SYSTEM ENERGY RESOURCES, INC.

EARLY SITE PERMIT APPLICATION

for the

GRAND GULF NUCLEAR STATION SITE

PART 4
EMERGENCY PLANNING INFORMATION

Revision 2

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ABBREVIATIONS AND ACRONYMS

Abbreviation or Acronym	Description
CFR	Code of Federal Regulations
CPR	Cardio-Pulmonary Resuscitation
CR	Control Room
DOE	U.S. Department of Energy
DOT	Department of Transportation
DRH	Division of Radiological Health
EAB	Exclusion Area Boundary
EAL	Emergency Action Level
EIC	Emergency Information Center
ENMC	Emergency News Media Center
ENS	Emergency Notification System
EOC	Emergency Operation Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPTS	Emergency Preparedness Training Specialized
EPZ	Emergency Planning Zone
ERDS	Emergency Response Data System
ERF	Emergency Response Facility
ESC	Energy Services Center
ESP	Early Site Permit
ETE	Evacuation Time Estimate
FEMA	Federal Emergency Management Agency
FFD	Fitness For Duty
FRERP	Federal Radiological Emergency Response Plan
GGNS	Grand Gulf Nuclear Station
HPN	Health Physics Network
INPO	Institute of Nuclear Power Operations
IRAP	Interagency Radiological Assistance Plan
IRST	Initial Response Site Team
KI	Potassium Iodide
LA	Louisiana
LAN	Local Area Network

ABBREVIATIONS AND ACRONYMS (Continued)

Abbreviation or Acronym	Description
LDEQ	Louisiana Department of Environmental Quality
LOEP	Louisiana Office of Emergency Preparedness
LPZ	Low Population Zone
MCL	Management Counterpart Link
MEMA	Mississippi Emergency Management Agency
MS	Mississippi
MSDH	Mississippi State Department of Health
msl	mean sea level
NRC/USNRC	Nuclear Regulatory Commission
OCL	Operational Counterpart Link
OSC	Operations Support Center
PA	Public Address
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PMCL	Protective Measures Counterpart Link
RAC	Regional Assistance Center
RAP	Radiological Assistance Plan
RSCL	Reactor Safety Counterpart Link
SERI	System Energy Resources, Inc.
T	Time of Notification (T)
TN	Tennessee
TLD	Thermoluminescent Dosimeter
TSC	Technical Support Center
UHF	Ultra-High Frequency
UFSAR	Updated Final Safety Analysis Report
U.S.	United States
YMCA	Young Men’s Christian Association

1.0 PLANNING STANDARDS AND EVALUATION CRITERIA

1.1 Introduction

This Major Features Emergency Plan (Plan) has been developed to support Early Site Permit (ESP) activities for the possible addition of a new nuclear generating facility at the existing Grand Gulf Nuclear Station (GGNS) site in southwest Mississippi. This Plan has been developed consistent with the requirements of 10 CFR 52.17 and the guidance provided in:

- NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (USNRC, 1980); and
- NUREG-0654/FEMA-REP-1, Revision 1, Supplement 2, "Criteria for Emergency Planning in an Early Site Permit Application" (USNRC, 1996).

These requirements and the guidance provided in NUREG-0654/FEMA-REP-1, Revision 1, Supplement 2, were developed to specifically address the major features of emergency plans at the ESP stage of facility development.

Approved plans governing emergency preparedness and response activities are currently in place for the GGNS Unit 1 facility. It is expected that these plans and implementing procedures would be expanded and modified as needed to support the proposed new facility. Those implementation details would be developed in cooperation with participating agencies and organizations at the COL stage. This Plan, presenting the major features of an emergency plan for the proposed new facility, describes or summarizes applicable portions of those plans currently in place and how they apply, or will apply, to the proposed new facility.

Current emergency plans supporting GGNS Unit 1 were developed to be consistent with the emergency response plans of the affected states (Mississippi and Louisiana) and localities. The current versions of the state and local plans are on file with the Federal Emergency Management Agency (FEMA) Regional Assistance Center (RAC) and are incorporated by reference in this submittal.

Section 2 of this Plan discusses the physical features of the GGNS site and provides an analysis of possible impediments to implementation of protective actions in the Plume Exposure Pathway Emergency Planning Zone under emergency conditions.

Section 3 of this Plan discusses the major features of the Plan as identified in NUREG-0654/FEMA-REP-1, Revision 1, Supplement 2, "Criteria for Emergency Planning in an Early Site Permit Application."

Section 4 of this Plan provides a cross-reference between this plan and the applicable ESP guidance provided in NUREG-0654/FEMA-REP-1, Revision 1, Supplement 2.

1.2 References

1. Title 10 Code of Federal Regulations, Part 52, Section 17, Contents of Applications.
2. NUREG-0654/FEMA-REP-1, Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, USNRC, 1980.
3. NUREG-0654/FEMA-REP-1, Revision 1, Supplement 2, Criteria for Emergency Planning in an Early Site Permit Application, USNRC, 1996.

4. Mississippi Radiological Emergency Preparedness Plan; Volume III, to the Mississippi Comprehensive Emergency Management Plan.
5. Port Gibson/Claiborne County - Radiological Emergency Preparedness Plan.
6. Louisiana Peacetime Radiological Response Plan, Revision 9.

2.0 IDENTIFICATION OF PHYSICAL SITE CHARACTERISTICS

2.1 Site Description

2.1.1 Location and Physical Characteristics

The proposed new facility will be located on the site of the existing Grand Gulf Nuclear Station (GGNS), which is located in Claiborne County in southwestern Mississippi. The GGNS site is located approximately 6 miles northwest of Port Gibson, Mississippi, and 37 miles north-northeast of Natchez, Mississippi. The Universal Transverse Mercator grid coordinates for the proposed reactor(s) location for the new nuclear power plant unit(s) are approximately N3,543,261 meters, and E684,018 meters.

The property boundary shown on Figure 2-1 encompasses approximately 2100 acres of property that makes up the Grand Gulf Nuclear Station (GGNS) site. The site and its environs consist primarily of woodlands and farms. Within this area are two lakes, Gin Lake and Hamilton Lake. These lakes were once the channel of the Mississippi River and average about 8 to 10 feet in depth.

The western half of the plant site consists of materials deposited by the Mississippi River and extends eastward from the river about 0.8 mile. This area is generally at elevation 55 to 75 feet above mean sea level (msl).

The eastern half of the plant site is rough and irregular with steep slopes and deep-cut stream valleys and drainage courses. Elevations in this portion of the plant site range from about 80 feet above msl to more than 200 feet above msl at the inland of the site. Elevations of about 400 feet above mean sea level occur on the hilltops east and northeast of the site.

There are no railroads or navigable waterways that traverse the exclusion areas for the existing GGNS Unit 1 plant or the proposed new facility location. One county road runs through the GGNS plant site property; Bald Hill Road traverses the exclusion area for the proposed new facility. Bald Hill Road cuts through the south-southeast, south, south-southwest, and southwest sectors of the plant site. The GGNS Unit 1 plant structures and support buildings (with exception of structures at the river), including the Energy Services Center (ESC) building, which includes engineering and training facilities, the site visitor's center, and the GGNS Emergency Operations Facility (EOF), are within the exclusion area for the proposed new facility. There are no other industrial, commercial, institutional, or residential structures in the proposed new facility's exclusion area.

The nearest communities include Port Gibson, MS, approximately 6 miles southeast of the site, Newellton, LA, approximately 12 miles west of the site, and St. Joseph, LA, approximately 13 miles west-southwest of the site.

Transportation infrastructure within the region includes the Mississippi River, U.S Interstate Highway 20, of which a portion lies approximately 28 miles north of the GGNS site, and U.S. Interstate Highway 55, a portion of which lies approximately 40 miles east of the GGNS site. U.S. Highway 65 runs north to south in Louisiana and lies approximately 9 miles to the west of the site, connecting to U.S. Highway 84 approximately 27 miles to the southeast of the site. Figure 2-2 shows the locations of all airports, federal highways and railroads in the area.

Recreational facilities near the site include the Grand Gulf Military Park, which borders a portion of the north side of the property, Lake Bruin State Park, Warner-Tully YMCA Camp and several hunting and fishing clubs.

2.1.2 Exclusion Area Authority And Control

The boundary line of the plant exclusion area (as defined in 10 CFR 100) for GGNS Unit 1 is shown on Figure 2-3. The boundary consists of a circle drawn from the center of the Unit 1 containment. The minimum distance from the Unit 1 reactor to the exclusion area boundary is 696 meters. This is the closest distance from the center of Unit 1 containment to the plant property boundary. The proposed location of the power block housing the reactor containment structure for the new facility is within the exclusion area for the GGNS Unit 1 plant.

The boundary line of the exclusion area for the proposed new facility (as defined in 10 CFR 100) is also shown on Figure 2-3. The exclusion area boundary (EAB) for the proposed new facility consists of a circle of approximately 0.52 miles (841 meters) radial distance from the circumference of a 630 ft. circle encompassing the proposed new facility power block location. Thus the minimum distance to the exclusion area boundary from any individual new reactor site within the 630 ft. circle would be 0.52 miles (841 meters). The area within this proposed EAB is wholly contained within the GGNS site property boundary. The exclusion area for the proposed new facility will include a majority of the GGNS Unit 1 exclusion area.

2.1.3 Authority

System Energy Resources, Inc. (SERI) controls the surface rights, and SERI has authorized Entergy Operations to maintain control of ingress to and egress from the GGNS Unit 1 exclusion area and provides for evacuation of individuals from the area in the event of an emergency. A similar arrangement would be made for exercise of authority over the area within the exclusion area for the new facility on the site property. Because the exclusion area for the proposed new facility is wholly contained within the GGNS site property boundary, SERI would have effective control over the exclusion area for the proposed new facility.

Entergy Operations currently allows access to parts of the plant site property outside the GGNS Unit 1 exclusion area for recreational purposes. The site protected area is posted to ensure awareness of access restrictions by individuals. Similar arrangements would be implemented for operation of the proposed new facility on the GGNS site.

2.1.4 Arrangements For Traffic Control

The exclusion area for the proposed new facility is not traversed by a railway or waterway and, therefore, no arrangements would be required for these; however, the exclusion area is traversed by a county road (see Section 2.1.1). Agreements are in place such that local law enforcement authorities would block the road when notified that such a need exists.

2.1.5 Emergency Planning Zones

Emergency Planning Zones (EPZs) are designated areas for which planning is recommended to assure that prompt and effective actions are taken to protect the public in the event of an emergency. In defining the EPZs, such factors as organizational capabilities, method of implementation for various emergency plans and the availability of onsite and offsite emergency facilities and equipment will be taken into consideration.

Two primary zones are identified for the purpose of development and implementation of emergency planning. The Plume Exposure Pathway EPZ has a radius of approximately 10-miles and is established in response to the possible direct exposure to the plume. Within this zone, shelter and evacuation are the protective actions recommended for the general public, as necessary. The Ingestion Pathway EPZ has a fifty mile radius and is established in response to possible exposure to deposited radionuclides, whether in water, or on the ground or vegetation.

This may necessitate monitoring of pathways such as crops, dairy products, farm animals, and pastures.

2.1.5.1 Plume Exposure Pathway EPZ Description

The Plume Exposure Pathway EPZ boundary for the proposed new facility would be identical to that for the existing GGNS Unit 1 and would encompass portions of Claiborne County in Mississippi and Tensas Parish in Louisiana. A small portion of Warren County, Mississippi, is located within the Plume Exposure EPZ, to the north of Claiborne County. However, since there are no permanent, transient or special facility populations associated with this small section of Warren County, it is not specifically cited throughout the remainder of this Plan. Due to their close proximity to the 10 mile radius from the proposed new facility, the towns of Newellton and St. Joseph in Tensas Parish, Louisiana and the campus of Alcorn State University in Mississippi have been included in the Plume Exposure Pathway EPZ. Figure 2-4 illustrates the boundaries of the Plume Exposure Pathway EPZ for the proposed new facility.

2.1.5.2 Ingestion Pathway EPZ Description

Beyond a ten mile radius, the effect of direct exposure to the plume is no longer of significant concern because the plume is sufficiently dispersed so as not to present an immediate hazard. Those counties in Mississippi and parishes in Louisiana within the 50-mile EPZ include, for both GGNS Unit 1 and the proposed new facility:

Mississippi Counties		Louisiana Parishes	
Adams	Lincoln	Caldwell	Madison
Amite	Madison	Catahoula	Richland
Claiborne	Rankin	Concordia	Tensas
Copiah	Sharkey	East Carroll	West Carroll
Franklin	Simpson	Franklin	
Hinds	Warren		
Issaquena	Wilkinson		
Jefferson	Yazoo		

Figure 2-5 illustrates the boundaries of the Ingestion Pathway EPZ and provides the populations of the various sectors.

2.2 Evacuation Time Estimate Preliminary Analysis

2.2.1 Introduction

A detailed Evacuation Time Estimate (ETE) for the Plume Exposure Pathway EPZ surrounding GGNS was performed in 1986. This ETE indicated that the maximum evacuation time for the affected area was approximately three hours (Reference 3). Since that time, monitoring of the area population has indicated that population growth has been modest. In addition, there have been significant improvements to major roadways in the area. The combination of these two factors has provided confidence that the findings of the original ETE remain valid.

In 2003, a detailed evaluation of the original ETE was undertaken to more fully consider the impact of the historical population growth and transportation system improvements. Following is a description of the methodology used and results of that evaluation.

2.2.2 Methodology

The 2003 ETE evaluation examined evacuation time estimates as determined in 1986 for the GGNS EPZ and evaluated those estimates through: (1) an evaluation of the current population in the GGNS EPZ, using 2000 US Census data and projected 2002 population estimates[1]; (2) an evaluation of the current roadway network in and around the GGNS EPZ; (3) an evaluation of other potential impediments (e.g. new population growth, new shopping centers, new large employers) in or near the EPZ; and (4) interviews with state and local emergency management and transportation officials, as well as verification of all of the above through a site visit to the GGNS EPZ.

The 2003 ETE evaluation included data collection regarding population types (permanent resident, transient recreational, transient workforce, special populations such as schools and nursing homes), and population locations. Data were collected from US Census Bureau data for Tensas Parish and for Claiborne County. Population data for transient recreational, transient workforce and special populations were collected from interviews with utility officials and with county Emergency Management Directors, as well as field observations in the GGNS EPZ.

Data regarding roadways were collected from the Mississippi Department of Transportation (DOT) website (traffic count data for Claiborne County roads), through interviews with Mississippi and Louisiana DOT supervisors, and through direct observation of each major road.

2.2.3 Emergency Planning Zone Population

The population data presented in this section were primarily based on the 2000 U.S. Census (Reference 4). The census data were augmented by information from other agencies and public organizations from the states of Mississippi and Louisiana (References 5 and 6). The total permanent population within the proposed new facility Plume Exposure EPZ is approximately 11,140 (from 2000 census data).

2.2.3.1 Population Within The Plume Exposure EPZ

Figure 2-4 shows a map of the GGNS site Plume Exposure Pathway Emergency Planning Zone. On this map, concentric circles have been drawn at 1 mile increments, with the site at the center point. The circles are divided into 22.5-degree segments with each segment centered on one of the 16 cardinal compass points (e.g., north, north-northeast). Within each area formed by the concentric circles and radial lines, the resident population for the year 2000 is given. The population data for the area within ten miles of the site were based on census block points from the LandView 5 software program provided by the U.S. Census Bureau.

The LandView software yielded a population of zero (0) within a one mile radius of the proposed power block location. This result is contrary to both direct observations and a previous survey,

[1] The population for the Ingestion Pathway EPZ was estimated based on 2002 population projections derived starting from 2000 U.S. Census data. Because of the complex geometry of the Plume Exposure Pathway EPZ, the permanent resident population estimate was based on 2000 U.S. Census data. Due to the relatively slow population growth in the Plume Exposure EPZ and the excess roadway capacities, the differences between year 2000 and 2002 population estimates are not expected to significantly affect the outcome of the ETE evaluation.

both of which indicate that a small resident population exists within a one mile radius of GGNS (see GGNS Emergency Plan, Figure 2-3 which indicates a population of 39 people). The difference between the Year 2000 census-based estimate and the previous survey-based enumeration appears to be the result of limitations on the manner in which census data are collected and presented. Specifically, the Year 2000 population estimates were derived from "census block" data, with a "census block" being the smallest geographic entity for which the Census Bureau tabulates census data. For purposes of this application and the supporting preliminary analysis of evacuation time estimates, the population within a census block was assumed to be resident at the geographic center of that block; therefore, if the center of the block lay outside of the one mile radius, then all of the residents in that block were assumed to live outside the one mile radius. In addition, in areas of low population densities, such as that surrounding GGNS, the Census Bureau may impose limits on the data available to protect the privacy of the residents. In any case, direct observations indicate that the population within one mile of the proposed power block location remains small. Because the preliminary analysis of evacuation time estimates was based on populations within protective action areas rather than radii, assumptions regarding the location of this population within or outside of the one mile radius do not affect the results of the preliminary analysis of evacuation time estimates.

Discussions with representatives of Alcorn State University indicate that 182 staff members and their families maintain permanent residency in housing provided on the university campus (Reference 7). Because of their location on the campus and the fact that the entire campus population has been treated as a special facility population in the 2003 ETE evaluation, these 182 persons are not included in the permanent resident data for the Plume Exposure Pathway EPZ. The Alcorn State University population is discussed in Section 2.2.3.6.

There are no residents within the exclusion area boundary for the proposed new facility.

2.2.3.2 Population Within The Ingestion Pathway EPZ

Figure 2-5 shows a map of the Ingestion Pathway EPZ. On this map, concentric circles have been drawn, with the center of the proposed power block location on the site at the center point, at distances of 10, 20, 30, 40 and 50 miles. The circles are then divided into 22.5-degree segments with each segment centered on one of the 16 cardinal compass points (e.g., north, north-northeast). The projected resident population for 2002 for each area formed by the concentric circles and radial lines is given in Figure 2-5.

2.2.3.3 Transient Population

Transient population, particularly within the low-population zone of the Grand Gulf site, shows both seasonal variations (due to the Grand Gulf Military Park, Warner-Tully YMCA Camp, Lake Claiborne, hunting camps, and fishing) and daily workday variations (due to employment, schools, and other sources of an occasional nature). Descriptions of the seasonal and daily variations in population in the area surrounding the Grand Gulf site are presented below.

The Grand Gulf Military Park is located approximately 1-1/2 miles north of the site and is contiguous to the site property. The park is open daily from 8:00 a.m. to 5:00 p.m. and had over 88,000 visitors who used the facilities and grounds in 2001. There were approximately 31,000 visitors to the park who paid for camping and tours in 2001. School groups, Boy Scouts, YMCA groups and others use Grand Gulf Military Park for field trips and nature studies. Most people visit the park on Sundays, with Saturday second in attendance. The park is most heavily populated during the months of June and July, when 250 to 300 persons visit the site per day depending on the weather conditions. (Reference 8)

The Warner-Tully YMCA Camp (Mississippi) consists of 108 acres of land located approximately 3-1/2 miles northeast of the site. Approximately 800 campers use the Warner-Tully camp facilities each year. The YMCA camp is open from late May to the end of August. (Reference 9)

Lake Claiborne (Mississippi) is a private development of residential and recreational facilities. It is located approximately 3-1/2 miles east of the site. Lake Claiborne, Inc. has a total of about 450 members. A maximum of 200 people, both residents and recreational users, use these facilities on a summer weekend (References 10 and 11).

Lake Bruin State Park consists of 53 acres located on the shore of Lake Bruin, Louisiana, approximately 9.5 miles southwest of the site. From July 2001 to June 2002, the park had approximately 36,000 visitors. (Reference 12)

There are approximately 150 hunting camps within Claiborne County. These camps are primarily used for deer hunting and other types of hunting, as well as sport fishing. Each camp, depending on its size, could have up to 20-30 hunters on a weekend day during hunting season (References 13 and 14). However, it is considered unlikely that all camps will be occupied to this extent at any one time; an average population of 8-10 hunters per camp is more likely.

There are several hunting clubs located across the Mississippi River from the GGNS site in Tensas Parish, Louisiana. Approximately 400 hunters are members of these clubs, primarily deer and duck hunters (Reference 15)

Deer season in Mississippi traditionally opens early in October for archery and late November for guns. The season continues through early January. The greatest number of hunters, approximately 500 to 600, is invariably present on the first day of gun season. After the opening weekend, approximately 70% of the hunting population utilize the camps until the end of the season in early January. (References 13 and 14) Louisiana deer season is similar in duration to that of Mississippi, beginning in early October and ending in late January (Reference 16).

Sport fishing in the area occurs in the months of April through September with Saturday the busiest day of the week. As many as 200-250 fishermen may be within the vicinity on weekends during the months noted above. The number of fishermen may drop to less than 150 during the week and depending on the weather conditions. (Reference 14) There is limited commercial fishing within the study area. Most of this occurs on the Mississippi River, the Big Black River and the Bayou Pierre River, with catfish being the most abundant catch. There are approximately 12 commercial fishermen who fish within the area. (Reference 14)

The Kansas City Southern freight train passes north to northeast within 28 miles of the site twice daily. The train runs from Vicksburg to Meridian, MS, and then returns to Vicksburg. The train carries a crew of five. (Reference 17)

The Delta Queen Steamboat Company operates three paddle wheel tour boats on the Mississippi River, the *Delta Queen*, the *Mississippi Queen* and the *American Queen*. The *Delta Queen* is scheduled to pass the GGNS site a minimum of five times during 2003. She has a full complement of 174 passengers and 75 crew. The *Mississippi Queen* is scheduled to pass the GGNS site a minimum of 8 times during the 2003 season with a full complement of 416 passengers and 156 crew. The *American Queen* is scheduled to pass the GGNS site a minimum of 13 times during 2003 with a full complement of 436 passengers and 161 crew. (Reference 18)

There is one primary forest product company, Anderson-Tully, that owns and leases land within the study area. Anderson-Tully has 12 people on logging crews that work in the vicinity. (Reference 19)

Approximately 800 people work at the GGNS plant site (maximum outage staffing). Plant staffing is round the clock, with approximate numbers of personnel on site as indicated below for the normal day crews and night crews. (Reference 20)

GGNS Approximate Staffing Levels

	Normal Week Day	Normal Weekend Day	Outage Week Day	Outage Weekend Day
Day	660	70	800*	210
Night	90	60	170*	140

* Outage weekday estimated based on difference between outage weekend day and normal weekend plus normal weekday staff.

2.2.3.4 Low Population Zone

The definition of a low population zone (LPZ) as stated in 10 CFR 100 is: "the area immediately surrounding the exclusion area which contains residents, the total number and density of which are such that there is a reasonable probability that appropriate protective measures could be taken in their behalf in the event of a serious accident."

The current LPZ radius is 2.0 miles centered on the reactor for the existing GGNS Unit 1 plant (Ref. GGNS UFSAR Section 2.1.3.4). The LPZ for the proposed new facility, a 2-mile radial distance measured from the circumference of a 630 ft. circle encompassing the proposed new facility power block location will be essentially the same as for GGNS Unit 1. The center of the 630 ft. circle is approximately 1200 feet west and 1000 feet north of the GGNS Unit 1 reactor center. Based on information obtained from the U.S. Census 2000 LandView 5 data, the 2002 projected resident population within the LPZ is 74 people. The number and density of residents in the area immediately surrounding the GGNS site (in both Mississippi and Louisiana) are low, enabling simple and effective evacuation procedures to be followed in the event of a serious accident. The GGNS Unit 1 daily population of employees is about 750, with the approximate distribution between day and night as indicated above in Section 2.2.3.3. The roads within the area will be the primary transportation routes for evacuation.

Seasonal and peak daily transient population within the low population zone is mainly due to recreational use of the Grand Gulf Military Park, hunting and sport fishing and the work force at the GGNS site . Each of these contributors to the transient population in the LPZ is described in Section 2.2.3.3.

2.2.3.5 Population Center

A population center is defined in 10 CFR 100.3 as a densely populated area where there are about 25,000 or more inhabitants. The closest population center is Vicksburg, Mississippi, located approximately 25 miles north-northeast of the site, with a 2000 population of 26,407. This is the only population center within 50 miles of the site. The nearest major city is Jackson,

Mississippi, which lies 55 miles to the northeast of the site, and has a population of 184,256 according to the 2000 census. The southwest portion of Jackson is located within the 50-mile radius.

2.2.3.6 Public Facilities and Institutions

A summary of the schools, hospitals, day care centers, and public parks in the area of the site and their peak populations are given in Table 2-1 (References 21 and 22).

Of particular interest during the 2003 ETE Evaluation was the resident population at Alcorn State University, which has grown from an estimated 1900 students in 1986 to 3150 students in 2003. Interviews with campus police and public safety officials (Reference 23) indicate that approximately 2000 students live on campus. Of these 2000 students who live on campus, approximately 1800 have their own vehicles. The campus is largely full on weekdays during the school year, and largely empty during the summer. Campus population decreases substantially during the weekends.

Alcorn State University also has a football stadium that, on some football game days in September-November, may be visited by 20,000 or more people. While this represents a substantial short-term increase in the EPZ population, these large crowds are rare events (5 or 6 games per year). Alcorn State University is on the outer edge of the Plume Exposure Pathway EPZ, and actually extends beyond the 10-mile radius circle around the plant. Evacuees would have to drive less than one mile to be out of the Plume Exposure Pathway EPZ. Traffic control in the campus area is adequate to ensure that a large temporary traffic increase on the roads from an Alcorn State football game do not prevent or preclude other resident evacuees from accessing roadways to evacuate if necessary. Interviews with campus security officials indicated that at the end of a home football game, extra football vehicle traffic is emptied off campus within 60-90 minutes.

2.2.3.7 Plume Exposure EPZ Peak Population

A tabulated comparison of Peak Plume Exposure Pathway EPZ populations, by population segment from 1986 and 2002, is provided below.

Comparison of Peak Plume Exposure Pathway EPZ Populations 1986-2002[2]

Population Segment	Weekday Peak Population			Weeknight Peak Population			Weekend Peak Population	
	1986	2002		1986	2002		1986	2002
Permanent Resident	8,702	9,846		8,702	9,846		8,702	9,846
Special Facilities	5,713	7,673		2,144	2,944		2,144	2,910
Work Force	1,814	1,116		80	201		80	241
Recreational	2,220	1,870		1,195	1,245		2,220	1,870
Total	18,449	20,505		12,121	14,236		13,146	14,867

[2] The evacuee population, as discussed in Section 2.2.3, was based on data collected from various sources from 2000 through 2003.

As indicated above, the limiting Plume Exposure EPZ peak population (for evacuation time estimate purposes) remains the daytime population estimated at 20,505, an increase of only 11.1% since the 1986 ETE Study. Most of this population growth was in the Port Gibson area (increase in permanent population as other areas around Port Gibson experienced a decrease over the same period), and at Alcorn State University (increase in special population category). Note that, due to double counting of some segments, it is expected that these figures provide a conservative estimation of the EPZ population. For example, it is expected that many members of the special facilities and recreational transient populations are also included in the 2000 census data as permanent residents.

2.2.4 Evacuation Time Estimate Evaluation

2.2.4.1 Assumptions

The ETE evaluation relied upon essentially the same assumptions as were used in the 1986 ETE, except as noted below. For clarity, this 2003 evaluation includes one additional assumption addressing the population at Alcorn State University. The assumptions include:

- Some double counting of populations will occur, as school children are treated as members of a special facility population base, and are also included in the permanent population data base.
- Evacuations will be conducted in accordance with State and County/Parish Radiological Emergency Response Plans.
- All persons within the EPZ will evacuate. Using guidance in NUREG 0654 (Reference 7.1) evacuation time estimate studies need only consider evacuation of the permanent population and the transient population. Special facilities populations are evacuated separately (and usually earlier than the general population).

  Note: This study includes the special facilities population and their associated vehicle load with the remainder of the evacuating population. By assuming all of the evacuating vehicles are on the evacuation roadway network in the same time frame, a conservative estimation of the impact on the roadway network is obtained.
- The time required to completely evacuate the EPZ includes time to alert and notify the public, and time for the public to mobilize, collect family members and household items needed for evacuation (personal items, toiletries, medicines, etc). For auto owning permanent residents, it is assumed they will begin the evacuation process between time of notification (T) plus 15 minutes to T plus 75 minutes. Residents of special facilities such as jails, hospitals and nursing homes will begin evacuation from between T plus 75 minutes and T plus 135 minutes (time needed to mobilize ambulances and other transportation specific vehicles). The work force population will depart between T plus 15 minutes and T plus 60 minutes.
- The auto owning permanent population will evacuate from their residences, using their best available vehicle. Plans are in place in both Claiborne County and Tensas Parish to have non-auto owning residents ride with a neighbor or to otherwise provide the non-auto owning permanent residents with transportation out of the EPZ.
- Existing lane utilization and traffic control (stop signs, traffic lights, etc.) will be used during evacuation, supplemented by pre-planned traffic control by law enforcement officers at key intersections to help coordinate the speedy passage of all vehicles through the intersections.

- People will evacuate based on a time distribution of events. Not everyone will receive the initial alert and notification at the same time. Not everyone will leave their residence at the same time.
- For weekday conditions, it is assumed that schools are in session, work places are fully staffed (including GGNS), permanent residents will evacuate from their residence, and recreational facilities are at typical weekday levels.
- For nighttime conditions, it is assumed that schools are not in session, permanent residents will evacuate from their residence, work places are at nighttime levels (including GGNS), and recreational facilities are at nighttime levels.
- For weekend conditions, it is assumed that schools are not in session, permanent residents will evacuate from their residence, work places are at weekend levels, and recreation facilities are at peak capacity.

  Note: The 1986 ETE assumed that, for weekend conditions, GGNS staffing would be at nighttime levels. Because conservative (e.g., outage) weekend staffing figures were available during the conduct of this study, these figures were used for GGNS weekend staffing.
- For adverse weather conditions, it is assumed that all roads would be available, but at 75 percent of their normal capacity. This 25 percent reduction includes allowances for reduced travel speeds as well as reduced roadway capacity.
- Each household in the EPZ will evacuate using one vehicle per household.
- For the transient population, it is assumed that those in recreational areas will evacuate at the rate of two persons per vehicle. It is also assumed that those transients who are in the EPZ to work or to shop will evacuate at the rate of one person per vehicle. For GGNS employees, a vehicle occupancy rate of 2 people per vehicle was assumed.
- Buses will transport up to 60 children if used to evacuate a school and up to 25 adults if used to evacuate residents of special facilities, such as jails and hospitals.

  Note: The 1986 ETE assumed that, in Claiborne County, the non-auto-owning population would be evacuated through a combination of private ride-sharing and transportation by public vehicles at a rate of 2.5 persons per vehicle. In Tensas Parish, buses would be used to evacuate non-auto-owning permanent residents at the rate of 25 adults per bus. These assumptions were consistent with existing local emergency plans. Although existing emergency plans include provisions to identify the locations and numbers of these residents so that transport may be provided, for purposes of estimating roadway vehicle loading, the 2003 ETE Study assumed that all of these residents would be transported in cars at the permanent resident rate of 2.5 persons per car. This assumption provides a conservative assessment of total vehicle loading on the evacuation roadway network.
- In accordance with Appendix 4 of NUREG 0654/FEMA REP-1, evacuation estimates are based on the total number of permanent residents and transient residents (work transient and recreation transient). Figure 2-6 represents the total number of potential evacuees by Protective Action Area in the GGNS EPZ. The full population of Alcorn State University is included in this number for Protective Action Area #6, even though the ETE evaluation report treats the Alcorn State population as a special needs facility (see Table 3-3). The population at Alcorn State can vary widely, from a peak high population in the day during the

school year, to a low at night during the summer. As most Alcorn State students and staff have their own vehicles, it is assumed that they will evacuate more like the recreation transient or work transient population than other special populations, such as area high schools, who depend on bus drivers to help evacuate.

It is assumed that during a typical school year day, there are 750 employees at Alcorn State, 2000 students who live on campus, another 400 students who commute to the campus, and approximately 182 staff members and their families (rounded to 200) in on-campus housing. This yields a total worst case campus population of 3350. It is recognized that there may be more students on campus some days, and fewer than 2400 students on other days.

2.2.4.2 Protective Action Area Description

For purposes of evacuation planning, the Plume Exposure EPZ has been divided into distinct Protective Action Areas as follows:

- Protective Action Area 1 includes the Grand Gulf Nuclear Station. It is defined by the Mississippi River on the east, the Bayou Pierre River and 3-mile radius on the south, local roads on the east and the Big Black River on the north.
- Protective Action Area 2A includes the area bounded by the Big Black River on the north, local roads on the east, the Bayou Pierre River on the south and U.S. Route 61 on the east.
- Protective Action Area 2B is just east of Area 2A with U.S. Route 61 serving as the western boundary, Bayou Pierre River as its southern boundary, and the 10-mile radius as its eastern boundary. The Big Black River is to the north of the area.
- Protective Action Area 3A has the Bayou Pierre to the north, local roads to the east, and the Little Bayou Pierre River to the south and west.
- Protective Action Area 3B is bounded on the north by the Bayou Pierre, on the west by local roads, on the south by the Little Bayou Pierre and on the east by the 10-mile radius.
- Protective Action Area 4A includes the town of Port Gibson. The 3-mile radius is to the north, Widows Creek to the west, local roads to the south and the Little Bayou Pierre River to the east.
- Protective Action Area 4B includes the area southwest of the Little Bayou Pierre River, northwest of the 10-mile radius and east of U.S. Route 61 and local roads.
- Protective Action Area 5A is south of the Grand Gulf Site and is bounded by the Bayou Pierre to the north and east, Widows Creek and U.S. Route 61 to the east and local roads to the south.
- Protective Action Area 5B is just south of Area 5A with U.S. Route 61 and local roads to the north, and the 10-mile radius serving as the southern boundary.
- Protective Action Area 6 is located south of the 10-mile radius, and includes Alcorn State University.
- Protective Action Area 7 is north of the site bounded by the Big Black River, the Mississippi River and the 10-mile radius.

- Protective Action Area 8 is the area in Tensas Parish, Louisiana, bounded on the north by the EPZ boundary, by the area just west and south of Lake Joseph and by the Mississippi River on the east.
- Protective Action Area 9 includes the town of Newellton and is the area just west of Area 8. It is bounded on the west by U.S. Route 65 and north by the EPZ boundary.
- Protective Action Area 10 is just south of Areas 8 and 9. It is bounded on the east and south by the Mississippi River and on the south and west by the western portion of Lake Bruin.
- Protective Action Area 11 includes the town of St. Joseph. It has Lake Bruin as its northern boundary, the Mississippi River to the east and the EPZ boundary to the south and west.
- Protective Action Area 12 includes rural areas in Claiborne County and Tensas Parish lying west and northwest of the plant and east of Areas 8 and 10.

The Protective Action Areas and their populations are illustrated in Figure 2-6.

2.2.4.3 Roadway Capacities

Estimated capacities for the designated evacuation routes are provided in Table 2-2.

2.2.4.4 Results of ETE Evaluation

The ETE evaluation report (Reference 24) concluded that the previous GGNS site Evacuation Time Estimate of approximately three hours remains valid, and that there are no physical characteristics unique to the site that could pose a significant impediment to the development of emergency plans and implementation of protective actions for the areas surrounding the proposed new facility. These conclusions are based on a re-evaluation of the GGNS ETE and on the opinions of local Emergency Management Agency and local Department of Transportation officials. Because of a stable population (and decreasing populations in some areas of the EPZ) and roadway improvements made since 1986, the original estimates of a full EPZ evacuation in approximately three hours may, in fact, overstate the actual time it would now take to evacuate the EPZ.

This ETE evaluation also examined existing letters of agreement between GGNS and local, state, federal and other agencies and concluded that all Letters of Agreement are appropriate and provide the level of support required for all planned protective actions, including sheltering and evacuation. The 2003 ETE evaluation report also concluded that the Radiological Emergency Response Plans of the states of Mississippi and Louisiana, and of Claiborne County and Tensas Parish, are more than adequate to address a nuclear emergency at GGNS that requires public protective actions.

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3.0 MAJOR FEATURES OF THE EMERGENCY PLAN

3.1 Assignment of Responsibility (Organization Control)

3.1.1 State and Local Governmental Agencies

In the event of a significant radiological emergency at the proposed new facility, notification of and support from State and local agencies may be required. Letters of agreement from the affected agencies, denoting their willingness to support development of emergency plans for the proposed new facility, are provided in Appendix A of this Plan. Participating governmental agencies whose plans are interrelated with this plan are listed below with a summary of current roles and responsibilities. As discussed in Section 1.0 of this Plan, it is expected that these roles and responsibilities, as defined in various emergency plans currently supporting GGNS Unit 1, would not be affected by the addition of the proposed new facility.

3.1.1.1 Mississippi Emergency Management Agency (MEMA)

MEMA is responsible for planning and coordinating the activities of State and local government agencies in the event of a radiological emergency.

3.1.1.2 Mississippi State Department of Health (MSDH)

MSDH is responsible for protection of the public health and safety from the hazards of radiation. The Division of Radiological Health (DRH) within MSDH is assigned the specific responsibility with regard to the hazards of radiation.

3.1.1.3 Louisiana Department of Environmental Quality (LDEQ)

LDEQ is responsible for planning and has the lead technical response role in the event of a radiological emergency.

3.1.1.4 Louisiana Office of Emergency Preparedness (LOEP)

LOEP is responsible for coordinating state agencies and for providing logistical and resource support to local governments in the event of a radiological emergency.

3.1.1.5 County and Parish Emergency Services

Claiborne County in Mississippi and Tensas Parish in Louisiana are the local governmental jurisdictions within the proposed new facility's Plume Exposure EPZ. They have developed plans to be implemented in the event of a radiological emergency at the GGNS Unit 1 facility. Claiborne County Civil Defense and Tensas Parish Emergency Preparedness have communication centers which serve as the means for notifying various support services (fire and rescue, transportation, law enforcement).

3.1.2 Federal Agencies

In addition to the affected State and local agencies, notification and support of certain Federal agencies may be necessary in the event of a significant radiological emergency at the proposed new facility. Responsibilities of affected Federal agencies during an emergency at the proposed new facility are established in the *Federal Radiological Emergency Response Plan* (FRERP) (FEMA, 1996). The primary Federal Response Agencies are expected to be the USNRC and the U.S. Department of Energy (DOE). Section 3.3.2.8 provides a discussion of Federal agencies having supporting roles in emergency response efforts.

3.1.2.1 Department of Energy (DOE)

The DOE provides radiological monitoring assistance. There are trained personnel on staff to provide additional expertise onsite/offsite during a radiological accident.

3.1.2.2 Nuclear Regulatory Commission (NRC)

The role of the NRC during a radiological emergency is that of verifying that emergency plans and procedures have been implemented, assuring that the public health and safety are protected, and conducting investigative activities associated with the incident. The NRC assists in coordinating Federal response resources and provides to the licensee, state, and local agencies advisory assistance associated with assessing and mitigating hazards to the public. The NRC's actions are governed by NUREG-728, "NRC Incident Response Plan," and NUREG-0845, "Agency Procedures for the NRC Incident Response Plan."

3.2 Emergency Organization

3.2.1 Onsite Emergency Organization

In the event of an emergency, the Emergency Organization for the proposed new facility will be activated. The organization will have predefined primary and alternate personnel for the various positions specified to provide for an automatic manning of the Emergency Organization within the time necessary to respond to the emergency. The extent to which the Emergency Organization will be activated will depend upon the classification of the emergency (see Section 3.4 for a description of the different emergency classifications).

3.2.1.1 Emergency Director

The Emergency Director will be responsible for the onsite emergency response and will perform the following actions during the course of the emergency:

- Make operational decisions involving the safety of the plant and its personnel and make recommendations to the Control Room personnel.
- Notify and recommend protective actions to authorities responsible for offsite emergency measures. (The Offsite Emergency Coordinator assumes this responsibility once the EOF is declared operational.)
- Implement the Emergency Plan through the use of specific Emergency Plan Procedures.
- Request additional resources as deemed necessary up to and including activation of the Emergency Organization as required. (The Offsite Emergency Coordinator assumes this responsibility once the EOF is declared operational.)
- Notify and inform the offsite support officials of pertinent facts and developments.
- Request assistance from Federal and State agencies if required. (The Offsite Emergency Coordinator assumes this responsibility once the EOF is declared operational.)

The Emergency Organization will include staffing to support the disciplines discussed in the following sections.

3.2.1.2 Security Personnel

Security personnel will be responsible for managing the security force during an emergency.

3.2.1.3 Operations Personnel

Operations personnel will coordinate activities in the Control Room(s) and coordinate operations activities outside of the Control Room(s) with the Technical Support Center (TSC).

3.2.1.4 Technical and Engineering Personnel

Appropriate Technical and Engineering personnel will be responsible for providing information concerning plant status and for developing recommendations and procedures for plant operation. They will also provide technical input, develop repair options and instructions, and identify materials needed for repairs required during an emergency.

3.2.1.5 Radiation Protection Personnel

Radiation Protection personnel will be responsible for onsite and offsite radiological assessments and development of radiological plans.

3.2.1.6 Other Assigned Personnel

Other personnel will be assigned as appropriate to provide the following support:

- Administrative Support
- Communications
- Personnel Accommodations
- Temporary Office Facilities and Communications
- Meals
- Transportation
- Emergency Repair Teams
- Search and Rescue Teams
- First Aid Teams

3.2.2 Offsite Emergency Organization

The Offsite Emergency Organization will be responsible for the overall emergency response effort, for official communications, and for providing needed plant support (local, State, and Federal) via the emergency organization. The Offsite Emergency Organization will be responsible for assuring continuity of technical, administrative, and material resources throughout the emergency, and for management level interface with governmental authorities. This organization will also be responsible for making protective action recommendations to State and local agencies after the EOF is operational.

3.2.2.1 Technical/Engineering Personnel

Technical/Engineering personnel will be responsible for arranging engineering support and for performing evaluations of the status of the reactor core during an emergency.

3.2.2.2 Radiological Emergency Personnel

Radiological Emergency personnel will perform offsite radiological monitoring, environmental sampling, offsite dose calculations, and radiological dose projection activities. They will provide assistance in radiological assessment and developing Protective Action Recommendations (PAR). They are also responsible for coordinating any needed radiological control support.

3.2.2.3 Public Communications Personnel

Public communications personnel will be responsible for operation of the Emergency News Media Center (ENMC). They will be responsible for preparation of official news bulletins, conduct of media briefings, media monitoring activities, and responding to technical questions from the news media.

3.2.2.4 Additional Offsite Personnel

Additional Offsite personnel will be assigned as appropriate to provide:

- Logistics support, such as transportation, meals, lodging, clerical support, security, and first aid
- Coordination of requests for outside assistance
- Technical and operational liaison capacity if requested by the directors of the EOCs
- Communications

3.2.3 Emergency Direction and Assignments

At the onset of all station emergencies, the Shift Manager will assume the position of Emergency Director and will be responsible for initiating the immediate actions required to safeguard the public, onsite personnel and equipment. Utilizing the Emergency Plan Procedures, the Emergency Director will order the activation of the necessary portions of the Emergency Organization.

Upon notification of an Unusual Event (see Section 3.4) from the Shift Manager, the On-Call Manager may report to the plant and assume the position of Emergency Director if he deems it necessary.

Upon notification of an Alert (see Section 3.4) or higher emergency classification, the On-Call Manager will report to the plant and assume the position of Emergency Director.

3.3 Emergency Response Support and Resources

3.3.1 Local Services Support

The potential nature of some emergencies may warrant the utilization of offsite individuals, organizations, and agencies. As a result, local support service arrangements will be made with offsite groups to provide aid in the event of an emergency situation at the proposed new facility. Support services encompass such things as medical assistance, fire control, evacuation, ambulance services, and law enforcement. Since it is imperative that the availability of these support agencies be on short notice, written agreements will be entered into with the organizations. The agencies, in the letters of support provided in Appendix A, have established their commitment to enter into discussions that may lead to agreements to provide emergency preparedness and response support for the proposed new facility.

3.3.1.1 Medical Support

Provisions for Medical Support are described in Section 3.12.

3.3.1.2 Fire Support

When it is determined by emergency management personnel that offsite fire support is needed, the Claiborne County Fire Department, located approximately six miles from the plant and available 24 hours per day, will be alerted. Notification of a need for offsite fire fighting assistance will be made by means of a telephone call.

The Claiborne County Fire Department has an informal aid pact with the Port Gibson Fire Department, which is also available on a 24 hours per day, seven days per week basis. This pact consists of a verbal agreement to furnish each other with fire fighting personnel, resources, and facilities and to render such fire protection services which may be necessary to suppress any fire or disaster which goes beyond the control of either of the agencies. In all cases where additional fire support groups would be brought in to assist at the proposed new facility, the Claiborne County Fire Department Fire Chief would direct all offsite fire fighting personnel. In instances where offsite fire fighting assistance is needed to fight a fire involving radioactive materials, radiological information and assistance will be provided by knowledgeable members of the proposed new facility's Emergency Organization.

3.3.1.3 Law Enforcement Agencies

The nature of a radiological emergency at the proposed new facility may require that the local law enforcement agencies be activated to assist in the emergency effort. Because it is essential that they be available during certain emergency situations, the Claiborne County Sheriff's Department and the Port Gibson Police Department will be called upon to provide support consistent with the applicable Letters of Agreement currently in place for GGNS Unit 1. Law enforcement responsibilities will include:

- Controlling matters of civil disorder within Claiborne County (provided by Sheriff's Department) and within the city limits of Port Gibson (provided by Sheriff's Department and Port Gibson Police Department)
- Communications
- Furnishing personnel and equipment in accordance with Security Plans
- Controlling access to areas affected by the emergency
- Directing area evacuation.

The local law enforcement agencies establish control over the public roadways within their jurisdictions. While this control affects, but does not necessarily preclude, access to and egress from the site via the public roadways, the site security force maintains control over site access. The applicant expects that similar arrangements will be made for the proposed new facility.

3.3.2 Coordination with Governmental Agencies

The close coordination between the local, State, and Licensee Emergency Plans serves to ensure the safety and health of the general public. It also enables all emergency organizations to participate in the emergency effort with a minimum of confusion and hesitation. All participating agencies must have a clear picture of their responsibilities during an emergency effort, which is provided for in their respective emergency plans and procedures.

Figure 3-1 depicts the interrelationships among the various state and local organizations which may respond to an emergency at the proposed new facility.

3.3.2.1 Mississippi Emergency Management Agency (MEMA) and Mississippi State Department of Health/Division of Radiological Health (DRH)

The Mississippi Emergency Management Agency is the designated State authority and as such, has the responsibility for the general planning and coordination of the State of Mississippi's response to nuclear plant accidents as detailed in the "Mississippi Radiological Emergency Preparedness Plan, Volume III, to the Mississippi Comprehensive Emergency Management Plan." Some of the functions of MEMA are: (1) development and maintenance of State Plans and Procedures; (2) operation of the State Emergency Operation Center (EOC); (3) notification and warning in coordination with the Mississippi Highway Safety Patrol and the operators of fixed nuclear facilities; (4) communications; (5) assisting local governments in the development and maintenance of plans and procedures; (6) public information; (7) training; (8) providing personnel for the Radiological Emergency Response Teams; and, (9) providing continuity of technical, administrative, and material resources. The Governor of Mississippi, who bears authority for directing the emergency actions of the affected State agencies, has formally committed[1] the affected State agencies to implement the Mississippi Radiological Emergency Plan, as required by Mississippi law.

The Mississippi State Department of Health/Division of Radiological Health is charged with the responsibility to protect the public health and safety of the general populace from the hazards of radiation. With respect to radiological hazards resulting from incidents involving fixed nuclear facilities, the functions of DRH include: (1) act as lead agency for technical response; (2) accident assessment; (3) provide personnel and equipment for the Radiological Emergency Response Team; (4) advise State and local officials on implementation of protective actions based on accident assessment; (5) establish radiological exposure controls; (6) access/egress and reentry criteria; (7) laboratory services; and, (8) coordinate offsite decontamination activities.

3.3.2.2 Louisiana Department of Environmental Quality (LDEQ) and Louisiana Office of Emergency Preparedness (LOEP)

The Secretary of the Louisiana Department of Environmental Quality under Act 97 of 1983 (L.R.S. 30:2001 et. seq.), also known as the Louisiana Environmental Quality Act, and specifically L.R.S. 30:2109, has the authority to develop and implement a statewide radiological emergency preparedness plan and coordinate the development of specific emergency plans for nuclear power facilities, including planned protective action for the population and the establishment of appropriate boundaries for which planning for nuclear emergencies is undertaken; to respond to any emergency which involves possible or actual release of radioactive material; to coordinate offsite decontamination efforts; to issue relocation and evacuation recommendations; and to otherwise protect the public welfare and safety in any manner deemed necessary and appropriate. As a result, the "Louisiana Peacetime Radiological Response Plan," which includes an Attachment 2 specifically for the Grand Gulf Nuclear Station, has been developed. Federal, State and local agencies will be notified as required to provide assistance in evaluating the radiological hazard and providing implementation of appropriate protective actions in accordance with the Louisiana Peacetime Radiological Response Plan.

[1] This commitment was made by letter, as discussed in the GGNS Emergency Plan, Section 5.7.1.

The Secretary of the LDEQ or his designee will be responsible for notifying the public that a radiological incident has occurred and for providing an evaluation of the incident in terms of public health. If protective actions are indicated, specific guidance can be provided and the information released. The Louisiana Office of Emergency Preparedness (LOEP) will be responsible for coordinating all emergency actions of the various State and local agencies in the event that evacuation is necessary. Local law enforcement agencies, rescue squads, medical facilities and other parish and municipal agencies will provide assistance pursuant to their agreements with local civil defense organizations as delineated in the local civil defense plans. The LOEP will immediately notify LDEQ in the event of a radiological emergency. A letter from the Governor of Louisiana to implement the Louisiana Peacetime Radiological Response Plan is a commitment from all State agencies to perform their functions as delineated in the State plan as required by Louisiana law in support of GGNS. The attached letter of Support indicate these agencies' commitment to enter into discussions to extend their current GGNS Unit 1 emergency response commitments to the proposed new facility.

3.3.2.3 Port Gibson/Claiborne County Civil Defense

The Port Gibson/Claiborne County Civil Defense Director is the designated County authority and as such, has executive authority and responsibility for the planning and coordination of the County's emergency response. The Civil Defense Director has delegated responsibilities and tasks to the local support agencies and has established operating procedures to implement the "Port Gibson/Claiborne County - Radiological Emergency Preparedness Plan." Upon notification of a major emergency at the proposed new facility, the Civil Defense Director, as a primary duty, will provide direction within the County boundaries. This duty will include, if required, coordination with other agencies to inform the public in affected portions of the County to take protective actions.

The Port Gibson/Claiborne County Civil Defense Director will be responsible for activation of the Claiborne County Emergency Operations Center (EOC).

The Port Gibson/Claiborne County Civil Defense Agency is also referred to as the "Claiborne County Civil Defense Agency."

3.3.2.4 Tensas Parish Emergency Preparedness

The President of the Tensas Parish Police Jury, as the Chief Executive of Tensas Parish, is responsible by law for emergency preparedness operations. The Emergency Preparedness Coordinator acts as his Chief of Staff and ensures continuity of resources for sustained emergency operations. The Emergency Preparedness Coordinator will be responsible for initiating the manning of the Tensas Parish Emergency Operations Center and for coordinating the involved agencies during the course of the radiological emergency as detailed in the "Tensas Parish Radiological Emergency Implementing Plan for Grand Gulf Nuclear Station."

3.3.2.5 Nuclear Regulatory Commission (NRC)

The United States Nuclear Regulatory Commission would respond to an emergency at the proposed new facility in accordance with the Federal Radiological Emergency Response Plan (FRERP).

3.3.2.6 Department of Energy (DOE)

The Department of Energy would respond to an emergency at the proposed new facility in accordance with the Federal Radiological Emergency Response Plan (FRERP).

3.3.2.7 U.S. Coast Guard

The U.S. Coast Guard has jurisdiction over the traffic on the Mississippi River. Upon notification by the Mississippi State Emergency Management Agency of an emergency requiring traffic exclusion, the Captain of the Port will exercise his authority to control traffic through the establishment of a safety zone in the immediate area.

3.3.2.8 Other Federal Agencies

Other Federal agencies may provide back-up support for emergency response efforts. For example, should there be a failure of the primary and secondary meteorological stations, the tertiary means of obtaining wind speed and direction data would be through the National Weather Service or the U.S. Army Corps of Engineers, Waterways Experiment Station in Vicksburg, MS. EPA Region IV may provide a mobile environmental sample laboratory.

3.3.3 Other Organizations

Institute of Nuclear Power Operations (INPO)

The Institute of Nuclear Power Operations provides emergency response as requested by the licensee. INPO can provide assistance in the following areas:

- Location of sources of emergency manpower and equipment
- Analysis of the operational aspects of the event
- Organization of industry experts who could advise the facility on technical matters.

INPO may be contacted by means of its 24-hour telephone number in the event of a radiological emergency.

Nuclear Steam System Supplier

GGNS Unit 1 maintains an arrangement with the supplier of its nuclear steam supply system (NSSS) to provide technical support under both routine and emergency conditions. The applicant expects that similar arrangements would be made with the NSSS supplier for the proposed new facility.

Private Sector Radiological Laboratories

The required capabilities of commercial radiological laboratories may be affected by the technology of the selected plant design. The applicant expects that suitable commercial arrangements would be made with one or more private sector radiological laboratories at the time of, or before, issuance of the combined operating license for the proposed new facility.

3.4 Emergency Classification System

Consistent with NUREG-0654/FEMA-REP-1, Revision 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” the proposed new facility will use four classes of emergency conditions covering the entire spectrum of possible emergency situations, from minor local incidents to hypothetical major radiological emergencies. These four classifications allow for classification of an accident, notification of the appropriate offsite agencies and support groups, and the activation of emergency organizations. The system will also provide for the notification and implementation of actions immediately applicable to a specific condition, and for changing the response to the appropriate level of classification in the event of a change in the severity of the condition.

The four emergency classes that comprise the emergency classification system will be:

1. Unusual Event
2. Alert
3. Site Area Emergency
4. General Emergency

Emergency Action Levels (EAL) will be used to provide indication that an Emergency Plan initiating condition exists. These levels will be composed of a combination of plant parameters (such as instrument readings and system status) that can be used to give relatively quick indication to the Station operating staff of the severity of the accident situation. In most cases further assessment action will be conducted both onsite and offsite before actual protective actions are initiated. EALs associated with radiological releases will be related to the Environmental Protection Agency's Protective Action Guides (PAG) summarized in EPA 400-R-92-001 "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents."

To the extent appropriate, the EALs will be developed from guidance provided in Appendix 1 to NUREG-0654 or Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors" (Reference 1), as appropriate. Should NUREG-0654 and Regulatory Guide 1.101 be determined to be inappropriate due to the technology of the proposed plant design, then the EALs will be developed consistent with applicable guidance, with appropriate technical bases provided for any deviations. A determination by the station emergency organization, along with state and local support agencies, of the potential for reaching or exceeding the PAGs will be performed in accordance with dose assessment procedures in the event of a radiological release to the environment.

The EALs, while comprehensive, are not meant to be all inclusive. The Emergency Director may declare any class of emergency based on the Director's assessment of plant conditions and consideration of the facility's emergency action levels.

3.5 Notification Methods and Procedures

3.5.1 Basis for Notification of Response Organizations

The Plan will be activated with the declaration of an emergency. The Shift Manager will act as the Emergency Director until properly relieved by an assigned manager from the Emergency Organization. The Shift Manager will ensure that at least one agency in each row below is notified within 15 minutes of an emergency declaration. Where both a primary and secondary contact are listed, only one contact (primary or secondary) is required.

Primary	Secondary
MS Emergency Management Agency	MS Hwy Patrol
LA Office Of Homeland Security and Emergency Preparedness	LA Dept. Of Environmental Quality
Claiborne County Sheriff's Dept	Claiborne County Civil Defense
Tensas Parish Sheriffs Dept	
Port Gibson Police Dept	

In accordance with 10 CFR 50.72 the NRC Operations Center will be notified, by telephone, immediately after notification of the appropriate state and local agencies and not later than one hour after the declaration of one of the Emergency Classes.

Emergency Organization personnel will be notified of the emergency and their expected response via one or more of the communication systems described in Section 3.6.

3.5.2 Mobilization of Emergency Response Personnel

If an Unusual Event has been declared, those members of the operating shift needed to handle the emergency will be activated. If the Emergency Director feels there is a reasonable possibility of escalation of the emergency to a higher classification, applicable portions of the Emergency Organization will be activated.

If an Alert, Site Area Emergency or General Emergency has been declared, the entire Emergency Organization will be activated.

3.5.3 Notification of the Public Within the Plume EPZ

An Alert Notification System will be provided that meets the design objectives of NUREG-0654, Appendix 3. Because of the close physical proximity and common EPZ boundaries, the proposed new facility is expected to share the system used for GGNS. The current system consists of 43 sirens located in Claiborne County and Tensas Parish. Institutions located in the Plume Exposure EPZ will be supplied with tone activated receivers which supplement the siren system. Port Gibson/Claiborne County Civil Defense and Tensas Parish Emergency Preparedness will be responsible for activating the portion of the system within their respective jurisdictions. Additional alert notification details will be addressed in local and state emergency plans, the GGNS Emergency Public Information publication, and the Alert Notification System Final Report. Following activation of the Alert Notification System, information concerning protective measures will be provided via State and local emergency communication systems and commercial broadcast media. See also Section 3.7.1 regarding additional measures taken to provide emergency information to the transient population.

3.6 Emergency Communications

Timeliness of information flow is achieved by (1) prompt notification, and (2) predefined lines of authority and responsibility. The network will be formulated around this basic concept and will be designed to channel information directly to the key parties having closely related functions, thus eliminating errors often associated with second hand information. By providing well-defined and dedicated communications links, better accident management from physically separate control and support centers can be achieved. Provisions will be made for both State and local agency representatives to call and verify the authenticity of the accident and obtain additional information.

3.6.1 Routine Plant Communications Systems

The facility will be equipped with a number of communications systems. While some of these are dedicated to emergency usage, others will be available for both routine and emergency usage.

3.6.1.1 Facility Telephone System

A high-reliability telephone system will be maintained at the proposed new facility to provide telephone communications with Licensee management and operating and support

organizations. The plant telephone system will also provide communications among the Control Room (CR), TSC, OSC, EOF, ENMC, EIC and public.

3.6.1.2 Alternate Communications Systems

Alternate communications systems, such as a plant paging system, cellular telephones, or radio communications, will be available to link permanent plant structures and support personnel.

3.6.2 Emergency Communications

3.6.2.1 Dedicated Telephone Lines

The following dedicated telephone system links will be established to provide a continuous (24 hour) means of communication during an emergency situation.

The Operational Hot Line will be used for initial notification and ongoing communications for the duration of the emergency. Utilization of this line by the proposed new facility will activate the emergency response network by notifying each location simultaneously. The UHF radio system will serve as an alternate means of communications to notify local authorities of an emergency. UHF radios will connect the Onsite and Offsite Monitoring Teams with the OSC and EOF respectively.

NRC Emergency Telecommunications System – The facility will make use of the NRC Emergency Telecommunications System which consists of the following dedicated Federal Telephone System circuits that provide direct communication with the NRC Operations Center in Rockville, MD:

Emergency Notification System (ENS) – will provide initial notification to, and ongoing communication with, NRC personnel in an emergency.

Health Physics Network (HPN) – will provide requested radiological data to the NRC in an emergency.

Reactor Safety Counterpart Link (RSCL) - will be used by the NRC Site team and NRC Base Team to conduct internal NRC discussions on plant parameters without interfering with exchange of information between GGNS and NRC. This link may be used for discussions with the NRC Reactor Safety management.

Protective Measures Counterpart Link (PMCL) - The PMCL will be used by personnel and plant management to conduct internal NRC discussions on radiological releases and meteorological conditions, and the need for protective actions without interfering with the exchange of information between the facility and NRC.

Emergency Response Data System (ERDS) – will be used to transmit raw reactor parametric data from the proposed new facility balance of plant computer to the NRC Operations Center.

Management Counterpart Link (MCL) – will be used for any internal discussion between NRC Executive Team Director and NRC Director of Site Operations or GGNS site management.

Operational Counterpart Link (OCL) or Local Area Network (LAN) Access – will be used by the NRC Base Team and NRC Site Team to access products and services provided on the NRC Operations Center’s local area network.

3.6.2.2 Notification of Facility Personnel

The facility will use a computerized emergency notification system to notify facility emergency response personnel upon declaration of an emergency. Site telephones serve as a backup to this system.

3.7 Public Education and Information

3.7.1 Provision of Information to the General Public

In conjunction with State and local agencies, the proposed new facility will provide written information addressing emergency preparedness to members of the general public who reside within the Plume Exposure EPZ. This information will include:

- Educational information on radiation
- Personnel to contact for further information
- Protective measures, e.g. evacuation routes and relocation centers, and sheltering
- Respiratory protection and radioprotective drugs
- Information addressing provisions for protecting the special needs population, including information on a process for registering the locations of the special needs population.

This information will be disseminated via an Emergency Public information publication mailed annually to residents of the 10-mile EPZ. The Public Education and Information Program will ensure, on an annual basis, that the permanent and transient adult population within the plume exposure EPZ are provided an adequate opportunity to become aware of the above information.

Appropriate information, such as evacuation routes, will be provided to the transient population through media that are likely to be available to this population group, such as postings in public places and notices in telephone books (commonly distributed to temporary lodging facilities). During an emergency, additional information will be made available through public emergency information systems, such as commercial broadcast media.

3.7.2 News Media Information

The proposed new facility will maintain a News Media Emergency Information Program that will include details on arrangements for timely exchange of information among the designated spokespersons and news media representatives. This program will provide for an annual training session to acquaint the news media with the methodology to obtain information during an emergency, as well as information about overall emergency preparedness for the proposed new facility.

The News Media Emergency Information Program will include a training program that will provide information concerning radiation, emergency plans, and points of contact for release of public information during an emergency.

3.8 Emergency Facilities And Equipment

Emergency planning requires the pre-installation of both facilities and equipment that allows the emergency organization to perform the following actions:

- Assess the extent of the emergency
- Perform corrective actions to mitigate the effects of the emergency

- Perform actions to protect onsite and offsite personnel
- Provide information to offsite support agencies
- Perform the proper recovery actions

The Control Room will contain those controls, instruments and communications equipment necessary for operation of the plant under both normal and emergency conditions. The ventilation system, shielding, and structural integrity will be designed and built to permit continuous occupancy during postulated accidents. During declared emergency conditions, additional facilities may be activated to provide management, technical, and communications support to the normal shift complement. Emergency facilities will be established for the proposed new facility and offsite support agencies. These facilities may be shared with the emergency response facilities for the existing GGNS Unit 1 facility.

3.8.1 Technical Support Center (TSC)

The Technical Support Center will provide an area outside the Control Room that can accommodate management, engineering personnel and the NRC acting in support of the command and control function during emergency conditions and the emergency recovery operations. Personnel staffing the TSC assist in accident assessment will provide advice to the control room and communicate with the Emergency Operations Facility (EOF), the Control Room, OSC and offsite support agencies. The TSC will be habitable to the same degree as the Control Room for all postulated accident conditions. The TSC may be activated at any time, and will be activated at an Alert, Site Area Emergency, or General Emergency. Once activated, the TSC will become operational as soon as possible. During emergencies, the TSC will provide for the classification, accident assessment, notification, and dose assessment functions if these functions are unavailable at the EOF.

3.8.2 Operations Support Center (OSC)

The OSC will provide an area for operations, maintenance, health physics, chemistry, and operations personnel to assemble and be assigned to duties in support of emergency response activities. The OSC will be activated at the declaration of an Alert, Site Area Emergency, and General Emergency.

3.8.3 Emergency Operations Facility

The EOF provides a location from which evaluation and coordination of all Licensee activities related to an emergency will be carried out. The facility will provide information to offsite groups, assess the impact of the emergency offsite and provide the necessary support to assist the Emergency Organization.

The EOF will be staffed by the key technical personnel of the Emergency Organization. Space and communications will be provided for Federal, State, and local representatives. The EOF also will provide a base of operation for Offsite Monitoring Teams and be the central point for the receipt of field monitoring data.

The EOF may be activated at any time, and will be activated at an Alert, Site Area Emergency, and General Emergency declaration. Once activated, the EOF will become operational as soon as possible (without delay) after declaration of any of these emergency classifications.

3.8.4 Claiborne County Emergency Operations Center

The Claiborne County Emergency Operations Center is currently located in the Port Gibson/Claiborne County Civil Defense Office in Port Gibson, MS. The center will be equipped with communications to the Control Room, TSC, EOF, the State Emergency Operations Center in Jackson and State supporting agencies. Functionally, the center will coordinate all local emergency operations.

3.8.5 Mississippi State Emergency Operations Center

The State Emergency Operations Center is currently located in the Mississippi Emergency Management Agency Building in Jackson, approximately 75 miles from the site. The center has supplies and equipment to support state emergency operations activities, including communication links with other emergency operations centers. During an emergency, at the proposed new facility, representatives from appropriate state agencies and GGNS will assemble in the State EOC to coordinate response efforts.

3.8.6 Tensas Parish Emergency Operations Center

The Tensas Parish Emergency Operations Center is currently located adjacent to the Tensas Parish Sheriff's Office. The center is equipped with communications to the Technical Support Center, Control Room, Emergency Operations Facility, Mississippi State Emergency Operations Center, the Louisiana State Emergency Operations Center (in Baton Rouge) and Louisiana state supporting agencies. Functionally, the Tensas Parish EOC will act in parallel with the Claiborne County, Mississippi, EOC and coordinate local emergency operations.

3.8.7 Louisiana State Emergency Operations Center

The LDEQ and LOEP representatives will report to the Louisiana Emergency Operations Center in Baton Rouge, approximately 125 miles from the site, in the event of a nuclear emergency which requires activation of State resources. The center has equipment and supplies to support state emergency operations activities including communications links with other emergency centers. The communications systems are designed to ensure the reliable, timely flow of information and action directives between all parties having jurisdiction and a role to play in the mitigation of emergencies. Reliability is provided via (1) extensive redundancy, (2) dedicated communication equipment to preclude delays due to system overload, and (3) routine use and testing of many of the systems, which lowers the probability of undetected system failures.

3.9 Accident Assessment

3.9.1 Meteorological Data

The proposed new facility will rely on the existing GGNS Unit 1 facility meteorological data system or, if deemed necessary due to site-specific factors, a similar system. The GGNS Unit 1 system includes an onsite meteorological tower, located approximately 5,300 feet northwest of the facility. The meteorological system utilizes local digital storage modules and Plant Data System digital storage. The facility also utilizes a back-up meteorological system which provides meteorological information to the Control Room, if the primary meteorological system fails. In the unlikely event that both the primary and backup meteorological systems were inoperable, the tertiary means of obtaining wind speed and direction data would be through the National Weather Service or the U.S. Army Corps of Engineers, Waterways Experiment Station in Vicksburg, MS.

Meteorological data obtained from the site instrumentation, National Weather Service, or U.S. Army Corps of Engineers may be communicated to the affected states using the communications systems discussed in Section 3.7.

3.9.2 Field Monitoring

The environmental monitoring program for the proposed new facility will provide for: (1) gathering of data on environmental radiation levels and the Station's degree of influence on these levels; (2) checks for specific radioisotopes to detect their introduction into the surroundings; and (3) a background for a continually developing program of radiological assessment.

Ambient radiation will be measured by thermoluminescent dosimeters (TLDs) or other appropriate exposure integrating devices. These devices will be installed at various onsite and offsite locations. The locations will be selected based on available meteorological data, prevailing wind direction and population concentration. During normal operating conditions, periodic measurements of the environmental dose rates will be made. During an emergency, incremental and time integrated dose measurements will be made, as needed, by selective and periodic changing of these devices.

Environmental samples collected by applicant personnel may be analyzed either in the applicant's facility, by the State of Mississippi State Department of Health Mobile Laboratory, or in commercial laboratory facilities. The proposed new facility will have isotopic analysis capability available for onsite radiological analysis. The Mississippi State Department of Health Mobile Laboratory may be brought into the vicinity of the plant in the event of a Site Area Emergency or General Emergency and could be expected to be in place within 2 to 4 hours of notification. These mobile laboratories have the capability to measure beta-gamma emitters, including radioiodine in environmental samples (soil, vegetation, water, and air). Data from these mobile laboratories may be provided to each agency's representative in the Emergency Operations Facility by radio communications established by each agency or by normal phone communications with the Mississippi State Department of Health or Louisiana Department of Environmental Quality. Additional mobile laboratories with similar capabilities are available from DOE, Region III, Oak Ridge, TN (estimated response time 12 hours) and EPA, Region IV, Montgomery, AL (estimated response time 9 hours).

The offsite radiation monitoring teams will have the capability to determine the extent of the radiological hazard in the environment, including collection of air, water, soil, and vegetation samples. Environmental air samplers and portable equipment will be available for the following assessments in the field within the Plume Exposure EPZ:

- Beta-gamma radiation from the plume and/or ground contamination
- Iodine concentration and assessment of inhalation and thyroid dose by using air samplers with iodine-specific cartridges and portable and fixed analyzers
- Water sampling for later analysis to assess contamination due to liquid release pathways can also be done by offsite monitoring teams.

Transportation for the offsite monitoring teams will be available using site vehicles, with normal deployment expected to be within approximately 90 minutes following notification.

The State of Louisiana currently holds responsibility for environmental monitoring in that State. The applicant expects similar arrangements to be made for the proposed new facility.

When necessary, the proposed new facility's field monitoring activities may be augmented by special aerial radiological surveys and meteorological services available through arrangements with the Department of Energy.

3.10 Protective Response

3.10.1 Evacuation of Onsite Personnel

Should evacuation of onsite personnel be necessary, pre-determined evacuation routes will be established and evacuating personnel will be directed to the preferred route based on an evaluation of conditions existing at the time of the evacuation. Onsite personnel may be evacuated to designated offsite locations to facilitate personnel accountability and radiological monitoring activities. If it is necessary to conduct a site evacuation during a release, such that a likelihood exists for radioactive contamination of evacuating personnel or vehicles, then site evacuees will be directed to report to a State reception center for monitoring and, if needed, decontamination.

As an alternative to site evacuation, site personnel may be directed to assemble in a safe on-site location by a member of the emergency response organization. The assembly location will be selected based on an assessment of conditions, such as meteorological, traffic, and operational conditions, at the time of the assembly.

When an Alert, Site Area Emergency or General Emergency is declared, all personnel in the protected area will be advised of the emergency classification by use of the public address system or other suitable communications system. If a site evacuation is ordered, the evacuation siren will be sounded over the selected communication system, followed by an evacuation announcement and any special instructions.

Emergency personnel not assigned to the Control Room, Technical Support Center, Central Alarm Station, and Secondary Alarm Station will report to the Operations Support Center for accountability. Non-emergency personnel will be accounted for as they exit the protected area. Facility Security personnel will be responsible for performing an accountability survey of personnel in the protected area. It is anticipated that accountability and identification of missing persons will be accomplished in approximately 30 minutes. This information will be reported to the Emergency Director.

Facility employees, contract personnel or visitors in remote locations will be notified of a site evacuation and given instructions by public address systems, telephone or security personnel equipped with portable PA systems.

Persons near the site in public access areas or passing through the site will be notified of an emergency classification by the Alert Notification System activated by local authorities.

All site personnel will be trained on site evacuation routes, escorted by someone who has been trained, or receive a map which gives instructions and routes away from the site. Site evacuation instructions and routes will be specified in the evacuation announcement. Non-essential personnel will be expected to evacuate the property in the same vehicles that were used for initial access.

Emergency situations, as discussed in this section, include natural events as well as radiological incidents. The procedures to be followed in these evacuations will be included in the Emergency Plan Procedures. Provisions will be made for consideration of weather conditions, traffic or radiological impediments to evacuation.

3.10.2 Offsite Areas

The protective actions to be implemented offsite will be the responsibility of the States of Mississippi and Louisiana and the counties within the Plume Exposure EPZ. The States will be responsible for protective actions for the Ingestion Pathway EPZ.

The administration of protective actions for persons residing offsite will be the responsibility of the States of Mississippi and Louisiana. Mississippi's responsibility is outlined in the "Mississippi Emergency Operations Plan" and Louisiana's responsibility is outlined in the "Louisiana Peacetime Radiological Response Plan." These plans will be implemented in addition to the county or parish emergency plans. Claiborne County and Tensas Parish will be responsible for developing or amending and submitting emergency plans which are coordinated with those of the States and the proposed new facility. The proposed new facility will provide protective action recommendations to the state/local civil defense agencies. The minimum standard PAR for a General Emergency will be to evacuate the 2-mile radius and 5 miles downwind, and to shelter the remainder of the Plume Exposure EPZ. Evacuation will be recommended for 5 to 10 miles in the downwind sectors, if dose projections or actual field measurements correspond to radiation levels to the public that exceed the EPA Protective Action Guides (PAGs) as established in EPA 400-R-92-001. Recommendations will be based upon emergency classification and projected dose to the public, and will be consistent with EPA PAGs. The methodology used for determining appropriate protective action recommendations will be described in Emergency Plan Procedures.

If the committed dose equivalent to the thyroid of any member of the public is projected to exceed 5 rem, the Emergency Director may recommend to State and local officials that they consider distribution of radioprotective drugs to members of the public, including those members of the affected population who may be confined to various institutions.

Warning and/or advising the population-at-risk of an impending emergency will be the responsibility of the counties or parishes affected. These counties or parishes also will be responsible for the preparation and dissemination of informational material concerning protective actions for the general public. Written messages for emergency dissemination to the public will be prepared by the States of Mississippi and Louisiana with supporting information provided by the proposed new facility. These messages will be distributed via the Emergency Alert System. These prepared messages will be documented in the affected state emergency plans.

Planned evacuation routings are illustrated on Figure 3-2. Locations of existing Mass Care Reception Centers for evacuees are depicted on Figure 3-3.

3.11 Radiological Exposure Control

3.11.1 Personnel Dose Limits and Control

During a radiological emergency situation as discussed in this Plan, three categories of risk versus benefit as related to personnel radiation exposure must be considered:

- Saving of human life and reduction of injury
- Protection of health and safety of the public and
- Protection of property

The following are exposure guidelines for individuals inclusive of support personnel and facility employees:

- Support personnel will be restricted to administrative limits and will be equipped with appropriate dosimetry. In situations where it appears that control of individual doses within the administrative limits may be challenged, the individuals will be relieved of duties involving additional radiation exposure.
- Guidance for emergency worker exposure is given in the following table, which represents exposure limits for which management authorization will be required prior to the exposure being received:

Guidance on Dose Limits for Workers Performing Emergency Services

Dose Limits (TEDE)	Activity	Conditions
> 5 up to 10 Rem	Protecting valuable property	Lower dose not practicable
> 10 up to 25 Rem	Life saving or protection of large populations	Lower dose not practicable
> 25 Rem	Life saving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved

(Reference 5)

With regard to the protection of large populations, doses to emergency workers may be justified when the collective dose avoided by the emergency operation is significantly larger than the collective dose incurred by the workers involved.

The Emergency Director or Offsite Emergency Coordinator may also authorize the use of radioprotective drugs for thyroid protection. Emergency personnel would take a pre-measured dose of the drug (such as potassium-iodide (KI) tablets). These drugs will be made available in the Control Room, Operations Support Center, Technical Support Center, Emergency Operations Facility, and offsite monitoring team kits.

3.11.2 Onsite Radiation Protection Program

The facility will maintain an onsite radiation protection program adequate to ensure compliance with the requirements of 10 CFR 20, Standards for Protection Against Radiation, and any specific facility license requirements. Such radiation protection programs typically include a combination of physical and administrative controls as are appropriate to direct station activities and maintain individual and collective doses as low as is reasonably achievable. Some of the routine administrative controls included in the radiation protection program may be suspended during a declared emergency as may be necessary to provide timely assessment and control of the situation. However, pre-approved procedures and lines of authority that are specifically developed for such conditions will be implemented to ensure appropriate response to the conditions that exist. Authorization for personnel exposures exceeding the routine occupational dose limits will be requested by the responsible supervisor in the affected emergency response facility and approved by either the Emergency Director or Offsite Emergency Coordinator. To ensure effective implementation under emergency conditions, training on these procedures and lines of authority will be developed and conducted in accordance with Section 3.16 of this Plan.

Should the need arise for state and local agency emergency workers located outside of the site boundaries to receive exposures in excess of the general public protective action guidelines, authority for such exposures will rest with the affected state and county agencies. Should these

workers be located inside the site boundaries when such a need arises, then authorizations will be issued by the Site Emergency Director in consultation with the appropriate agency authority.

3.11.3 Monitoring of Individual Doses

Provisions will be made for 24-hour-per-day capability to determine the doses received by emergency personnel. Specific emergency procedures will be written for the issuance of permanent record dosimetry devices (or systems) (e.g., thermoluminescent dosimeters) and self-reading dosimeters to emergency personnel, including both onsite and offsite emergency response personnel who must enter areas within the protected area where personnel dosimeters are required. These procedures will also provide instructions on how often to read dosimeters and maintain appropriate dose records.

Radionuclide intakes resulting from emergency response activities will be determined by in-vitro- or in-vivo radioactivity measurements and/or analyses of facility air and water samples, as appropriate. While the facility will maintain on-site capabilities to perform routine analyses, provisions will also be developed and maintained to allow for off-site performance of these analyses as needed to compensate for temporary interruptions in site capabilities or to enhance the site capabilities (e.g., for hard to detect radionuclides). Following determination of individual radionuclide intakes, internal doses will be determined using technically-justified biological models for physical characteristics and radionuclide behavior in the body.

3.11.4 Decontamination and First Aid

Onsite personnel decontamination stations for emergency conditions will be fully equipped with decontamination material and portable first aid kits. The location of the primary and alternate decontamination facilities will be described in the final Radiological Emergency Plan. The decontamination facilities will be equipped for disrobing, collecting contaminated clothing, showering of contaminated personnel, and distribution of clean clothing.

All personnel and equipment exiting from the radiologically controlled area at the proposed new facility will be monitored for the presence of radioactive contamination. Should an emergency exist that results in the spread of contamination, appropriate boundaries and monitoring stations will be established to provide a location for establishment of contamination controls. In situations when the instruments detect contamination exceeding values specified in site procedures, preventive measures, such as containment, decontamination or storage for decay of short-lived radionuclides, will be initiated to mitigate the possibility of the spread of contamination.

Contamination action levels for decontamination of emergency workers, equipment, and vehicles are established in GGNS Unit 1 Radiation Protection Procedures. The applicant expects that similar action levels will be made in Radiation Protection Procedures associated with the proposed new facility. The Emergency Director may alter these contamination action levels as necessary to ensure the appropriate level of overall safety.

Provisions for decontamination of personnel wounds are established in GGNS Unit 1 Radiation Protection Procedures. These provisions include, for minor wounds, the use of tepid water and mild detergents. For more serious wounds, decontamination is performed under the direction of qualified medical personnel. The applicant expects that similar provisions for decontamination of personnel wounds will be made in Radiation Protection Procedures associated with the proposed new facility.

First Aid Courses will be conducted for selected members of the Emergency Organization. Personnel trained in first aid/CPR will be available on each shift to administer first aid.

3.12 Medical and Public Health Support

In certain instances, medical emergencies may require the transport of an injured person from the station to an offsite medical facility. Transportation of injured persons to the medical facility normally will be provided by regional ambulance service. These services have the capability to provide support on a 24 hours per day, seven days per week basis. In the event that these services are unavailable, provisions will be in place to transport injured persons in company-owned or private vehicles. Ambulances will be equipped with radios to maintain communications with the medical facility. The applicant expects that similar arrangements will be made for support for the proposed new facility.

The primary medical facility for injured personnel, with or without contamination, is the Claiborne County Hospital located in Port Gibson approximately six miles from the plant site. The existing GGNS facility maintains an agreement with this hospital to accept injured personnel and/or victims of radiation-related accidents for emergency medical and surgical treatment and observation. River Region Medical Center has agreed to serve as a back-up with the same emergency medical capabilities as Claiborne County Hospital. Hospital emergency kits for treatment of contaminated personnel will be maintained at these facilities.

If medical treatment of the injured and/or contaminated personnel requires assistance or medical expertise beyond the capabilities of the local facilities, the patients would be transferred to a support hospital. The existing GGNS facility has an agreement with The Oschner Clinic to provide hospital and medical services for injured/ contaminated or overexposed personnel.

Both of the back-up medical facilities, River Region Medical Center and The Oschner Clinic, have the ability to provide support of a 24 hours per day, seven days per week basis. The applicant expects that similar arrangements for primary and back-up medical facilities will be made for the proposed new facility. Training for both primary and back-up medical facilities will be offered as described in Section 3.15.

Communications with both primary and backup medical facilities, including requests for ambulance support, are provided by the commercial telephone system. Backup communications are provided by the UHF radio system.

3.13 Recovery and Reentry Planning and Post-Accident Operations

Details related to Recovery and Reentry Planning and Post-Accident Operations will be provided at COL.

3.14 Exercises and Drills

Details related to exercises and drills will be provided at COL.

3.15 Radiological Emergency Response Training

Proper training of the emergency response staff, both within and external to the proposed new facility, is essential to effective emergency plan implementation. Training will be provided as necessary to facilitate the efficient and effective operation of the emergency response organization. The initial training effort will be completed prior to that stage of facility construction and licensing that would require an active Emergency Plan. Personnel included in this training program will include:

- Directors and coordinators of the response organizations
- Personnel responsible for accident assessment

- Radiological monitoring teams and radiological analysis personnel
- Police, security, and fire fighting personnel
- First aid and rescue personnel
- Local support services personnel, including civil defense/emergency service personnel
- Medical support personnel
- Personnel responsible for transmission of emergency information and instructions
- The on- and off-site Emergency Response Organizations, including those individuals subject to this training program, are discussed in Section 3.3 of this Plan.

For those functions that include separate primary and back-up response organizations, initial training and refresher training will be offered to both the primary and back-up organizations.

3.15.1 Licensee Staff

The Licensee will appoint appropriate executive and management level personnel with authority and responsibility for establishing management direction and control to assure that preparedness is maintained and that any required corrective actions are implemented.

The Licensee will appoint an appropriate manager to be responsible for providing required Emergency Preparedness Training for personnel who are part of the Emergency Response Organization, commensurate with their positions in the emergency organization.

3.15.2 Facility Staff

A program will be developed to provide information on the Emergency Plan to all personnel (excluding visitors) coming into the proposed new facility for the first time and to all personnel participating in the periodic retraining program. This training will address applicable signals and alarms, evacuation routes and procedures, and response during an emergency. The objectives of this training program will be to:

- Train personnel with respect to their responsibilities during an emergency situation
- Keep personnel informed of any applicable changes to the Emergency Plan.

3.15.3 Emergency Response Organization

Emergency Organization Personnel at the proposed new facility will receive training in emergency response prior to initial assignment to the Emergency Response Organization and on a periodic basis. This training program will ensure continued emergency preparedness of all persons who may participate in emergency response activities. The level of detail included in the Emergency Response Training will be tailored to the responsibilities of the affected person. The overall program will consist of the following:

- Plant Access Training for all unescorted personnel in the protected area.
- Fitness For Duty (FFD) training for all emergency response personnel in the protected area and the EOF
- Emergency Preparedness Training Specialized (EPTS) and Emergency Plan Procedure training for all emergency response personnel as required.

3.15.4 Orientation and Training Program for Offsite Support Agencies

An orientation and training program will be offered for all outside support agencies such as the local fire department, law enforcement, ambulance, hospital services, and civil defense/emergency preparedness. The Licensee will ensure that training is made available for affected offsite support agencies. This emergency plan training will include the following topics as a minimum:

- Station layout
- Communications interfaces and procedures between the onsite organizations and the offsite support agencies
- Expected responses to emergencies
- Anticipated protective actions
- Basic health physics and radiation protection
- Primary and alternate plant access routes and access procedures.

Local civil defense/emergency preparedness personnel will be provided training through participation in joint utility/state/local status meetings, through invitations to attend the training offered to the agencies listed above, and through their respective state emergency preparedness organization(s). The Licensee may also provide assistance in the training of other county/parish emergency organization personnel, if requested to do so. Emphasis will be placed on the interfaces between the station and the state and local emergency organizations, communications procedures, basic radiation protection, and the expected roles of the offsite response agencies.

Refresher training will be offered at an established frequency as necessary to ensure the affected agencies are able to effectively discharge their responsibilities. The adequacy of the selected training frequency may be assessed through the evaluation of periodic drills and exercises and the training content and frequency may be modified as necessary to ensure the continued effectiveness of the emergency response organization.

3.15.5 Training Development and Conduct

Emergency response training at the proposed new facility will be developed and conducted in accordance with approved Training organization procedures. Training conducted for the proposed new facility by outside organizations, such as that training conducted by outside technical specialists and other organizations, will be approved and conducted in accordance with facility procedures addressing such activities to ensure its adequacy and accuracy.

3.16 Responsibility For The Planning Effort – Development, Periodic Review, and Distribution of Emergency Plans

3.16.1 Licensee Responsibility

The COL Licensee will appoint an appropriate Manager who will have overall authority and responsibility for the emergency planning effort. The appointed Manager will discharge the responsibilities of the Emergency Planning Coordinator, as discussed in NUREG-0654, including responsibility for development and updating of plans and coordination of the plans with those of affected response organizations.

The appointed Manager will be responsible for coordinating periodic reviews and updates of the Plan as needed to ensure its ongoing accuracy and consistency with the status of the proposed new facility. Letters of Agreement with offsite organizations and agencies will be reviewed during the periodic Plan review and updated as necessary. In addition, the Manager, Emergency Preparedness, by virtue of his involvement with the Emergency Preparedness Program, will ensure other individuals affected by the Plan, including both Licensee employees and Federal, state, and local officials, are informed of revisions to the Plan.

Emergency plans of offsite organizations and agencies will be reviewed as requested.

The Licensee will provide for the assignment of an individual with significant expertise, including appropriate education and experience, to the position of Manager, Emergency Preparedness and to those positions that provide technical or management support for emergency preparedness efforts. The Licensee will also undertake an ongoing effort to ensure these individuals are provided opportunities to periodically enhance and update their knowledge of pertinent subject matter through participation in industry training, seminars, drills and exercises.

3.16.2 Plan Distribution

Because this Plan is not associated with an operating facility, this document will not be distributed. Copies of the completed Emergency Plan will be distributed only when construction and licensing of the proposed new facility reach a stage requiring an active Emergency Plan. Revisions to the final Emergency Plan will be distributed in a controlled manner.

Results of each periodic revision and change to the plan will be reported to agencies and organizations through letters, meetings, seminars, or other means, as appropriate. Changes to the plan will be indicated, using generally accepted administrative practices and word-processing technology to clearly indicate the subject changes. The expected method used will most likely consist of providing dates and/or revision numbers on each page and change markings, such as text or margin markings, to indicate where changes have been made.

3.17 Contacts And Arrangements

Letters indicating arrangements executed between the Licensee/facility operator and Federal, State, and local government agencies having emergency preparedness support functions are included in Appendix A to this Plan. The agencies contacted are consistent with those having made arrangements for support of GGNS Unit 1; the applicant expects that similar arrangements would be made for the proposed new facility. The following agencies have provided letters indicating their support for emergency preparedness efforts associated with the proposed new facility:

- U. S. Department of Energy, Oak Ridge Operations
- Mississippi Emergency Management Agency
- State of Louisiana
- Claiborne County Civil Defense
- Tensas Parish Emergency Preparedness
- Port Gibson Police Department
- Claiborne County Sheriff’s Department
- Claiborne County Fire Department

- Claiborne County Hospital
- Louisiana Office Of Emergency Preparedness.

3.18 References

1. Regulatory Guide 1.101, Revision 4, Emergency Planning and Preparedness for Nuclear Power Reactors, USNRC, 2000.
2. Mississippi Radiological Emergency Preparedness Plan; Volume III, to the Mississippi Comprehensive Emergency Management Plan.
3. Port Gibson/Claiborne County - Radiological Emergency Preparedness Plan.
4. Louisiana Peacetime Radiological Response Plan, Revision 9.
5. EPA 400-R-92-001 “Manual of Protective Action Guides and Protective Actions for Nuclear Incidents.

4.0 CONFORMANCE WITH REGULATORY GUIDANCE

Table 4-1 indicates the emergency plan criteria of NUREG-0654, Revision 1, Supplement 2, and provides reference to the paragraph, section, table or figure of this Plan that implements or satisfies each applicable criterion.

TABLE 2-1

PLUME EXPOSURE EPZ PUBLIC FACILITIES AND INSTITUTIONS – PEAK POPULATIONS

Facility	Peak Population
Schools	
Tensas Elementary School	250
Tensas Academy	200
Newellton Head Start	115
Newellton High School	475
Davidson High School	210
Richardson School	210
Port Gibson High School	565
Port Gibson Middle School	453
Arthur W. Watson Elementary	993
Chamberlain-Hunt Academy	150
Claiborne Educational Foundation	84
Alcorn State University	3,350
Day Care Centers	
Amazing Grace	35
All God’s Children	27
Child’s	12
Concerned Citizen’s	23
Little Kid’s College	13
Loving Arms	6
Millcreek	17
New Haven Christian Academy	34

TABLE 2-1 (Continued)

Facility	Peak Population
Employers	
Port Gibson Bank	22
Piggly Wiggly Store	26
MS Southern Bank	15
M&M	16
Bruce Hardwood	147
Anderson Tully	12
Newellton Elevator	15
LSU Experimental Station	25
Tensas Parish Courthouse	35
GGNS	800
Special Facilities	
Claiborne County Courthouse	30
Claiborne County Hospital	56[1]
St. Charles Nursing Home	90
Tensas Parish Jail	10
Southern Home Care	96
Sta-Home Health Care	56
MS Home Care	88
Prestige Plaza	37
Claiborne County Nursing Center	155

NOTES:

1. Includes 32 beds, five doctors, ten registered nurses, six nurses' aides, and three X-ray technicians. (Reference 22)

TABLE 2-2

EVACUATION ROUTE ROADWAY CAPACITIES

Protective Action Area No.	County / Name	Primary Evacuation Route	Roadway Capacity (Vehicles/hr)
1	Claiborne	U.S. 61 N to Vicksburg	1100 (GG Rd)
	Grand Gulf		3800 (U.S. 61 N)
2a, 2b	Claiborne	U.S. 61 N and MS 462 E to Vicksburg	1400 (MS 462)
	Kennison/Willows		3800 (U.S. 61 N)
3a, 3b	Claiborne	MS 18 E to Utica	1700 (MS 18 E)
	Between Little Bayou Pierre and Bayou Pierre		
4a	Claiborne	MS 547 S to MS 28 E to Hazlehurst	1500 (MS 547)
	Port Gibson		1400 (MS 28 E)
4b	Claiborne	MS 547 S to MS 28 E to Hazlehurst	1500 (MS 547)
	Between Gordon and Little Bayou Pierre		1400 (MS 28 E)
5a	Claiborne	MS 552 E to U.S. 61 S to Natchez	3800 (MS 552 E)
	Westside		>1400 (U.S. 61S)
5b	Claiborne	MS 552 E to U.S. 61 S to Natchez	>1400
	Gordon Road		
6	Claiborne	MS 552 E to U.S. 61 S to Natchez	3800 (MS 552 E)
	Alcorn State University		>1400 (U.S. 61S)
7	Claiborne	U.S. 61 N to Vicksburg	3800 (U.S. 61 N)
	North of Big Black River		
8	Tensas	LA 608 N to LA 605 N to U.S. 65 N to Tallulah, LA.	<1000 (LA 608 and LA 605)
	East Bank of Lake St. Joseph and east of Newellton		>1400 (U.S. 65 N)
	West Bank of Lake St. Joseph	LA 608 W to LA 605 N to U.S. 65 N to Tallulah, LA.	<1000 (LA 608 and LA 605)
			>1400 (U.S. 65 N)

TABLE 2-2 (Continued)

Protective Action Area No.	County / Name	Primary Evacuation Route	Roadway Capacity (Vehicles/hr)
9	Tensas West of LA 605, incl. Newellton	W to U.S. 65 N to Tallulah, LA.	>1400 (U.S. 65 N)
	East of LA 605, incl. Newellton	LA 887 W to LA 605 N to U.S. 65 N to Tallulah, LA.	<1000 (LA 887 & 605) >1400 (U.S. 65 N)
10	Tensas	LA 604 N to LA 605 W to U.S. 65 S to Ferriday, LA.	<1000 (LA 605)
	Outside of Lake Bruin		>1400 (U.S. 65 S)
	Inside of Lake Bruin	LA 606 S to LA 604 S to LA 605 S to LA 128 W to U.S. 65 S to Ferriday, LA.	<1000 (LA 606, 604, 605, & 128) >1400 (U.S. 65 S)
11	Tensas	LA 605 N to LA 605 W to U.S. 65 S to Ferriday, LA.	1000 (LA 605)
	Outside of lake Bruin		>1400 (U.S. 65 S)
	St. Joseph area	LA 128 W to U.S. 65 S to Ferriday, LA.	1000 (LA 128) >1400 (U.S. 65 S)
12	Tensas S. of Yucatan Lake, incl. Lakamardia	LA 604 N to LA 605 W to U.S. 65 S to Ferriday, LA.	<1000 (LA 604 and 605) >1400 (U.S. 65 S)
	Tensas N. and inside of Yucatan Lake	LA 608 W to LA 605 N to U.S. 65 N to Tallulah, LA.	<1000 (LA 608 & 605) >1400 (U.S. 65 S)

SOURCE:

1) Grand Gulf Nuclear Station Emergency Plan, Revision 48, 7/31/2002
2) Temple, J. M., Black Diamond Engineers, Inc., 2003, Evaluation Of Existing Evacuation Time Estimates And Analysis Of Potential Impediments To Protective Actions; Grand Gulf Nuclear Station

TABLE 4-1

NUREG-0654, REVISION 1, SUPPLEMENT 2, CROSS-REFERENCE

NUREG-0654, Revision 1, Supplement 2 Criterion		Implementing Plan Section
A.	**Assignment of Responsibility (Organization Control)**	
1.	Identify the state, local, federal and private sector organizations (including utilities) that are intended to be part of the overall response organization for EPZs.	3.1, 3.3
3.	Include a description of contacts and arrangements pertaining to the concept of operations developed between Federal, State, and local agencies and other support organizations having an emergency response role within the EPZs. Any written letters of agreement should be included. A signature page in the application may be appropriate for some organizations to signify their agreement.	3.3, 3.17, Appendix A
B.	**Onsite Emergency Organizations**	
1.	Identify the interfaces between and among the onsite functional areas of emergency activity, local services support, and State and local government response organization. This may be illustrated in a block diagram.	3.1, 3.2, 3.3, Figure 3-1
2.	Identify the services to be provided by local agencies for handling emergencies (e.g., police, ambulance, medical, hospital, and fire fighting organizations). A description of the arrangements involving these services shall be included in the plan. Any written letters of agreement should also be included.	3.3, 3.12, Appendix A
C.	**Emergency Response Support and Resources**	
1.	The Federal Government maintains in-depth capability to assist licensees, States, and local governments through the Federal Radiological Emergency Response Plan. Each state and ESP applicant shall make provisions for requesting Federal assistance.	3.3
2.	Identify radiological laboratories and their general capabilities and expected availability to provide radiological monitoring and analyses services during an emergency.	3.3

TABLE 4-1 (Continued)

NUREG-0654, Revision 1, Supplement 2 Criterion		Implementing Plan Section
3.	Identify nuclear and other facilities and organizations that can be relied on to provide assistance in an emergency.	3.3
4.	Include a description of the contacts and arrangements made with the response organizations identified above.	3.3, 3.17, Appendix A
D.	**Emergency Classification System**	
1.	An emergency classification scheme as set forth in Appendix 1 of NUREG-0654/FEMA-REP-1, Revision 1, or Regulatory Guide 1.101, Revision 3, must be established by ESP applicant but need not include plant-specific initiating conditions.	3.4
E.	**Notification Methods and Procedures**	
1.	Each organization shall describe mutually agreeable bases for notification of response organizations consistent with the emergency classification scheme set forth in Appendix 1 of NUREG-0654/FEMA-REP-1, Revision 1.	3.5
2.	Each organization shall describe a method for alerting, notifying, and mobilizing emergency response personnel.	3.5
3.	Each organization shall describe the administrative and physical means for notifying and promptly instructing the public within the plume exposure pathway EPZ.	3.5
F.	**Emergency Communications**	
1.	The communication plans for emergencies shall describe: a. Provision for communications with contiguous State/local governments within the EPZ. b. Provision for communications as needed with Federal emergency response organizations. c. Provision for alerting and activating emergency personnel within each response organization.	3.6
2.	The communication arrangement for fixed and mobile medical support facilities shall be described.	3.6, 3.12

TABLE 4-1 (Continued)

NUREG-0654, Revision 1, Supplement 2 Criterion		Implementing Plan Section
G.	**Public Education and Information**	
1.	Each organization shall describe a program to provide a coordinated dissemination of information to the public on a periodic basis (at least annually) regarding how they will be notified and what their actions should be in an emergency. This program should include information on: - educational information on radiation - contact for additional information - protective measures, e.g. evacuation routes and relocation centers, sheltering, respiratory protection, radioprotection drugs - special needs of the handicapped and transient population Means for accomplishing this dissemination may include, but are not limited to: information in the telephone book, periodic information in utility bills, posting in public areas, and publications distributed on an annual basis.	3.7
2.	Each organization shall describe a program for acquainting news media on a periodic basis (at least annually) with the emergency plans, information concerning radiation, and points of contact for release of public information in an emergency.	3.7
H.	**Emergency Facilities and Equipment**	
1.	Describe a technical support center and an onsite operations support center in accordance with NUREG-0696.	3.8.1, 3.8.2
2.	Describe an emergency operations facility from which evaluation and coordination of all licensee activities related to an emergency is to be carried out and from which the licensee shall provide information to Federal, State, and local authorities responding to radiological emergencies in accordance with NUREG 0696.	3.8
3.	Each off-site organization shall describe an emergency operations center for use in directing and controlling response functions.	3.8

TABLE 4-1 (Continued)

NUREG-0654, Revision 1, Supplement 2 Criterion		Implementing Plan Section
I.	**Accident Assessment**	
1.	Provide a description of the contacts and arrangements made with off-site organizations for acquiring and evaluating meteorological information. Describe how suitable meteorological data will be made available to the State.	3.9
2.	Describe the contacts and arrangements made for field monitoring within the plume exposure EPZ.	3.9
3.	Describe contacts and arrangements to locate and track airborne radioactive plume, using either or both Federal and State resources.	3.9
J.	**Protective Response**	
1.	Describe the evacuation routes and transportation for on-site individuals to some suitable off-site location, including alternatives for inclement weather, high traffic density, and specific radiological conditions.	3.10, Figure 3-2
2.	Describe a mechanism for recommending protective actions to the appropriate State and local authorities in accordance with the Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400-R-92-001).	3.10
3.	Prepare time estimates for evacuation within the plume exposure EPZ in accordance with Appendix 4 of NUREG-0654/FEMA-REP-1, Revision 1.	2.2
4.	Each organization's concept for implementing protective measures for the plume EPZ shall be described, including items such as those listed below, if available. Where appropriate, a description of contacts and arrangements made with off-site agencies with emergency planning responsibilities must be included.	3.10
	a. Maps showing evacuation routes, evacuation areas, shelter areas, and relocation centers in host areas.	3.10, Figures 3-1, 3-2, 3-3

TABLE 4-1 (Continued)

NUREG-0654, Revision 1, Supplement 2 Criterion		Implementing Plan Section
	b. Maps showing population districts around site. This shall be by evacuation areas. Each applicant shall also present the information in a sector format.	3.10, Figures 2-4, 2-5, 2-6
	c. Proposed means for notifying all segments of the transient and resident population.	3.10
K.	**Radiological Exposure Control**	
1.	Describe guidelines on dose limits for: a. Removal of injured persons. b. Undertaking corrective actions. c. Performing assessment actions. d. Performing field radiological measurements in the plume EPZ. e. Providing first aid. f. Performing personnel decontamination. g. Providing ambulance service. h. Providing medical treatment services.	3.11
2.	Describe an on-site radiation protection program to be implemented during emergencies, including methods to implement dose limits. General guidance on dose limits for workers performing emergency services can be found in EPA 400-R-92-001.	3.11
3.a.	Describe how to determine doses received by emergency personnel involved in any nuclear accident, including volunteers.	3.11
3.b.	Describe how to acquire and distribute dosimeters, both direct reading and permanent record devices.	3.11
4.	Describe a decision chain for authorizing emergency workers to incur exposures in excess of the EPA dose limits for workers performing emergency services.	3.11

TABLE 4-1 (Continued)

NUREG-0654, Revision 1, Supplement 2 Criterion		Implementing Plan Section
5.a.	Specify action levels for determining the need for decontamination of emergency workers, equipment and vehicles, and the general public and their possessions.	3.11
5.b.	Describe a means for decontamination of emergency personnel wounds, supplies, instruments and equipment.	3.11
L.	**Medical and Public Health Support**	
1.	Describe the contacts and arrangements made for local and backup hospitals and medical services having the capability for evaluation of radiation exposure and uptake.	3.12
O.	**Radiological Emergency Response Training**	
1.	Describe a training program for instructing and qualifying personnel who will implement radiological emergency response plans. Specialized internal training and periodic retraining shall be provided in the following categories: a. Directors or coordinators of the response organizations b. Personnel responsible for accident assessment c. Radiation monitoring teams and radiation analysis personnel d. Police, security and fire fighting personnel f. First aid and rescue personnel g. Local support services personnel including Civil Defense /emergency services personnel h. Medical support personnel i. Personnel responsible for transmission of emergency information and instructions.	3.15

TABLE 4-1 (Continued)

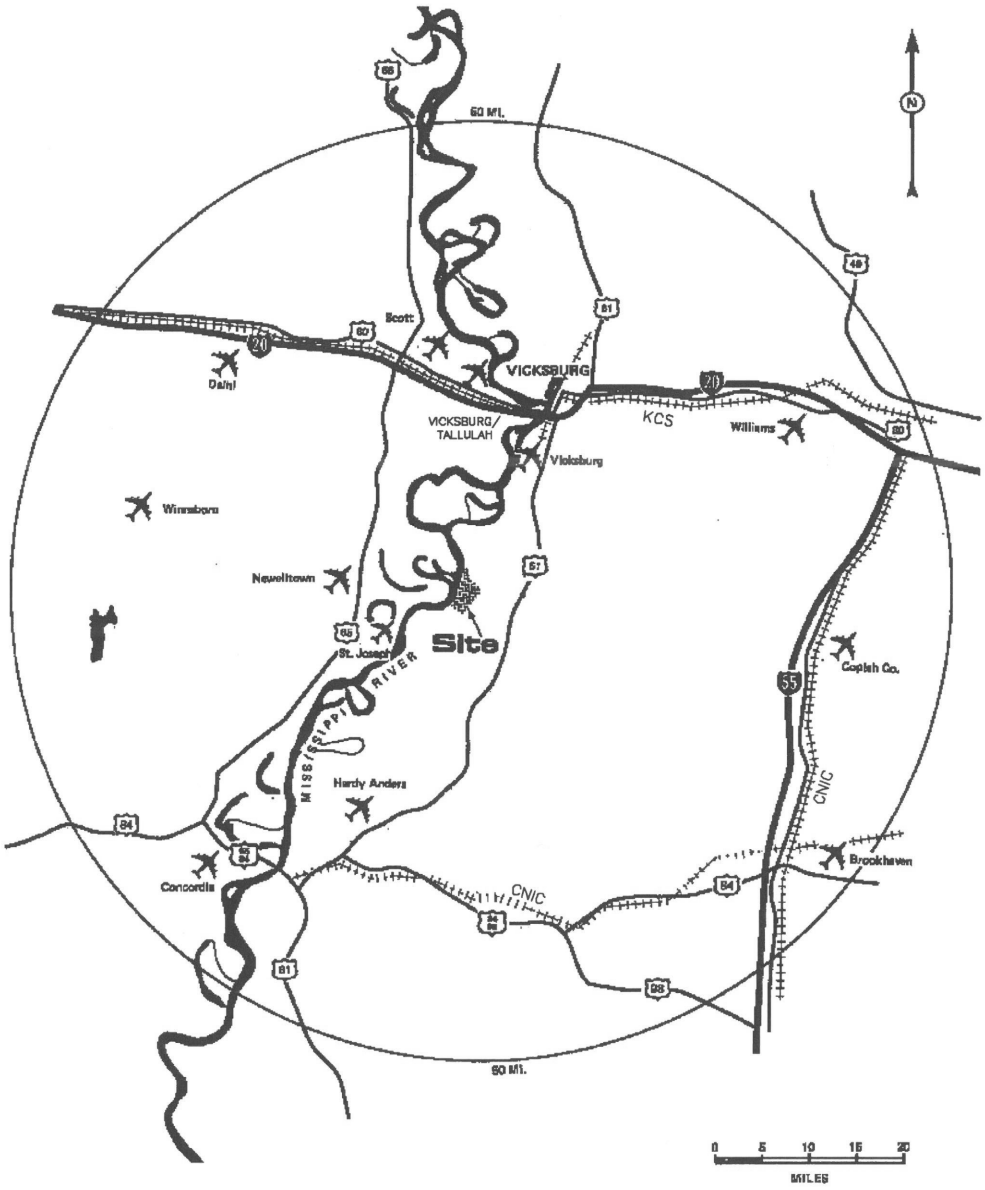
NUREG-0654, Revision 1, Supplement 2 Criterion		Implementing Plan Section
P.	**Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans**	
1.	Provide for the training of individuals responsible for the planning effort.	3.16
2.	Identify by title the individual with the overall authority and responsibility for radiological emergency response planning.	3.16
3.	Designate an Emergency Planning Coordinator with responsibility for the development and updating of emergency plans and coordination of these plans with other response organizations.	3.16
4.	Update plans and agreements as needed.	3.16
5.	Forward emergency response plans and approved changes to all organizations and appropriate individuals with responsibility for implementation of the plans. Date and mark revised pages to show where changes have been made.	3.16
6.	Provide a specific table of contents and a cross-reference to the criteria in NUREG-0654/FEMA-REP-1, Revision 1, Supplement 2.	Table of Contents, Section 4

SOURCE:
USGS TOPO MAP GRAND GULF, MS – LA (1963–1973) AND WIDOWS CREEK, MS – LA (1986 PROVISIONAL)

SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

PROPERTY BOUNDARY

FIGURE 2-1 REV. 1



AIRPORT

RAILROAD

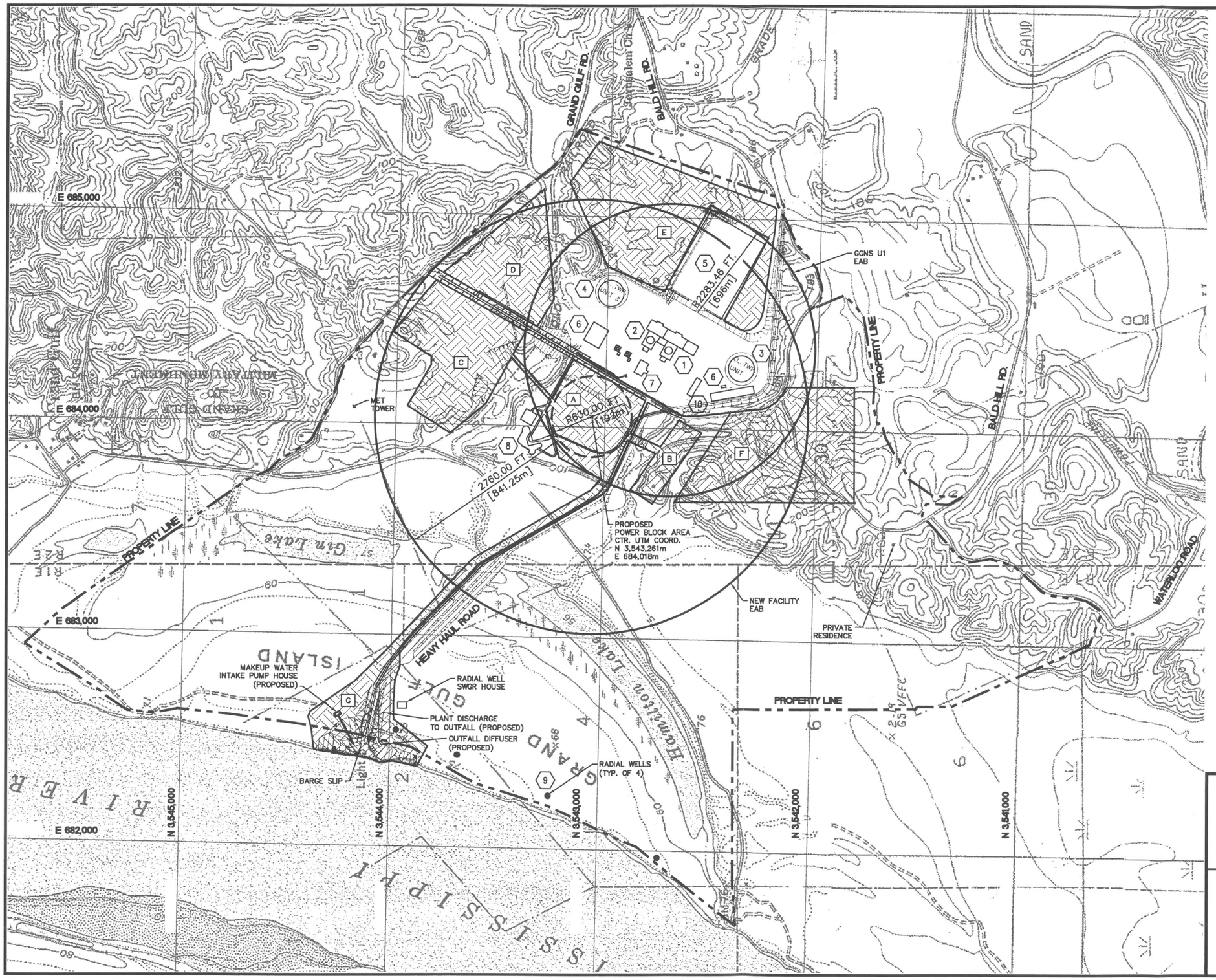
FEDERAL HIGHWAY

INTERSTATE HIGHWAY

SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

TRANSPORTATION MAP
GENERAL AREA

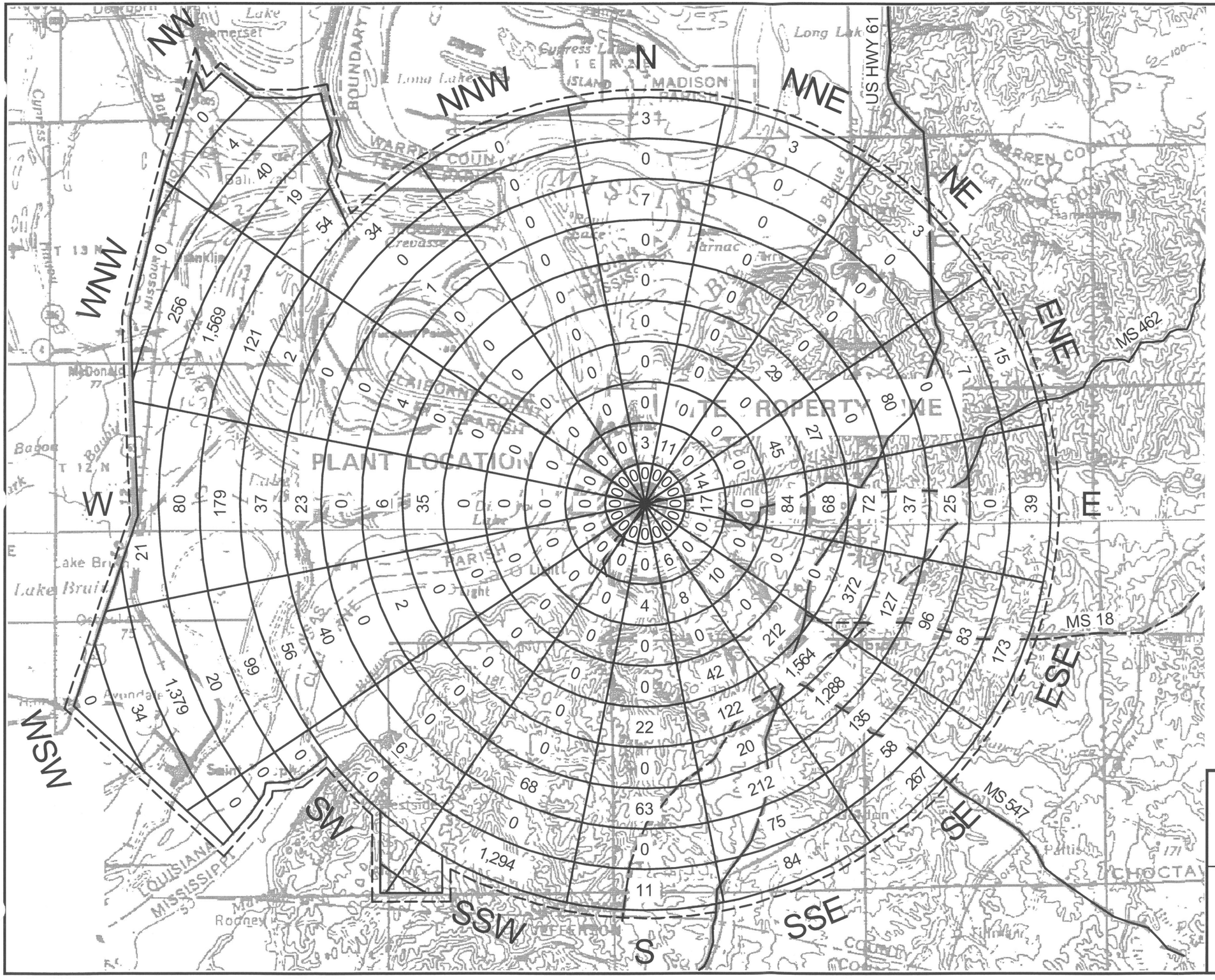
FIGURE 2-2 REV. 1



SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

GGNS UNIT 1 AND PROPOSED NEW FACILITY EXCLUSION AREA BOUNDARIES

FIGURE 2-3 REV. 1



- - - EPZ BOUNDARY BASED ON GGNS UNIT 1 EMERGENCY PLAN.

RING	TOTAL
0-1	0
1-2	51
2-3	22
3-4	129
4-5	378
5-6	2,187
6-7	1,564
7-8	607
8-9	292
9-10	2,021
10-11	453
11-12	1,688
12-13	1,696
13-14	52
EPZ TOTAL	11,140

NOTES:

1. POPULATION DATA FROM 2000 CENSUS FOR YEAR 2000.

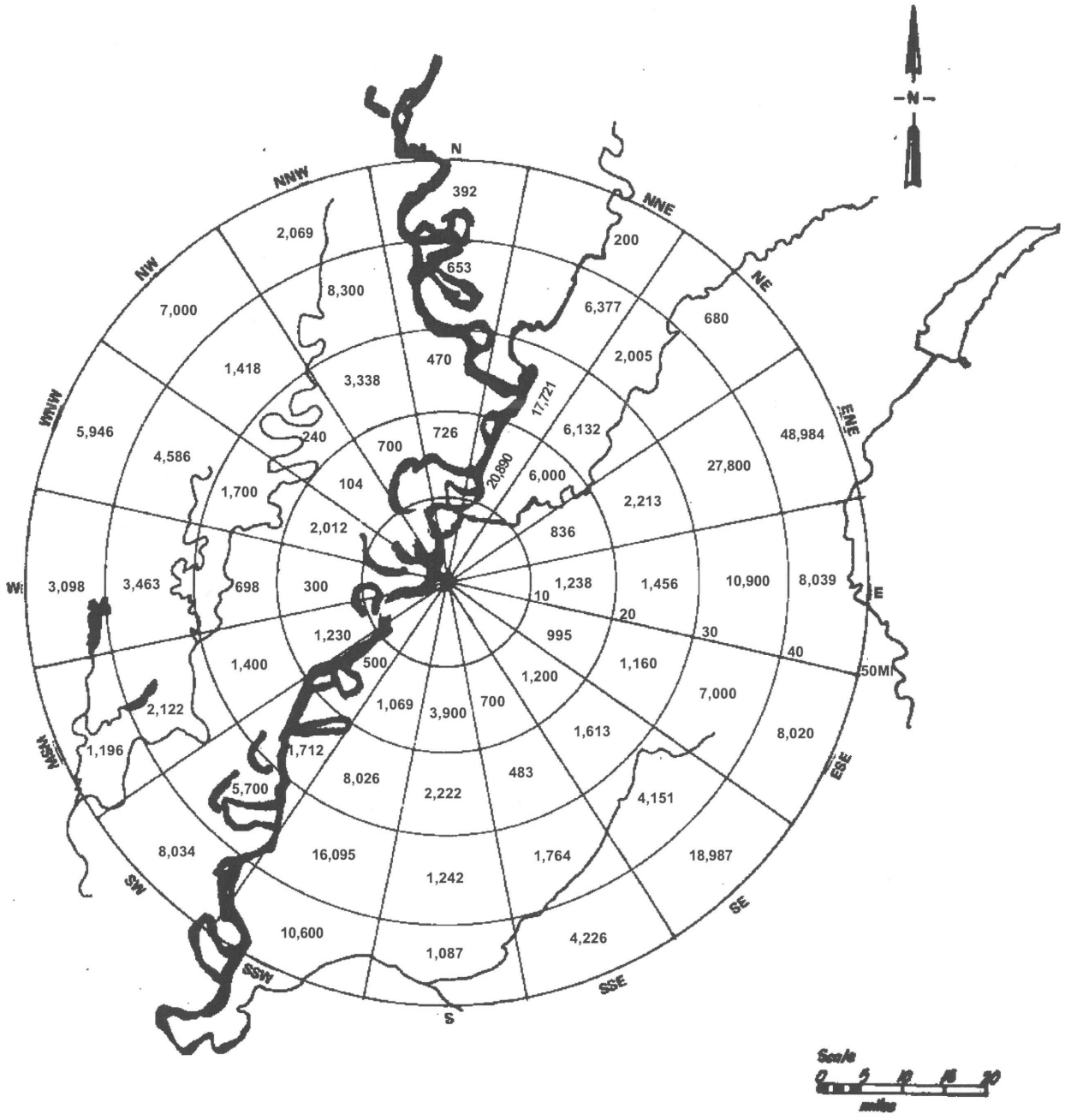
THIS MAP WAS PREPARED FROM PORTIONS OF USGS JACKSON, MISS.; LA. (1955-62) AND NATCHEZ, MISS.; LA. (1953-65) TOPOGRAPHIC MAPS.

CONTOUR INTERVAL IS 50 FEET WITH SUPPLEMENTARY CONTOURS AT 25 FOOT INTERVALS. DATUM IS MSL.

SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

PERMANENT RESIDENT
POPULATION DISTRIBUTION IN
GGNS PLUME EXPOSURE EPZ

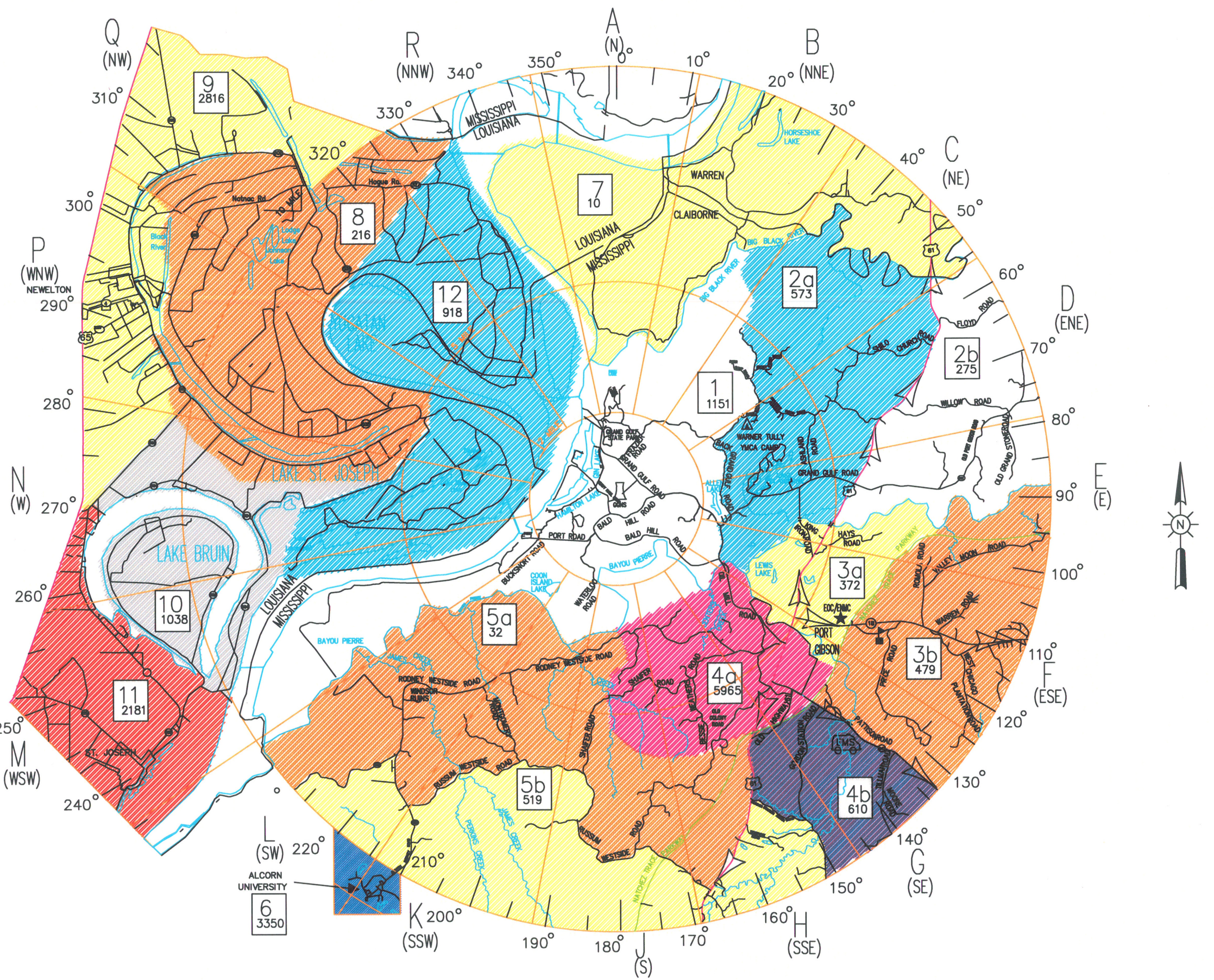
FIGURE 2-4 REV. 1

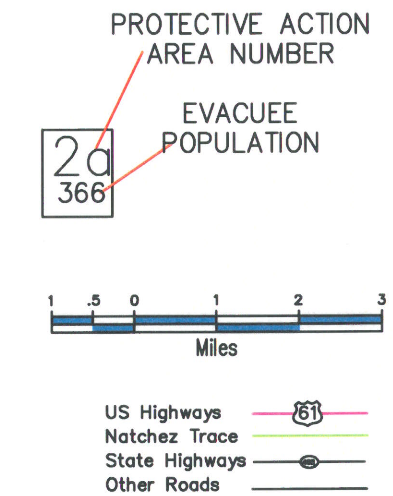


SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

PROJECTED 2002
POPULATION DISTRIBUTION
10 - 50 MILE RADIUS

FIGURE 2-5 REV. 1

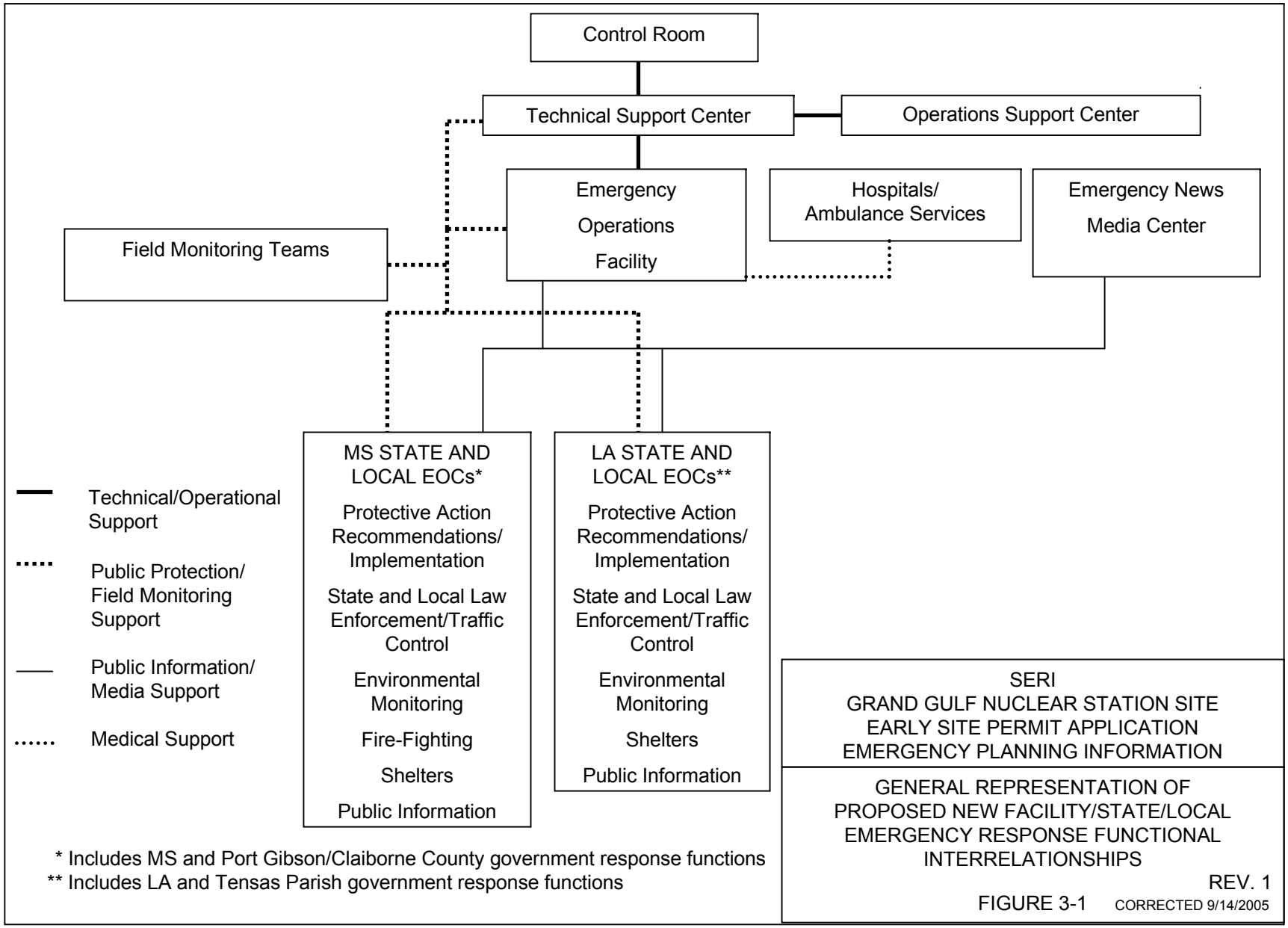


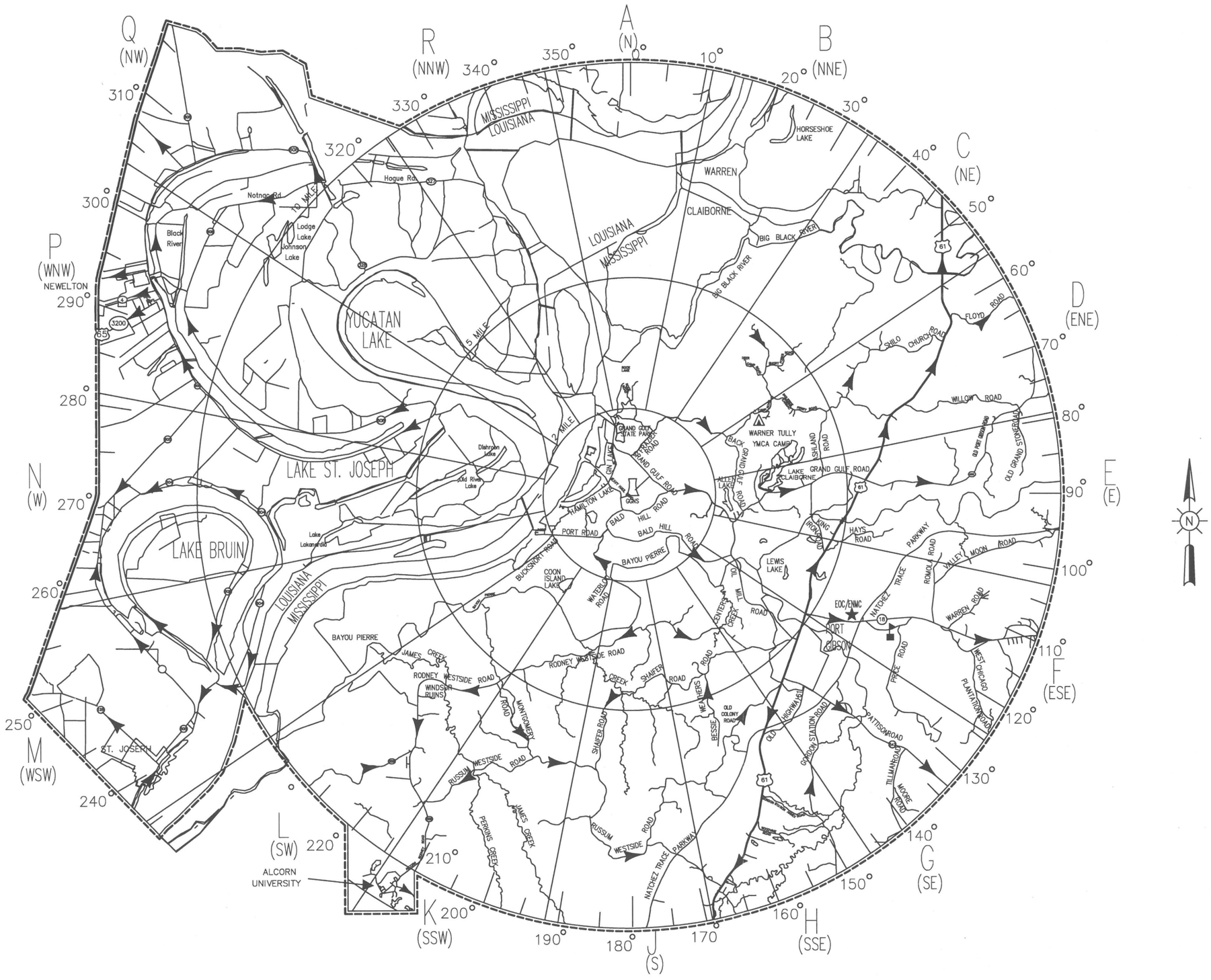


SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

EVACUATION AREA
POPULATION DISTRIBUTION
(GGNS UNIT 1 EP FIGURE 2-4)

FIGURE 2-6 REV. 1


Control Room
Technical Support Center
Operations Support Center
Emergency Operations Facility
Hospitals/ Ambulance Services
Emergency News Media Center
Field Monitoring Teams
MS STATE AND LOCAL EOCs*
Protective Action Recommendations/ Implementation
State and Local Law Enforcement/Traffic Control
Environmental Monitoring
Fire-Fighting
Shelters
Public Information
LA STATE AND LOCAL EOCs**
Protective Action Recommendations/ Implementation
State and Local Law Enforcement/Traffic Control
Environmental Monitoring
Shelters
Public Information
Technical/Operational Support
Public Protection/ Field Monitoring Support
Public Information/ Media Support
Medical Support
* Includes MS and Port Gibson/Claiborne County government response functions
** Includes LA and Tensas Parish government response functions
SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION
GENERAL REPRESENTATION OF PROPOSED NEW FACILITY/STATE/LOCAL EMERGENCY RESPONSE FUNCTIONAL INTERRELATIONSHIPS
REV. 1
FIGURE 3-1
CORRECTED 9/14/2005



LEGEND:

--------- - EPZ BOUNDARY

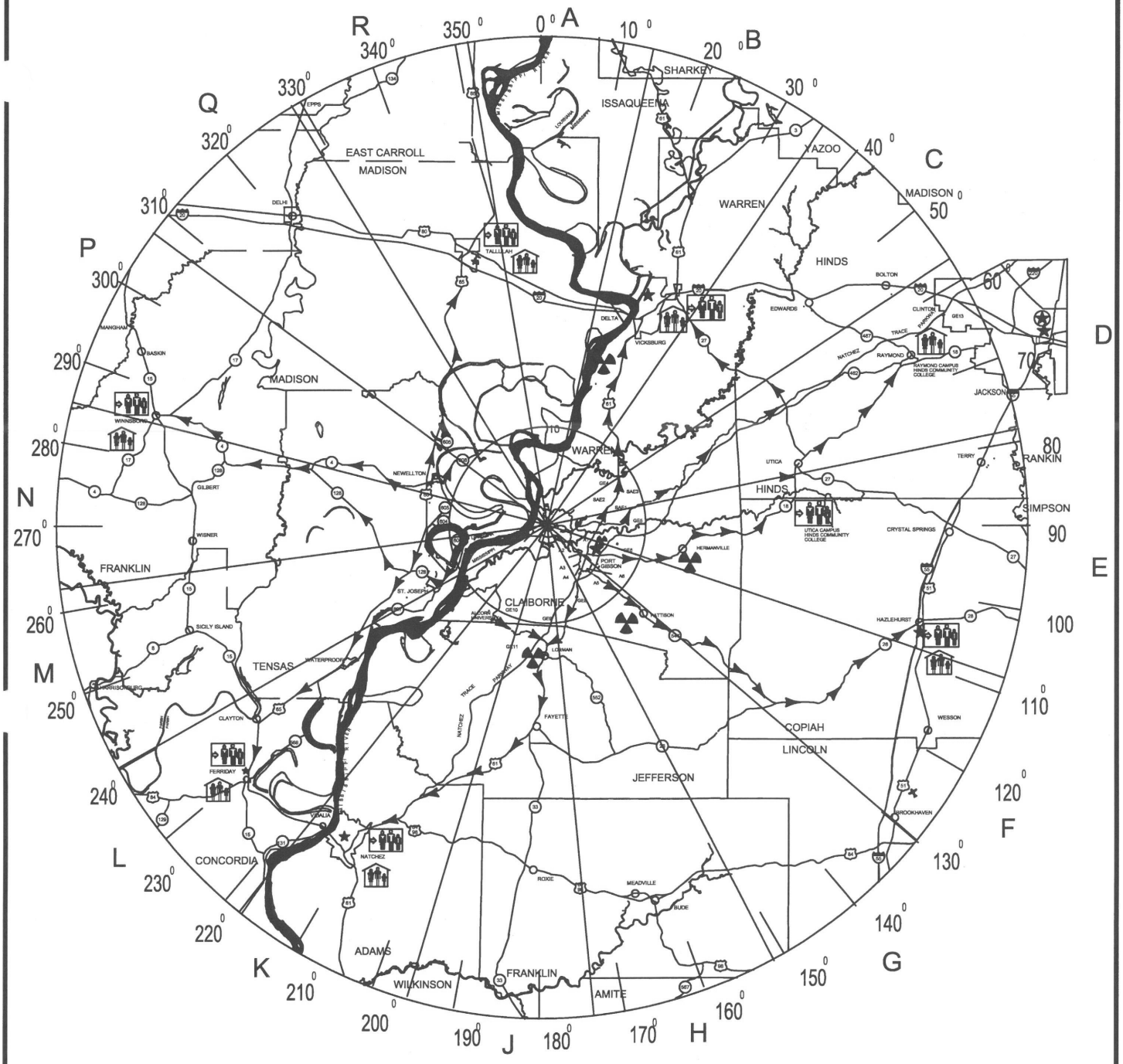
REFERENCES:

GGNS UNIT 1 E-PLAN, FIG. 2-11

SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

DESIGNATED EVACUATION ROUTINGS
WITHIN THE EPZ

FIGURE 3-2 REV. 1



REFERENCES:
GRAND GULF NUCLEAR STATION EMERGENCY PLAN

SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
EMERGENCY PLANNING INFORMATION

MASS CARE RECEPTION
CENTER LOCATIONS

FIGURE 3-3 REV. 1

APPENDIX A

AGENCY LETTERS OF AGREEMENT

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Governor Foster:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the State of Louisiana's responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of agreement at a later

stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the State of Louisiana would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L. Blount
Secretary

The State of Louisiana currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The State of Louisiana would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

M.J. "Mike" Foster, Jr.
Print Name

Signature

Governor
Title

ATTACHMENT 1
REGULATORY REFERENCES

The following extract from the Code of Federal Regulations is provided for information. A complete version of the applicable regulations is available on the Nuclear Regulatory Commission website at < http://www.nrc.gov/reading-rm/doc-collections/cfr/ >. NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996) is available at < http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/ >.

10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Mrs. Young:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the Claiborne County Civil Defense's responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of

agreement at a later stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that Claiborne County Civil Defense would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5878 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L. Blount
Secretary

The Claiborne County Civil Defense currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The Claiborne County Civil Defense would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

Bobbie M. Young
Print Name

Signature

Title

ATTACHMENT 1
REGULATORY REFERENCES

The following extract from the Code of Federal Regulations is provided for information. A complete version of the applicable regulations is available on the Nuclear Regulatory Commission website at < http://www.nrc.gov/reading-rm/doc-collections/cfr/ >. NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996) is available at < http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/ >.

10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Mr. Davis:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the Claiborne County Sheriff Departments responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of

agreement at a later stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that Claiborne County Sheriff Department would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L Blount

Joseph L. Blount
Secretary

The Claiborne County Sheriff Department currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The Claiborne County Sheriff Department would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

FRANK DAVIS
Print Name

Signature

Title

ATTACHMENT 1
REGULATORY REFERENCES

The following extract from the Code of Federal Regulations is provided for information. A complete version of the applicable regulations is available on the Nuclear Regulatory Commission website at < http://www.nrc.gov/reading-rm/doc-collections/cfr/ >. NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996) is available at < http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/ >.

10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site. .

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Mr. Jackson:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the Port Gibson Police Department's responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of

agreement at a later stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the Port Gibson Police Department would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L Blount

Joseph L. Blount
Secretary

The Port Gibson Police Department currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The Port Gibson Police Department would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

Calvin Jackson
Print Name

Calvin Jackson
Signature

Chief of Police
Title

ATTACHMENT 1
REGULATORY REFERENCES

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10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Colonel Brown:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
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The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the Louisiana Office of Emergency Preparedness' responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of

agreement at a later stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the Louisiana Office of Emergency Preparedness would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L. Blount
Secretary

The Louisiana Office of Emergency Preparedness currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The Louisiana Office of Emergency Preparedness would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

Michael L. Brown
Print Name

Signature

Assistant Director
Title

ATTACHMENT 1
REGULATORY REFERENCES

The following extract from the Code of Federal Regulations is provided for information. A complete version of the applicable regulations is available on the Nuclear Regulatory Commission website at < http://www.nrc.gov/reading-rm/doc-collections/cfr/ >. NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996) is available at < http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/ >.

10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Mrs. Fleming:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the Claiborne County Hospital's responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of agreement at a later

stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the Claiborne County Hospital would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L. Blount

Joseph L. Blount
Secretary

The Claiborne County Hospital currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The Claiborne County Hospital would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

Wanda C. Fleming
Print Name

Wanda C. Fleming
Signature

Administrator/CEO
Title

ATTACHMENT 1
REGULATORY REFERENCES

The following extract from the Code of Federal Regulations is provided for information. A complete version of the applicable regulations is available on the Nuclear Regulatory Commission website at < http://www.nrc.gov/reading-rm/doc-collections/cfr/ >. NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996) is available at < http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/ >.

10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Mr. Foster:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the Tensas Parish, Office of Emergency Preparedness' responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a

new letter of agreement at a later stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the Tensas Parish, Office of Emergency Preparedness would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L. Blount
Secretary

The Tensas Parish, Office of Emergency Preparedness currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The Tensas Parish, Office of Emergency Preparedness would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

Rick Foster
Print Name

Rick Foster
Signature

Director, Tensas OEP
Title

ATTACHMENT 1
REGULATORY REFERENCES

The following extract from the Code of Federal Regulations is provided for information. A complete version of the applicable regulations is available on the Nuclear Regulatory Commission website at < http://www.nrc.gov/reading-rm/doc-collections/cfr/ >. NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996) is available at < http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/ >.

10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

Entergy

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5880

April 11, 2003

Dear Mr. Latham:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the State of Mississippi's responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of agreement at a later

stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the State of Mississippi would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L. Blount
Secretary

The State of Mississippi currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The State of Mississippi would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

Robert R. Latham Jr
Print Name

4/24/03
Signature

Executive Director
Title

ATTACHMENT 1
REGULATORY REFERENCES

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10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Mr. Johnson:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the U. S. Department of Energy's responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of agreement at a later

stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the U. S. Department of Energy would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L Blount

Joseph L. Blount
Secretary

The U. S. Department of Energy currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The U. S. Department of Energy would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

Steven M. Johnson
Print Name

Steven M. Johnson April 21, 2003
Signature

Regional Response Coordinator, RAP Region 2
Title

ATTACHMENT 1
REGULATORY REFERENCES

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10 CFR 52 (b) (1) The application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans.

(2) The application may also either:

(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.

System Energy Resources, Inc.
1340 Echelon Parkway
P.O. Box 31995
Jackson, MS 39286-1995
Tel 601 368 5680

April 11, 2003

Dear Mr. Gray:

As has been stated in public announcements and meetings, Entergy is participating in an industry initiative, consistent with the requirements of 10 CFR 52, to develop an Early Site Permit (ESP) application for the Grand Gulf Nuclear Station (GGNS) site. The purpose of this initiative is to develop an ESP application, on behalf of System Energy Resources, Inc. (SERI), that would ultimately lead to U.S. Nuclear Regulatory Commission (NRC) approval of the GGNS site for possible future construction of one or more additional commercial nuclear generating units. Subsequent to the NRC's review and approval of the ESP application, an application may be filed by SERI to construct and operate a new nuclear facility (or facilities) at the GGNS site.

With regard to emergency planning provisions of 10 CFR 52 and the ESP process, Entergy will follow the option provided in Part 52(b)(2)(i). In accordance with this option, Entergy's ESP application will propose:

1) Major features of the emergency plans, such as the exact size of the emergency planning zones that can be reviewed by the NRC in consultation with FEMA; and
2) A description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The principal guidance document applicable to ESP emergency planning provisions is NUREG-0654 (FEMA-REP-1), Revision 1, Supplement 2 (April 1996). Supplement 2 provides revised standards and criteria that reflect the particular conditions of the ESP phase of the licensing process. Specific guidance on the major features that may be addressed in the ESP application is discussed in Supplement 2 and will be followed by Entergy in development of the ESP application.

In the development and description of these major features, Entergy will take credit, to the extent practical, for the site, federal, state, and local plans already in place for GGNS Unit 1. In general, it is expected that the current GGNS Unit 1 plans will be acceptable in basic form and content for the new facility (or facilities) that may be constructed at the GGNS site.

Consistent with the "major features" approach, the Entergy application will include descriptions of contacts and arrangements with federal, state and local agencies and other organizations that have emergency planning responsibilities. With regard to the specific arrangements, we would expect the extent of the Claiborne County Fire Department's responsibilities to be similar to those established in the current GGNS Emergency Plan and the applicable letter of agreement incorporated into that plan. The actual emergency preparedness arrangements would be finalized in a new letter of

agreement at a later stage in the new facility (or facilities) licensing process. At that time Entergy would be willing to consider appropriate changes to the agreement.

In support of the ESP application process, we are seeking your concurrence, as indicated by your signature below, that the Claiborne County Fire Department would be willing to enter into discussions with SERI to extend the current emergency preparedness arrangements, implemented for the existing GGNS facility, to a new facility (or facilities) that may be constructed at the GGNS site. Your signature below also indicates that, at this time, you are aware of no significant impediments to the development and implementation of emergency plans for the site that could include a future nuclear facility (or facilities).

We appreciate your prompt attention to this matter and look forward to working with you in the future. Please contact Mike Bourgeois at 601-368-5676 regarding any questions or comments or your need for additional information.

Sincerely,

Joseph L Blount

Joseph L. Blount
Secretary

The Claiborne County Fire Department currently provides emergency preparedness support to the Grand Gulf Nuclear Station. The specific nature of these arrangements is clearly established in a properly executed and binding letter of agreement that is included in Appendix D of the GGNS Emergency Plan. The Claiborne County Fire Department would be willing to enter into discussions that may result in extending these arrangements to address the emergency preparedness needs of any additional nuclear generating units that may be constructed on the GGNS site.

JAMES GRAY
Print Name

James Gray
Signature

FIRE CHIEF FOR CLAIBORN CO.
Title

ATTACHMENT 1
REGULATORY REFERENCES

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(i) Propose major features of the emergency plans, such as the exact sizes of the emergency planning zones, that can be reviewed and approved by NRC in consultation with FEMA in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with the Federal Emergency Management Agency, in accord with the applicable provisions of 10 CFR 50.47.

(3) Under paragraphs (b)(1) and (2)(i) of this section, the application must include a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that: (i) The proposed emergency plans are practicable; (ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (iii) that these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site.