6-7		Control Rod Drive Hydraulic System
Figure 4.6-8		Control Rod Drive Hydraulic Control Unit
Figure 4.6-9		Control Rod Drive Housing Support
<b><u>Chapter 5</u></b>		
Figure 5.1-1		Rated Operating Conditions of the Boiling Water Reactor
Figure 5.1-2		Coolant Volumes of the Boiling Water Reactor
Figure 5.1-3 (1)	D-302-605	Nuclear Boiler System
Figure 5.1-3 (2)	D-302-606	Nuclear Boiler System
Figure 5.1-3 (3)	D-302-607	Nuclear Boiler System
Figure 5.1-3 (4)	D-302-608	Nuclear Boiler System
Figure 5.1-4 (1)		Preliminary Piping Study
Figure 5.1-4 (2)		Preliminary Piping Study
Figure 5.2-1		Typical Dual Safety/Relief Valve Capacity Characteristics Power-Actuated Relief Mode
Figure 5.2-2		Typical Dual Safety/Relief Valve Capacity Characteristics - Spring Action Safety Mode
Figure 5.2-3		Initial Cycle MSIV Closure with Flux Scram and Installed Safety/Relief Valve Capacity (Overpressurization Protection Analysis)
Figure 5.2-4		Scram Reactivity vs Time Characteristics

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 5.2-5		Control Rod Drive vs Time Characteristics
Figure 5.2-6a		Power Actuated & Safety Action Valve Lift Characteristics
Figure 5.2-6b		Reactor Vessel Pressure Following Transient Isolation Event
Figure 5.2-7		Peak Vessel Pressure Versus Safety/Relief Capacity
Figure 5.2-8		Initial Cycle Time Response for Pressurization
Figure 5.2-9		Safety/Relief Valve Schematic Elevation
Figure 5.2-10		Safety/Relief Valve and Steamline Schematic
Figure 5.2-11 (1)		Nuclear Boiler System
Figure 5.2-11 (2)		Nuclear Boiler System
Figure 5.2-12		Schematic of Safety Valve with Auxiliary Activating Device
Figure 5.2-13		Typical BWR Flow Diagram
Figure 5.2-14		Conductivity pH and Chloride Concentration of Aqueous Solution @ 77°F (25°C)
Figure 5.2-15		Calculated Leak Rate vs. Crack Length as a Function of Applied Hoop Stress
Figure 5.2-16		Axial Throughwall Crack Length Data Correlation
Figure 5.3-1		Surveillance Bracket
Figure 5.3-2 (1)		DELETED
Figure 5.3-2 (2)		DELETED
Figure 5.3-2 (3)		DELETED
Figure 5.3-2 (4)		DELETED
Figure 5.3-2 (5)		DELETED
Figure 5.3-2 (6)		DELETED
Figure 5.3-3		DELETED
Figure 5.3-4		DELETED
Figure 5.3-5 (1)		DELETED
Figure 5.3-5 (2)		DELETED
Figure 5.3-6		Reactor Vessel Cutaway Diagram
Figure 5.3-7		Reactor Vessel Nominal Water Level Trip and Alarm Elevations
Figure 5.4-1		Recirculation System Elevation and Isometric
Figure 5.4-2 (1)	D-302-601	Reactor Water Recirculation System
Figure 5.4-2 (2)	D-302-602	Reactor Water Recirculation System
Figure 5.4-2 (3)	D-302-603	Reactor Water Recirculation System
Figure 5.4-2 (4)	D-302-604	Reactor Water Recirculation System
Figure 5.4-3		Typical Recirculation Pump Head, NPSH, and Efficiency Curves

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 5.4-4		Typical Flow Control Valve Characteristic
Figure 5.4-5		Operating Principle of Jet Pump
Figure 5.4-6		Core Flooding Capability of Recirculation System
Figure 5.4-7		Main Steamline Flow Restrictor
Figure 5.4-8 (1)		DELETED
Figure 5.4-8		Main Steam Isolation Valve
Figure 5.4-9 (1)	D-302-631	Reactor Core Isolation Cooling System
Figure 5.4-9 (2)	D-302-632	Reactor Core Isolation Cooling System
Figure 5.4-10		Reactor Core Isolation Cooling System
Figure 5.4-11		Vessel Coolant Temperature vs. Time (Two Heat Exchangers Available)
Figure 5.4-12		Vessel Coolant Temperature vs. Time (One Heat Exchanger Available)
Figure 5.4-13 (1)	D-302-641	Residual Heat Removal System
Figure 5.4-13 (2)	D-302-642	Residual Heat Removal System
Figure 5.4-13 (3)	D-302-643	Residual Heat Removal System
Figure 5.4-14 (1)		Residual Heat Removal System
Figure 5.4-14 (2)		Residual Heat Removal System
Figure 5.4-14 (3)		Residual Heat Removal System
Figure 5.4-15		RHR Pump Characteristic Curves
Figure 5.4-16 (1)	D-302-671	Reactor Water Cleanup System
Figure 5.4-16 (2)	D-302-672	Reactor Water Cleanup System
Figure 5.4-17 (1)		Reactor Water Cleanup System
Figure 5.4-17 (2)		Reactor Water Cleanup System
Figure 5.4-18 (1)		Filter/Demineralizer System, Reactor Water Cleanup System
Figure 5.4-18 (2)		Filter/Demineralizer System, Reactor Water Cleanup System
Figure 5.4-19	D-302-675	Filter/Demineralizer System, Reactor Water Cleanup System
Figure 5.4-20	B-301-726	RCIC Turbine Exhaust Sparger Detail
Figure 5.4-21		RCIC Pump Performance Curves
<b><u>Chapter 6</u></b>		
Figure 6.2-1		Effective Blowdown Area for Recirculation Line Break
Figure 6.2-2		Short Term Pressure Response Following a Recirculation Line Break
Figure 6.2-3		Short Term Temperature Response Following a Recirculation Line Break
Figure 6.2-4		DELETED
Figure 6.2-5		Short Term Vent Flow Rates Following a Recirculation Line Break (Minimum ECCS)

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.2-6		Long Term Pressure Response Following a Main Steam Line Break (at 3729 MWt)
Figure 6.2-6a		Long Term Pressure Response Following a Main Steam Line Break (at 3833 MWt)
Figure 6.2-7		Long Term Drywell Temperature Response Following a Main Steam Line Break (at 3729 MWt)
Figure 6.2-7a		Long Term Drywell Temperature Response Following a Main Steam Line Break (at 3833 MWt)
Figure 6.2-8		Long Term Suppression Pool Temperature Response Following a Recirculation Line Break (at 3729 MWt)
Figure 6.2-8a		Long Term Suppression Pool Temperature Response Following a Recirculation Line Break (at 3833 MWt)
Figure 6.2-9		RHR Heat Removal Rate Following a Recirculation Line Break (at 3729 MWt)
Figure 6.2-10		Effective Blowdown Area for Main Steam Line Break
Figure 6.2-11		Short Term Pressure Response Following a Main Steam Line Break
Figure 6.2-12		Short Term Temperature Response Following a Main Steam Line Break
Figure 6.2-13		DELETED
Figure 6.2-14		Short Term Vent Flow Rates Following a Main Steam Line Break (Minimum ECCS)
Figure 6.2-15		Suppression Pool Temperature for DBA and for Blowdown During Hot Standby Operation (at 3729 MWt)
Figure 6.2-16		Short Term Containment Pressure Response Following an Intermediate Size Break (IBA = 0.68 ft <sup>2</sup> ) (at 3729 MWt)
Figure 6.2-17		Short Term Containment Temperature Response Following an Intermediate Size Break (IBA = 0.68 ft <sup>2</sup> ) (at 3729 MWt)
Figure 6.2-18		Schematic of the RHR Containment Cooling System Analytical Model (Min. ECCS)
Figure 6.2-19		Containment Vacuum Breaker Analysis with Initial Internal Surface Temp. 80°F
Figure 6.2-20		Containment Vacuum Breaker Analysis with Initial Internal Surface Temp. 90°F
Figure 6.2-21		Containment Pressure Versus Time - Small Line Break
Figure 6.2-22		Total Flow Through Two 24 - Inch Diameter CVR Lines Versus Total System Differential Pressure
Figure 6.2-23		Containment Pressure Versus Time Inadvertent Spray Operation - Normal Operation
Figure 6.2-24		Initial Relative Humidity Versus Initial Temperature for Inadvertent Spray Operation to Maintain Peak Vacuum ≤ 0.72 PSI

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.2-25		Containment Pressure Following a Small Break with Steam Bypass (With Containment Spray and Heat Sinks)
Figure 6.2-26		Reactor Vessel Head Ventilation System
Figure 6.2-27		RWCU Main Flow Piping Inside Containment and Drywell
Figure 6.2-28	E-018-001	Recirculation Suction Flow Diverter Arrangement
Figure 6.2-29		Reactor Annulus Nodalization - Recirculation Line Breaks
Figure 6.2-30		Reactor Annulus Nodalization Feedwater Line Break
Figure 6.2-31		Reactor Annulus Pressure Differentials (Nodes 1 - 24)
Figure 6.2-32		Reactor Annulus Pressure Differentials (Nodes 6 - 24)
Figure 6.2-33		Reactor Annulus Pressure Differentials (Nodes 11 - 24)
Figure 6.2-34		Reactor Annulus Pressure Differentials (Nodes 16 - 24)
Figure 6.2-35		Reactor Annulus Pressure Differentials (Nodes 20 - 24)
Figure 6.2-36		Reactor Annulus Pressure Differentials (Nodes 25 - 24)
Figure 6.2-37		Reactor Annulus Pressure Differentials (Nodes 26 - 24)
Figure 6.2-38		Reactor Annulus Pressure Differentials (Nodes 1 - 50)
Figure 6.2-39		Reactor Annulus Pressure Differentials (Nodes 8 - 50)
Figure 6.2-40		Reactor Annulus Pressure Differentials (Nodes 15 - 50)
Figure 6.2-41		Reactor Annulus Pressure Differentials (Nodes 22 - 50)
Figure 6.2-42		Reactor Annulus Pressure Differentials (Nodes 29 - 50)
Figure 6.2-43		Reactor Annulus Pressure Differentials (Nodes 30 - 50)
Figure 6.2-44		Reactor Annulus Pressure Differentials (Nodes 36 - 50)
Figure 6.2-45		Reactor Annulus Pressure Differentials (Nodes 34 - 50)
Figure 6.2-46		Drywell Head Pressure Differential
Figure 6.2-47		RWCU Heat Exchanger Pressure Differential
Figure 6.2-48		RWCU Filter Demineralizer Drain Valve Nest Room Pressure Differential
Figure 6.2-49		RWCU Filter Demineralizer Valve Room Pressure Differential
Figure 6.2-50		RWCU Filter Demineralizer Room Pressure Differential
Figure 6.2-51		Steam Tunnel Pressure Differential
Figure 6.2-51a		Drywell Bulkhead $\Delta P$ Analysis "COMPARE" Model

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.2-51b		Pressure Differential Across Bulkhead Plate Due to MSLB
Figure 6.2-51c		Pressure Differential Across Bulkhead Plate Due to MSLB
Figure 6.2-52		Vessel Blowdown Flow Rates Following a Recirculation Line Break (at 3729 MWt)
Figure 6.2-53		Vessel Blowdown Flow Rates Following a Main Steam Line Break (at 3729 MWt)
Figure 6.2-54		Sensible Energy in the Reactor Pressure Vessel and Internal Metals Following a Main Steam Line Break
Figure 6.2-55	D-304-646	Residual Heat Removal System Plan and Section - West
Figure 6.2-56	D-304-647	Residual Heat Removal System Plan and Section - East
Figure 6.2-57		Model Used In CONTEMPT
Figure 6.2-58		Annulus Pressure Following DBA LOCA Versus Time
Figure 6.2-59a		Annulus Volume Reduction Due to Containment Vessel Response to Post-LOCA Containment Pressure
Figure 6.2-59b		Annulus Volume Reduction Due to Containment Vessel Response to Post LOCA Containment Temperature
Figure 6.2-60 (1)	D-300-761	Containment & Drywell Isolation
Figure 6.2-60 (2)	D-300-762	Containment and Drywell Isolation
Figure 6.2-60 (3)	D-300-763	Containment & Drywell Isolation
Figure 6.2-60 (4)	D-300-764	Containment and Drywell Isolation
Figure 6.2-61		Hydrogen Concentration Versus Time
Figure 6.2-62	D-302-831	Combustible Gas Control System
Figure 6.2-63		Hydrogen Recombiner System
Figure 6.2-64		Integrated Hydrogen Production Within Containment and Drywell Due to Radiolysis
Figure 6.2-65	D-302-811	Containment Integrated Leak Rate Testing System
Figure 6.2-66		Details of Personnel Lock for Periodic Testing
Figure 6.2-67	D-302-686	Suppression Pool Makeup System
Figure 6.2-68		LOCA Signal Used in Initiation Logic of Suppression Pool Makeup System
Figure 6.2-69		DELETED
Figure 6.2-70		Right Hand Coordinate System Used for Bio-Wall Annulus Pressurization Loadings
Figure 6.2-71		Force Moment Arms on Bio-Wall For Annulus Pressurization Due to Feedwater Line Break
Figure 6.2-72		Force Moment Arms on Bio-Wall For Annulus Pressurization Due to Recirc Discharge and Suction Line Breaks
Figure 6.2-73		Resultant Bio-Wall Forces and Moments Due to Annulus Pressurization

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.2-74		Feedwater Line Break Force X1 Bio-Shield Wall
Figure 6.2-75		Feedwater Line Breaks Force X3 Bio-Shield Wall
Figure 6.2-76		Recirculation Suction Line Break Force X1 Bio-Shield Wall
Figure 6.2-77		Recirculation Discharge Line Break Force X3 Bio-Shield Wall
Figure 6.2-78		Feedwater Line Break Moment X1 Bio-Shield Wall
Figure 6.2-79		Feedwater Line Break Moment X3 Bio-Shield Wall
Figure 6.2-80		Recirculation Suction Line Break Moment At X3 Bio-Shield Wall
Figure 6.2-81		Recirculation Discharge Line Break Moment At X1 Bio-Shield Wall
Figure 6.2-82 (1)		Essential Equipment Location Plan Elev. 599'-9"
Figure 6.2-82 (2)		Essential Equipment Location Plan Elev. 620'-6"
Figure 6.2-82 (3)		Essential Equipment Location Plan Elev. 642'-0"
Figure 6.2-82 (4)		Essential Equipment Location Plan Elev. 664'-7"
Figure 6.2-82 (5)		Essential Equipment Location Plan Elev. 689'-6"
Figure 6.2-83	D-302-574	ECCS Suction Strainer
Figure 6.2-84		Integrated Hydrogen Production Within Containment and Drywell Due to Corrosion of Zinc (3833 MWC)
Figure 6.3-1		High Pressure Core Spray System Process Diagram
Figure 6.3-2		Low Pressure Core Spray System Process Diagram
Figure 6.3-3 (1)		Residual Heat Removal System Process Diagram
Figure 6.3-3 (2)		Residual Heat Removal System Process Diagram
Figure 6.3-3 (3)		Residual Heat Removal System Process Diagram
Figure 6.3-4		Head Versus High Pressure Core Spray Flow Used in LOCA Analysis
Figure 6.3-5		Head Versus Low Pressure Core Spray Flow Used in LOCA Analysis
Figure 6.3-6		Head Versus Low Pressure Coolant Injection Flow Used in LOCA Analysis for 1 Pump Only
Figure 6.3-7	D-302-701	High Pressure Core Spray System
Figure 6.3-8	D-302-705	Low Pressure Core Spray System
Figure 6.3-9		Limiting Peak Cladding Temperature Versus Break Area
Figure 6.3-10		Normalized Power Versus Time
Figure 6.3-11 (1)		Water Level in Hot and Average Channels - DBA Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.3-11 (2)		Reactor Vessel Pressure - DBA Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-11 (3)		DELETED
Figure 6.3-11 (4)		DELETED
Figure 6.3-11 (5)		ECCS Flow - DBA Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-11 (6)		Peak Cladding Temperature (GE11) - DBA Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-11 (7)		Heat Transfer Coefficient (GE11) - DBA Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-11 (8)		DELETED
Figure 6.3-11 (9)		DELETED
Figure 6.3-11 (10)		Core Average Inlet Flow - DBA Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-11 (11)		Minimum Critical Power Ratio - DBA Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-12 (1)		Water Level in Hot and Average Channel - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-12 (2)		Reactor Vessel Pressure - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-12 (3)		DELETED
Figure 6.3-12 (4)		DELETED
Figure 6.3-12 (5)		ECCS Flow - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-12 (6)		Peak Cladding Temperature (GE11) - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-12 (7)		Heat Transfer Coefficient (GE11) - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-13 (1)		Water Level in Hot and Average Channel - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-13 (2)		Reactor Vessel Pressure - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-13 (3)		DELETED
Figure 6.3-13 (4)		DELETED
Figure 6.3-13 (5)		ECCS Flow - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.3-13 (6)		Peak Cladding Temperature (GE11) - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-13 (7)		Heat Transfer Coefficient (GE11) - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Nominal) LPCS + 3LPCI + ADS Available
Figure 6.3-14 (1)		Water Level in Hot and Average Channel - DBA Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-14 (2)		Reactor Vessel Pressure - DBA Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-14 (3)		DELETED
Figure 6.3-14 (4)		DELETED
Figure 6.3-14 (5)		ECCS Flow - DBA Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-14 (6)		Peak Cladding Temperature (GE11) - DBA Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-14 (7)		Heat Transfer Coefficient (GE11) - DBA Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-14 (8)		DELETED
Figure 6.3-14 (9)		DELETED
Figure 6.3-14 (10)		Core Average Inlet Flow - DBA Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-14 (11)		Minimum Critical Power Ratio - DBA Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-15 (1)		Water Level in Hot and Average Channel - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-15 (2)		Reactor Vessel Pressure - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-15 (3)		DELETED
Figure 6.3-15 (4)		DELETED
Figure 6.3-15 (5)		ECCS Flow - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-15 (6)		Peak Cladding Temperature (GE11) - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-15 (7)		Heat Transfer Coefficient (GE11) - 1.0 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-16 (1)		Water Level in Hot and Average Channel - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.3-16 (2)		Reactor Vessel Pressure - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-16 (3)		DELETED
Figure 6.3-16 (4)		DELETED
Figure 6.3-16 (5)		ECCS Flow - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-16 (6)		Peak Cladding Temperature (GE11) - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-16 (7)		Heat Transfer Coefficient (GE11) - 0.1 ft <sup>2</sup> Suction - HPCS D/G Failure (Appendix K) LPCS + 3LPCI + ADS Available
Figure 6.3-17		DELETED
Figure 6.3-18		DELETED
Figure 6.3-19		DELETED
Figure 6.3-20		DELETED
Figure 6.3-21		DELETED
Figure 6.3-22		DELETED
Figure 6.3-23		DELETED
Figure 6.3-24		DELETED
Figure 6.3-25		DELETED
Figure 6.3-26		DELETED
Figure 6.3-27		DELETED
Figure 6.3-28		DELETED
Figure 6.3-29		DELETED
Figure 6.3-30		DELETED
Figure 6.3-31		DELETED
Figure 6.3-32		DELETED
Figure 6.3-33		DELETED
Figure 6.3-34		DELETED
Figure 6.3-35		DELETED
Figure 6.3-36		DELETED
Figure 6.3-37		DELETED
Figure 6.3-38		DELETED
Figure 6.3-39		DELETED
Figure 6.3-40		DELETED
Figure 6.3-41		DELETED
Figure 6.3-42		DELETED

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.3-43		DELETED
Figure 6.3-44		DELETED
Figure 6.3-45		DELETED
Figure 6.3-46		DELETED
Figure 6.3-47		DELETED
Figure 6.3-48		DELETED
Figure 6.3-49		DELETED
Figure 6.3-50		DELETED
Figure 6.3-51		DELETED
Figure 6.3-52		DELETED
Figure 6.3-53		DELETED
Figure 6.3-54		DELETED
Figure 6.3-55		DELETED
Figure 6.3-56		DELETED
Figure 6.3-57		DELETED
Figure 6.3-58		DELETED
Figure 6.3-59		DELETED
Figure 6.3-60		DELETED
Figure 6.3-61		DELETED
Figure 6.3-62		DELETED
Figure 6.3-63		DELETED
Figure 6.3-64		DELETED
Figure 6.3-65		DELETED
Figure 6.3-66		DELETED
Figure 6.3-67		DELETED
Figure 6.3-68		DELETED
Figure 6.3-69		DELETED
Figure 6.3-70		DELETED
Figure 6.3-71		DELETED
Figure 6.3-72		DELETED
Figure 6.3-73		DELETED
Figure 6.3-74		Jockey Pump Performance Curve
Figure 6.3-75		Pump Curves for HPCS Pump
Figure 6.3-76		Pump Curves for LPCS Pump
Figure 6.3-77		Pump Curves for RHR Pump
Figure 6.4-1 (1)	D-912-610	Control Room HVAC and Emergency Recirculation Systems

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 6.4-1 (2)	D-912-611	Notes and Operating Data for Figure 6.4-1 and Figure 9.4-1
Figure 6.4-2	D-105-015	Control Room Envelope
Figure 6.4-3		DELETED
Figure 6.4-4 (1)		DELETED
Figure 6.4-4 (2)		DELETED
Figure 6.5-1	D-912-605	Annulus Exhaust Gas Treatment System
Figure 6.5-2		Annulus Exhaust Gas Treatment System Distribution Ductwork
Figure 6.5-2 (2)		DELETED
Figure 6.5-3	D-302-661	Containment Spray System
Figure 6.5-4		DELETED
Figure 6.5-5		DELETED
Figure 6.7-1 (1)		DELETED
Figure 6.7-1 (2)		DELETED
Figure 6.7-2 (1)		DELETED
Figure 6.7-2 (2)		DELETED
Figure 6.7-2 (3)		DELETED
Figure 6.7-3		DELETED
Figure 6.7-4		DELETED
Figure 6.8-1	D-302-271	Safety Related Instrument Air System
Figure 6.9-1	D-302-971	Feedwater Leakage Control System
Figure 6.9-1 (2)		DELETED
<b><u>Chapter 7</u></b>		
Figure 7.2-1 (1)	D-808-302 (1)	Reactor Protection System
Figure 7.2-1 (2)	D-808-302 (2)	Reactor Protection System
Figure 7.2-1 (3)	D-808-302 (3)	Reactor Protection System
Figure 7.2-1 (4)	D-808-302 (4)	Reactor Protection System Instrumentation and Electrical Diagram
Figure 7.2-2		DELETED
Figure 7.3-1 (1)	D-808-311	High Pressure Core Spray System
Figure 7.3-1 (2)	D-808-311	High Pressure Core Spray System
Figure 7.3-1 (3)	D-808-311	High Pressure Core Spray System
Figure 7.3-2		DELETED
Figure 7.3-3 (1)	D-808-303 (1)	Nuclear Boiler System
Figure 7.3-3 (2)	D-808-303 (2)	Nuclear Boiler System
Figure 7.3-3 (3)	D-808-303 (3)	Nuclear Boiler System
Figure 7.3-3 (4)	D-808-303 (4)	Nuclear Boiler System

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 7.3-3 (5)	D-808-303(5)	Nuclear Boiler System
Figure 7.3-3 (6)	D-808-303(6)	Nuclear Boiler System
Figure 7.3-3 (7)	D-808-303(7)	Nuclear Boiler System
Figure 7.3-4 (1)	D-808-310(1)	Low Pressure Core Spray System
Figure 7.3-4 (2)	D-808-310(2)	Low Pressure Core Spray System
Figure 7.3-5 (1)	D-808-309(1)	Residual Heat Removal System
Figure 7.3-5 (2)	D-808-309(2)	Residual Heat Removal System
Figure 7.3-5 (3)	D-808-309(3)	Residual Heat Removal System
Figure 7.3-5 (4)	D-808-309(4)	Residual Heat Removal System
Figure 7.3-5 (5)	D-808-309(5)	Residual Heat Removal System
Figure 7.3-6	D-808-315	Reactor Water Cleanup System
Figure 7.3-7 (1)		DELETED
Figure 7.3-7 (2)		DELETED
Figure 7.3-7 (3)		DELETED
Figure 7.3-7 (4)		DELETED
Figure 7.3-8	D-302-832	Hydrogen Analysis System
Figure 7.3-9		Suppression Pool Makeup System Logic Diagram
Figure 7.3-10	D-912-606	Drywell and Containment Vacuum Relief System
Figure 7.3-11		Containment Vacuum Relief System Control Logic
Figure 7.3-12		DELETED
Figure 7.4-1 (1)	D-808-314(1)	Reactor Core Isolation Cooling System
Figure 7.4-1 (2)	D-808-314(2)	Reactor Core Isolation Cooling System
Figure 7.4-1 (3)	D-808-314(3)	Reactor Core Isolation Cooling System
Figure 7.4-1 (4)	D-808-314(4)	Reactor Core Isolation Cooling System
Figure 7.4-1 (5)	D-808-314(5)	Reactor Core Isolation Cooling System
Figure 7.4-2 (1)	D-808-306(1)	Standby Liquid Control System
Figure 7.4-2 (2)	D-808-306	Standby Liquid Control System
Figure 7.6-1 (1)	D-302-961	Leak Detection System
Figure 7.6-1 (2)	D-302-962	Leak Detection System
Figure 7.6-1 (3)	D-302-963	Leak Detection System
Figure 7.6-1 (4)	D-302-964	Leak Detection System
Figure 7.6-2 (1)	D-808-307(1)	Neutron Monitoring System
Figure 7.6-2 (2)	D-808-307(2)	Neutron Monitoring System
Figure 7.6-2 (3)	D-808-307(3)	Neutron Monitoring System
Figure 7.6-2 (4)	D-808-307(4)	Neutron Monitoring System
Figure 7.6-2 (5)	D-808-307(5)	Neutron Monitoring System

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 7.6-2 (6)	D-808-307(6)	Neutron Monitoring System
Figure 7.6-2 (7)	D-808-307(7)	Neutron Monitoring System
Figure 7.6-3		Ranges of Neutron Monitoring System
Figure 7.6-4		SRM/IRM Neutron Monitoring Unit
Figure 7.6-5 (1)		Neutron Monitoring System Arrangement
Figure 7.6-5 (2)		Neutron Monitoring System Arrangement
Figure 7.6-5 (3)		Neutron Monitoring System Arrangement
Figure 7.6-5 (4)		Neutron Monitoring System Arrangement
Figure 7.6-5 (5)		Neutron Monitoring System Arrangement
Figure 7.6-5 (6)		Neutron Monitoring System Arrangement
Figure 7.6-5 (7)		Neutron Monitoring System Arrangement
Figure 7.6-5 (8)		Neutron Monitoring System Arrangement
Figure 7.6-6		Power Range Monitor Director Assembly Location
Figure 7.6-7	D-302-881	Containment Atmosphere Monitoring System
Figure 7.6-8		RRCS Initiation Logic
Figure 7.6-9		Perry RRCS ARI Valves
Figure 7.6-10		RRCS Separation Block Diagram
Figure 7.7-1 (1)	D-808-305(1)	Control Rod Drive Hydraulic System
Figure 7.7-1 (2)	D-808-305(2)	Control Rod Drive Hydraulic System
Figure 7.7-1 (3)	D-808-305(3)	Control Rod Drive Hydraulic System
Figure 7.7-1 (4)	D-808-305(4)	Control Rod Drive Hydraulic System
Figure 7.7-1 (5)	D-808-305(5)	Control Rod Drive Hydraulic System
Figure 7.7-1 (6)	D-808-305(6)	Control Rod Drive Hydraulic System
Figure 7.7-1 (7)	D-808-305(7)	Control Rod Drive Hydraulic System
Figure 7.7-2		Rod Control and Information System Logic Diagram
Figure 7.7-3		Rod Control and Information System Self-Test Provisions
Figure 7.7-4 (1)	D-808-304(1)	Reactor Recirculation System
Figure 7.7-4 (2)	D-808-304(2)	Reactor Recirculation System
Figure 7.7-4 (3)	D-808-304(3)	Reactor Recirculation System
Figure 7.7-4 (4)	D-808-304(4)	Reactor Recirculation System
Figure 7.7-4 (5)	D-808-304(5)	Reactor Recirculation System
Figure 7.7-4 (6)	D-808-304(6)	Reactor Recirculation System
Figure 7.7-4 (7)	D-808-304(7)	Reactor Recirculation System
Figure 7.7-5 (1)		Recirculation Flow Control Illustrations
Figure 7.7-5 (2)	B-208-015 (200)	Recirculation Flow Control Illustrations

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 7.7-5 (3)	B-208-015 (205)	Recirculation Flow Control Illustrations
Figure 7.7-5 (4)	B-208-015 (201)	Recirculation Flow Control Illustrations
Figure 7.7-5 (5)	B-208-015 (202)	Recirculation Flow Control Illustrations
Figure 7.7-5 (6)	B-208-015 (203)	Recirculation Flow Control Illustrations
Figure 7.7-6 (1)	B-208-025 (A200)	Feedwater Control System Instrumentation and Electrical Diagram
Figure 7.7-6 (2)	B-208-025 (A201)	Feedwater Control System Instrumentation and Electrical Diagram
Figure 7.7-7 (1)		Pressure Regulator/Turbine Control System Diagram
Figure 7.7-7 (2)		Pressure Regulator/Turbine Control System Diagram
Figure 7.7-8		Drywell Vacuum Relief System Control Logic for Motor Operated Isolation Valves
<b><u>Chapter 8</u></b>		
Figure 8.1-1		FirstEnergy Corporation Transmission System
Figure 8.1-2		DELETED
Figure 8.2-1		Transmission Lines Layout
Figure 8.2-2		345 kV Transmission Substation Main Connection Diagram
Figure 8.2-3		Preferred Power System Layout
Figure 8.3-1	D-206-010	Main One Line Diagram, 13.8 kV and 4.16 kV
Figure 8.3-2	D-206-020	Main One Line Diagram, 480V and Under
Figure 8.3-3	E-001-033	Control Complex and Diesel Generator Building Equipment Layout Above Elev. 620'-6", Units 1 and 2
Figure 8.3-4		Control Complex Equipment Layout Above Elev. 628'-6", Units 1 and 2
Figure 8.3-5	D-015-002	Emergency Service Water Pumphouse Equipment Layout Above Elev. 586'-6"
Figure 8.3-6 (1)	D-808-317(1)	Diesel Logic Diagrams, Division 1
Figure 8.3-6 (2)	D-808-317(2)	Diesel Logic Diagrams, Division 2
Figure 8.3-7	D-206-018	One Line Meter and Relay Diagram, Class 1E, 4.16 kV, Division 3
Figure 8.3-8	D-808-311(4)	HPCS Diesel, Diesel Breakers, Alternate Preferred Supply Breakers Logic Diagram, (Division 3)
Figure 8.3-9	D-808-317(3)	Diesel Breaker, Preferred, Alternate Preferred and Stub Bus Logic Diagram, Division 1, (Division 2)
Figure 8.3-10	D-206-017	One Line Meter and Relay Diagram, Class 1E, 4.16 kV, Divisions 1 and 2
Figure 8.3-11	D-206-019	One Line Meter and Relay Diagram, Recirculation Pump Motor Feeders, Unit 1
Figure 8.3-12	D-206-053	One Line Diagram, Class 1E, 120 Volt AC, Division 1



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 8.3-13	D-206-054	One Line Diagram, Class 1E, 120 Volt AC, Divisions 2 and 3
Figure 8.3-14		DELETED
Figure 8.3-15		DELETED
Figure 8.3-16		DELETED
Figure 8.3-17		DELETED
Figure 8.3-18	D-226-501 (Partial)	DELETED
Figure 8.3-19	D-215-667 (501)	Containment Vessel Penetration Locations Protective Enclosure Spatial Layout Viewed from Inside Unit 1 Containment Vessel
Figure 8.3-20		DELETED
Figure 8.3-21	D-206-051	One Line Meter and Relay Diagram, Class 1E, 125 Volt DC, Division 1 & 2
Figure 8.3-22	D-206-050	One Line Meter and Relay Diagram, Class 1E, 125 Volt DC, Division 3
Figure 8.3-23		Block Diagram - RPS Protective Circuit Showing EPA Assemblies
<b><u>Chapter 9</u></b>		
Figure 9.1-1		New Fuel Vault
Figure 9.1-2		Fuel Storage Racks
Figure 9.1-3		Eccentric Fuel Positioning
Figure 9.1-4		Fuel Stored in Control Rod Racks
Figure 9.1-5		Abnormal Fuel Storage Conditions
Figure 9.1-6		Modular Isometric View
Figure 9.1-7		7x10+5 Multiple Purpose Cavities BWR Spent Fuel Rack
Figure 9.1-8		Detail Sections
Figure 9.1-9 (1)	D-302-651	Fuel Pool Cooling and Cleanup System
Figure 9.1-9 (2)	D-302-653	Fuel Pool Filter Demineralizer System
Figure 9.1-9 (3)	D-302-654	Fuel Pool Transfer Tank Drain Tank System
Figure 9.1-9 (4)	D-302-655	Fuel Pool Storage and Transfer System
Figure 9.1-10		Fuel Preparation Machine Shown Installed in Facsimile Fuel Pool
Figure 9.1-11		New Fuel Inspection Stand
Figure 9.1-12		Channel Bolt Wrench
Figure 9.1-13		Channel Handling Tool
Figure 9.1-14		Fuel Pool Sipper - Historical
Figure 9.1-15		Channel Gauging Fixture
Figure 9.1-16		General Purpose Grapple
Figure 9.1-17		DELETED
Figure 9.1-18		Channel Handling Boom

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 9.1-19		Transfer Tube
Figure 9.1-20		DELETED
Figure 9.1-21		Drywell Head Removal Sequence
Figure 9.1-22		Reactor Vessel Head Removal Sequence
Figure 9.1-23		Steam Dryer Removal Sequence
Figure 9.1-24		Steam Separator Removal Sequence
Figure 9.1-25		Fuel Bundle Transfer Sequence
Figure 9.1-26	E-015-045	Fuel Handling Facilities, Laydown Study
Figure 9.1-27	E-015-044	Reactor Refueling Floor Laydown Study
Figure 9.2-1 (1)	D-302-791	Emergency Service Water System
Figure 9.2-1 (2)	D-302-792	Emergency Service Water System
Figure 9.2-1 (3)	D-302-793	Emergency Service Water Operating Data
Figure 9.2-2 (1)	D-304-791	Emergency Service Water Plan, Yard Area, Units 1 & 2
Figure 9.2-2 (2)	E-304-792	Emergency Service Water Profile & Sections, Yard Area, Units 1 & 2
Figure 9.2-3 (1)	D-302-621	Emergency Closed Cooling System
Figure 9.2-3 (2)	D-302-622	Emergency Closed Cooling System
Figure 9.2-3 (3)	D-302-623	Emergency Closed Cooling System
Figure 9.2-3 (4)	D-352-621	Emergency Closed Cooling System
Figure 9.2-3 (5)		DELETED
Figure 9.2-4 (1)	D-302-611	Nuclear Closed Cooling System
Figure 9.2-4 (2)	D-302-612	Nuclear Closed Cooling System
Figure 9.2-4 (3)	D-352-612	Nuclear Closed Cooling System
Figure 9.2-4 (4)	D-302-613	Nuclear Closed Cooling System
Figure 9.2-4 (5)	D-352-613	DELETED
Figure 9.2-5	D-302-713	Mixed Bed Demineralizer and Distribution System
Figure 9.2-6	D-302-711	Two Bed Demineralizer & Distribution System Storage & North Zone Distribution
Figure 9.2-7	D-302-172	Two Bed Demineralizer and Distribution System Regeneration Facilities
Figure 9.2-8	D-302-171	Two Bed Demineralizer and Distribution System Cation and Anion Exchangers
Figure 9.2-9 (1)	D-302-161	Makeup Water System Pretreatment
Figure 9.2-9 (2)	D-302-162	Makeup Water System Pretreatment
Figure 9.2-10 (1)		DELETED
Figure 9.2-10	D-300-060(2)	Ultimate Heat Sink
Figure 9.2-11		Heat Rate Input to Ultimate Heat Sink
Figure 9.2-12		Total Integrated Heat Input to Ultimate Heat Sink

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 9.2-13	D-302-102	Condensate Transfer and Storage System
Figure 9.2-14	D-302-212	Service Water System Unit 1
Figure 9.2-14 (2)		DELETED
Figure 9.2-15 (1)	D-302-221	Turbine Building Closed Cooling System
Figure 9.2-15 (2)	D-302-222	Turbine Building Closed Cooling System
Figure 9.2-15 (3)	D-302-223	Turbine Building Closed Cooling System
Figure 9.2-16	D-302-246	Alternate Decay Heat Removal System
Figure 9.2-17		DELETED
Figure 9.3-1 (1)	D-302-241	Service and Instrument Air Supply
Figure 9.3-1 (2)	D-352-241	Service and Instrument Air Supply
Figure 9.3-2		DELETED
Figure 9.3-3		DELETED
Figure 9.3-4		DELETED
Figure 9.3-5	D-911-005	Lube Oil Area and Turbine Location Drains
Figure 9.3-6	D-911-021	Turbine Power Complex, Turbine Building, Heater Bay and Offgas Drains
Figure 9.3-7	D-911-022	Turbine Power Complex Drains
Figure 9.3-8	D-911-023	Turbine Power Complex Drains
Figure 9.3-9	D-911-024	Heater Bay Building Drains
Figure 9.3-10	D-911-601	Reactor Building Drains
Figure 9.3-11	D-911-617	Auxiliary Building Dirty Radwaste Drains
Figure 9.3-12	D-911-627	Intermediate Building Clean Radwaste Drains
Figure 9.3-13	D-911-628	Intermediate Building Dirty Radwaste Floor and Equipment Drains, Units 1 & 2
Figure 9.3-14	D-911-629	Intermediate Building Dirty Radwaste Floor and Equipment Drains, Units 1 & 2
Figure 9.3-15	D-911-651	Radwaste Building Dirty Radwaste Floor and Equipment Drains
Figure 9.3-16	D-911-652	Radwaste Building Clean and Dirty Equipment Drains
Figure 9.3-17	D-911-671	Control Complex Dirty Radwaste Floor and Equipment Drain
Figure 9.3-18	D-911-691	Diesel Generator Building Drain
Figure 9.3-19 (1)	D-302-691	Standby Liquid Control System
Figure 9.3-19 (2)	D-302-692	Standby Liquid Control System
Figure 9.3-20		Solubility Isotherms in the Standby Liquid Control System
Figure 9.3-21	D-302-180	Turbine Plant Sampling System
Figure 9.3-22	D-302-181	Turbine Plant Sampling System
Figure 9.3-23	D-302-182	Turbine Plant Sampling System
Figure 9.3-24	D-302-183	Turbine Plant Sampling System

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 9.3-25	D-302-184	Turbine Plant Sampling System
Figure 9.3-26	D-302-185	Turbine Plant Sampling System
Figure 9.3-26a	D-302-186	Turbine Plant Sampling System
Figure 9.3-27	D-302-771	Nuclear Sampling System
Figure 9.3-28	D-302-772	Reactor Plant Sampling
Figure 9.3-29	D-302-242	Service Air Distribution
Figure 9.3-30		DELETED
Figure 9.3-31 (1)	D-302-243	Instrument Air
Figure 9.3-31 (2)	D-302-244	Parallel Instrument Air Distribution System
Figure 9.3-32		DELETED
Figure 9.3-33	D-302-431	Post Accident Sampling System
Figure 9.3-34	D-302-121	Main Reheat, Extraction and Miscellaneous Drains
Figure 9.3-35	D-302-077	Hydrogen Water Chemistry
Figure 9.4-1 (1)	D-912-609	MCC Switchgear and Miscellaneous Equipment Areas HVAC System
Figure 9.4-1 (2)	D-912-611	Notes and Operating Data for Figure 6.4-1 and Figure 9.4-1
Figure 9.4-2	D-912-608	Controlled Access and Miscellaneous Equipment Areas HVAC System
Figure 9.4-3	D-912-607	Computer Room HVAC System
Figure 9.4-4	D-912-617	Fuel Handling Ventilation System
Figure 9.4-5	D-912-615	Auxiliary Building Ventilation System
Figure 9.4-6	D-912-625	Steam Tunnel Cooling System
Figure 9.4-7	D-912-612	Radwaste Building Ventilation System
Figure 9.4-8	D-912-614	Turbine Building Ventilation System
Figure 9.4-9	D-912-621	Heater Bay Ventilation System
Figure 9.4-10	D-912-622	Offgas Building Exhaust
Figure 9.4-11	D-912-630	Emergency Service Water Pumphouse Ventilation System
Figure 9.4-12	D-912-623	Emergency Closed Cooling Pump Area Cooling System
Figure 9.4-13	D-912-616	ECCS Pump Rooms Cooling Systems
Figure 9.4-14	D-912-619	Diesel Generator Building Ventilation System
Figure 9.4-15	D-912-603	Drywell Cooling System
Figure 9.4-16	D-912-602	Containment Vessel Cooling System
Figure 9.4-17	D-912-604	Containment Vessel and Drywell Purge
Figure 9.4-18	D-912-613	Intermediate Building Ventilation System
Figure 9.4-19	D-912-618	Turbine Power Complex Ventilation System
Figure 9.4-20 (1)	D-913-001	Control Complex Chilled Water

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 9.4-20 (2)	D-913-002	Control Complex Chilled Water
Figure 9.4-21 (1)	D-913-003	Turbine Building Chilled Water
Figure 9.4-21 (2)	D-913-004	Turbine Building Chilled Water
Figure 9.4-22 (1)	D-913-007	Containment Vessel Chilled Water System
Figure 9.4-22 (2)	D-913-008	Containment Vessel Chilled Water System
Figure 9.4-23 (1)	D-913-014	Hot Water Heating System, Heater Bay and Auxiliary Boiler Building, Unit 1
Figure 9.4-23 (2)	D-913-015	Hot Water Heating System, Turbine Building, Water Treatment Building & Turbine Lube Oil System, Unit 1
Figure 9.4-23 (3)	D-913-016	Hot Water Heating System, Turbine Power Complex, Auxiliary Building and Off-Gas Building, Unit 1
Figure 9.4-24 (1)	D-912-624	Offgas Charcoal Vault Refrigeration System, Chilled Liquid Diagram
Figure 9.4-24 (2)	D-913-009	Offgas Charcoal Vault Refrigeration System, Chilled Liquid Diagram
Figure 9.4-24 (3)	D-913-010	Offgas Charcoal Vault Refrigeration System, Brine Cooling Package Boiler Diagram
Figure 9.4-24 (4)	D-913-011	Offgas Charcoal Vault Refrigeration System, Brine Cooling Package Boiler Diagram
Figure 9.4-24 (5)	D-913-012	Offgas Charcoal Vault Refrigeration System, Brine Cooling Package Boiler Diagram
Figure 9.4-25	D-912-633	Smoke Venting System, Miscellaneous Electrical Areas
Figure 9.4-26		DELETED
Figure 9.4-27	D-912-629	Turbine Lube Oil Storage Area, Diesel Driven Fire Pump Area, Service Water Pumphouse, Water Treatment Building, and Circulating Water Pumphouse and Auxiliary Boiler Building Ventilation Systems
Figure 9.4-28	D-912-634	Radwaste Control Room HVAC System
Figure 9.4-29	D-913-018	Control and Computer Rooms Humidification System
Figure 9.5-1	D-914-001	Fire Service Water Yard Area
Figure 9.5-2	D-914-002	Fire Service Water (Unit 1, Turbine Area)
Figure 9.5-3	D-914-003	Fire Service Water (Nuclear Plant)
Figure 9.5-4	D-914-004	Fire Protection Water Miscellaneous Services
Figure 9.5-5	D-914-005	Carbon Dioxide System
Figure 9.5-6 (1)	D-218-106	DELETED
Figure 9.5-6 (2)	D-218-111	DELETED
Figure 9.5-7		Exclusion Area, Boundary Layout
Figure 9.5-8	D-302-352	Standby Diesel Generator Fuel Oil System
Figure 9.5-9	D-302-354	Standby Diesel Generator, Jacket Water
Figure 9.5-10	D-302-351	Piping System Diagram, R-44, Standby Diesel Generator Starting Air

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 9.5-11	D-302-353	Standby Diesel Generator, Lube Oil
Figure 9.5-12	D-302-355	Standby Diesel Generator Exhaust, Intake and Crankcase
Figure 9.5-13		G.E. Intake Air System 2600 kW Generator Set
Figure 9.5-14		G.E. Exhaust Air System 2600 kW Generator Set
Figure 9.5-15	D-302-356	HPCS Diesel Generator Fuel Oil System
Figure 9.5-16	D-302-360	Division 3 Diesel Jacket Water Cooling System Diagram
Figure 9.5-17	D-302-051	Auxiliary Steam
Figure 9.5-18	D-302-052	Auxiliary Steam
Figure 9.5-19	D-302-053	Auxiliary Steam
Figure 9.5-20	D-302-054	Auxiliary Steam
Figure 9.5-21 (1)	D-304-352	Diesel Generator Fuel Oil Piping - Yard Area
Figure 9.5-21 (2)	D-304-353	Diesel Generator Fuel Oil Piping - Yard Area
Figure 9.5-22 (1)	E-744-180	Plant Backfill and Excavation Showing Diesel Generator Piping and Fuel Oil Tanks
Figure 9.5-22 (2)	E-744-182	Plant Backfill and Excavation Showing Diesel Generator Piping and Fuel Oil Tanks
Figure 9.5-22 (3)	E-744-188	Plant Backfill and Excavation Showing Diesel Generator Piping and Fuel Oil Tanks
Figure 9.5-23		DELETED
Figure 9.5-24	D-302-358	Division 3 Diesel Starting Air/ Air Dryer Diagram
Figure 9.5-25	D-302-359	Division 3 Diesel Lube Oil System Diagram
Figure 9.5-26		Functional Block Diagram of Division 3 HPCS Diesel Generator
Figure 9A-1	E-023-001	Fire Protection Evaluation - Plot Plan
Figure 9A-2	E-023-002	Fire Protection Evaluation - Unit 1 Auxiliary and Reactor Buildings Plan - Elev. 574'-10"
Figure 9A-3	E-023-003	Fire Protection Evaluation - Unit 1 Intermediate and Fuel Handling Buildings Plan - Elev. 574'-10"
Figure 9A-4		DELETED
Figure 9A-5	E-023-005	Fire Protection Evaluation - Unit 1 Auxiliary and Reactor Buildings Plan - Elev. 599'-0" and 599'-9"
Figure 9A-6	E-023-006	Fire Protection Evaluation - Units 1 and 2 Control Complex Plan - Elev. 574'-10"
Figure 9A-7	E-023-007	Fire Protection Evaluation - Units 1 and 2 Control Complex Plan - Elev. 599'-0"
Figure 9A-8	E-023-008	Fire Protection Evaluation - Unit 1 Intermediate and Fuel Handling Buildings Plan - Elev. 599'-0"
Figure 9A-9		DELETED

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 9A-10	E-023-010	Fire Protection Evaluation - Unit 1 Auxiliary and Reactor Buildings Plan - Elev. 620'-6"
Figure 9A-11	E-023-011	Fire Protection Evaluation - Units 1 and 2 Control Complex and Diesel Generator Building Plan - Elev. 620'-6"
Figure 9A-12	E-023-012	Fire Protection Evaluation - Unit 1 Intermediate and Fuel Handling Buildings Plan - Elev. 620'-6"
Figure 9A-13		DELETED
Figure 9A-14	E-023-014	Fire Protection Evaluation - Unit 1 Reactor Building and Auxiliary Building Roof Plan - Elev. 642'-6"
Figure 9A-15	E-023-015	Fire Protection Evaluation - Units 1 and 2 Control Complex and Diesel Generator Building Roof Plan - Elev. 638'-6" and 646'-6"
Figure 9A-16	E-023-016	Fire Protection Evaluation - Unit 1 Intermediate and Fuel Handling Building Plan - Elev. 639'-6" and 654'-6"
Figure 9A-17		DELETED
Figure 9A-18	E-023-018	Fire Protection Evaluation - Unit 1 Reactor Building Plan - Elev. 654'-0"
Figure 9A-19	E-023-019	Fire Protection Evaluation - Units 1 and 2 Control Complex Plan - Elev. 654'-6" and 679'-6"
Figure 9A-20	E-023-020	Fire Protection Evaluation - Unit 1 Intermediate and Fuel Handling Buildings Plan - Elev. 665'-0"
Figure 9A-21		DELETED
Figure 9A-22	E-023-022	Fire Protection Evaluation - Unit 1 Reactor Building Plan - Elev. 664'-7"
Figure 9A-23	E-023-023	Fire Protection Evaluation - Units 1 and 2 Control Complex Roof Plan - Elev. 707'-6"
Figure 9A-24	E-023-024	Fire Protection Evaluation - Unit 1 Intermediate Building and Fuel Handling Building Roof Plan - Elev. 682'-6"
Figure 9A-25	E-023-025	Fire Protection Evaluation - Unit 1 Reactor Building Plan - Elev. 689'-6"
Figure 9A-26	E-023-026	Fire Protection Evaluation - Unit 1 Intermediate Building Roof Plan - Elev. 707'-6" and 721'-6"
Figure 9A-27	E-023-027	Fire Protection Evaluation - Unit 1 Reactor Building Plan - Elev. 721'-0"
Figure 9A-28	E-023-028	Fire Protection Evaluation - Unit 1 Reactor Building Plan - Elev. 757'-0"
Figure 9A-29	E-023-029	Fire Protection Evaluation - Unit 1 Auxiliary, Reactor and Fuel Handling Buildings - Section A-A Looking West
Figure 9A-30	E-023-030	Fire Protection Evaluation Fuel Handling Building Section B-B Looking West
Figure 9A-31	E-023-031	Fire Protection Evaluation - Units 1 and 2 Control Complex - Section C-C looking West

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 9A-32	E-023-032	Fire Protection Evaluation - Units 1 and 2 Fuel Handling Building - Section D-D looking North
Figure 9A-33	E-023-033	Fire Protection Evaluation - Unit 1 Control Complex and Diesel Generator Building - Section E-E Looking North
Figure 9A-34	E-023-034	Fire Protection Evaluation - Unit 1 Emergency Service Water Pumphouse - Plans and Sections
<b><u>Chapter 10</u></b>		
Figure 10.1-1 (1)	D-302-011	Main Steam System, Unit 1
Figure 10.1-1 (2)	D-302-012	Reheat Steam System, Unit 1
Figure 10.1-1 (3)	D-302-014	Reheater Heating Steam System
Figure 10.1-2	D-302-041	Extraction Steam
Figure 10.1-3 (1)	D-302-081	Feedwater
Figure 10.1-3 (2)	D-302-082	Feedwater
Figure 10.1-4 (1)	D-302-101	Condensate System
Figure 10.1-4 (2)	D-302-103	Condensate System
Figure 10.1-5 (1)	D-302-104	Condensate Filtration System
Figure 10.1-5 (2)	D-302-105	Condensate Filtration System
Figure 10.1-5 (3)	D-302-106	Condensate Filtration System
Figure 10.1-6 (1)	D-302-107	Condensate Demineralizer System
Figure 10.1-6 (2)	D-302-108	Condensate Demineralizer System
Figure 10.1-6 (3)	D-302-109	Condensate Demineralizer System
Figure 10.1-6 (4)	D-302-110	Condensate Demineralizer System
Figure 10.1-7	D-302-201	Circulating Water System
Figure 10.1-8 (1)	D-302-111	High Pressure Heater Drains and Vents
Figure 10.1-8 (2)	D-302-112	High Pressure Heater Drains and Vents
Figure 10.1-8 (3)	D-302-114	High Pressure Heater Drains and Vents
Figure 10.1-8 (4)	D-302-115	High Pressure Heater Drains and Vents
Figure 10.1-9	D-302-113	Low Pressure Heater Drains and Vents
Figure 10.1-10	D-302-141	Steam Seal System
Figure 10.1-11	D-302-131	Condenser Air Removal System
Figure 10.1-12		Rated Power
Figure 10.1-13		Designed Power - VWO
Figure 10.2-1		Turbine Stop Valve Closure Characteristics
Figure 10.2-2		Turbine Control Valve Fast Closure Characteristics
Figure 10.2-3		Turbine Protection System Block Diagram
Figure 10.2-4	D-302-301	Hydrogen Supply System



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 10.2-5	D-302-302	Generator H <sub>2</sub> and CO <sub>2</sub> Gas Control System
Figure 10.2-6	D-914-005	Fire Service Carbon Dioxide
Figure 10.2-7		DELETED
Figure 10.2-8		DELETED
Figure 10.2-9		DELETED
Figure 10.3-1		Steam Tunnel Arrangement
Figure 10.4-1	D-302-021	Steam Bypass and Pressure Regulation System
Figure 10.4-2		Steam Bypass and Pressure Regulation System Pictorial Diagram
Figure 10.4-3 (1)		Bypass Valves Chest A
Figure 10.4-3 (2)		Bypass Valves Chest A
<b><u>Chapter 11</u></b>		
Figure 11.1-1		Noble Radiogas Decay Constant Exponent Frequency Histogram
Figure 11.1-2		Radiohalogen Decay Constant Exponent Frequency Histogram
Figure 11.1-3		Noble Radiogas Leakage vs. I-131 Leakage
Figure 11.2-1 (1)	D-302-739	Input Streams for the Liquid Radwaste System
Figure 11.2-1 (2)	D-302-740	Input Streams for the Liquid Radwaste System
Figure 11.2-1 (3)	D-302-741	Input Streams for the Liquid Radwaste System
Figure 11.2-1 (4)		Input Streams for the Liquid Radwaste System
Figure 11.2-2		Process Flow Paths for the Liquid Radwaste System
Figure 11.3-1 (1)		Offgas System Process Diagram
Figure 11.3-1 (2)		Offgas System Process Diagram
Figure 11.3-2 (1)	D-302-751	Offgas System
Figure 11.3-2 (2)	D-302-752	Offgas System
Figure 11.3-2 (3)	D-302-753	Offgas System
Figure 11.3-2 (4)	D-302-754	Offgas System
Figure 11.3-3	D-806-001	Plant Airborne Radiation Monitoring
Figure 11.4-1		Solid Radwaste System
Figure 11.5-1 (1)	D-806-006	Plant Radiation Monitoring
Figure 11.5-1 (2)	D-806-007 (Partial)	Plant Radiation Monitoring
Figure 11.5-1 (3)	D-806-008	Plant Radiation Monitoring
Figure 11.5-1 (4)	D-806-009	Plant Radiation Monitoring
Figure 11.5-1 (5)	D-806-010	Plant Radiation Monitoring
Figure 11.5-1 (6)	D-806-017	Plant Radiation Monitoring
Figure 11.5-1 (7)	D-806-018	Plant Radiation Monitoring
Figure 11.5-1 (8)	D-806-019	Plant Radiation Monitoring

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 11.5-1 (9)	D-806-022	Plant Radiation Monitoring
Figure 11.5-1 (10)	D-806-023	Plant Radiation Monitoring Automatic Isokinetic Sampling System
Figure 11.5-1 (11)	D-806-024	Plant Radiation Monitoring
Figure 11.5-1 (12)	D-806-025	Plant Radiation Monitoring
<b><u>Chapter 12</u></b>		
Figure 12.2-1		Radiation Source Model
Figure 12.3-1	E-013-003	Radiation Zones, Plan A Above Elev. 568'-6", 574'-10", 577'-6", and 580'-6" Plant Complex
Figure 12.3-2	E-013-004	Radiation Zones Plan B Above Elevs. 593'-6", 599'-0", 600'-6", 602'-6", and 605'-6"
Figure 12.3-3	E-013-005	Radiation Zones, Plan C Above Elevs. 620'-6", 623'-6", and 624'-6"
Figure 12.3-4	E-013-006	Radiation Zones, Plan D Above 638'-6", 642'-0", and 647'-6"
Figure 12.3-5	E-013-007	Radiation Zones, Plan E Above Elev. 652'-0" and 654'-6" Plant Complex
Figure 12.3-6	E-013-008	Radiation Zones, Plan F Above Elev. 664'-7", 665'-0", and 670'-6" Plant Complex
Figure 12.3-7	E-013-009	Radiation Zone, Plan G Above Elev. 689'-6"
Figure 12.3-8	E-013-010	Radiation Zone, Plan H Roof Plan
Figure 12.3-9	E-013-011	Radiation Zone, Section A-A
Figure 12.3-10	E-013-012	Radiation Zone, Section B-B
Figure 12.3-11	E-013-013	Radiation Zone, Section C-C
Figure 12.3-12		Skyshine Dose Rate (mrem/hr) vs. Distance (ft.)
Figure 12.3-13		General Arrangement - Annulus Exhaust Unit
Figure 12.3-14 (1)		General Arrangement - Control Room Emergency Recirculation Plenum
Figure 12.3-14 (2)		General Arrangement - Control Room Emergency Recirculation Plenum
Figure 12.3-15		General Arrangement - Offgas Building Exhaust Plenum
Figure 12.3-16		General Arrangement - Fuel Handling Area Exhaust Plenum
Figure 12.3-17		General Arrangement - Containment Vessel & Drywell Purge Exhaust
Figure 12.3-18		General Arrangement - Controlled Access Area Exhaust Plenum
Figure 12.3-19		General Arrangement - Radwaste Building Exhaust Plenum
Figure 12.3-20		General Arrangement - Auxiliary Building Exhaust Plenum
Figure 12.3-21		Inclined Fuel Transfer Tube Radiation Shielding
Figure 12.3-22		Intermediate Building Tool Storage/Decon Area Exhaust
Figure 12.4-1		Engineering and Construction Schedule

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 12.4-2		Site Organization Manning (Without Perry Plant Department)
Figure 12.5-1		DELETED
Figure 12.6-1	E-013-003	Post-Accident Radiation Zones, Plan A Above Elev. 568'-6", 574'-10", 577'-6" and 580'-6" Plant Complex
Figure 12.6-2	E-013-004	Post-Accident Radiation Zones, Plan B Above Elevs. 593'-6", 599'-0", 600'-6", 602'-6" and 605'-6" Plant Complex
Figure 12.6-3	E-013-005	Post Accident Radiation Zones, Plan C Above Elev. 620'-6", 623'-6", and 624'-6", Plant Complex
Figure 12.6-4	E-013-006	Post Accident Radiation Zones, Plan D Above Elev. 638'-6", 642'-0", and 647'-0", In Plant Complex
Figure 12.6-5	E-013-007	Post-Accident Radiation Zones, Plan E Above Elev. 652'-0" and 654'-6" Plant Complex
Figure 12.6-6	E-013-008	Post-Accident Radiation Zones, Plan F Above Elev. 664'-7", 665'-0", and 670'-6" Plant Complex
Figure 12.6-7	E-013-009	Post-Accident Radiation Zones, Plan G Above Elev. 689'-6", Plant Complex
Figure 12.6-8		Auxiliary Building Dose Rates Versus Time Following a LOCA
Figure 12.6-9		Intermediate Building Dose Rates Versus Time Following a LOCA
<b><u>Chapter 13</u></b>		
Figure 13.1-1		DELETED
Figure 13.1-2		Onsite Organizational Structure Perry Nuclear Power Plant Updated Final Safety Analysis Report
Figure 13.1-3		DELETED
Figure 13.1-4		DELETED
Figure 13.1-5		DELETED
Figure 13.1-6		DELETED
Figure 13.2-1		DELETED
Figure 13.5-1		Area Designated as "At the Controls" (Unit 1 shown- Unit 2 similar)
<b><u>Chapter 14</u></b>		
Figure 14.2-1		DELETED
Figure 14.2-2		Nuclear Test Section Organization Chart
Figure 14.2-3		Perry Nuclear Power Plant Startup Test Organization
Figure 14.2-4		Startup Test Condition Power/Flow Map
Figure 14.2-5		Component, Preoperational/ Acceptance and Startup Test Phase Schedule
Figure 14.2-6		DELETED
Figure 14.2-7		RCIC Acceptance Criteria Curves For Capacity and Actuation Time

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
<b>Chapter 15</b>		
Figure 15.0-1		Typical Design Power/Flow Map Standard Power/Flow Region
Figure 15.0-2		Scram Reactivity Characteristics (REDY)
Figure 15.0-3		Scram Time Characteristics
Figure 15.1-1		Loss of 100°F Feedwater Heating, Automatic Flow Control
Figure 15.1-2		Loss of 100°F Feedwater Heating, Manual Flow Control
Figure 15.1-3		Feedwater Controller Failure, Maximum Demand, With HWL Trips
Figure 15.1-4		Pressure Regulator Failure - Open to 130%
Figure 15.1-5		High Thermal Power Scram Setpoint for Plant Operation up to 100% NBR Power
Figure 15.2-1		Pressure Regulator Downscale Failure
Figure 15.2-2		Generator Load Rejection Trip Scram, Bypass - On
Figure 15.2-3		Generator Load Rejection Trip Scram, Bypass - Off
Figure 15.2-4		Turbine Trip, Trip Scram, Bypass and RPT - On
Figure 15.2-5		Turbine Trip, Trip Scram, Bypass - Off, RPT - On
Figure 15.2-6a		Three Second Closure of all Main Steam Line Isolation Valves With Position Switch Scram Trip
Figure 15.2-6b		Response to MSIV Closure With Flux Scram
Figure 15.2-7		Loss of Condenser Vacuum at 2 Inches Per Second
Figure 15.2-8		Loss of Auxiliary Power Transformer
Figure 15.2-9		Loss of All Grid Connections
Figure 15.2-10		Loss of All Feedwater Flow
Figure 15.2-11		ADS/RHR Cooling Loops
Figure 15.2-12		Summary of Paths Available to Achieve Cold Shutdown
Figure 15.2-13 (1)		DELETED
Figure 15.2-13 (2)		DELETED
Figure 15.2-14 (1)		RHR Loop C
Figure 15.2-14 (2)		LPCS
Figure 15.2-15 (1)		RHR Loop B (Suppression Pool Cooling Mode)
Figure 15.2-15 (2)		RHR Loop A (Suppression Pool Cooling Mode)
Figure 15.2-16		DELETED
Figure 15.2-17		Suppression Pool Temperature During Alternate Shutdown (at 3729 MWt)
Figure 15.2-17a		Suppression Pool Temperature During Alternate Shutdown (at 3833 MWt)

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 15.3-1		Trip of One Recirculation Pump Motor
Figure 15.3-2		Trip of Both Recirculation Pump Motors
Figure 15.3-3		Fast Closure of One Main Recirculation Valve at 60% Per Second
Figure 15.3-4		Fast Closure of Both Main Recirculation Valves at 11% Per Second
Figure 15.3-5		Seizure of One Recirculation Pump
Figure 15.4-1		Abnormal Startup of Idle Recirculation Loop Pump
Figure 15.4-2		Fast Opening of One Main Recirculation Loop Valve at 30% Per Second
Figure 15.4-3		Fast Opening of Both Main Recirculation Loop Valves at 11% Per Second
Figure 15.4-4		Critical Rod Pattern for Misplaced Bundle Accident
Figure 15.4-5		Leakage Path Model for Rod Drop Accident
Figure 15.4-6		Rod Pattern for RWE Analysis $\frac{1}{4}$ Core Geometry (Rated Power Case)
Figure 15.4-7		DELETED
Figure 15.5-1		Inadvertent Startup of HPCS
Figure 15.6-1		Steam Flow Schematic For Steam Break Outside Containment
Figure 15.6-2		Air Leakage Flowpath Post-LOCA
Figure 15.6-2A		DELETED
Figure 15.6-2B		DELETED
Figure 15.6-3		Leakage Path for Feedwater Line Break Outside Containment
Figure 15A.2-1		Block Diagram Used to Derive Nuclear Safety Operational Requirement, System Level Qualitative Design Basis Confirmation Audits and Technical Specifications
Figure 15A.2-2		Possible Inconsistencies in the Selection of Nuclear Safety Operational Requirements
Figure 15A.4-1		Format for Protection Sequence Diagrams
Figure 15A.4-2		Format for Safety System Auxiliary Diagrams
Figure 15A.4-3		Format for Commonality of Auxiliary Diagrams
Figure 15A.6-1		Safety System Auxiliaries
Figure 15A.6-2		Safety System Auxiliaries
Figure 15A.6-3		Safety Action Sequences for Normal Operation in State A.
Figure 15A.6-4		Safety Action Sequences for Normal Operation in State B.
Figure 15A.6-5		Safety Action Sequences for Normal Operation in State C.
Figure 15A.6-6		Safety Action Sequences for Normal Operation in State D.
Figure 15A.6-7		Protection Sequence for Manual or Inadvertent Scram

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 15A.6-8		Protective Sequence for Loss of Plant Instrument or Service Air System
Figure 15A.6-9		Protective Sequence for Inadvertent Startup of HPCS Pumps
Figure 15A.6-10		Protective Sequence for Inadvertent Startup of Idle Recirculation Loop Pump
Figure 15A.6-11		Protective Sequence for Recirculation Loop Flow Control Failure - Maximum Demand
Figure 15A.6-12		Protective Sequences for Recirculation Loop Flow Control Failure - Decreasing
Figure 15A.6-13		Recirculation Loop Pump Trip - one or both
Figure 15A.6-14 (1)		Protective Sequence for Isolation of All Main Steam Lines
Figure 15A.6-14 (2)		Protective Sequence for Isolation of One Main Steam Line
Figure 15A.6-15		Protective Sequences for Inadvertent Opening of a Safety/ Relief Valve
Figure 15A.6-16		Protective Sequence for Control Rod Withdrawal Error for Startup and Refueling Operations
Figure 15A.6-17		Protective Sequence for Control Rod Withdrawal Error for Power Operation
Figure 15A.6-18		Protective Sequence for RHRS - Loss of Shutdown Cooling Failure
Figure 15A.6-19		RHRS - Shutdown Cooling Failure - Increased Cooling
Figure 15A.6-20		Protective Sequence for Loss of Feedwater Flow
Figure 15A.6-21		Protective Sequence for Loss of a Feedwater Heater
Figure 15A.6-22		Protective Sequences for Feedwater Controller Failure - Maximum Demand
Figure 15A.6-23		Protective Sequences for Pressure Regulator Failure - Open
Figure 15A.6-24		Protective Sequences for Pressure Regulator Failure - Closed
Figure 15A.6-25		Protective Sequences for Main Turbine Trip with Bypass
Figure 15A.6-26		Protective Sequences for Loss of Main Condenser Vacuum
Figure 15A.6-27		Protective Sequences for Main Generator Trip With Bypass
Figure 15A.6-28		Protective Sequence for Auxiliary Transformer Failure
Figure 15A.6-29		Protective Sequences for Loss of AC Power - Grid Connection Loss
Figure 15A.6-30		Proactive Sequences for Main Generator Trip - With Bypass Failure
Figure 15A.6-31		Protective Sequences for Turbine Trip - With Bypass Failure
Figure 15A.6-32		Protective Sequence for Inadvertent Loading and Operation of Fuel Assembly in Improper Position
Figure 15A.6-33		Protective Sequence for Recirculation Loop Pump Seizure

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 15A.6-34		Protective Sequence for Recirculation Loop Pump Shaft Break
Figure 15A.6-35		Protective Sequences for Control Rod Drop Accident
Figure 15A.6-36		Protective Sequences for Fuel Handling Accident Outside Containment
Figure 15A.6-37		Protective Sequences for Loss-of-Coolant Piping Breaks in RCPS - Inside Containment
Figure 15A.6-38		Protective Sequences for Liquid, Steam, Large, Small Piping Breaks Outside Containment
Figure 15A.6-39		Protective Sequences for Gaseous Radwaste System Leak or Failure
Figure 15A.6-40		Protective Sequences Augmented Offgas Treatment System Failure
Figure 15A.6-41		Protective Sequences Augmented Liquid Radwaste System Failures
Figure 15A.6-42		Protective Sequence for Liquid Radwaste System Storage Tank Failures
Figure 15A.6-43		Protective Sequences for Fuel Handling Accident Inside Containment
Figure 15A.6-44		Protective Sequence for Reactor Shutdown From Anticipated Transient Without Scram
Figure 15A.6-45		Protective Sequences for Reactor Shutdown - From Outside Main Control Room
Figure 15A.6-46		Protective Sequence for Reactor Shutdown - Without Control Rods
Figure 15A.6-47		Commonality of Auxiliary Systems - DC Power Systems (125 Volts)
Figure 15A.6-48		Commonality of Standby AC Power Systems (120/480/4160 Volts)
Figure 15A.6-49		Commonality of Auxiliary Systems - Equipment Area Cooling Systems
Figure 15A.6-50		Commonality of Auxiliary Systems - Plant Service Water System
Figure 15A.6-51		Commonality of Auxiliary Systems - Suppression Pool Storage
Figure 15C-1		DELETED
Figure 15C-2		DELETED
Figure 15C-3		DELETED
Figure 15C-4		DELETED
Figure 15C-5		DELETED
Figure 15D-1 (1)		Generator Load Rejection with Bypass Failure 3729 MWt Core Power 100% Flow 370°F Rated FWT
Figure 15D-1 (2)		Generator Load Rejection with Bypass Failure 3729 MWt Core Power 100% Flow 370°F Rated FWT
Figure 15D-2 (1)		Generator Load Rejection with Bypass Failure 3729 MWt Core Power 100% Flow 320°F Rated FWT
Figure 15D-2 (2)		Generator Load Rejection with Bypass Failure 3729 MWt Core Power 100% Flow 320°F Rated FWT
Figure 15D-3a		Generator Load Rejection with Bypass Failure 3729 MWt Core Power 100% Flow 250°F Rated FWT

**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 15D-3b		Generator Load Rejection with Bypass Failure for Power Uprate 100% Power, 105% Flow, 255.5°F FWT
Figure 15D-4 (1)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 370°F Rated FWT
Figure 15D-4 (2)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 370°F Rated FWT
Figure 15D-5 (1)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 320°F Rated FWT
Figure 15D-5 (2)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 320°F Rated FWT
Figure 15D-6a (1)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 250°F Rated FWT
Figure 15D-6a (2)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 250°F Rated FWT
Figure 15D-6a (3)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 250°F Rated FWT
Figure 15D-6a (4)		Feedwater Controller Failure 3729 MWt Core Power 100% Flow 250°F Rated FWT
Figure 15D-6b		Feedwater Controller Failure for Power Uprate, 100% Power, 105% Flow, 255.5°F Rated FWT
Figure 15E.2-1		Maximum Extended Operating Domain Power/Flow Map
Figure 15E.3-1 (1)		Generator Load Rejection W/O Bypass 3729 MWt Core Power 105% Core Flow
Figure 15E.3-1 (2)		Generator Load Rejection W/O Bypass 3729 MWt Core Power 105% Core Flow
Figure 15E.3-2 (1)		Generator Load Rejection W/O Bypass 3729 MWt Core Power 73.6% Flow
Figure 15E.3-2 (2)		Generator Load Rejection W/O Bypass 3729 MWt Core Power 73.6% Flow
Figure 15E.3-3 (1)		Feedwater Controller Failure 3729 MWt Core Power 105% Flow
Figure 15E.3-3 (2)		Feedwater Controller Failure 3729 MWt Core Power 105% Flow
Figure 15E.3-4 (1)		Feedwater Controller Failure 3729 MWt Core Power 73.6% Flow
Figure 15E.3-4 (2)		Feedwater Controller Failure 3729 MWt Core Power 73.6% Flow
Figure 15E.5-1		DELETED
Figure 15E.5-2		DELETED
Figure 15E.11-1 (1)		Generator Load Rejection W/O Bypass 104.2% Power 105% Flow 250°F FWT
Figure 15E.11-1 (2)		Generator Load Rejection W/O Bypass 104.2% Power 105% Flow 250°F FWT
Figure 15E.11-2 (1)		Feedwater Controller Failure 104.2% Power 105% Flow 250°F FWT
Figure 15E.11-2 (2)		Feedwater Controller Failure 104.2% Power 105% Flow 250°F FWT
Figure 15E.11-3 (1)		Generator Load Rejection W/O Bypass 104.2% Power 108.7% Flow 370°F FWT



**FIGURE LIST FOR ALL CHAPTERS**

<u>Figure</u>	<u>Drawing #</u>	<u>Title of Figure</u>
Figure 15E.11-3 (2)		Generator Load Rejection W/O Bypass 104.2% Power 108.7% Flow 370°F FWT
Figure 15E.11-4 (1)		Generator Load Rejection W/O Bypass 104.2% Power 110% Flow 320°F FWT
Figure 15E.11-4 (2)		Generator Load Rejection W/O Bypass 104.2% Power 110% Flow 320°F FWT
Figure 15E.11-5 (1)		Feedwater Controller Failure 104.2% Power 108% Flow 370°F FWT
Figure 15E.11-5 (2)		Feedwater Controller Failure 104.2% Power 108% Flow 370°F FWT
Figure 15E.11-6 (1)		Feedwater Controller Failure 104.2% Power 110% Flow 320°F FWT
Figure 15E.11-6 (2)		Feedwater Controller Failure 104.2% Power 110% Flow 320°F FWT
Figure 15E.11-7 (1)		Generator Load Rejection W/O Bypass 104.2% Power 74.8% Flow 370°F FWT
Figure 15E.11-7 (2)		Generator Load Rejection W/O Bypass 104.2% Power 74.8% Flow 370°F FWT
Figure 15E.11-8 (1)		Generator Load Rejection W/O Bypass 104.2% Power 73.7% Flow 320°F FWT
Figure 15E.11-8 (2)		Generator Load Rejection W/O Bypass 104.2% Power 73.7% Flow 320°F FWT
Figure 15E.11-9 (1)		Feedwater Controller Failure 104.2% Power 74.8% Flow 370°F FWT
Figure 15E.11-9 (2)		Feedwater Controller Failure 104.2% Power 74.8% Flow 370°F FWT
Figure 15E.11-10 (1)		Feedwater Controller Failure 104.2% Power 73.7% Flow 320°F FWT
Figure 15E.11-10 (2)		Feedwater Controller Failure 104.2% Power 73.7% Flow 320°F FWT
Figure 15F.2-1		Illustration of Single Recirculation Loop Operation Flows
Figure 15F.3-1		Peak Dome Pressure Versus Initial Power Level, Turbine Trip at EOEC
Figure 15F.3-2 (1)		Feedwater Controller Failure - Maximum Demand Single Loop Operations
Figure 15F.3-2 (2)		Feedwater Controller Failure - Maximum Demand Single Loop Operations
Figure 15F.3-3 (1)		Generator Load Rejection, W/O Bypass Single Loop Operation
Figure 15F.3-3 (2)		Generator Load Rejection, W/O Bypass Single Loop Operation
Figure 15F.5-1		DELETED
<b><u>Chapter 17</u></b>		
Figure 17.2-1		DELETED
Figure 17.2-2		DELETED