

**SYSTEM ENERGY RESOURCES, INC.**

**EARLY SITE PERMIT APPLICATION**

*for the*

**GRAND GULF NUCLEAR STATION SITE**

**PART 3**

**ENVIRONMENTAL REPORT**

**Revision 2**

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1.1-1
1.1	The Proposed Project .....	1.1-1
1.1.1	References .....	1.1-5
1.2	Status Of Reviews, Approvals, and Consultations.....	1.2-1
2.0	ENVIRONMENTAL DESCRIPTION.....	1.2-1
2.1	Station Location .....	2.1-1
2.1.1	References .....	2.1-1
2.2	Land .....	2.2-1
2.2.1	The Site and Vicinity.....	2.2-1
2.2.2	Transmission Corridors and Offsite Areas.....	2.2-3
2.2.3	The Region.....	2.2-4
2.2.4	References .....	2.2-5
2.3	Water.....	2.3-1
2.3.1	Hydrology .....	2.3-1
2.3.2	Water Use.....	2.3-13
2.3.3	Water Quality.....	2.3-16
2.3.4	References .....	2.3-18
2.4	Ecology .....	2.4-1
2.4.1	Terrestrial Ecology.....	2.4-1
2.4.2	Aquatic Ecology.....	2.4-12
2.4.3	References .....	2.4-17
2.5	Socioeconomics .....	2.5-1
2.5.1	Demography.....	2.5-1
2.5.2	Community Characteristics.....	2.5-3
2.5.3	Historic Properties .....	2.5-8
2.5.4	Environmental Justice .....	2.5-9
2.5.5	References .....	2.5-10
2.6	Geology.....	2.6-1
2.7	Meteorology and Air Quality .....	2.7-1
2.7.1	General Climate.....	2.7-1

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS (Continued)

2.7.2	Regional Climatology.....	2.7-2
2.7.3	Regional Air Quality.....	2.7-6
2.7.4	Local Meteorology.....	2.7-7
2.7.5	Onsite Meteorological Measurements Program.....	2.7-11
2.7.6	Short-Term Diffusion Estimates.....	2.7-18
2.7.7	Long Term Diffusion Estimates.....	2.7-21
2.7.8	References.....	2.7-23
2.8	Noise.....	2.8-1
2.8.1	Ambient Background Noise Survey.....	2.8-1
2.8.2	References.....	2.8-2
2.9	Related Federal Project Activities.....	2.9-1
2.9.1	References.....	2.9-1
3.0	PLANT DESCRIPTION.....	2.9-1
3.1	External Appearance and Plant Layout.....	3.1-1
3.1.1	Existing Grand Gulf Nuclear Station Description.....	3.1-1
3.1.2	New Facility Arrangement.....	3.1-2
3.1.3	References.....	3.1-2
3.2	Reactor Power Conversion System.....	3.2-1
3.3	Plant Water Use.....	3.3-1
3.3.1	Water Consumption.....	3.3-1
3.3.2	Water Treatment.....	3.3-3
3.3.3	References.....	3.3-4
3.4	Cooling System.....	3.4-1
3.4.1	Description and Operational Modes.....	3.4-1
3.4.2	Component Descriptions.....	3.4-3
3.4.3	References.....	3.4-5
3.5	Radioactive Waste Management System.....	3.5-1
3.5.1	Source Terms.....	3.5-1
3.5.2	Liquid Radwaste Systems.....	3.5-2
3.5.3	Gaseous Radwaste System (Airborne Releases).....	3.5-2
3.5.4	Solid Radwaste System.....	3.5-2

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS (Continued)

3.5.5	Process and Effluent Monitoring.....	3.5-2
3.6	Non-Radioactive Waste Systems.....	3.6-1
3.6.1	Effluents Containing Chemicals or Biocides.....	3.6-1
3.6.2	Sanitary System Effluents .....	3.6-2
3.6.3	Other Effluents.....	3.6-2
3.6.4	References .....	3.6-3
3.7	Power Transmission System.....	3.7-1
3.7.1	References .....	3.7-2
3.8	Transportation of Radioactive Materials.....	3.8-1
3.8.1	Light-Water-Cooled Reactors .....	3.8-1
3.8.2	Gas-Cooled Reactors .....	3.8-4
3.8.3	Conclusion.....	3.8-11
3.8.4	Methodology Assessment .....	3.8-11
3.8.5	References .....	3.8-11
4.0	ENVIRONMENTAL EFFECTS OF CONSTRUCTION.....	3.8-1
4.1	Land-Use Impacts .....	4.1-1
4.1.1	The Site and Vicinity.....	4.1-1
4.1.2	Transmission Corridors And Offsite Areas .....	4.1-2
4.1.3	Historical Properties .....	4.1-3
4.1.4	Construction Noise Impact Assessment.....	4.1-3
4.1.5	References .....	4.1-8
4.2	Water-Related Impacts .....	4.2-1
4.2.1	Hydrologic Alterations.....	4.2-1
4.2.2	Water-Use Impacts.....	4.2-3
4.2.3	References .....	4.2-6
4.3	Ecological Impacts .....	4.3-1
4.3.1	Terrestrial Ecosystems .....	4.3-1
4.3.2	Aquatic Ecosystems .....	4.3-6
4.3.3	References .....	4.3-9
4.4	Socioeconomic Impacts .....	4.4-1
4.4.1	Physical Impacts.....	4.4-1

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS (Continued)

4.4.2	Social and Economic Impacts .....	4.4-3
4.4.3	Environmental Justice Impacts.....	4.4-8
4.4.4	References .....	4.4-9
4.5	Radiation Exposure to Construction Workers .....	4.5-1
4.5.1	Site Layout.....	4.5-1
4.5.2	Radiation Sources .....	4.5-1
4.5.3	Measured Radiation Dose Rates and Airborne Concentrations .....	4.5-1
4.5.4	Construction Worker Dose Estimates.....	4.5-2
4.5.5	References .....	4.5-4
4.6	Measures & Controls to Limit Adverse Impacts During Construction.....	4.6-1
5.0	ENVIRONMENTAL EFFECTS OF STATION OPERATIONS .....	4.6-1
5.1	Land-Use Impacts .....	5.1-1
5.1.1	The Site and Vicinity.....	5.1-1
5.1.2	Transmission Corridors and Offsite Areas.....	5.1-2
5.1.3	Historic Properties .....	5.1-2
5.1.4	Noise Impacts.....	5.1-2
5.1.5	References .....	5.1-2
5.2	Water-Related Impacts .....	5.2-1
5.2.1	Hydrologic Alterations and Plant Water Supply.....	5.2-1
5.2.2	Water-Use Impacts.....	5.2-2
5.2.3	Water Use/Water Quality Regulations.....	5.2-5
5.2.4	References .....	5.2-6
5.3	Cooling System Impacts .....	5.3-1
5.3.1	Intake System.....	5.3-1
5.3.2	Discharge System .....	5.3-4
5.3.3	Heat-Discharge System.....	5.3-6
5.3.4	Impacts to Members of the Public .....	5.3-14
5.3.5	References .....	5.3-16
5.4	Radiological Impacts of Normal Operation.....	5.4-1
5.4.1	Exposure Pathways.....	5.4-1
5.4.2	Radiation Doses to Members of the Public .....	5.4-3

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS (Continued)

5.4.3	Impacts to Members of the Public .....	5.4-4
5.4.4	Impacts to Biota Other than Members of the Public .....	5.4-6
5.4.5	References .....	5.4-8
5.5	Environmental Impacts of Waste .....	5.5-1
5.5.1	Non-Radioactive Waste-System Impacts .....	5.5-1
5.5.2	Mixed Waste Management and Impacts .....	5.5-4
5.5.3	References .....	5.5-8
5.6	Transmission System Impacts .....	5.6-1
5.6.1	References .....	5.6-1
5.7	Uranium Fuel Cycle Impacts .....	5.7-1
5.7.1	Light-Water-Cooled Reactor Designs.....	5.7-1
5.7.2	Gas-Cooled Reactor Designs.....	5.7-2
5.7.3	Methodology Assessment .....	5.7-8
5.7.4	References .....	5.7-8
5.8	Socioeconomic Impacts .....	5.8-1
5.8.1	Physical Impacts of Station Operation.....	5.8-1
5.8.2	Social and Economic Impacts of Station Operation .....	5.8-3
5.8.3	Environmental Justice Impacts.....	5.8-9
5.8.4	References .....	5.8-10
5.9	Decommissioning.....	5.9-1
5.9.1	References .....	5.9-1
5.10	Measures and Controls to Limit Adverse Impacts During Operation .....	5.10-1
6.0	ENVIRONMENTAL MEASUREMENT AND MONITORING PROGRAMS .....	5.10-1
6.1	Thermal Monitoring .....	6.1-1
6.1.1	Pre-Application Monitoring .....	6.1-1
6.1.2	Pre-Operational Monitoring .....	6.1-1
6.1.3	Operational Monitoring .....	6.1-2
6.1.4	References .....	6.1-2
6.2	Radiological Monitoring.....	6.2-1
6.2.1	Introduction.....	6.2-1
6.2.2	GGNS Unit 1 Radiological Environmental Monitoring Program .....	6.2-1

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS (Continued)

6.2.3	References .....	6.2-2
6.3	Hydrological Monitoring.....	6.3-1
6.3.1	Pre-application Monitoring.....	6.3-1
6.3.2	Construction Monitoring.....	6.3-3
6.3.3	Pre-Operational Monitoring .....	6.3-3
6.3.4	Operational Monitoring .....	6.3-4
6.3.5	References .....	6.3-4
6.4	Meteorological Monitoring .....	6.4-1
6.5	Ecological Monitoring.....	6.5-1
6.5.1	Pre-Application Monitoring .....	6.5-1
6.5.2	Site Preparation and Construction Monitoring.....	6.5-3
6.5.3	Pre-operational Monitoring .....	6.5-3
6.5.4	Operational Monitoring .....	6.5-4
6.5.5	References .....	6.5-4
6.6	Chemical Monitoring .....	6.6-1
6.6.1	Pre-Application Monitoring .....	6.6-1
6.6.2	Construction Monitoring.....	6.6-2
6.6.3	Pre-Operational Monitoring .....	6.6-2
6.6.4	Operational Monitoring .....	6.6-3
6.6.5	References .....	6.6-3
6.7	Summary of Monitoring Programs .....	6.7-1
6.7.1	Pre-Application Monitoring .....	6.7-1
6.7.2	Site Preparation and Construction Monitoring.....	6.7-1
6.7.3	Pre-Operational Monitoring .....	6.7-1
6.7.4	Operational Monitoring .....	6.7-1
7.0	ENVIRONMENTAL IMPACTS OF POSTULATED ACCIDENTS INVOLVING RADIOACTIVE MATERIALS.....	6.7-1
7.1	Design Basis Accidents.....	7.1-1
7.1.1	Selection of Design Basis Accidents .....	7.1-1
7.1.2	Evaluation of Radiological Consequences .....	7.1-2
7.1.3	Source Terms .....	7.1-2

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS (Continued)

7.1.4	Postulated Accidents .....	7.1-3
7.1.5	References .....	7.1-15
7.2	Severe Accidents .....	7.2-1
7.2.1	Introduction.....	7.2-1
7.2.2	Applicability of Existing Generic Severe Accident Studies .....	7.2-1
7.2.3	Evaluation of Potential Severe Accident Releases.....	7.2-3
7.2.4	Evaluation of Economic Impacts of Severe Accidents .....	7.2-6
7.2.5	Consideration of Commission Severe Accident Policy.....	7.2-7
7.2.6	Conclusion.....	7.2-8
7.2.7	References .....	7.2-8
7.3	Severe Accident Mitigation Alternatives.....	7.3-1
7.4	Transportation Accidents .....	7.4-1
8.0	NEED FOR POWER .....	7.4-1
8.1	Need For Power .....	8.1-1
9.0	ALTERNATIVES TO PROPOSED ACTION .....	8.1-1
9.1	Background to the Alternatives Analyses.....	9.1-1
9.1.1	Introduction.....	9.1-1
9.1.2	No-Action Alternative and Potential Outcomes .....	9.1-3
9.1.3	References .....	9.1-4
9.2	Energy Alternatives .....	9.2-1
9.2.1	Alternatives Not Requiring New Generating Capacity.....	9.2-1
9.2.2	Alternatives Requiring New Generating Capacity .....	9.2-4
9.2.3	Assessment of Alternative Energy Sources and Systems.....	9.2-17
9.2.4	References .....	9.2-18
9.3	Alternative Sites .....	9.3-1
9.3.1	Introduction.....	9.3-1
9.3.2	Process for Preferred Site Selection .....	9.3-2
9.3.3	Region of Interest.....	9.3-2
9.3.4	Initial Screening.....	9.3-3
9.3.5	Preferred Site Selection.....	9.3-4



GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

TABLE OF CONTENTS (Continued)

9.3.6	Consideration of Sites Other Than Existing Nuclear Sites .....	9.3-4
9.3.7	References .....	9.3-7
9.4	Alternative Plant and Transmission Systems .....	9.4-1
9.4.1	Heat Dissipation Systems.....	9.4-1
9.4.2	Circulating Water Systems .....	9.4-2
9.4.3	Transmission Systems .....	9.4-6
9.4.1	References .....	9.4-6
10.0	ENVIRONMENTAL CONSEQUENCES OF PROPOSED ACTION .....	9.4-1
10.1	Unavoidable Adverse Environmental Impacts .....	10.1-1
10.1.1	Facility Construction .....	10.1-1
10.1.2	Facility Operation.....	10.1-1
10.1.3	References .....	10.1-1
10.2	Irreversible and Irretrievable Commitments of Resources .....	10.2-1
10.2.1	Irreversible and Irretrievable Commitments of Environmental Resources .....	10.2-1
10.2.2	Irreversible and Irretrievable Commitments of Material Resources.....	10.2-1
10.3	Relationship Between Short Term Uses and Long Term Productivity of the Human Environment.....	10.3-1
10.3.1	References .....	10.3-2
10.4	Benefit-Cost Balance .....	10.4-1
APPENDIX 2.4A	AGENCY CONSULTATION CORRESPONDENCE	

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>
1.2-1	Federal, State, and Local Environmental Authorizations
2.2-1	Acreage Affected by Various Facilities Associated with Grand Gulf Nuclear Station
2.2-2	Land Use Within Transmission Line Corridors
2.2-3	Claiborne County and District 7 Crop Estimates for 2001
2.2-4	Average Crop Yields for Claiborne County, MS and District 7, 1997 – 2001
2.2-5	Livestock Commodity Estimates for 2002 for Claiborne County, MS and District 7
2.2-6	Tensas Parish, LA, and District 3 Crop Estimates for 2001
2.2-7	Average Crop Yields for Tensas Parish, LA, and District 3, 1997 – 2001
2.2-8A	Livestock Commodity Estimates for 2002 for Tensas Parish, LA, and District 3
2.2-8B	Tensas Parish LA Livestock Production for 2001
2.3-1	Velocity, Discharge, and Water Surface Elevations for Mississippi River at Site
2.3-2	Ranges of Water Temperatures for the Mississippi River at Vicksburg, Mississippi - Degrees F
2.3-3	USGS Water Temperature Measurement for Mississippi River at Vicksburg, Mississippi
2.3-4	NPDES Thermal Monitoring Data
2.3-5	Flood Discharges at Vicksburg, Mississippi During Six Highest Recent Floods
2.3-6	Maximum Daily Streamflow in the Mississippi River at Vicksburg (1932 to 1988) USGS Station 07289000
2.3-7	Minimum Daily Streamflow Observed on the Mississippi River at Vicksburg, MS (1932 To 1988), USGS Station 07289000
2.3-8	Low-Flow Values, CFS, for 1, 7, and 30 Days for Selected Return Periods for Mississippi River at Vicksburg, Mississippi
2.3-9	Maximum Discharge of Stream Draining Basin A at Station 2
2.3-10	GGNS Surface Water Discharge and Water Quality Data
2.3-11	Geologic Formations of Claiborne, Copiah, Hinds, Jefferson, and Warren Counties, Mississippi
2.3-12	USGS Ground Water Levels – Vicksburg, Well Completed in the Mississippi River Alluvial Aquifer Station No. 322310090530202
2.3-13	USGS Ground Water Levels - Port Gibson, Well Completed in the Lower Catahoula Formation, Station No. 315718090291501
2.3-14	Permeability Test Results
2.3-15	Site Hydrogeologic Parameters

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.3-16	Hydraulic Conductivities of Terrace Deposits
2.3-17	Piezometer Inventory
2.3-18	Observation Well Inventory
2.3-19	Groundwater Levels Monitoring Wells
2.3-20	Groundwater Level Data for Onsite Wells, 1996 - 2001
2.3-21a	1995 Water Use Totals, Mississippi Counties Surrounding Grand Gulf Site
2.3-21b	1995 Irrigation Water Use, Mississippi Counties Surrounding Grand Gulf Site
2.3-21c	1995 Livestock Water Use, Mississippi Counties Surrounding Grand Gulf Site
2.3-21d	1995 Mining Water Use, Mississippi Counties Surrounding Grand Gulf Site
2.3-21e	1995 Thermoelectric Power Water Use – All Fuel Types Mississippi Counties Surrounding Grand Gulf Site
2.3-21f	1995 Industrial Water Use, Mississippi Counties Surrounding Grand Gulf Site
2.3-21g	1995 Domestic Water Use, Mississippi Counties Surrounding Grand Gulf Site
2.3-21h	1995 Commercial Water Use, Mississippi Counties Surrounding Grand Gulf Site
2.3-21i	1995 Public Supply, Mississippi Counties Surrounding Grand Gulf Site
2.3-22	Surface Water Intakes on the Mississippi River, Mississippi
2.3-23	Surface Water Intakes on the Mississippi River, Public Water Supply Systems, Louisiana
2.3-24	Public Supply and Industrial Wells Claiborne, Copiah, Hinds, Jefferson, and Warren Counties, Mississippi
2.3-25	Details of Public Supply and Industrial Wells in Port Gibson, MS
2.3-26	Water Wells Within A 4-Mile Radius of GGNS
2.3-27	USGS Water Quality Sampling Data for the Mississippi River at Vicksburg, MS
2.3-28	USGS Water Quality Sampling Data for the Mississippi River Near St. Joseph, Louisiana, Approximately at River Mile 390, Station No. 315218091150000
2.3-29	USGS Water Quality Data for the Mississippi River at Mile 405 Station No. 315956091050000
2.3-30	USGS Water Quality Sampling Data for the Mississippi River at Mile 402, Station No. 315847091072700
2.3-31	Results of Chemical Analysis of Water Samples, 1972
2.3-32	USGS Ground Water Quality Sampling Data
2.3-33	Mississippi River and Radial Well Water Quality at GGNS

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.3-34	Chemical Analysis of Water Samples, Three Potable Wells Located at the GGNS Site Proposed Power Block Location
2.4-1	Common Forest Overstory and Understory Vegetation on the GGNS Site, 1972 - 1973
2.4-2	Mammals Collected or Observed at the GGNS Site, 1972 - 1973
2.4-3	Common Birds of the Forest and Field Forest Communities Observed Seasonally at the GGNS Site, 1972 - 1973
2.4-4	Birds Observed on Hamilton and/or Gin Lakes, 1972 - 1973
2.4-5	Birds of Special Interest Observed on or Near the GGNS Site, 1972 - 1973
2.4-6	Terrestrial Species of Special Interest Potentially Occurring at GGNS
2.4-7	Common Fish Observed at or Near GGNS, 1972 - 1973
2.4-8	Aquatic Species of Special Interest Potentially Occurring at GGNS
2.5-1	Projected Population Distribution, 0-10 Miles
2.5-2	Age and Sex Distribution in Region Surrounding GGNS
2.5-3	Racial and Ethnic Distribution Within the LPZ, EPZ, and Region Surrounding the GGNS Site
2.5-4	Income Distribution in Region Surrounding GGNS
2.5-5	Median Household Income Within 50-Mile Radius of GGNS (by MS County / LA Parish)
2.5-6	Projected Population Distribution, 10 to 50 Miles from the GGNS Site
2.5-7	Claiborne County Income and Poverty Measures Comparison
2.5-8	Annual Average Wages for Claiborne County and Contiguous Mississippi Counties
2.5-9	Area Employment by Industry
2.5-10	Manufacturers Within a 50-Mile Radius of the GGNS Site
2.5-11	Area Labor Force Data for December 2002
2.5-12	Employment Trends for Claiborne County, Contiguous MS Counties and Tensas Parish, LA - 1990-2000
2.5-13	Regional Occupied Housing Stability Characteristics
2.5-14	Regional Housing Information by County / Parish for the Year 2000
2.5-15	Schools Within the EPZ for GGNS Site
2.5-16	Number of Primary and Secondary Schools and Students Within Surrounding Counties / Parishes

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.5-17	National Register of Historic Places, Claiborne County, Mississippi
2.7-1	Wind Direction and Speed - Grand Gulf Site 1996 – 2003
2.7-2	Wind Direction and Speed, Vicksburg, MS 1997 – 2003
2.7-3	Design Wet and Dry Bulb Temperatures (Degrees Fahrenheit)
2.7-4	Deleted
2.7-5	Relative Humidity at Vicksburg, MS for Four Time Periods Per Day, 1997 – 2001
2.7-6	Precipitation Data (Inches of Rain) at Grand Gulf Site
2.7-7	Precipitation Data (Inches of Rain) at Vicksburg, MS
2.7-8	Frequency of Hurricanes (by Month) for the States of Florida, Alabama, Mississippi, Louisiana, and Texas
2.7-9	Tornadoes in Claiborne, Warren and Hinds Counties, Mississippi, and Tensas Parish, Louisiana
2.7-10	Thunderstorms and High Wind Events in Claiborne, Warren and Hinds Counties, Mississippi, and Tensas Parish, Louisiana
2.7-11	Hailstorms in Claiborne, Warren and Hinds Counties Mississippi, and Tensas Parish, Louisiana
2.7-12	Ice Storms in Claiborne, Warren and Hinds Counties Mississippi, and Tensas Parish, Louisiana
2.7-13	Estimated Maximum Point Precipitation Amounts (Inches) for Selected Durations and Recurrence Intervals Grand Gulf, Mississippi Compared to Recent Experience at Vicksburg, Mississippi
2.7-14	Total Maximum Winter Precipitation Jackson, Mississippi
2.7-15	Pasquill Stability Class Annual Frequency
2.7-16	Pasquill Stability Class Winter Frequency
2.7-17	Pasquill Stability Class Spring Frequency
2.7-18	Pasquill Stability Class Summer Frequency
2.7-19	Pasquill Stability Class Fall Frequency
2.7-20	Inversion Heights and Strengths, Jackson, Mississippi International Airport, January 1992 – 2000 (NCDC Data)
2.7-21	Inversion Heights and Strengths, Jackson, Mississippi International Airport, February 1992 – 2000 (NCDC Data)
2.7-22	Inversion Heights and Strengths, Jackson, Mississippi International Airport, March 1992 – 2000 (NCDC Data)

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.7-23	Inversion Heights and Strengths, Jackson, Mississippi International Airport, April 1992 – 2000 (NCDC Data)
2.7-24	Inversion Heights and Strengths, Jackson, Mississippi International Airport, May 1992 – 2000 (NCDC Data)
2.7-25	Inversion Heights and Strengths, Jackson, Mississippi International Airport, June 1992 – 2000 (NCDC Data)
2.7-26	Inversion Heights and Strengths, Jackson, Mississippi International Airport, July 1992 – 2000 (NCDC Data)
2.7-27	Inversion Heights and Strengths, Jackson, Mississippi International Airport, August 1992 – 2000 (NCDC Data)
2.7-28	Inversion Heights and Strengths, Jackson, Mississippi International Airport, September 1992 – 2000 (NCDC Data)
2.7-29	Inversion Heights and Strengths, Jackson, Mississippi International Airport, October 1992 – 2000 (NCDC Data)
2.7-30	Inversion Heights and Strengths, Jackson, Mississippi International Airport, November 1992 – 2000 (NCDC Data)
2.7-31	Inversion Heights and Strengths, Jackson, Mississippi International Airport, December 1992 – 2000 (NCDC Data)
2.7-32	Inversion Heights and Strengths, Jackson, Mississippi International Airport, Annual 1992 – 2000 (NCDC Data)
2.7-33	Number of Inversion Occurrences During January at Jackson, Mississippi
2.7-34	Number of Inversion Occurrences During February at Jackson, Mississippi
2.7-35	Number of Inversion Occurrences During March at Jackson, Mississippi
2.7-36	Number of Inversion Occurrences During April at Jackson, Mississippi
2.7-37	Number of Inversion Occurrences During May at Jackson, Mississippi
2.7-38	Number of Inversion Occurrences During June at Jackson, Mississippi
2.7-39	Number of Inversion Occurrences During July at Jackson, Mississippi
2.7-40	Number of Inversion Occurrences During August at Jackson, Mississippi
2.7-41	Number of Inversion Occurrences During September at Jackson, Mississippi
2.7-42	Number of Inversion Occurrences During October at Jackson, Mississippi
2.7-43	Number of Inversion Occurrences During November at Jackson, Mississippi
2.7-44	Number of Inversion Occurrences During December at Jackson, Mississippi
2.7-45	Mean Number of Inversion Occurrences During 1955-1964 at Jackson, Mississippi

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.7-46	Percent of Hours with Inversion at Jackson, Mississippi
2.7-47	Number of Inversion Occurrences During January at Grand Gulf Site
2.7-48	Number of Inversion Occurrences During February at Grand Gulf Site
2.7-49	Number of Inversion Occurrences During March at Grand Gulf Site
2.7-50	Number of Inversion Occurrences During April at Grand Gulf Site
2.7-51	Number of Inversion Occurrences During May at Grand Gulf Site
2.7-52	Number of Inversion Occurrences During June at Grand Gulf Site
2.7-53	Number of Inversion Occurrences During July at Grand Gulf Site
2.7-54	Number of Inversion Occurrences During August at Grand Gulf Site
2.7-55	Number of Inversion Occurrences During September at Grand Gulf Site
2.7-56	Number of Inversion Occurrences During October at Grand Gulf Site
2.7-57	Number of Inversion Occurrences During November at Grand Gulf Site
2.7-58	Number of Inversion Occurrences During December at Grand Gulf Site
2.7-59	Number of Inversion Occurrences at Grand Gulf Site
2.7-60	Percent of Hours with Inversion at Grand Gulf Site
2.7-61	Mixing Heights at Jackson International Airport
2.7-62	Percentage Frequency of Wind Direction and Speed (mph) During January, Vicksburg, MS
2.7-63	Percentage Frequency of Wind Direction and Speed (mph) During February, Vicksburg, MS
2.7-64	Percentage Frequency of Wind Direction and Speed (mph) During March, Vicksburg, MS
2.7-65	Percentage Frequency of Wind Direction and Speed (mph) During April, Vicksburg, MS
2.7-66	Percentage Frequency of Wind Direction and Speed (mph) During May, Vicksburg, MS
2.7-67	Percentage Frequency of Wind Direction and Speed (mph) During June, Vicksburg, MS
2.7-68	Percentage Frequency of Wind Direction and Speed (mph) During July, Vicksburg, MS
2.7-69	Percentage Frequency of Wind Direction and Speed (mph) During August, Vicksburg, MS
2.7-70	Percentage Frequency of Wind Direction and Speed (mph) During September, Vicksburg, MS

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.7-71	Percentage Frequency of Wind Direction and Speed (mph) During October, Vicksburg, MS
2.7-72	Percentage Frequency of Wind Direction and Speed (mph) During November, Vicksburg, MS
2.7-73	Percentage Frequency of Wind Direction and Speed (mph) During December, Vicksburg, MS
2.7-74	Percentage Frequency of Wind Direction and Speed (mph) During All Years, Vicksburg, MS
2.7-75	Percentage Frequency of Wind Direction and Speed (mph) During January, GGNS Site
2.7-76	Percentage Frequency of Wind Direction and Speed (mph) During February, GGNS Site
2.7-77	Percentage Frequency of Wind Direction and Speed (mph) During March, GGNS Site
2.7-78	Percentage Frequency of Wind Direction and Speed (mph) During April, GGNS Site
2.7-79	Percentage Frequency of Wind Direction and Speed (mph) During May, GGNS Site
2.7-80	Percentage Frequency of Wind Direction and Speed (mph) During June, GGNS Site
2.7-81	Percentage Frequency of Wind Direction and Speed (mph) During July, GGNS Site
2.7-82	Percentage Frequency of Wind Direction and Speed (mph) During August, GGNS Site
2.7-83	Percentage Frequency of Wind Direction and Speed (mph) During September, GGNS Site
2.7-84	Percentage Frequency of Wind Direction and Speed (mph) During October, GGNS Site
2.7-85	Percentage Frequency of Wind Direction and Speed (mph) During November, GGNS Site
2.7-86	Percentage Frequency of Wind Direction and Speed (mph) During December, GGNS Site
2.7-87	Percentage Frequency of Wind Direction and Speed (mph) During All Years, GGNS Site
2.7-88	Maximum Number of Consecutive Hours with Wind from a Single Sector, Vicksburg, MS



GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.7-89	Maximum Number of Consecutive Hours with Wind from 3 Adjacent Sectors, Vicksburg, MS
2.7-90	Maximum Number of Consecutive Hours with Wind from 5 Adjacent Sectors, Vicksburg, MS
2.7-91	Maximum Number of Consecutive Hours with Wind from a Single Sector, Grand Gulf Site
2.7-92	Maximum Number of Consecutive Hours with Wind from 3 Adjacent Sectors, Grand Gulf Site
2.7-93	Maximum Number of Consecutive Hours with Wind from 5 Adjacent Sectors, Grand Gulf Site
2.7-94	Comparison of Maximum Wind Persistence at Grand Gulf Site and Jackson, MS
2.7-95	Comparison of Maximum Wind Persistence at the Grand Gulf Site and Vicksburg, MS
2.7-96	Temperature Means and Extremes at Vicksburg, MS
2.7-97	Temperature Means and Extremes at Grand Gulf Site
2.7-98	Rainfall Frequency Distribution at Grand Gulf, 2000 - 2001, Number of Hours Per Month, Average Year
2.7-99	Rainfall Frequency Distribution at Vicksburg, MS, Number of Hours Per Month, Average Year
2.7-100	Maximum Observed Short Period Precipitation (in.) Vicksburg, Mississippi
2.7-101	Total Hours of Snowfall, Vicksburg, Mississippi
2.7-102	Average Hours of Fog and Haze at Vicksburg
2.7-103	Meteorological Equipment Specification and Performance Characteristics
2.7-104	Meteorological Equipment Specification and Performance Characteristics – Existing Equipment
2.7-105	Monthly Data Recovery Rate – Data from 1996 to 2003
2.7-106	2002 to 2003 Grand Gulf Data (Averaged in Hours) Extremely Unstable, Stability Class A
2.7-107	2002 to 2003 Grand Gulf Data (Averaged in Hours) Moderately Unstable, Stability Class B
2.7-108	2002 to 2003 Grand Gulf Data (Averaged in Hours) Slightly Unstable, Stability Class C
2.7-109	2002 to 2003 Grand Gulf Data (Averaged in Hours) Neutral, Stability Class D
2.7-110	2002 to 2003 Grand Gulf Data (Averaged in Hours) Slightly Stable, Stability Class E

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
2.7-111	2002 to 2003 Grand Gulf Data (Averaged in Hours) Moderately Stable, Stability Class F
2.7-112	2002 to 2003 Grand Gulf Data (Averaged in Hours) Extremely Stable, Stability Class G
2.7-113	Exclusion Area Boundary Cumulative Frequency of Relative Concentration (X/Q) of Effluent at the Minimum Site Boundary Distance (841 m), 0-2 Hours
2.7-114	Cumulative Frequency of Relative Concentration (X/Q) of Effluent at the Low Population Zone (3219 m), 0-2 Hours
2.7-115	Exclusion Area Boundary Direction Dependent Sector Relative Concentration (X/Q) of Effluent at the Minimum Site Boundary (841 M)
2.7-116	Low Population Zone Direction Dependent Sector Relative Concentration (X/Q) of Effluent at the LPZ (3219 M)
2.7-117	Annual Average X/Q and D/Q (Data Period 2002 - 2003)
2.7-118	Annual Average Relative Concentration, X/Q, Undepleted
2.7-119	Annual Average Relative Concentration, X/Q, Depleted
2.7-120	Annual Average Relative Deposition, D/Q
3.0-1	Plant Parameters Envelope (PPE)
3.0-2	Blowdown Constituents and Concentrations
3.0-3	Principal Radionuclides in Solid Radwaste
3.0-4	Yearly Emissions Auxiliary Boilers
3.0-5	Yearly Emissions From Standby Diesel Generators
3.0-6	Yearly Standby Power System Gas Turbine Flue Gas Effluents
3.0-7	Normal Operations Gaseous Release Source Term
3.0-8	Normal Operations Liquid Release Source Term
3.0-9	Plant Parameters Definitions
3.4-1	Estimated Plant Water Usage
3.8-1	Light-Water-Cooled Reactor Transportation Worksheet
3.8-2	Gas-Cooled Reactor Transportation Worksheet
3.8-3	Summary Table S-4 - Environmental Impact of Transportation of Fuel and Waste to and from One Light-Water-Cooled Nuclear Power Reactor
4.1-1	Typical Noise Levels of Construction Equipment
4.1-2	Primary Activities Occurring During Each of the Construction Noise Surveys

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
4.1-3	Overall Average dB(A) Levels, L <sub>10</sub> , L <sub>50</sub> , and L <sub>60</sub> , for the July 1973 Survey and the June 1974 Survey vs HUD Category and Criteria
4.4-1	Claiborne County Roadway Analysis
4.5-1	2001 Airborne Effluent Dose (mrem)
4.5-2	2001 Liquid Effluent Dose (mrem)
4.5-3	Outer Ring TLD Dose (mrem/Qtr) - Approximately Three to Five Miles from the Site (ODCM Specifications)
4.5-4	Inner Ring TLD Dose (mrem/Qtr) - Within General Area of Site Boundary (ODCM Specifications)
4.5-5	Protected Area Boundary TLD Dose (mrem/Qtr)
4.5-6	Deleted
4.5-7	Comparison of Construction Worker Public Dose to 10 CFR 20.1301 Criteria
4.5-8	Comparison of Construction Worker Public Dose from Gaseous Effluent Discharges to 40 CFR 190 Criteria
4.5-9	Comparison of Construction Worker Occupational Dose to 10 CFR 20.1201 Criteria
4.5-10	Annual Construction Worker Doses
4.5-11	Comparison with 10 CFR 50 Appendix I Criteria for Effluent Doses
4.6-1	Measures and Controls to Limit Adverse Impacts During Construction
5.3-1	Summary of Facility Discharge Plume Cases Analyzed
5.3-2	Summary of Thermal Plume Analysis
5.3-3	Average Plume Lengths During 4 NDCT Operation
5.3-4	Average Plume Lengths During 4 LMDCT Unit Operation
5.3-5	Visible Plume Length Summary
5.3-6	Hours/Yr of Fogging (4 LMDCT)
5.3-7	Annual Sodium Salt Deposition in lbm/(100-acre-month) 4 NDCT
5.3-8	Annual Sodium Salt Deposition in lbm/(100-acre-month) 4 LMDCT
5.3-9	Deposition Rate on Nearest Homes and Gardens
5.4-1	Liquid Pathway Parameters
5.4-2	Liquid Pathway Consumption Factors
5.4-3	Gaseous Pathway Parameters
5.4-4	Gaseous Pathway Consumption Factors

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
5.4-5	Milk Production from 10 to 50 Miles from GGNS Site
5.4-6	Total Meat Production Between 0 and 50 Miles by Sector
5.4-7	Total Vegetable Production Between 0 and 50 Miles by Sector
5.4-8	Liquid Pathway Comparison of Maximum Individual Dose to 10 CFR 50, Appendix I Criteria
5.4-9	Liquid Pathway Comparison of Maximum Individual Dose to 40 CFR 190 Criteria
5.4-10	Estimated Population Dose from Liquid Effluents Via the Aquatic Food Pathway
5.4-11A	Annual Dose to a Maximally Exposed Individual from Gaseous Effluents
5.4-11B	Comparison of Maximum Individual Dose to 10 CFR 50, Appendix I Criteria – Gaseous Pathway
5.4-12	Comparison of Maximum Individual Dose to 40 CFR 190 Criteria – Gaseous Pathway
5.4-13	Annual Population Doses - Gaseous Pathway
5.4-14	Terrestrial Biota Parameters
5.4-15	Biota Residence Times
5.4-16	Dose to Biota from Liquid and Gaseous Effluents
5.4-17	Biota Doses Compared to 40 CFR 190 Whole Body Dose Equivalent of 25 mrem/yr
5.4-18	Total Site Dose Comparison of Maximum Site Individual Dose to 40 CFR 190 Criteria
5.7-1	Gas-Cooled Fuel Cycle Worksheet
5.7-2	Gas-Cooled Reactor SWU and Feed Calculation Results
5.7-3	Table S-3 - Table of Uranium Fuel Cycle Environmental Data
5.10-1	Measures and Controls to Limit Adverse Impacts During Operation of the Proposed New Facility at the GGNS Site
6.2-1	Radiological Environmental Sampling Program
6.2-2	Radiological Environmental Monitoring Program Summary – GGNS Unit 1
6.5-1	Summary of Terrestrial Ecological Measurements Program – 1972-1973
6.5-2	Census Techniques Employed to Determine Seasonal Avian Species Composition and Relative Abundance at the Grand Gulf Site - 1972-1973
6.5-3	Summary of Supplementary Sampling Activities
6.5-4	Summary of Aquatic Ecological Measurements Program - 1972-1973
7.1-1	Comparison of Reactor Types for Limiting Off-Site Dose Consequences

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
7.1-2	AP1000 Main Steam Line Break - Accident-Initiated Iodine Spike
7.1-3	AP1000 Main Steam Line Break - Pre-Existing Iodine Spike
7.1-4	ABWR Main Steam Line Break Outside Containment
7.1-5	ABWR Main Steam Line Break Outside Containment - Maximum Equilibrium Value for Full Power Operation
7.1-6	ABWR Main Steam Line Break Outside Containment - Pre-Existing Iodine Spike
7.1-7	AP1000 Locked Rotor Accident – Pre-Existing Iodine Spike
7.1-8	AP1000 Control Rod Ejection Accident - Pre-Existing Iodine Spike
7.1-9	AP1000 Steam Generator Tube Rupture - Accident-Initiated Iodine Spike
7.1-10	AP1000 Steam Generator Tube Rupture - Pre-Existing Iodine Spike
7.1-11	AP1000 Small Line Break Accident, 0 to 0.5 Hour Duration - Accident-Initiated Iodine Spike
7.1-12	ABWR Small Line Break Outside Containment - Activity Released to Environment
7.1-13	ABWR Small Line Break Outside Containment
7.1-14	AP1000 Design Basis Loss of Coolant Accident
7.1-15	ABWR LOCA Curies Released to Environment by Time Interval
7.1-16	ABWR Design Basis Loss of Coolant Accident
7.1-17	ACR-700 Design Basis Large LOCA - Curies Released to Environment by Interval
7.1-18	ACR-700 Large Loss of Coolant Accident
7.1-19	AP1000 Fuel Handling Accident - Curies Released to Environment
7.1-20	AP1000 Fuel Handling Accident
7.1-21	ABWR Fuel Handling Accident - Curies Released to Environment
7.1-22	ABWR Fuel Handling Accident
7.1-23	AP1000 Locked Rotor Accident - Curies Released to Environment
7.1-24	AP1000 Control Rod Ejection Accident - Curies Released to Environment by Interval – Pre-Existing Iodine Spike
7.1-25	AP1000 Steam Generator Tube Rupture Accident - Curies Released to Environment by Interval - Accident Initiated Iodine Spike
7.1-26	AP1000 Steam Generator Tube Rupture Accident - Curies Released to Environment by Interval – Pre-Existing Iodine Spike

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF TABLES (Continued)

<u>Table No.</u>	<u>Title</u>
7.1-27	AP1000 Small Line Break Accident - Curies Released to Environment - Accident Initiated Iodine Spike
7.1-28	AP1000 Design Basis Loss Of Coolant Accident - Curies Released to Environment by Interval
9.2-1	Alternative Energy Sources: Comparison of Key Environmental Impacts
9.4-1	Screening of Alternative Heat Dissipation Systems
10.1-1	Unavoidable Adverse Environmental Impacts of Facility Construction
10.1-2	Unavoidable Adverse Environmental Impacts of Facility Operation
10.2-1	Irreversible and Irrecoverable Commitments of Environmental Resources

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>
2.1-1	Site Layout
2.1-2	Aerial View Grand Gulf Site November 21, 2001
2.2-1	Site Layout
2.2-2	Site Vicinity Transportation Map, Area Highways – Mississippi
2.2-3	Site Vicinity Land Use Map
2.2-4	Oil and Gas Line Map
2.2-5	Transmission Line Routes
2.2-6	Transportation Map General Area
2.2-7	Mississippi Agricultural Statistics Services Districts
2.2-8	Louisiana Agricultural Statistics Districts
2.3-1	Surface Drainage Plan
2.3-2	Regional Topography
2.3-3	Hydrographic Details of the Mississippi River at Grand Gulf
2.3-4	Rating Curve for the Mississippi River at Grand Gulf Site
2.3-5	Channel Cross Sections of the Mississippi River in the Vicinity of the Discharge Structure
2.3-6	Initial Water Sampling Locations
2.3-7	Local Drainage Basins
2.3-8	Site Drainage Plan
2.3-9	Hydrographs of Mississippi River, Gin Lake, and Hamilton Lake
2.3-10	Locations of Initial Velocity and Temperature Measurements
2.3-11	Vertical Temperature Profile, Mississippi River, February 19, 1973
2.3-12	Approximate Locations of GGNS NPDES Outfall
2.3-13	Water Surface Profiles for 1937 High Flow and 1993 Low Water Reference Plane
2.3-14	Hydrograph for the Mississippi River at Vicksburg, MS
2.3-15	Hydrograph for Mississippi River at Natchez, MS
2.3-16	Annual Maximum Instantaneous Peak Streamflow – Mississippi River USGS Station, Vicksburg, MS
2.3-17	Hydrograph of a Well Completed in the MS River Alluvial Aquifer, Vicksburg, MS
2.3-18	Hydrograph of a Well Completed in the Lower Catahoula Formation, Port Gibson, MS
2.3-19	Sole Source Aquifer Map

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF FIGURES (Continued)

<u>Figure No.</u>	<u>Title</u>
2.3-20	Site Hydrologic Features (Normal Conditions)
2.3-21	Hydrogeologic Cross Section A-A
2.3-22	Hydrogeologic Cross Section B-B'
2.3-23 SH. 1	Hydrographs of Wells and Piezometers
2.3-23 SH. 2	Hydrographs of Wells and Piezometers
2.3-23 SH. 3	Hydrographs of Replacement Piezometers
2.3-23 SH. 4	Hydrographs of Wells and Piezometers
2.3-23 SH. 5	Hydrographs of Wells and Piezometers
2.3-24	Site Hydrologic Features, Flood Conditions, May 1973
2.3-25	Plant Site Well Plan
2.3-26 SH. 1	Hydrographs of Construction Observation Wells
2.3-26 SH. 2	Hydrographs of Construction Observation Wells
2.3-26 SH. 3	Hydrographs of Construction Observation Wells
2.3-26 SH. 4	Hydrographs of Construction Observation Wells
2.3-26 SH. 5	Hydrographs of Construction Observation Wells
2.3-27 SH. 1	Hydrographs of Replacement Observation Wells MW-3 and MW-4
2.3-27 SH. 2	Hydrographs of Replacement Observation Wells MW-5 and MW-6
2.3-28	Average Post-Construction Ground Water Elevations
2.3-29	Plant Water Use Diagram
2.4-1	Aerial Photograph of the GGNS Site and Vicinity, October 11, 1971
2.4-2	Aerial Photograph of the GGNS Site and Vicinity, November 21, 2001
2.4-3	Terrestrial Habitat Types and Wetlands on the GGNS Site, 2002
2.4-4	Species of Special Concern Around GGNS Site
2.5-1	Projected 2002 Population Distribution, 0 – 10 Miles
2.5-2	Projected 2002 Population Distribution, 10 – 50 Mile Radius
2.5-3	Estimated 2000 Daily Traffic Count Within Claiborne County
2.5-4	Mississippi DOT Roadway Development Priority
2.5-5	Historic Resource Locations in GGNS Site Vicinity
2.5-6	Mississippi Minority Population Map for GGNS Site Region
2.5-7	Louisiana State Minority Population Map for GGNS Site Region
2.5-8	Mississippi Low-Income Population Areas in GGNS Site Region



GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF FIGURES (Continued)

<u>Figure No.</u>	<u>Title</u>
2.5-9	Louisiana Low-Income Population Areas in GGNS Site Region
2.5-10	GGNS Plume Exposure EPZ
2.7-1	GGNS Site Wind Rose, 2001 - 2003
2.7-2	GGNS Site Wind Rose, 2001
2.7-3	GGNS Site Wind Rose, 2002
2.7-4	GGNS Site Wind Rose, 2003
2.7-5	Deleted
2.7-6	Deleted
2.7-7	Deleted
2.7-8	Vicksburg Wind Rose, 1997-2001
2.7-9	Vicksburg Wind Rose, 1997
2.7-10	Vicksburg Wind Rose, 1998
2.7-11	Vicksburg Wind Rose, 1999
2.7-12	Vicksburg Wind Rose, 2000
2.7-13	Vicksburg Wind Rose, 2001
2.7-14	GGNS Site 2000 Hourly Temperatures (Degrees F)
2.7-15	GGNS Site 2001 Hourly Temperatures (Degrees F)
2.7-16	GGNS Site Maximum and Minimum Temperature for Revolving 96 Hour Periods
2.7-17	Topographic Profiles
2.7-18	Topographic Profiles
2.7-19	Topographic Plan of Area Within 5 and 10 Miles of Plant
2.8-1	Ambient Noise Monitoring Station Locations
2.8-2	Diel Variation dB(A) Background Noise Level
4.1-1	Comparison of Median ( $L_{50}$ ) dB(A) Noise Levels Between July 1973 and June 1974 Surveys
4.1-2	Variation of dB(A) Noise Levels with Time During the Construction Noise Survey, June 1974
4.1-3	Variation of dB(A) Noise Levels with Time During the Ambient Background Noise Survey, July 1973
4.1-4	Overall Mean Octave Band Levels During the July 1973 and June 1974 Surveys
4.1-5	Comparison of Median ( $L_{50}$ ) dB(A) Noise Levels Between July 1973 and August 1974 Surveys

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

LIST OF FIGURES (Continued)

<u>Figure No.</u>	<u>Title</u>
4.1-6	Comparison of Median ( $L_{50}$ ) dB(A) Noise Levels Between July 1973 and October 1974 Surveys
4.1-7	Comparison of Median ( $L_{50}$ ) dB(A) Noise Levels Between July 1973 and December 1974 Surveys
4.1-8	Comparison of Median ( $L_{50}$ ) dB(A) Noise Levels Between the July 1973 Pre-Construction and February 1975 Construction Noise Surveys, Grand Gulf Site
4.5-1	Relative Locations of 16 TLD Stations at GGNS Unit 1 Protected Area Boundary
5.3-1	Makeup Water Embayment Layout
5.3-2	Makeup Water Intake Structure Profile
5.3-3	Predicted Thermal Dilution Characteristics from CORMIX
5.3-4	Summer Mean 5 °F Isotherm Plume
5.3-5	Summer Mean Low 5 °F Isotherm Plume
5.3-6	Summer Extreme 5 °F Isotherm Plume
5.3-7	Summer Extreme Low 5 °F Isotherm Plume
5.3-8	Winter Mean 5 °F Isotherm Plume
5.3-9	Winter Mean Low 5 °F Isotherm Plume
5.3-10	Winter Extreme 5 °F Isotherm Plume
5.3-11	Winter Extreme Low 5 °F Isotherm Plume
6.2-1	Exposure Pathways
6.2-2	Sample Collection Sites – Near Field
6.2-3	Sample Collection Sites – Far Field

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

ABBREVIATIONS AND ACRONYMS

Abbreviation or Acronym	Description
ABWR	Advanced Boiling Water Reactor
ACR	Advanced CANDU Reactor
AEA	Atomic Energy Act
ALARA	As Low As Reasonably Achievable
ANO	Arkansas Nuclear One
AP 1000	Advanced Passive (Pressurized Water Reactor) 1000
AREOR	Annual Radiological Environmental Operating Report
BOD	Biological Oxygen Demand
BOP	Balance of Plant
BWR	Boiling Water Reactor
CEDE	Committed Effective Dose Equivalent
CEUS	Central and Eastern United States
CFCs	Chlorinated Fluorocarbons
CFR	Code of Federal Regulations
CHI/Q	Relative Concentration (X/Q)
COL	Combined (Construction and Operating) License
CP	Construction Permit
CPTs	Cone Penetrometer Tests
CST	Condensate (Water) Storage Tank
CWA	Clean Water Act
CWPT	Circulating Water Pipe Trench
D&D	Decontamination and Decommissioning
DBA	Design Basis Accident
DDE	Deep Dose Equivalent
DDT	Dichloro-Diphenyl-Trichloroethene
DEQ	Department of Environmental Quality
DG	Draft Guide
DOE	Department of Energy
DW	Dewatering Well
EA	Environmental Assessment
EAB	Exclusion Area Boundary
E-NE	East-Northeast

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

ABBREVIATIONS AND ACRONYMS (Continued)

Abbreviation or Acronym	Description
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute
ER	Environmental Report
ESBWR	Economic Simplified Boiling Water Reactor
ESC	Energy Services Center
E-SE	East-Southeast
EPZ	Emergency Planning Zone
ESF	Engineered Safeguard Feature
ESP	Early Site Permit
FER	Final Environmental Report
FERC	Federal Energy Regulatory Commission
FFCA	Federal Facilities Compliance Act
FGEIS	Final Generic Environmental Impact Statement
FHA	Fuel Handling Accident
FOL	Facility Operating License
FWPCA	Federal Water Pollution Control Act
GEIS	Generic Environmental Impact Statement
GG	Grand Gulf
GGNS	Grand Gulf Nuclear Station
gpd	Gallons per day
GTCC	Greater Than Class C
GT-MHR	Gas Turbine – Modular Helium Reactor
HHV	Higher Heating Value
HLW	High Level Waste
HUD	Department of Housing and Urban Development
HVAC	Heating, Ventilation And Air Conditioning
IPEC	Indian Point Energy Center
IRIS	International Reactor Innovative And Secure
JAF	James A. Fitzpatrick
LDWF	Louisiana Department of Wildlife and Fisheries
LHV	Lower Heating Value

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

ABBREVIATIONS AND ACRONYMS (Continued)

Abbreviation or Acronym	Description
LLD	Lower Limits of Detection
LLW	Low Level Waste
LMDCT	Linear Mechanical Draft Cooling Towers
LOCA	Loss Of Coolant Accident
LPZ	Low Population Zone
LRGEIS	License Renewal Generic Environmental Impact Statement
LSU	Louisiana State University
LWR	Light-Water-Cooled Reactors
m/s	Meters per second
MDA	Mississippi Development Authority
MDAH	Mississippi Department of Archives and History
MDEQ	Mississippi Department of Environmental Quality
MDOT	Mississippi Department of Transportation
MDWFP	Mississippi Department of Wildlife, Fisheries, and Parks
MGD	Million Gallons Per Day
MHTGR	Modular High-Temperature Gas Reactor
MP&L	Mississippi Power & Light Company
mph	Miles per hour
MSDH	Mississippi State Department of Health
MSL or (msl)	Mean Sea Level
MSUES	Mississippi State University Extension Service
MSW	Municipal Solid Waste
MT	Metric Ton
MTU	Metric Tons of Uranium
MW	Monitoring Well
MWd	Mega-Watt days (MWd)
MWe	Megawatts electric
MWt	Megawatts thermal
NCDC	National Climatic Data Center
NEPA	National Environmental Policy Act
NDCT	Natural Draft Cooling Towers
NE	Northeast

GGNS  
EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

ABBREVIATIONS AND ACRONYMS (Continued)

Abbreviation or Acronym	Description
NEI	Nuclear Energy Institute
NHS	Normal Plant Heat Sink
NMFS	National Marine Fisheries Service
N-NE	North-Northeast
N-NW	North-Northwest
NOAA	National Oceanographic and Atmosphere Administration
NOPSIS	New Orleans Public Services, Inc.
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRCS	Natural Resources Conservation Service
NW	Northwest
NWS	National Weather Service
ODCM	Offsite Dose Calculation Manual
OSHA	Occupational Safety and Health Administration
OW	Observation Well
PBAPS	Peach Bottom Atomic Power Station
PBMR	Pebble Bed Modular Reactor
PNS	Pilgrim Nuclear Station
PPE	Plant Parameters Envelope
ppm	Parts per million
PPMVD	Parts Per Million Dry Volume
PSHA	Probabilistic Seismic Hazard Assessment
PSW	Plant Service Water
PV	Photovoltaic
PWR	Pressurized Water Reactor
RBS	River Bend Station
RCRA	Resource Conservation and Recovery Act
REMP	Radiological Environmental Monitoring Program
ROI	Region Of Interest
ROW	Right of Way
RRY	Reactor Reference Year
SE	Southeast

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EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

ABBREVIATIONS AND ACRONYMS (Continued)

Abbreviation or Acronym	Description
SERI	System Energy Resources, Inc.
SGTR	Steam Generator Tube Rupture
SMEPA	South Mississippi Electric Power Association
SMSA	Standard Metropolitan Statistical Area
SSAR	Site Safety Analysis Report
SSE	Safe Shutdown Earthquake
S-SE	South-Southeast
S-SW	South-Southwest
SW	Southwest
SWPPP	Stormwater Pollution Prevention Plan
SWS	Service Water System
SWU	Separative Work Units
T&D	Transmission and Distribution
T/E (T&E)	Threatened or (and) Endangered
TDS	Total Dissolved Solids
TEDE	Total Effective Dose Equivalent
TLD	Thermo-luminescent dosimeter
TSS	Total Suspended Solids
TW	Test Well
UFSAR	Updated Final Safety Analysis Report
UHC	Unburned Hydrocarbon Emissions
UHS	Ultimate Heat Sink
URL	Uniform Resource Locator
USACE	The United States Army Corps of Engineers
USEC	United States Enrichment Corporation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USNRC	U.S. Nuclear Regulatory Commission
USWB	U.S. Weather Bureau
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compounds
W3	Waterford-3

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EARLY SITE PERMIT APPLICATION  
PART 3 – ENVIRONMENTAL REPORT

ABBREVIATIONS AND ACRONYMS (Continued)

Abbreviation or Acronym	Description
W-NW	West-Northwest
W-SW	West-Southwest