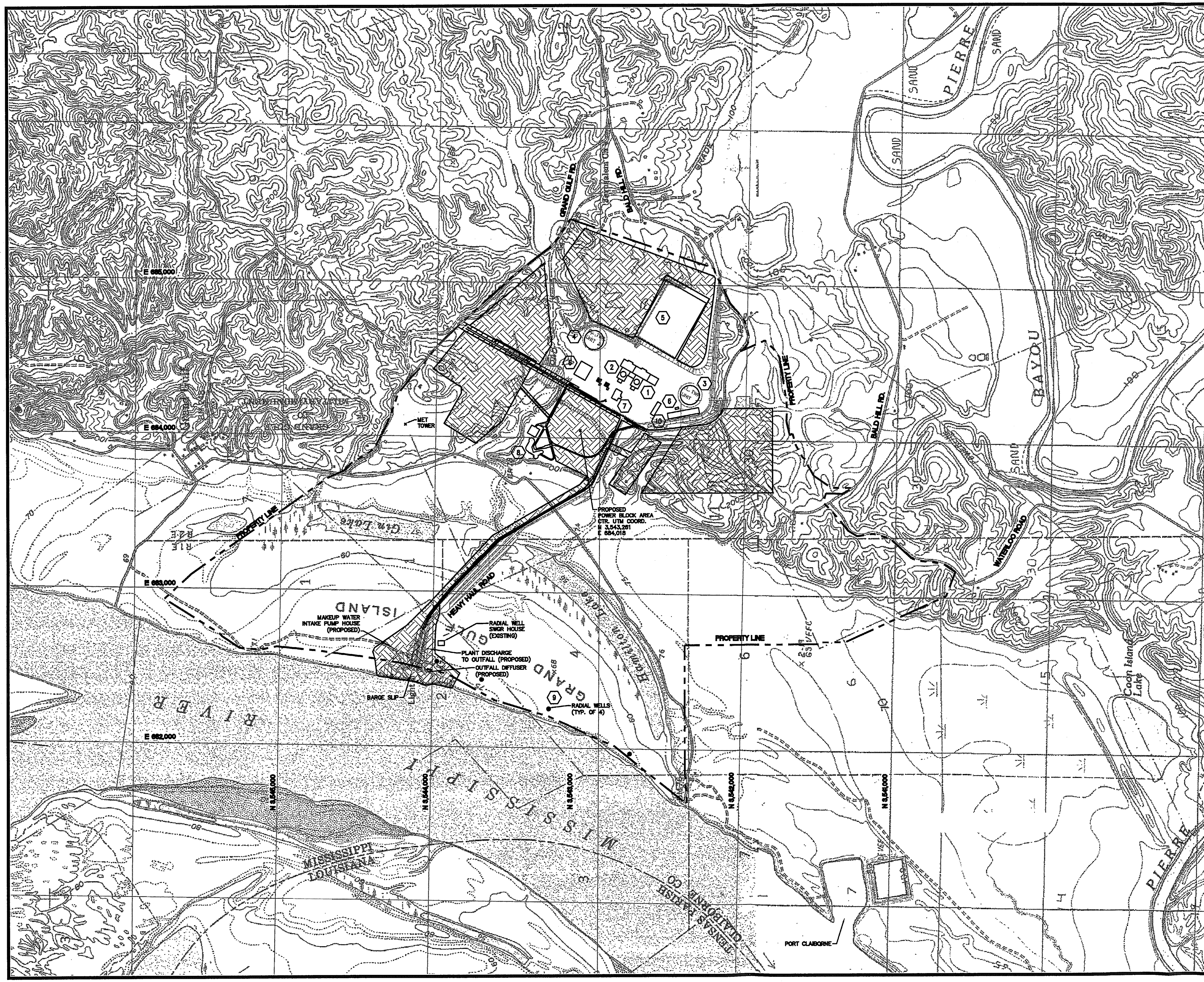


GGNS BUILDING LEGEND:

1. UNIT 1
2. UNIT 2 (NOT COMPLETED)
3. UNIT 1 NDCT
4. UNIT 2 NDCT BASIN
5. SWITCHYARD
6. WAREHOUSE
7. ADMINISTRATION BUILDING
8. ESC BUILDING
9. RADIAL WELLS
10. AUXILIARY COOLING TOWER

NOTES:

PROPOSED NEW PLANT CONSTRUCTION AREAS.

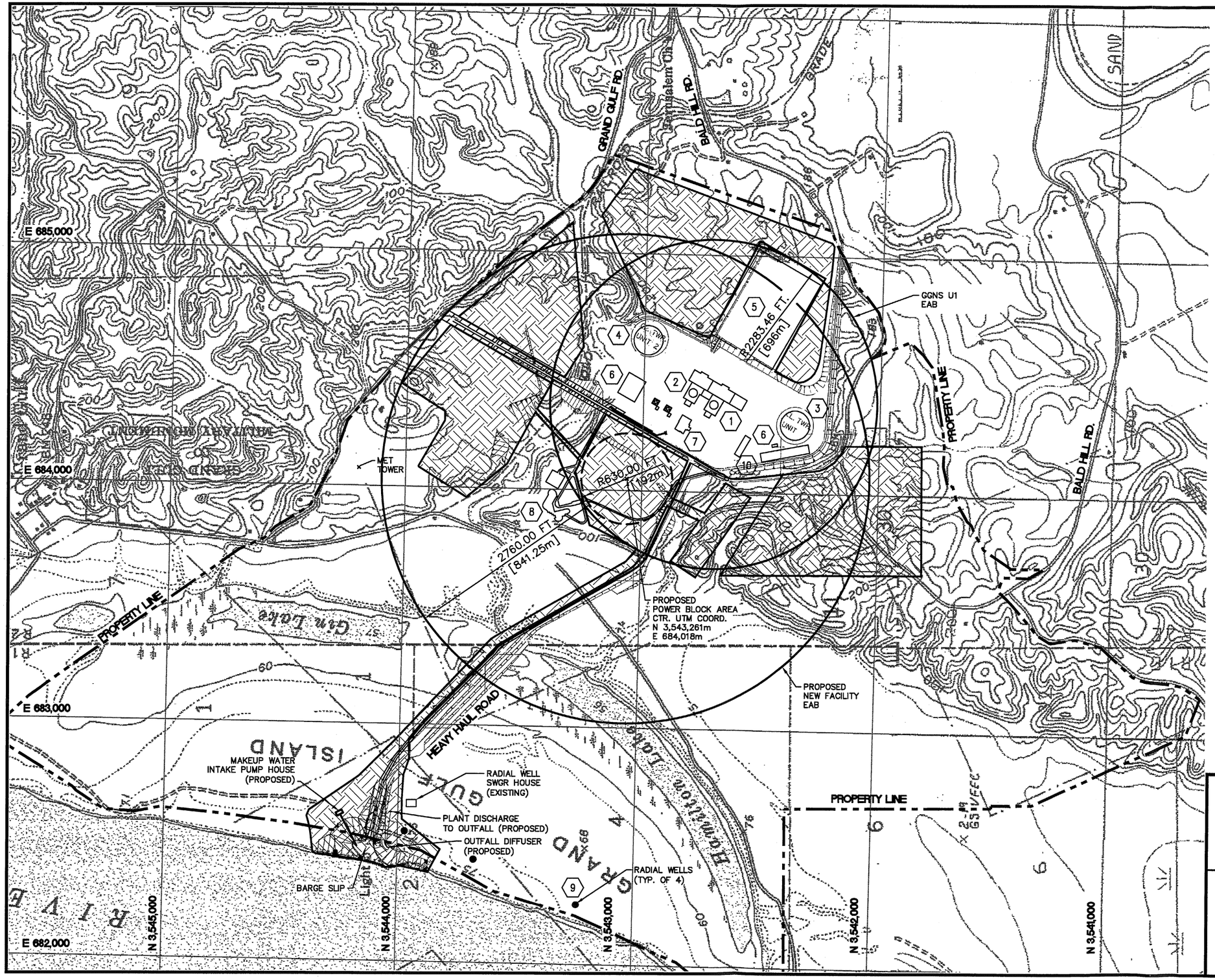
UTM COORD. GRID SHOWN.

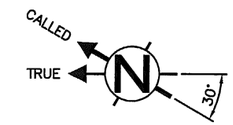
SOURCE:
USGS TOPO MAP GRAND GULF, MS – LA (1963–1973) AND WIDOWS CREEK, MS – LA (1986 PROVISIONAL)

SERI
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE LAYOUT
WITH PROPOSED NEW FACILITY
CONSTUCTION AREAS

FIGURE 2.1-1 REV. 1





GGNS BUILDING LEGEND:

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2. UNIT 2 (NOT COMPLETED)
3. UNIT 1 NDCT
4. UNIT 2 NDCT BASIN
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6. WAREHOUSE
7. ADMINISTRATION BUILDING
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9. RADIAL WELLS
10. AUXILIARY COOLING TOWER

NOTES:

PROPOSED NEW PLANT CONSTRUCTION AREAS.

UTM COORD. GRID SHOWN.

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

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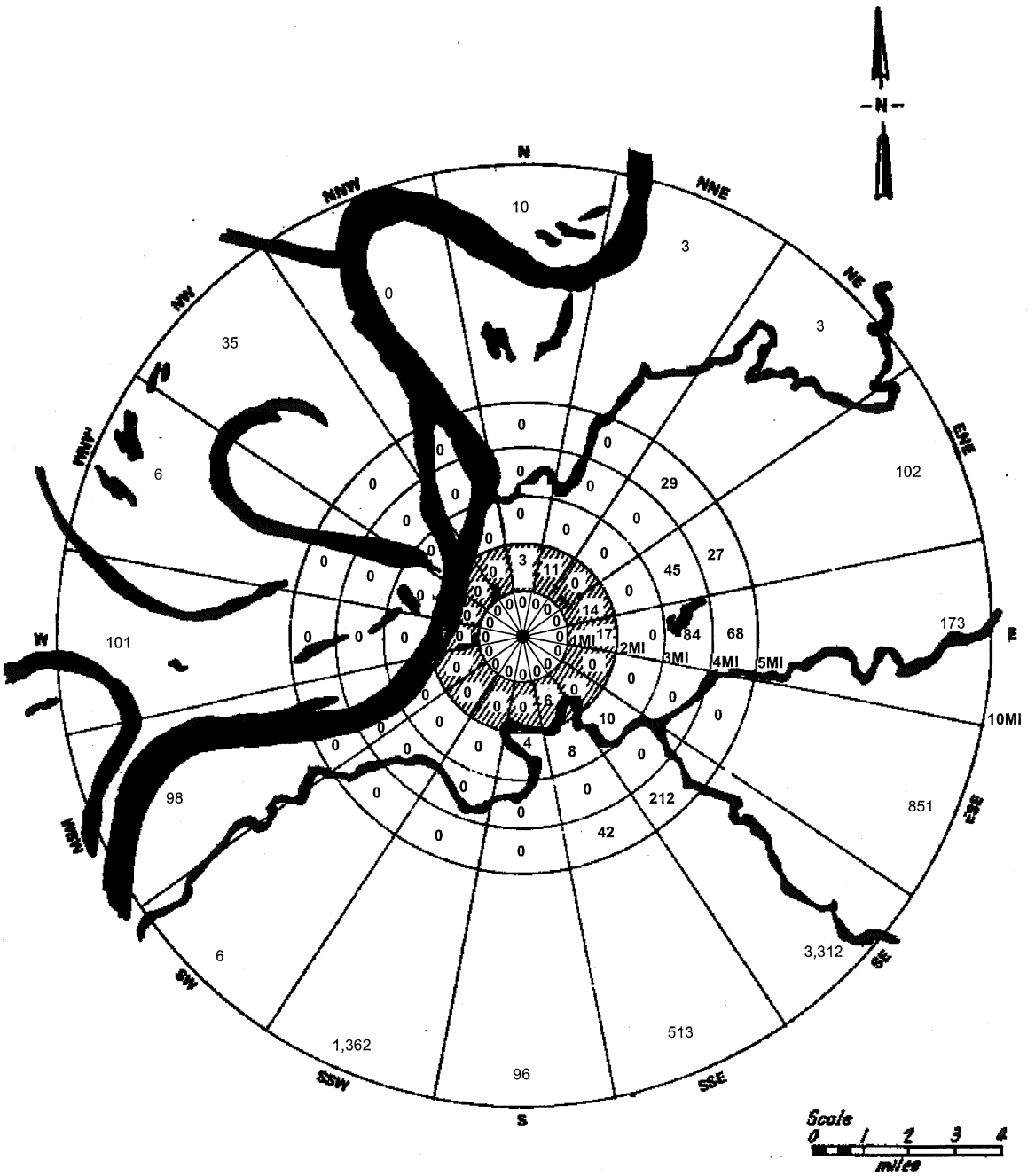
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

SITE LAYOUT

FIGURE 2.1-2 REV. 1



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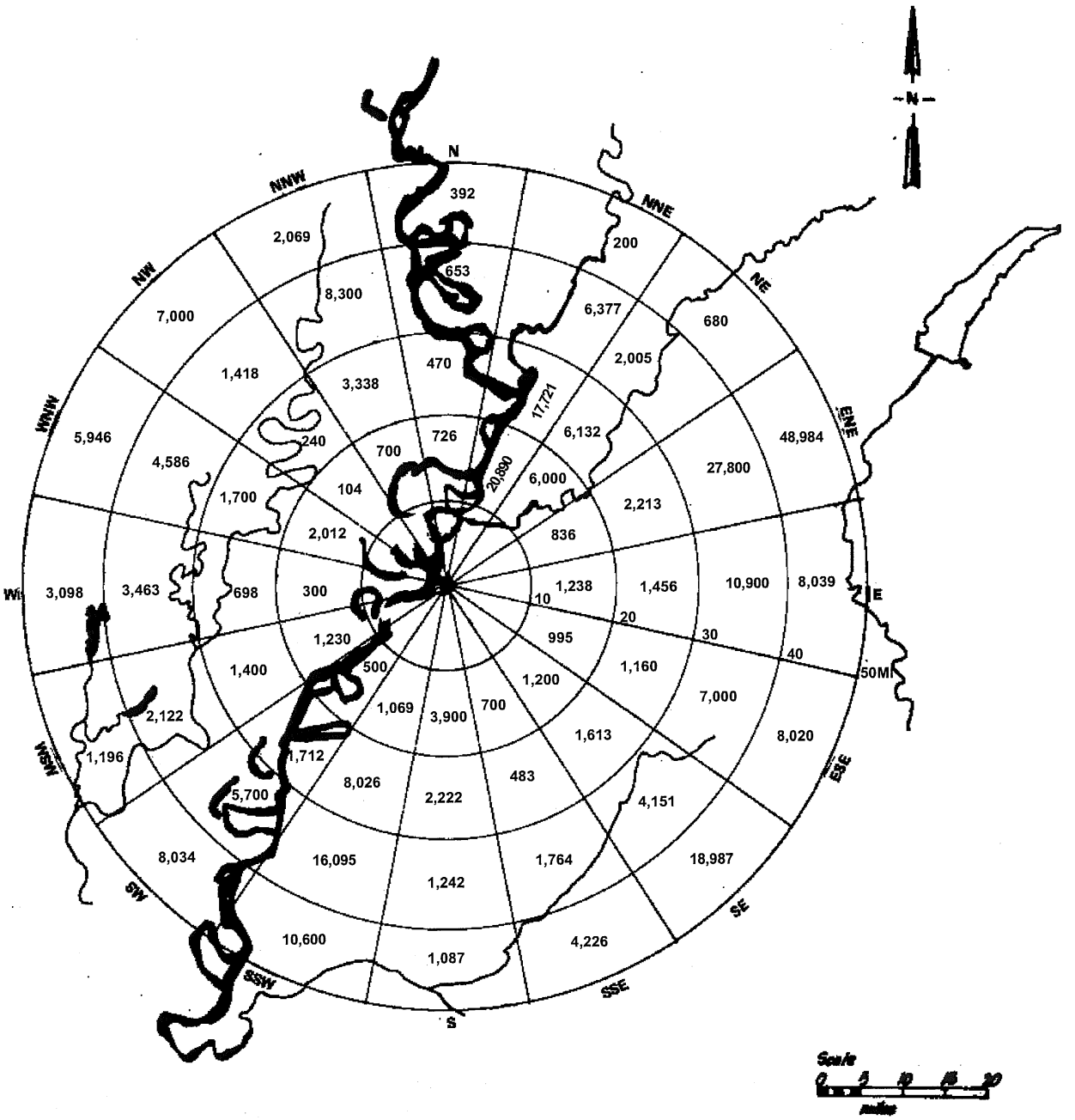
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

PROJECTED 2002
POPULATION DISTRIBUTION
0 - 10 MILES
(UFSAR FIGURE 2.1-6)

FIGURE 2.1-3 REV. 1



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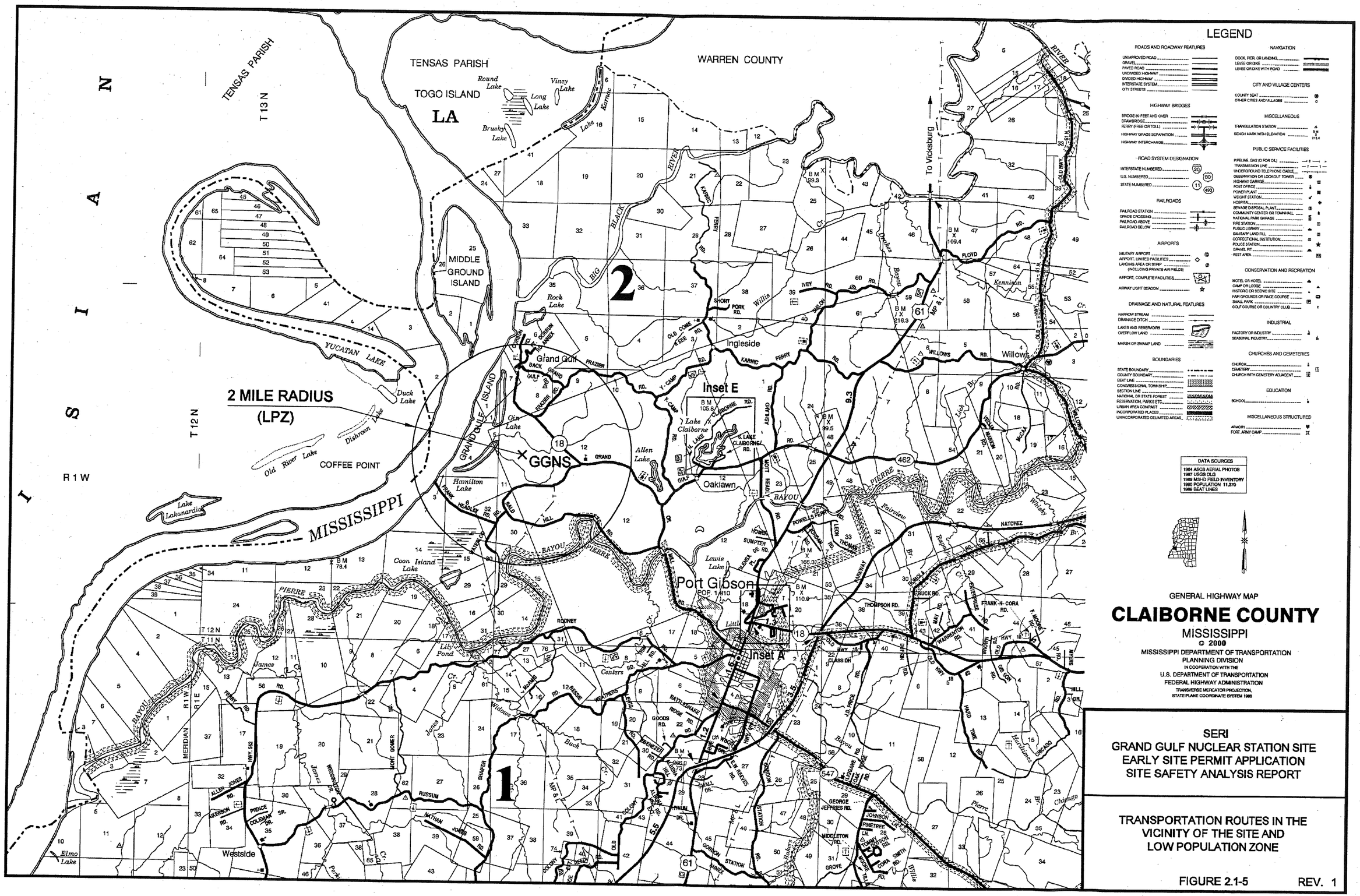
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

PROJECTED 2002
POPULATION DISTRIBUTION
10 - 50 MILE RADIUS
(UFSAR FIGURE 2.1-4)

FIGURE 2.1-4 REV. 1


LEGEND
ROADS AND ROADWAY FEATURES
UNIMPROVED ROAD
GRAVEL
PAVED ROAD
UNDIVIDED HIGHWAY
DIVIDED HIGHWAY
INTERSTATE SYSTEM
CITY STREETS
HIGHWAY BRIDGES
BRIDGE 60 FEET AND OVER
DRAWBRIDGE
FERRY (FREE OR TOLL)
HIGHWAY GRADE SEPARATION
HIGHWAY INTERCHANGE
ROAD SYSTEM DESIGNATION
INTERSTATE NUMBERED
U.S. NUMBERED
STATE NUMBERED
RAILROADS
RAILROAD STATION
GRADE CROSSING
RAILROAD ABOVE
RAILROAD BELOW
AIRPORTS
MILITARY AIRPORT
AIRPORT, LIMITED FACILITIES
LANDING AREA OR STRIP
(INCLUDING PRIVATE AIR FIELDS)
AIRPORT, COMPLETE FACILITIES
AIRWAY LIGHT BEACON
DRAINAGE AND NATURAL FEATURES
NARROW STREAM
DRAINAGE DITCH
LAKES AND RESERVOIRS
OVERFLOW LAND
MARSH OR SWAMP LAND
BOUNDARIES
STATE BOUNDARY
COUNTY BOUNDARY
BEAT LINE
CONGRESSIONAL TOWNSHIP
SECTION LINE
NATIONAL OR STATE FOREST
RESERVATION, PARKS ETC.
URBAN AREA COMPACT
INCORPORATED PLACES
UNINCORPORATED DELIMITED AREAS
NAVIGATION
DOCK, PIER, OR LANDING
LEVEE OR DIKE
LEVEE OR DIKE WITH ROAD
CITY AND VILLAGE CENTERS
COUNTY SEAT
OTHER CITIES AND VILLAGES
MISCELLANEOUS
TRIANGULATION STATION
BENCH MARK WITH ELEVATION
PUBLIC SERVICE FACILITIES
PIPELINE, GAS (O FOR OIL)
TRANSMISSION LINE
UNDERGROUND TELEPHONE CABLE
OBSERVATION OR LOOKOUT TOWER
HIGHWAY GARAGE
POST OFFICE
POWER PLANT
WEIGHT STATION
HOSPITAL
SEWAGE DISPOSAL PLANT
COMMUNITY CENTER OR TOWNHALL
NATIONAL PARK GARAGE
FIRE STATION
PUBLIC LIBRARY
SANITARY LAND FILL
CORRECTIONAL INSTITUTION
POLICE STATION
GRAVEL PIT
REST AREA
CONSERVATION AND RECREATION
MOTEL OR HOTEL
CAMP OR LODGE
HISTORIC OR SCENIC SITE
FAIR GROUNDS OR RACE COURSE
SMALL PARK
GOLF COURSE OR COUNTRY CLUB
INDUSTRIAL
FACTORY OR INDUSTRY
SEASONAL INDUSTRY
CHURCHES AND CEMETERIES
CHURCH
CEMETERY
CHURCH WITH CEMETERY ADJACENT
EDUCATION
SCHOOL
MISCELLANEOUS STRUCTURES
ARMORY
FORT, ARMY CAMP
DATA SOURCES
1964 ASCS AERIAL PHOTOS
1987 USGS DLG
1989 MSHD FIELD INVENTORY
1990 POPULATION 11,370
1989 BEAT LINES
GENERAL HIGHWAY MAP
CLAIBORNE COUNTY
MISSISSIPPI
© 2000
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TRANSVERSE MERCATOR PROJECTION,
STATE PLANE COORDINATE SYSTEM 1983
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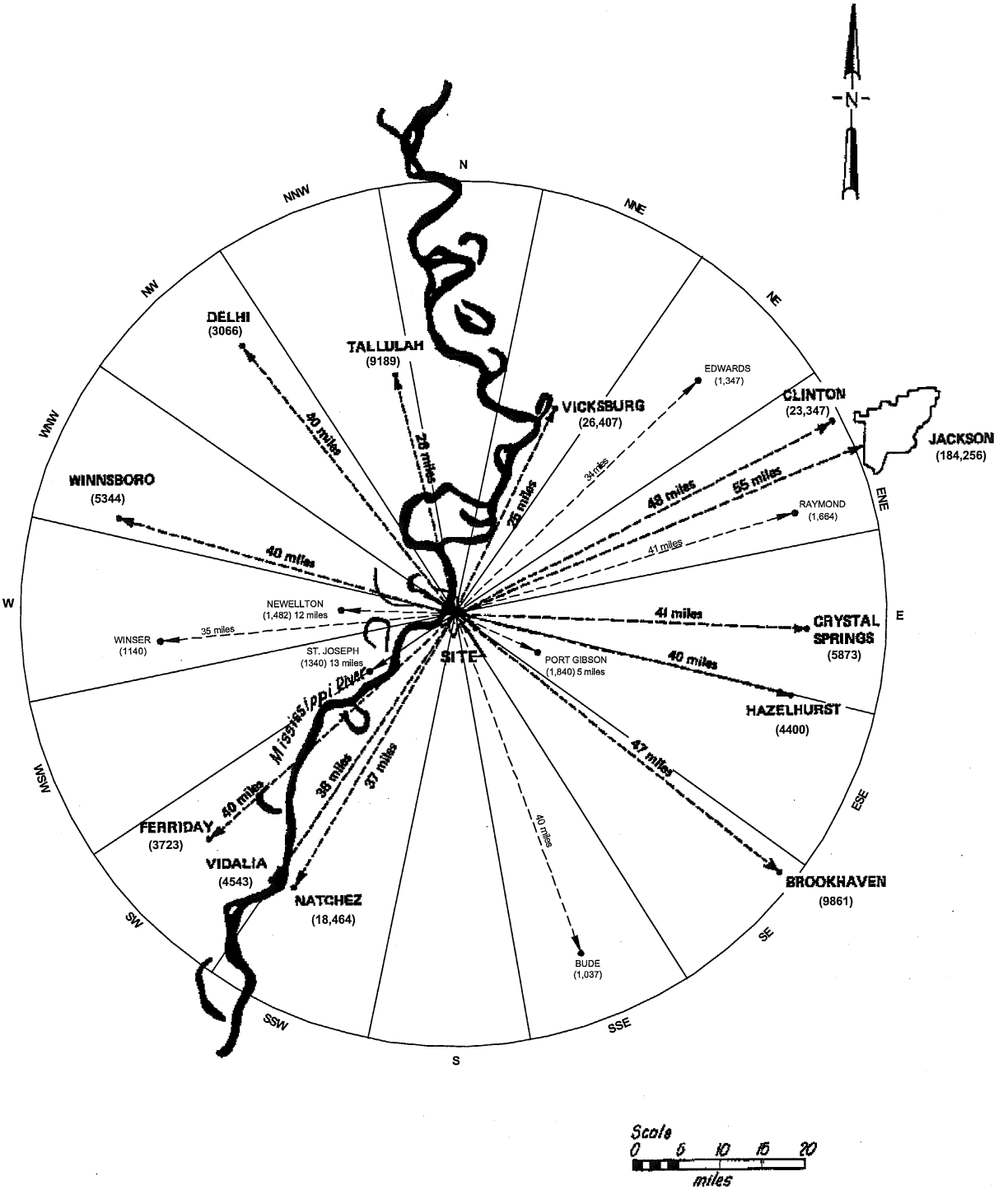
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT
TRANSPORTATION ROUTES IN THE
VICINITY OF THE SITE AND
LOW POPULATION ZONE
FIGURE 2.1-5
REV. 1
TENSAS PARISH
TOGO ISLAND
LA
WARREN COUNTY
MIDDLE GROUND ISLAND
YUCATAN LAKE
2 MILE RADIUS
(LPZ)
COFFEE POINT
MISSISSIPPI
GRAND GULF ISLAND
GGNS
Grand Gulf
Ingleside
Inset E
Inset A
Port Gibson
Oaklawn
Willows
Westside
To Vicksburg
T 13 N
T 12 N
T 11 N
R 1 W
R 1 E
MERIDIAN
1
2



POP. SOURCE: 2000 BUREAU OF CENSUS

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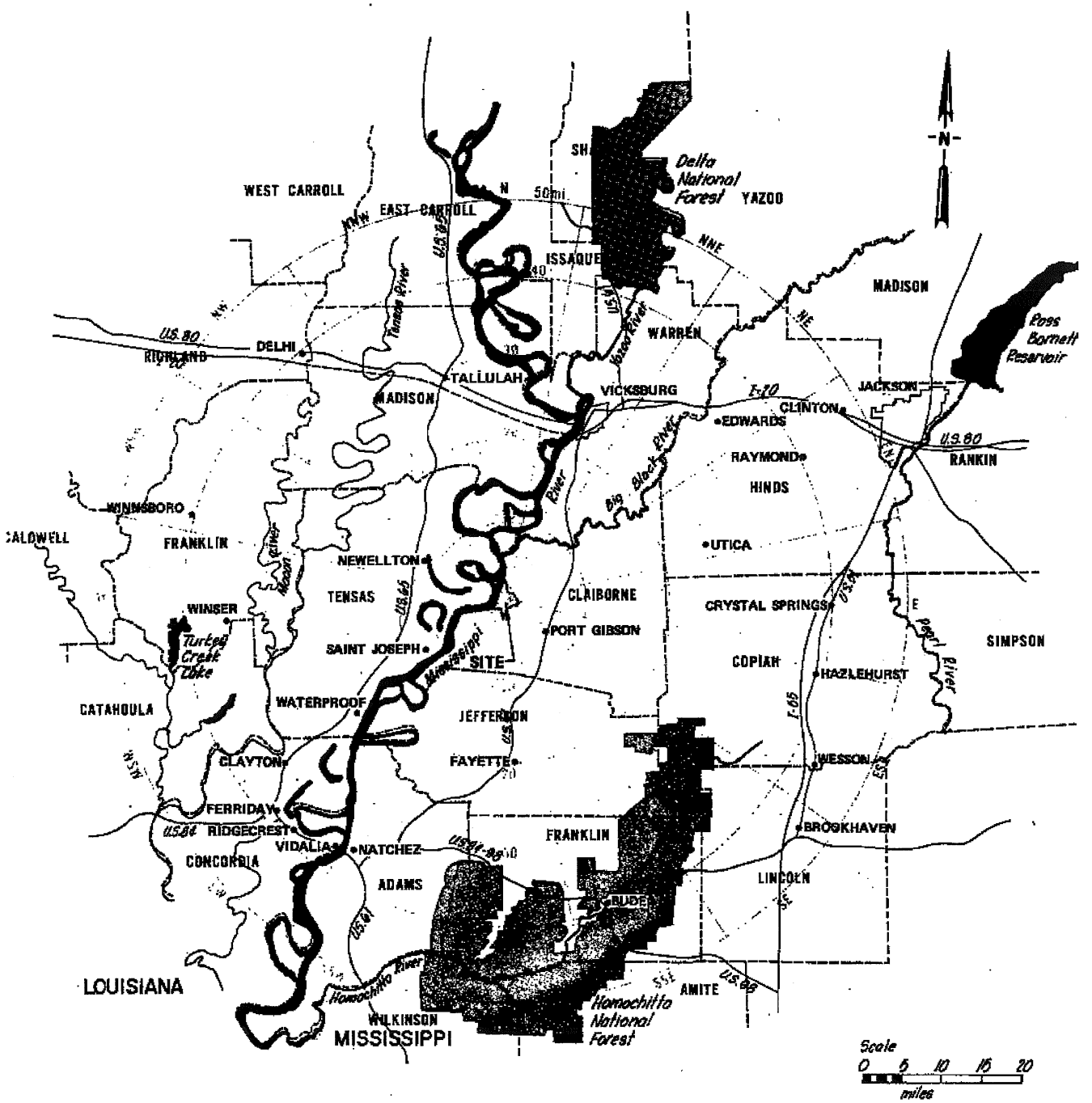
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

COMMUNITIES OVER 1000 POPULATION

FIGURE 2.1-6 REV. 1



SOURCE: Official highway map - Louisiana (1970)
Official highway map - Mississippi (1971)

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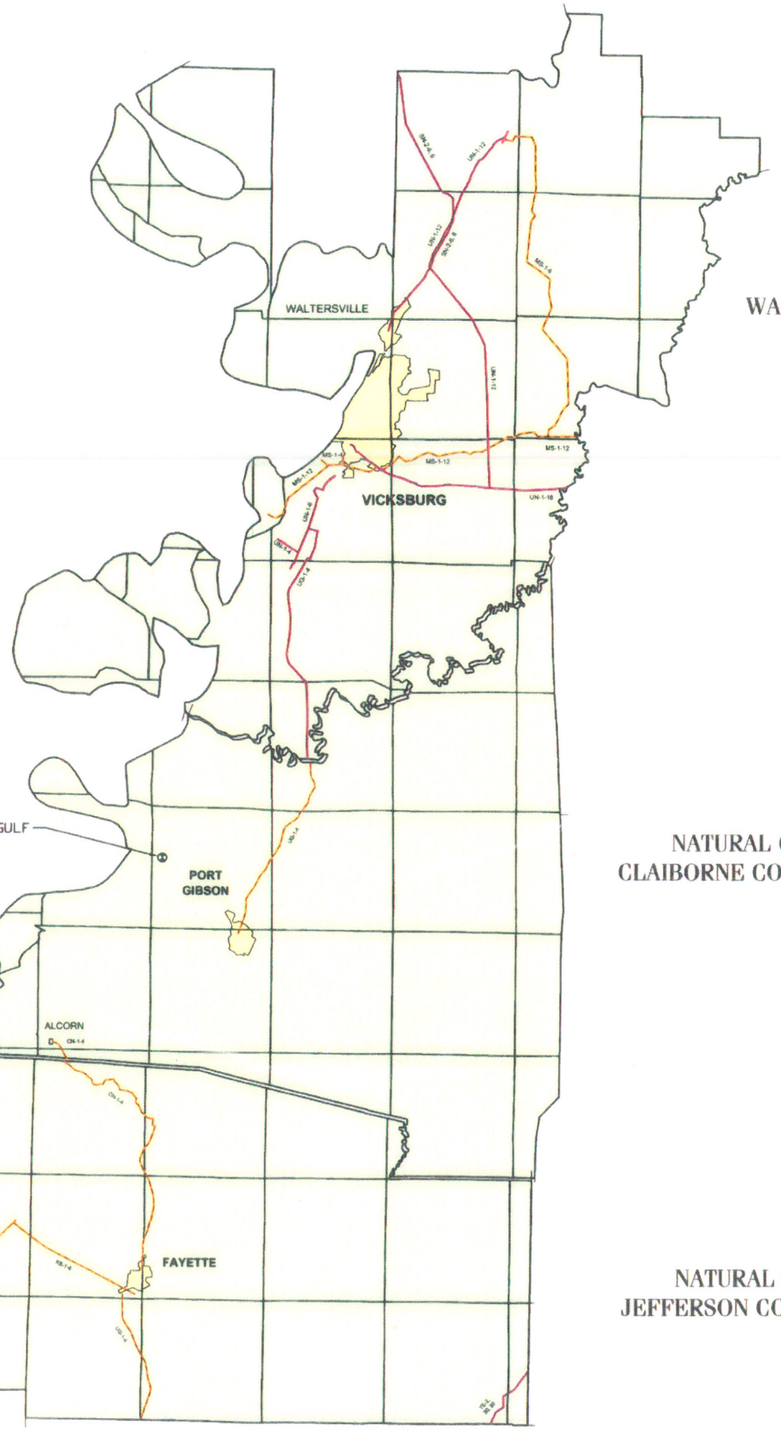
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GENERAL AREA MAP
(UFSAR FIGURE 2.1-3)

FIGURE 2.2-1 REV. 1



NATURAL GAS PIPLINES
WARREN COUNTY, MISSISSIPPI

GAS PIPELINES

- TRANSMISSION
- LOCAL-PRIVATE
- LOCAL-MUNICIPAL

LINE CODE	PIPELINE OWNER/OPERATOR
MS	MISSISSIPPI FUEL CO.
SN	SOUTHERN NATURAL GAS PIPELINE
UG	UNION GAS
UN	UNITED GAS PIPELINE CO.

NATURAL GAS PIPLINES
CLAIBORNE COUNTY, MISSISSIPPI

GAS PIPELINES

- TRANSMISSION
- LOCAL-PRIVATE
- LOCAL-MUNICIPAL

LINE CODE	PIPELINE OWNER/OPERATOR
CN	CLAIBORNE NATURAL GAS
UG	UNION GAS

NATURAL GAS PIPLINES
JEFFERSON COUNTY, MISSISSIPPI

GAS PIPELINES

- TRANSMISSION
- LOCAL-PRIVATE
- LOCAL-MUNICIPAL

LINE CODE	PIPELINE OWNER/OPERATOR
CN	CLAIBORNE NATURAL GAS
KB	KERN & BROOKS OIL OPERATIONS
TE	TEXAS EASTERN
UG	UNION GAS

Prepared for the Municipal Gas Authority of Mississippi by

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220 Old Chemistry Building
University, Mississippi 38677
662-915-7320
e-mail: lnm@mmrl.olemiss.edu
www.olemiss.edu/depts/mmri

DISCLAIMER

The Mississippi Mineral Resources Institute and The University of Mississippi are not responsible for the accuracy of the sources used to determine pipeline locations and associated information. These data should not substitute for field verification or standard engineering procedures at specific sites. **Data last updated in 1992.**

EXAMPLE OF LINE CODE USE

Example Code:
ET-2-8, 10 = Entex - 2 lines - 8 & 10 inches

0 — 5 Miles

SCALE; 1:350,000

Transverse Mercator Projection
Nad27 Datum

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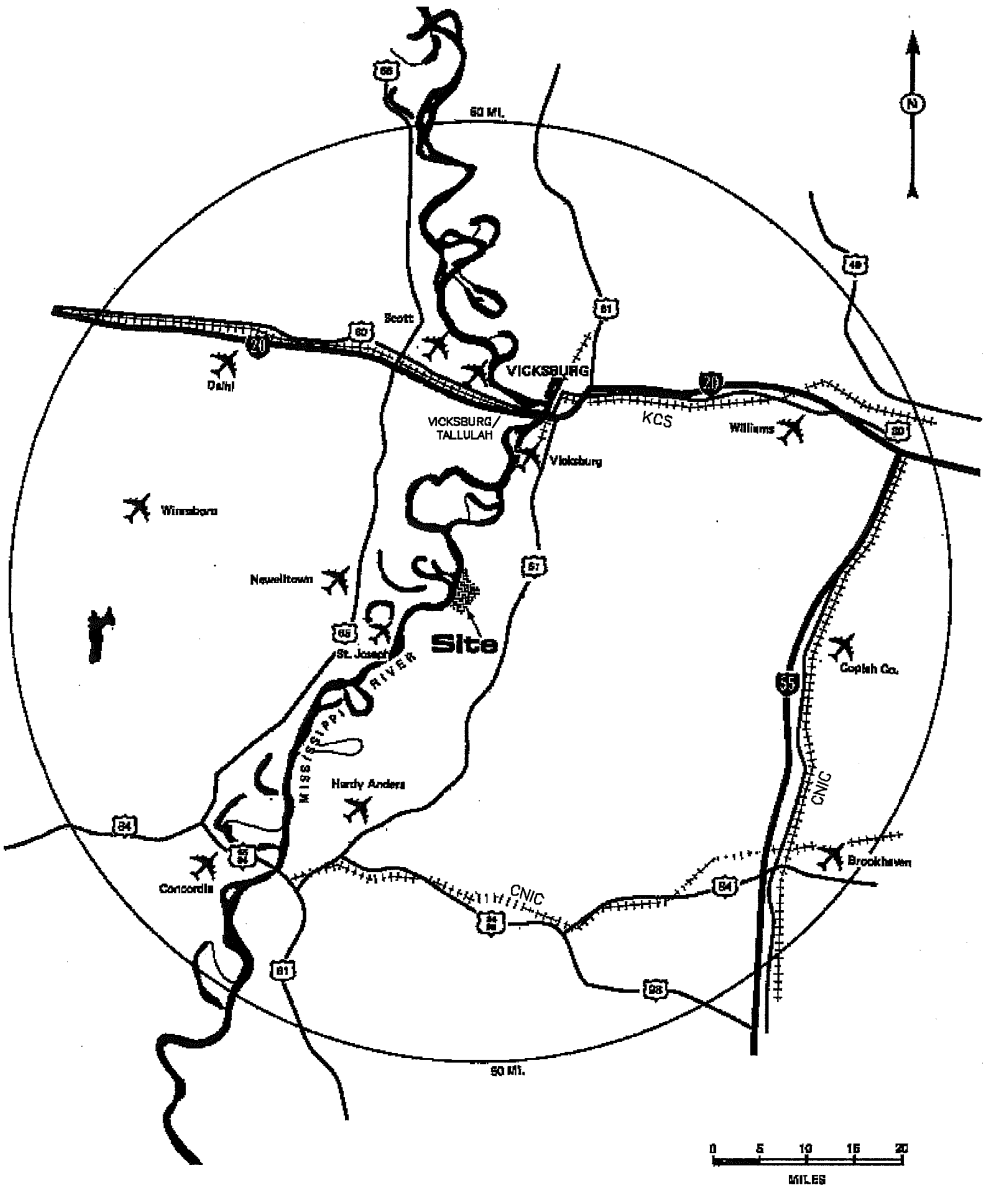
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

3 - COUNTY NATURAL GAS LINE MAP

FIGURE 2.2-2 REV. 1



AIRPORT

RAILROAD

FEDERAL HIGHWAY

INTERSTATE HIGHWAY

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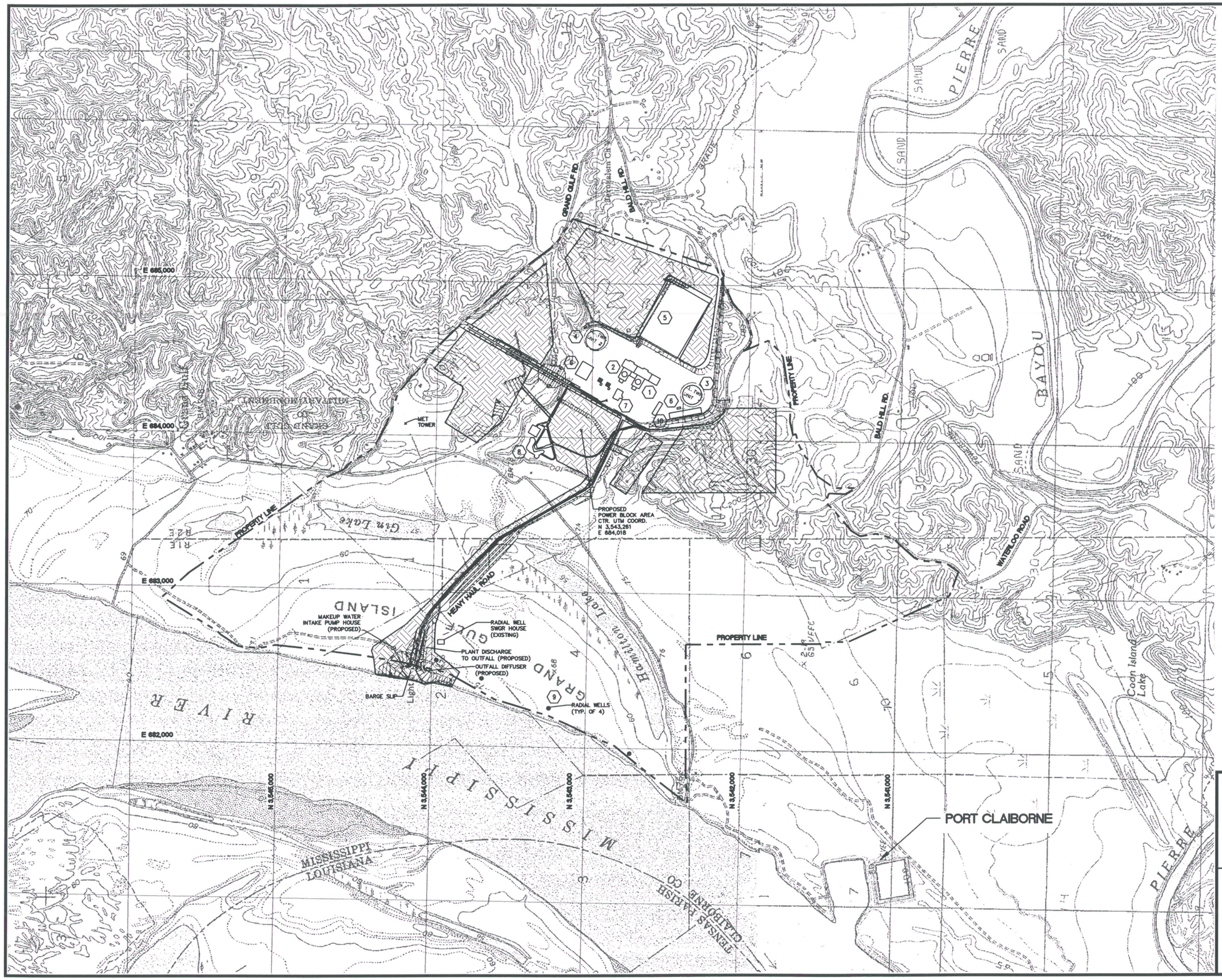
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

TRANSPORTATION MAP
GENERAL AREA

FIGURE 2.2-3 REV. 1



GGNS BUILDING LEGEND:

1. UNIT 1
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NOTES:

PROPOSED NEW PLANT CONTRUCTION AREAS.

UTM COORD. GRID SHOWN.

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

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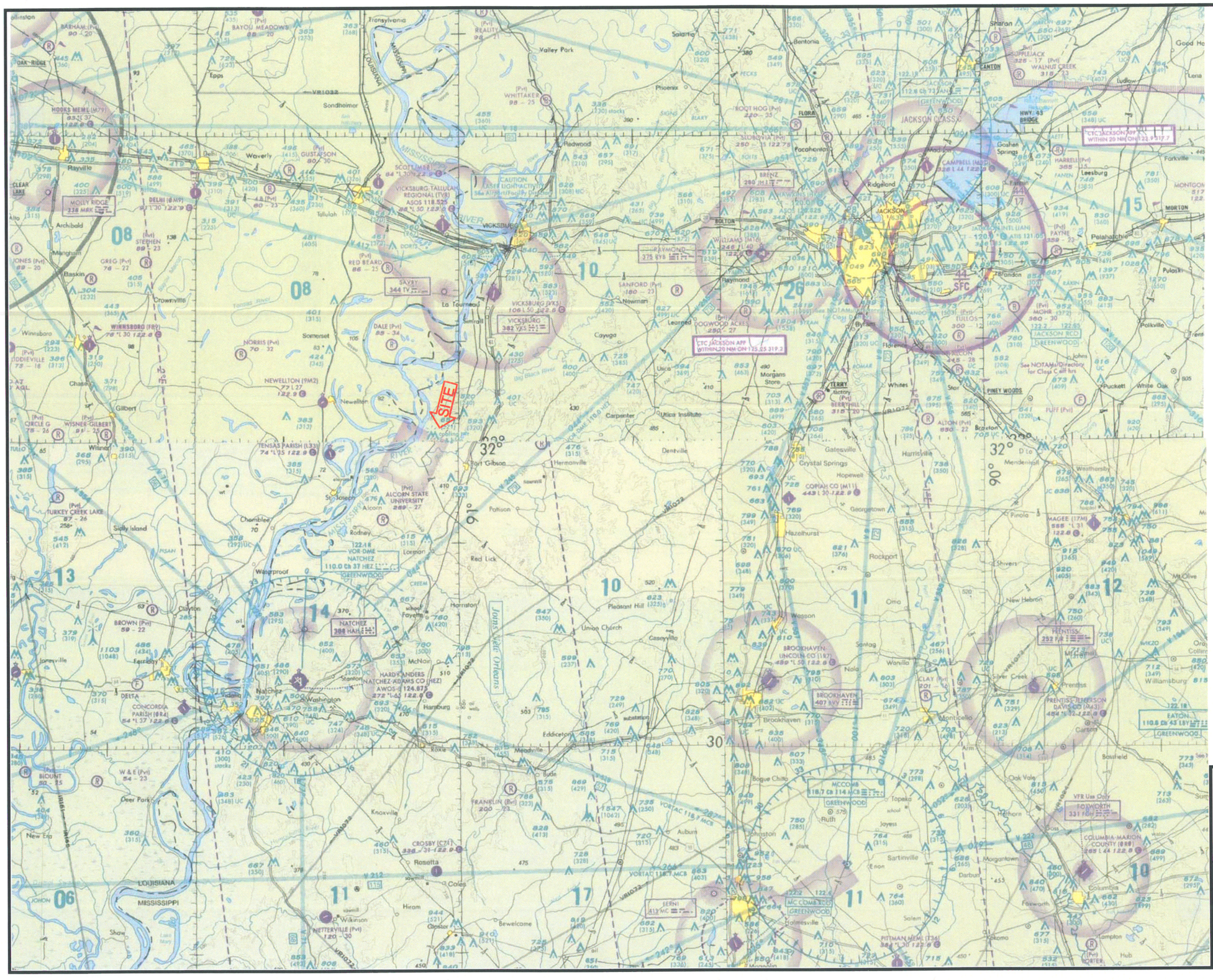
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

PORT CLAIBORNE
LOCATION

FIGURE 2.2-4 REV. 1



SOURCE:
Houston Section Aeronautical Chart, 70th Edition October 3, 2002, published by the US Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office

New Orleans Section Aeronautical Chart, 71st Edition November 28, 2002, published by the US Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office

Memphis Section Aeronautical Chart, 69th Edition October 3, 2002, published by the US Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office

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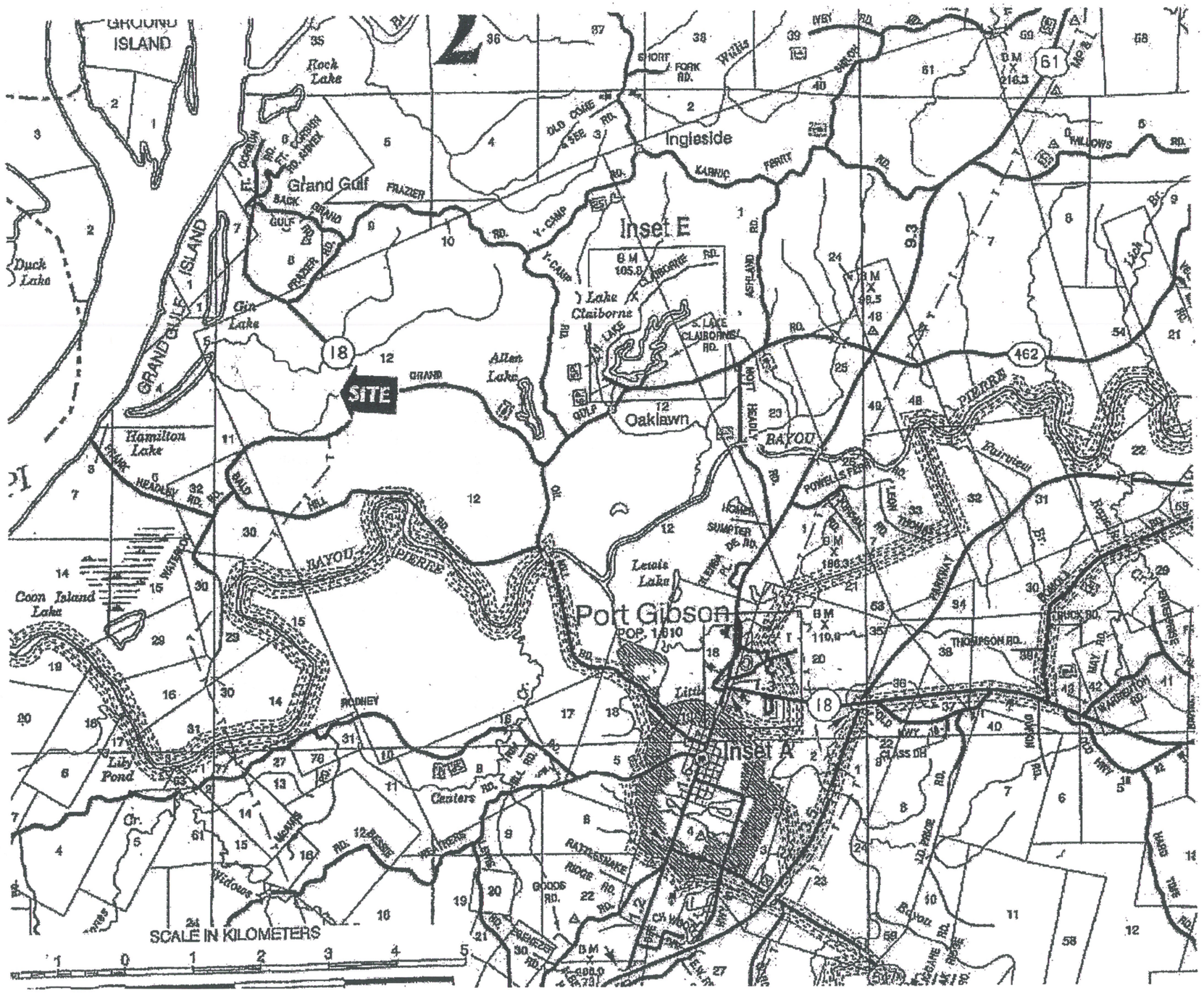
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

AIR ROUTE MAP
FOR GGNS SITE AREA

FIGURE 2.2-5 REV. 1



SOURCE: GENERAL HIGHWAY MAP, CLAIBORNE COUNTY, MS., 2000 (MDOT PLANNING DIV.)

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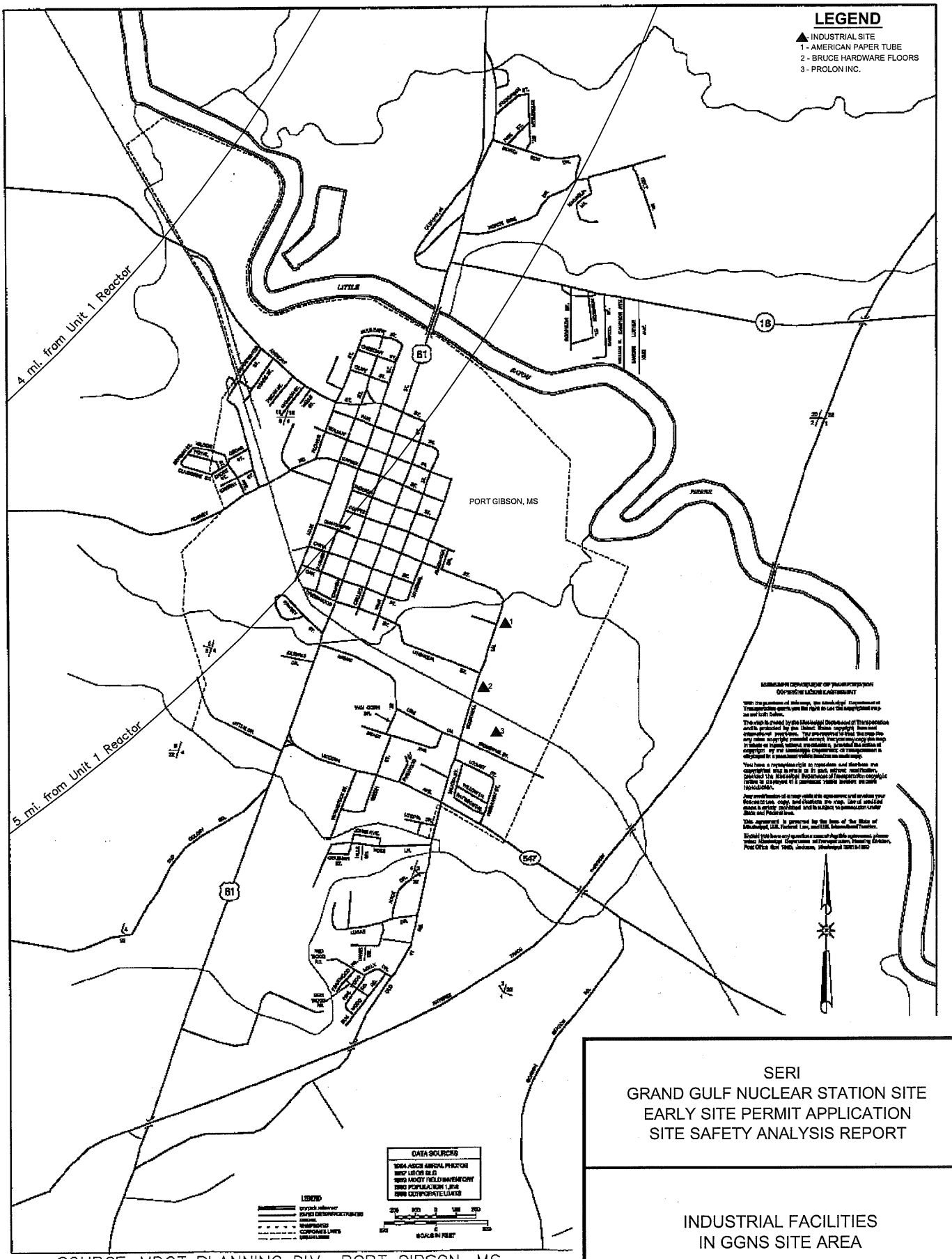
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

TRANSPORTATION MAP
AREA HIGHWAYS - MISSISSIPPI

FIGURE 2.2-6 REV. 1



SOURCE: MDOT PLANNING DIV., PORT GIBSON, MS., CLAIBORNE COUNTY MAP

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EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

INDUSTRIAL FACILITIES
IN GGNS SITE AREA

FIGURE 2.2-7 REV. 1

SEE UFSAR
FIGURE 2.2-5

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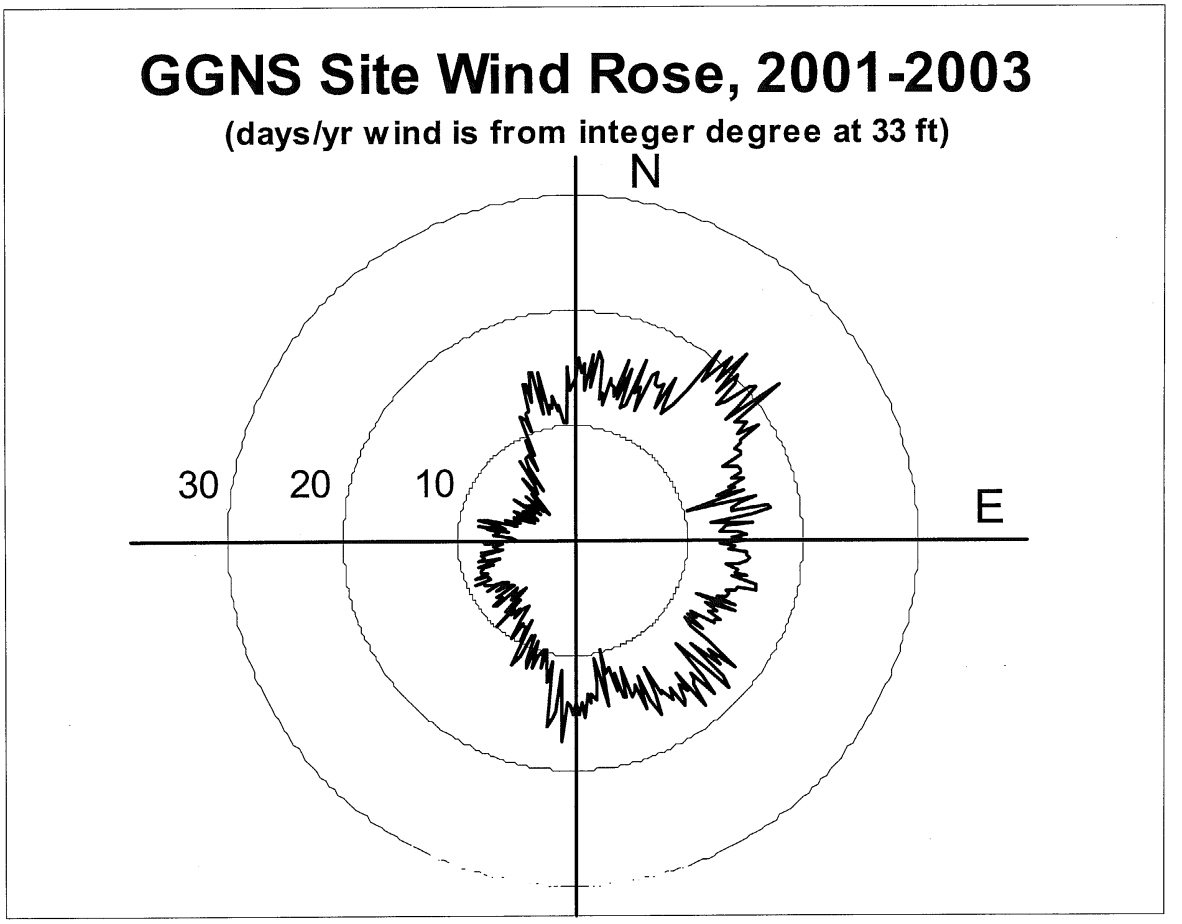
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

LOCATION OF CHEMICAL STORAGE
(UFSAR FIGURE 2.2-5)

FIGURE 2.2-8 REV. 1



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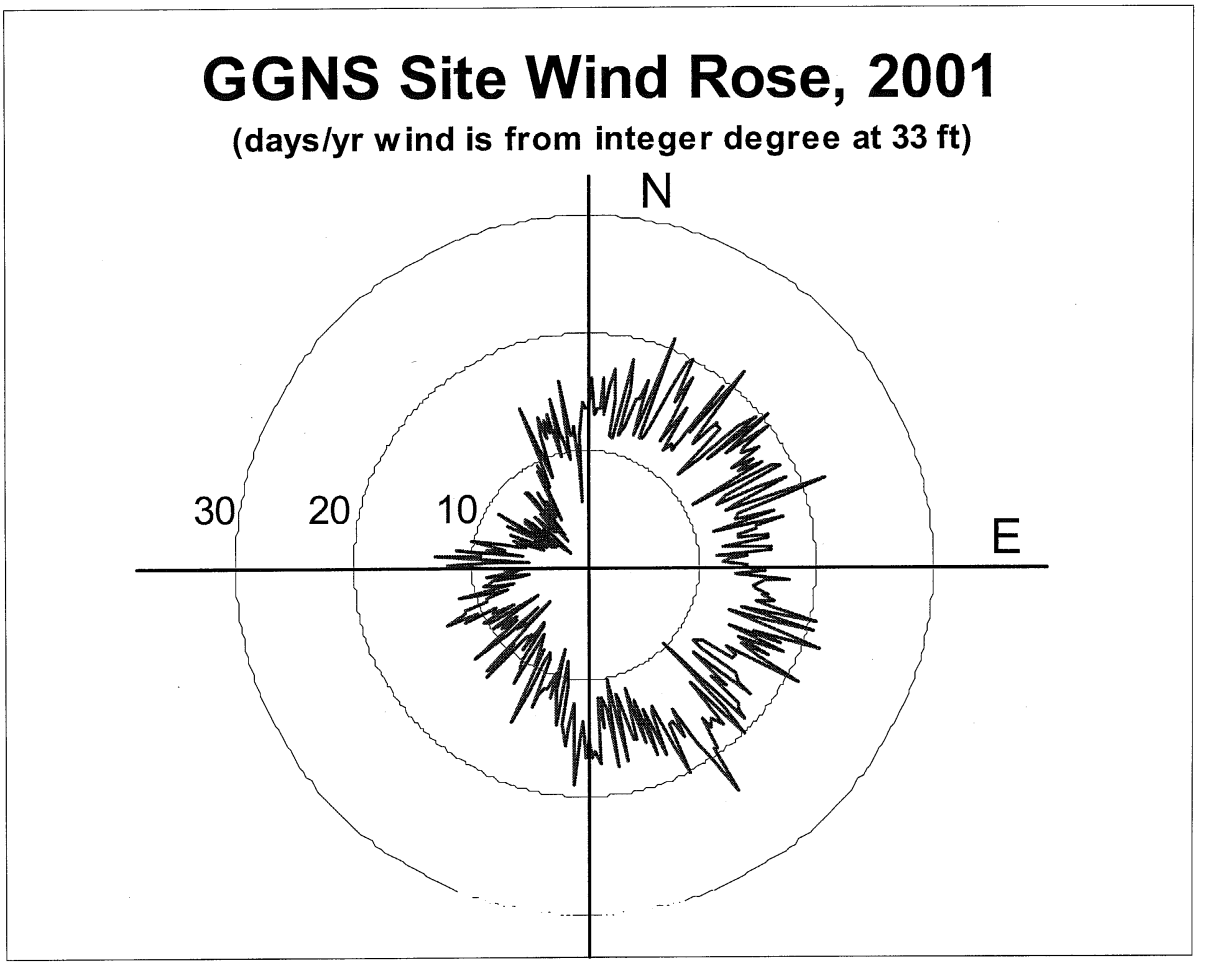
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE WIND ROSE,
2001-2003

FIGURE 2.3-1 REV. 1



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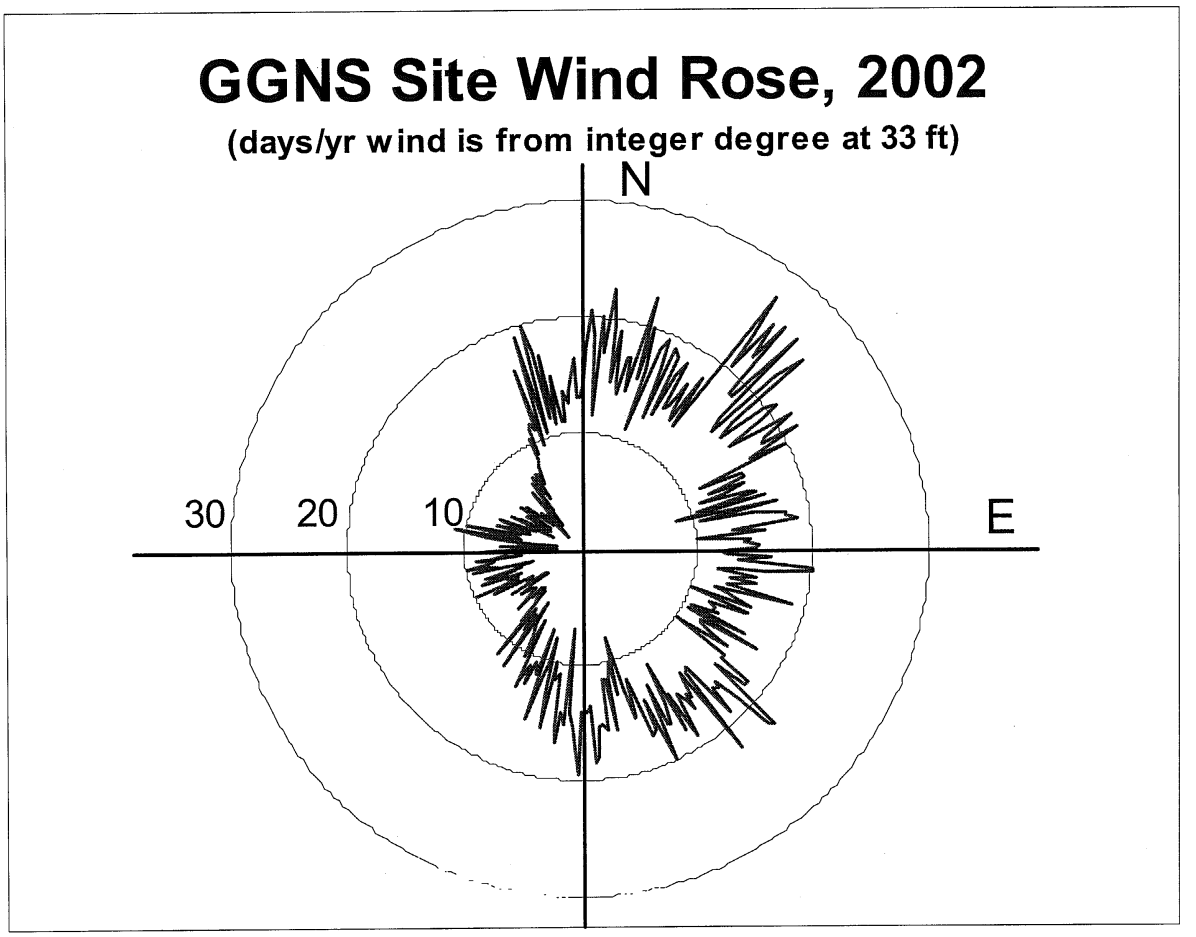
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE WIND ROSE,
2001

FIGURE 2.3-2 REV. 1



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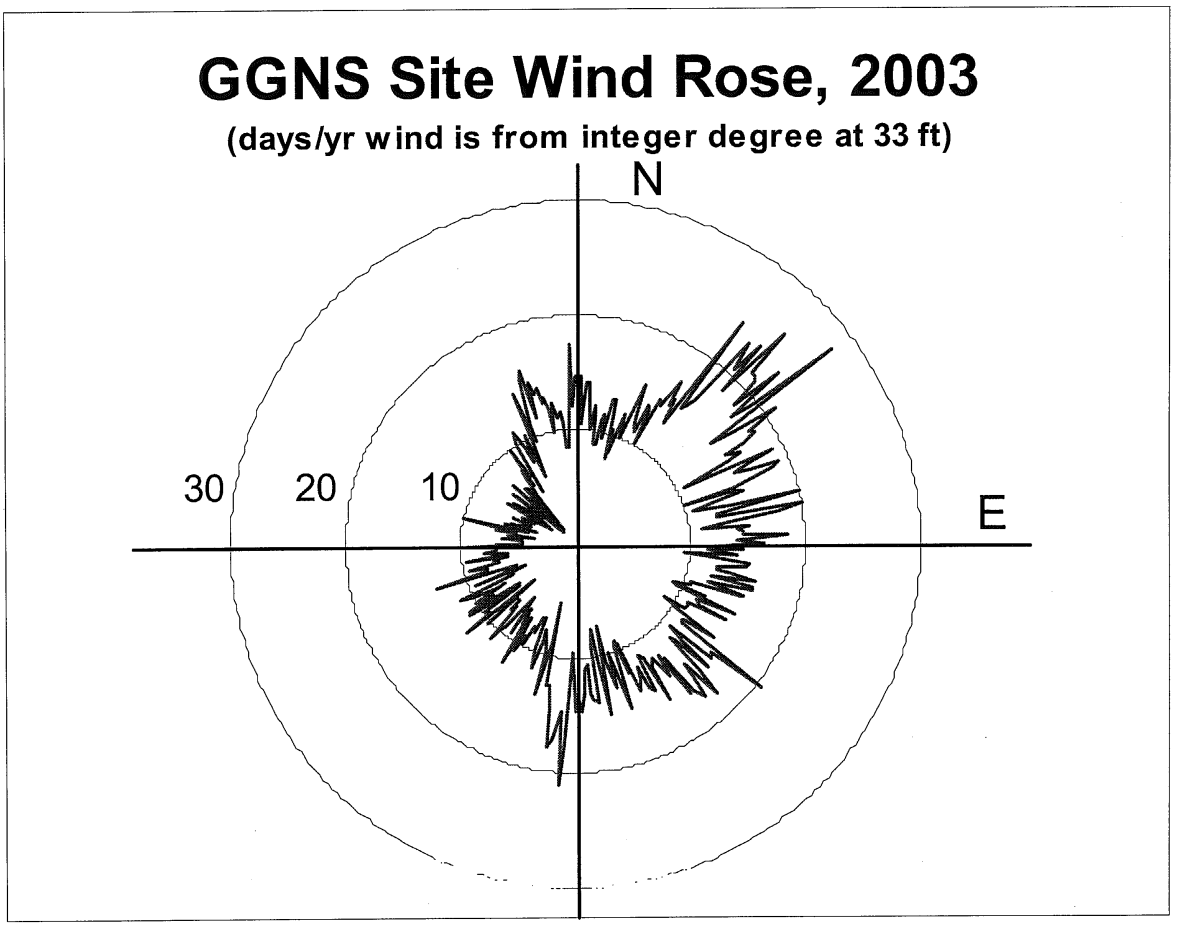
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE WIND ROSE,
2002

FIGURE 2.3-3 REV. 1



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GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE WIND ROSE,
2003

FIGURE 2.3-4 REV. 1

DELETED

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GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

FIGURE 2.3-5 REV. 1

DELETED

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GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

FIGURE 2.3-6 REV. 1

DELETED

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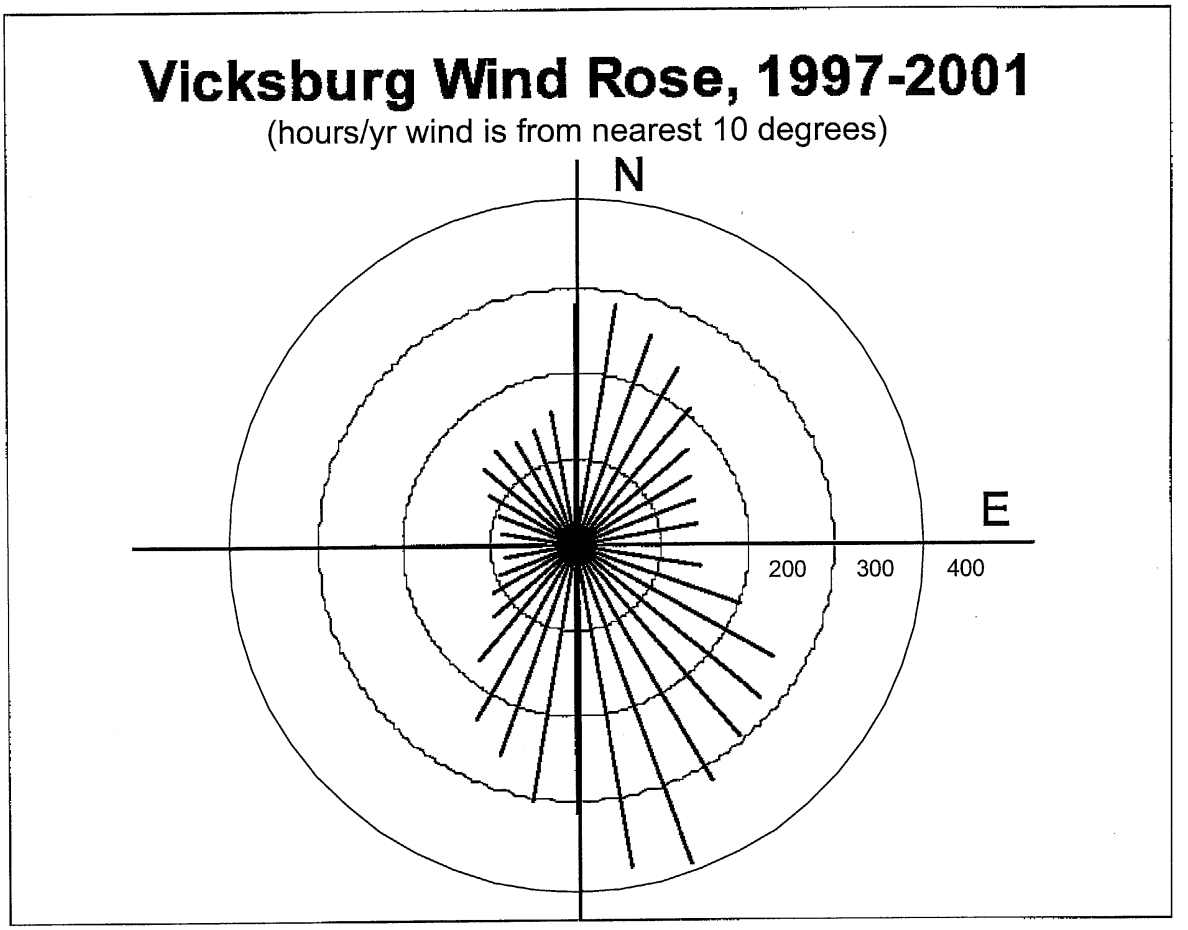
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

FIGURE 2.3-7 REV. 1



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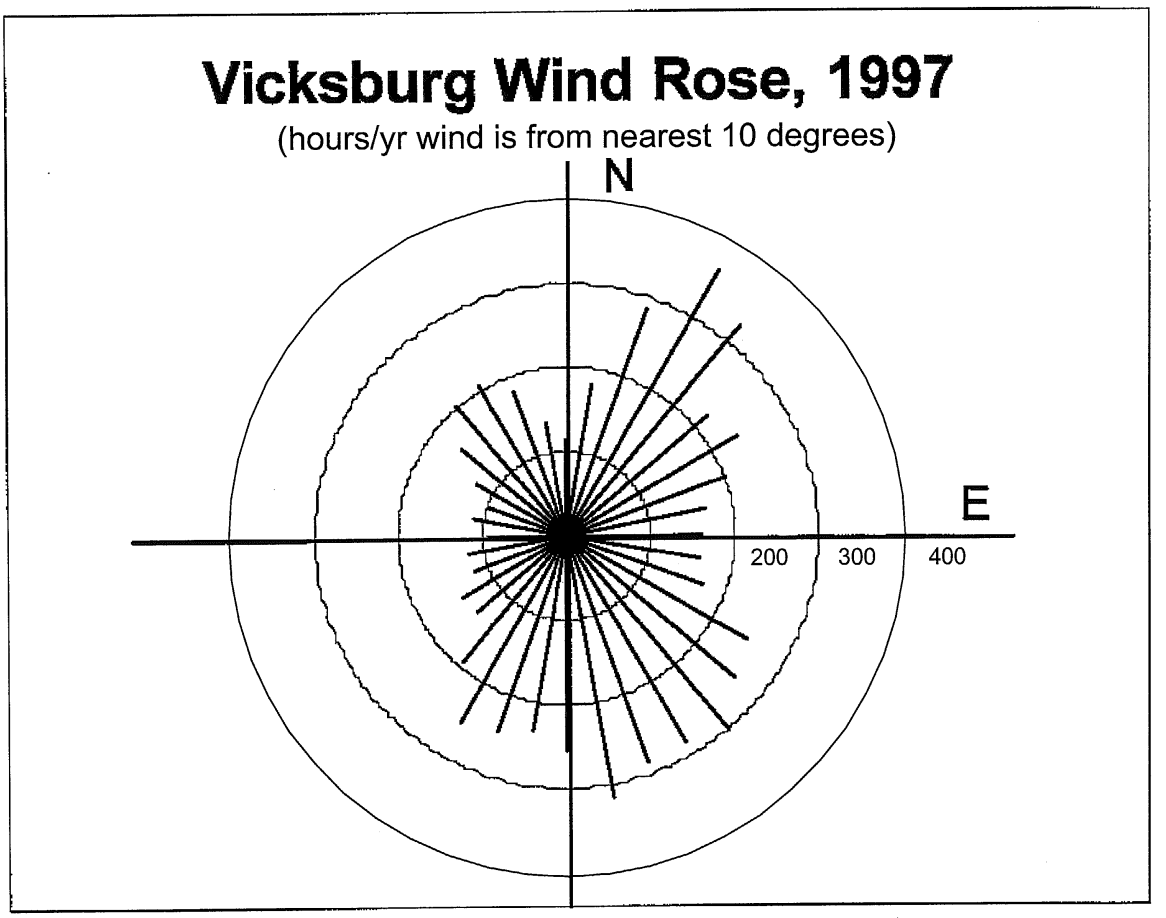
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

VICKSBURG WIND ROSE,
1997-2001

FIGURE 2.3-8 REV. 1



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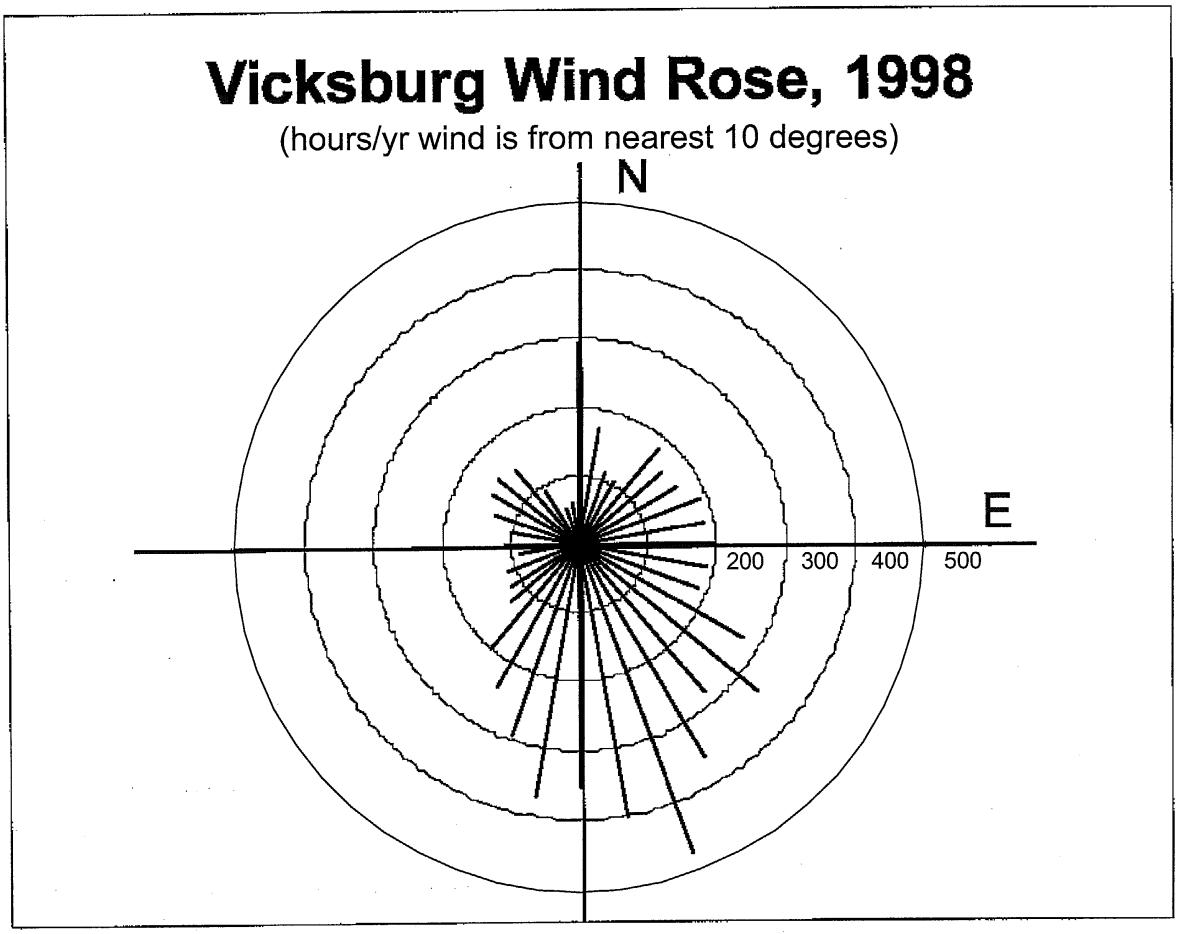
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

VICKSBURG WIND ROSE,
1997

FIGURE 2.3-9 REV. 1



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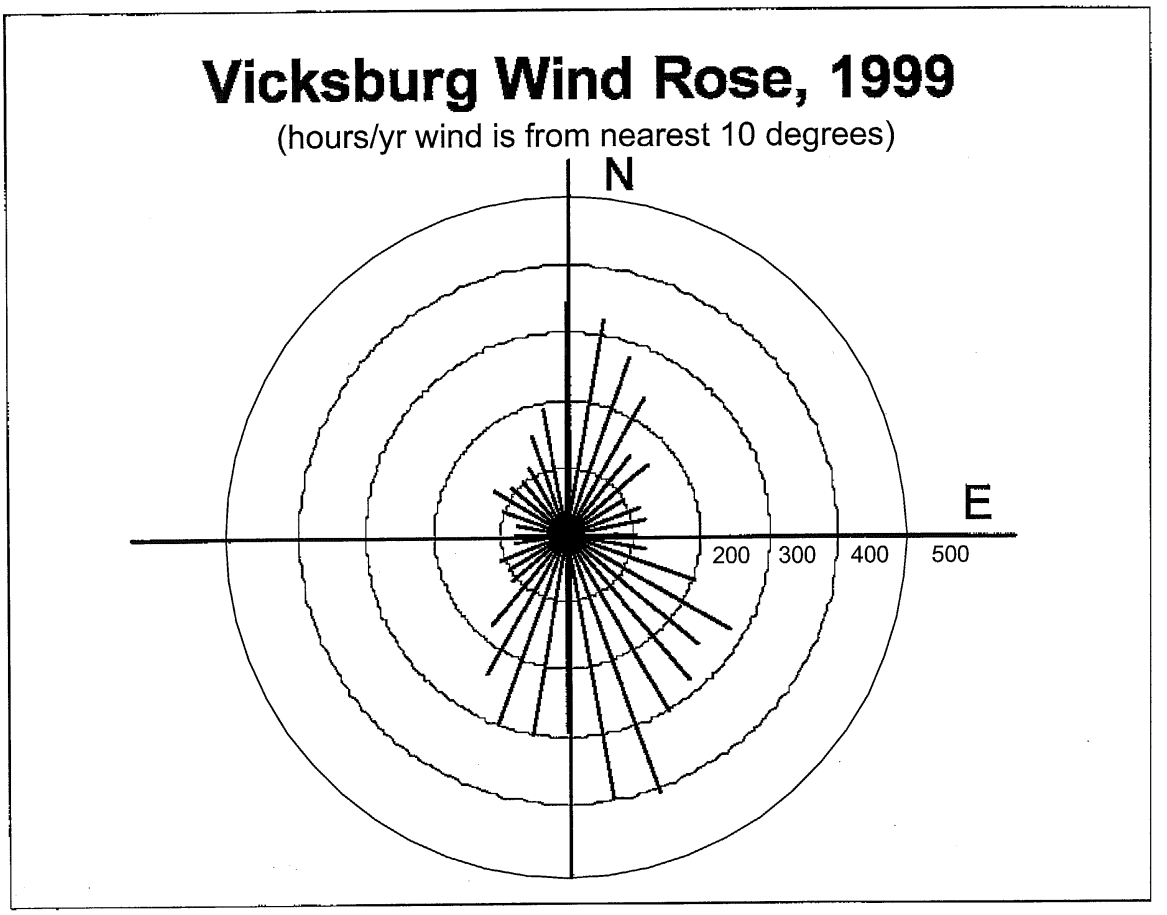
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

VICKSBURG WIND ROSE,
1998

FIGURE 2.3-10 REV. 1



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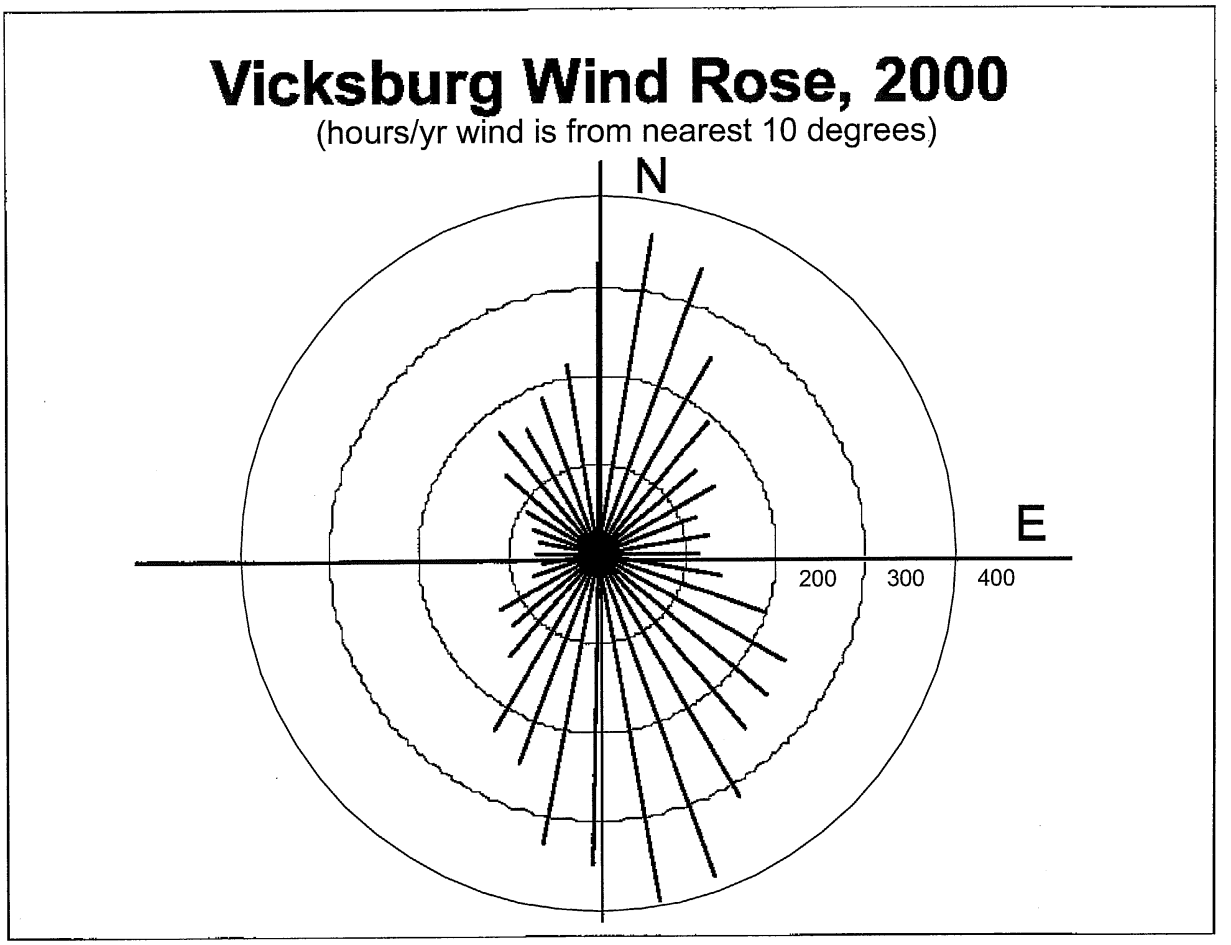
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

VICKSBURG WIND ROSE,
1999

FIGURE 2.3-11 REV. 1



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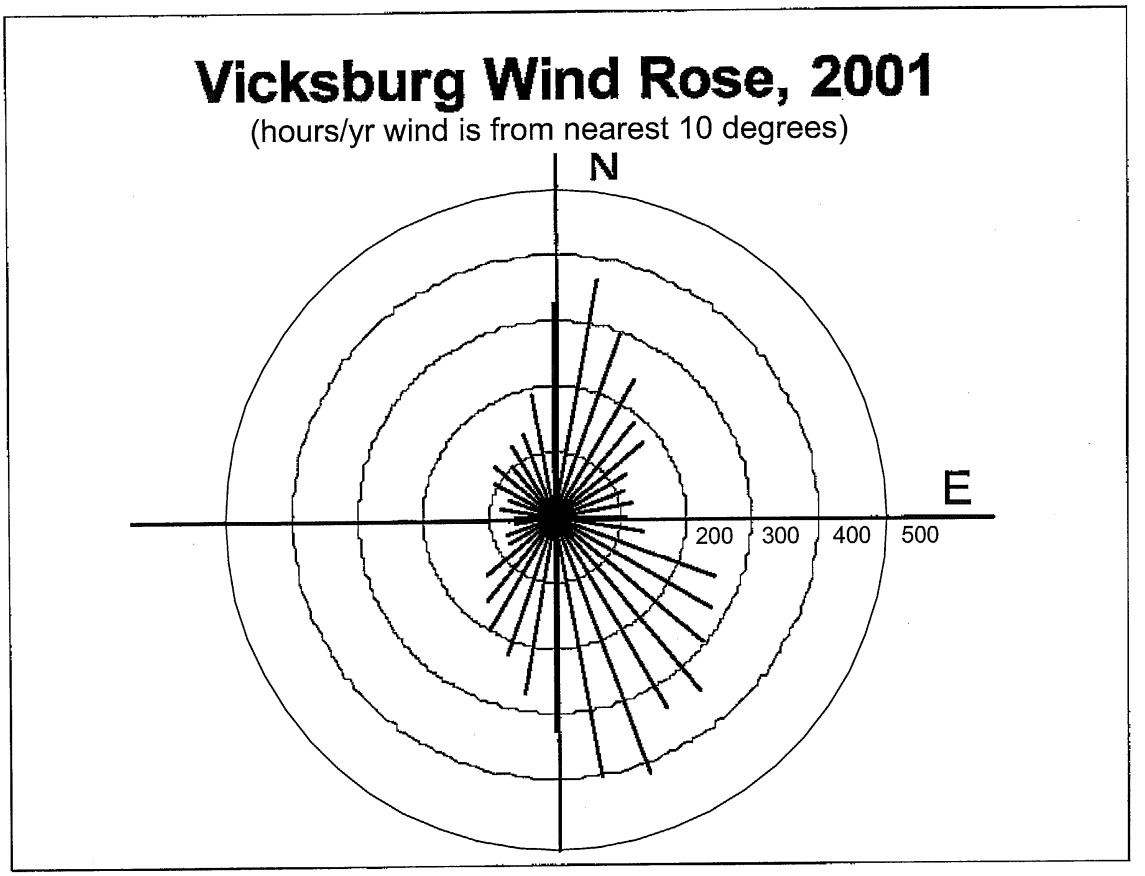
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

VICKSBURG WIND ROSE,
2000

FIGURE 2.3-12 REV. 1



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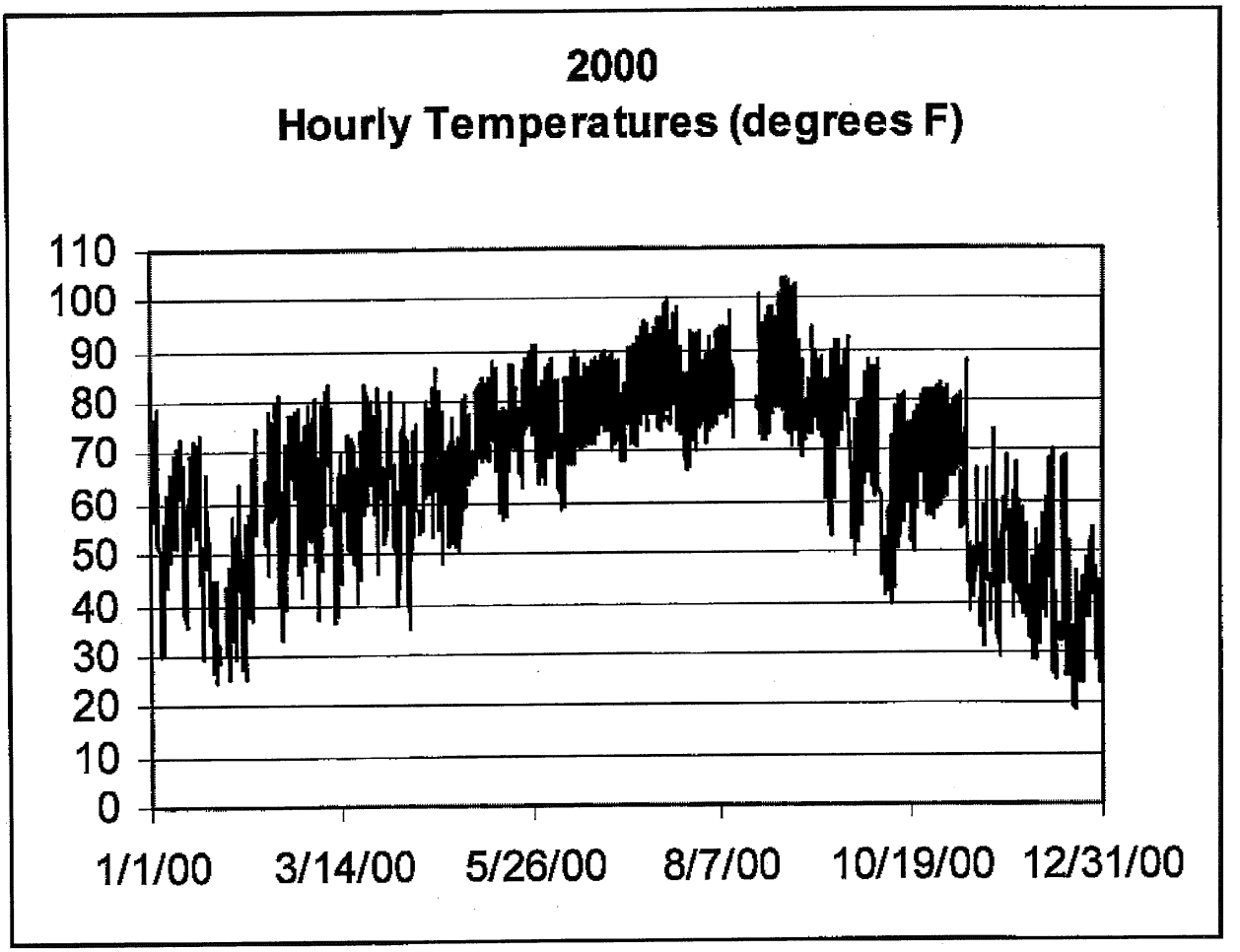
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

VICKSBURG WIND ROSE,
2001

FIGURE 2.3-13 REV. 1



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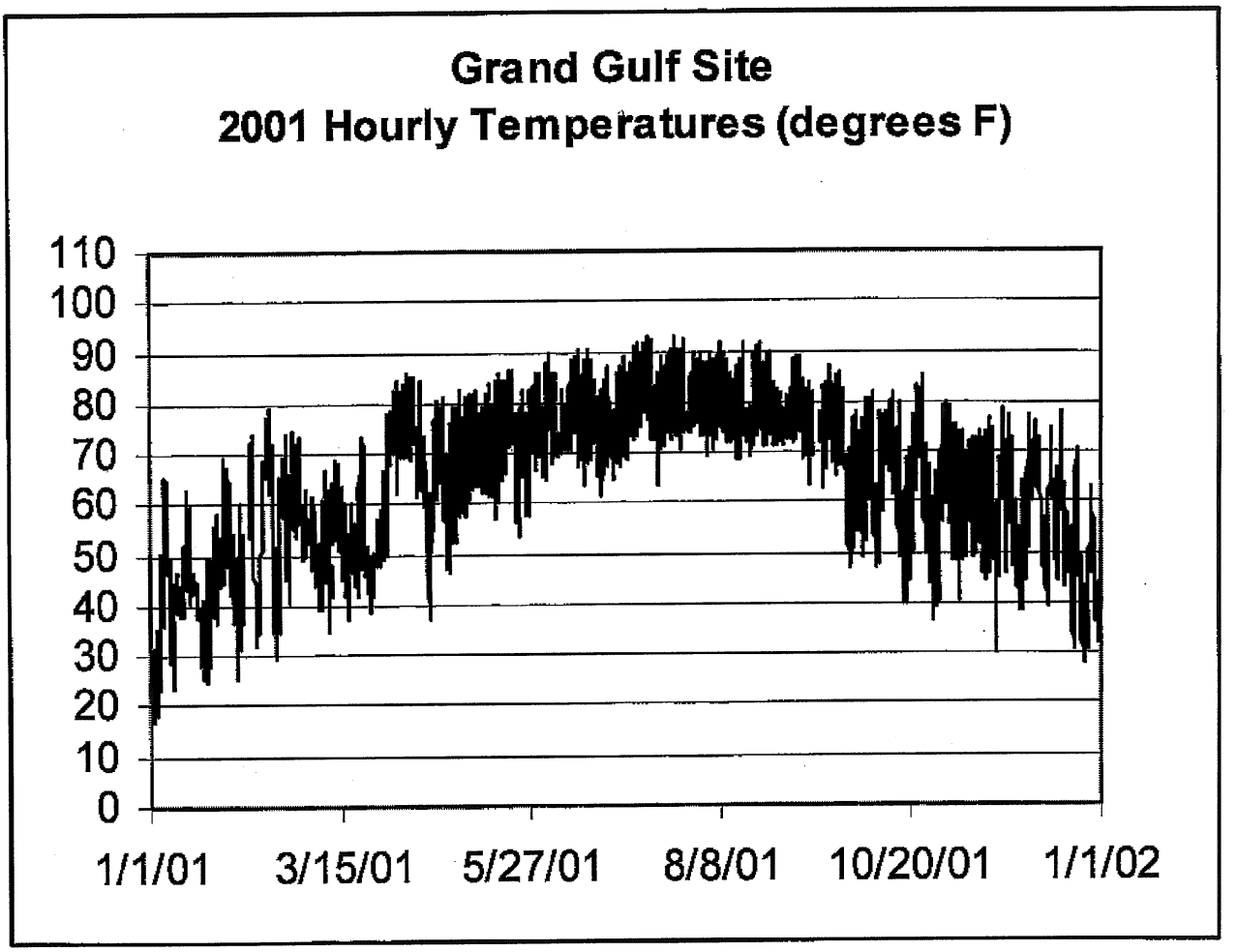
GRAND GULF NUCLEAR STATION SITE
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE 2000
HOURLY TEMPERATURES
(DEGREES F)

FIGURE 2.3-14 REV. 1



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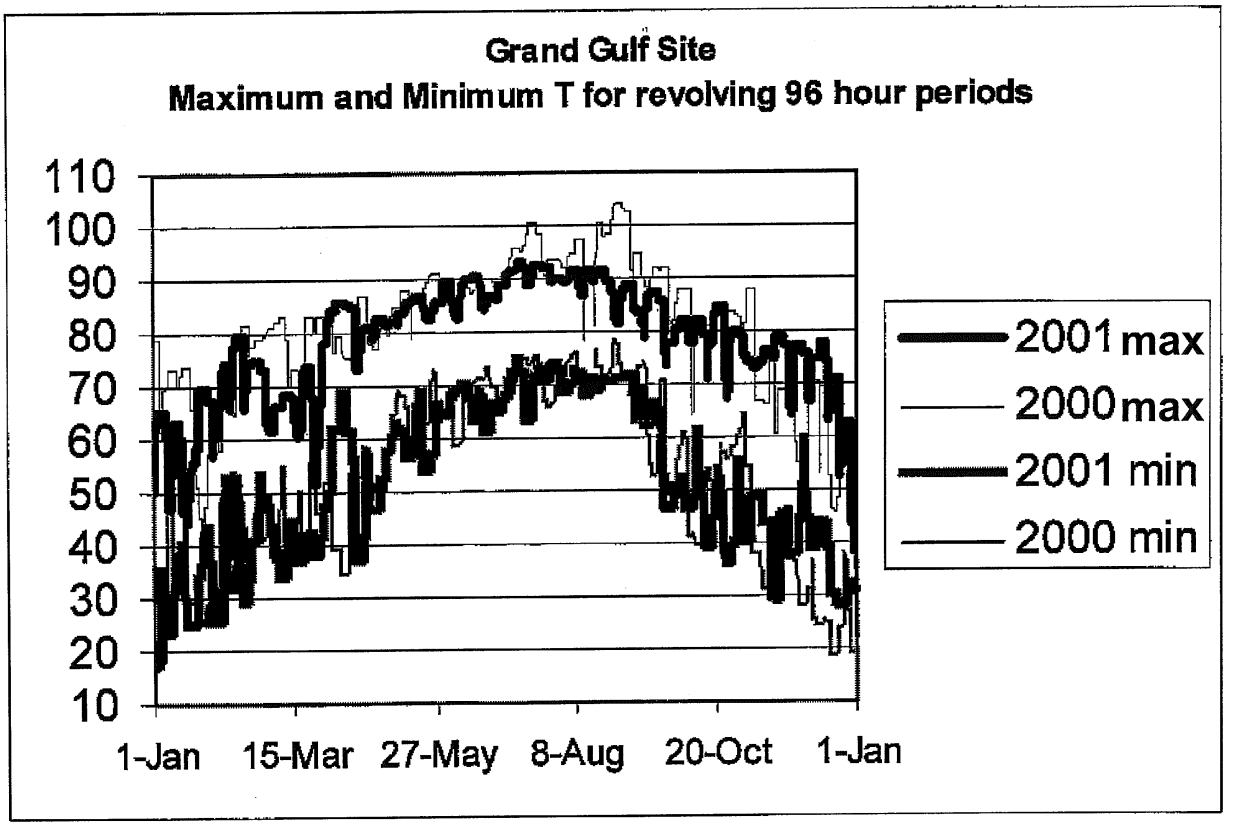
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE 2001
HOURLY TEMPERATURES
(DEGREES F)

FIGURE 2.3-15 REV. 1



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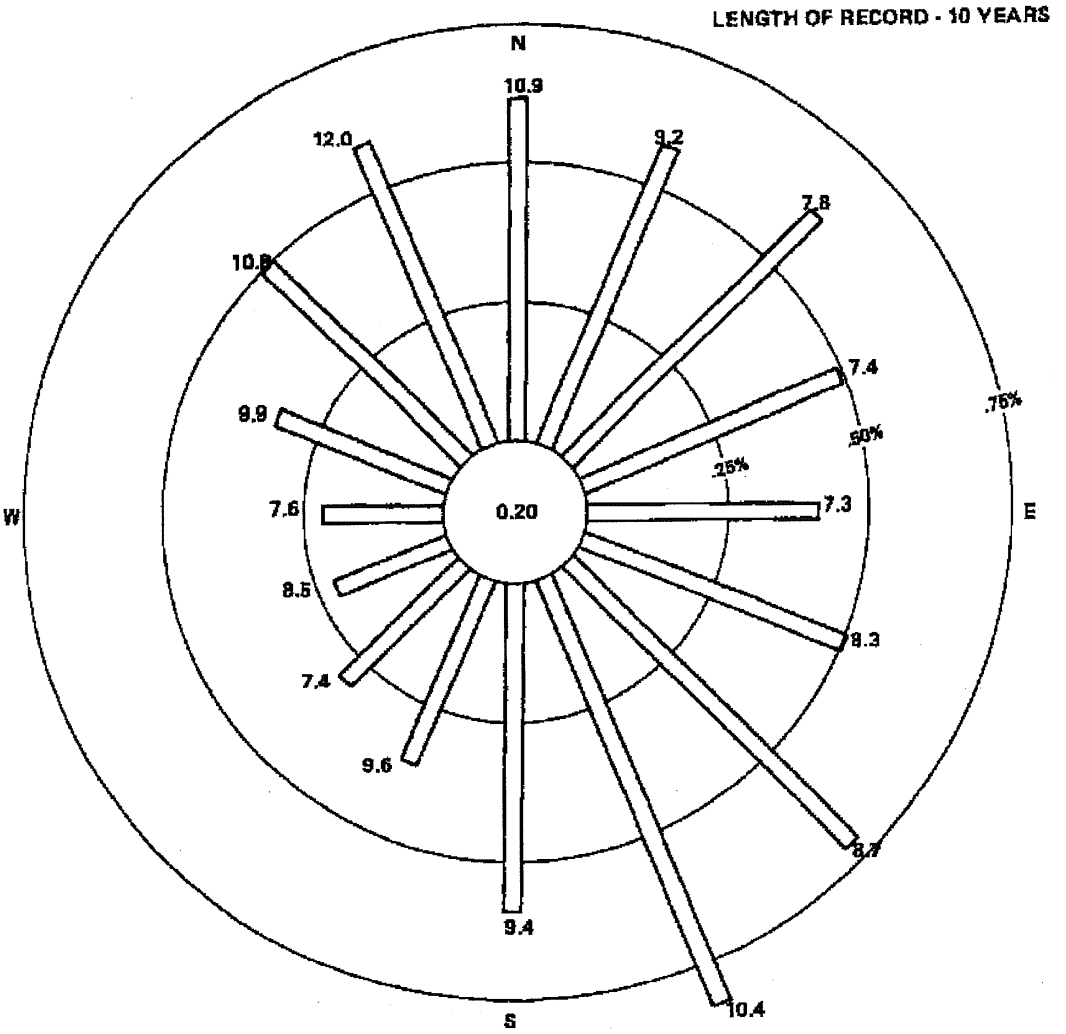
EARLY SITE PERMIT APPLICATION
SITE SAFETY ANALYSIS REPORT

GGNS SITE
MAXIMUM AND MINIMUM TEMPERATURE
FOR REVOLVING 96 HOUR PERIODS

FIGURE 2.3-16 REV. 1



NOTES: THE VALUE IN THE CENTER OF THE INNER CIRCLE GIVES THE PERCENTAGE OF CALM WINDS. DATA WERE PLOTTED IN HUNDREDTHS PRIOR TO ROUNDING FOR TABLE 2.3.65 VALUES AT ENDS OF BARS ARE AVERAGE ANNUAL WIND SPEEDS, BY DIRECTION, DURING PRECIPITATION, IN MILES PER HOUR.

DATA SOURCE: PRECIPITATION AND NON-PRECIPITATION WINDS, JOB NO. 13267, U. S. DEPARTMENT OF COMMERCE, NOAA, NATIONAL CLIMATIC CENTER, FEBRUARY, 1972.

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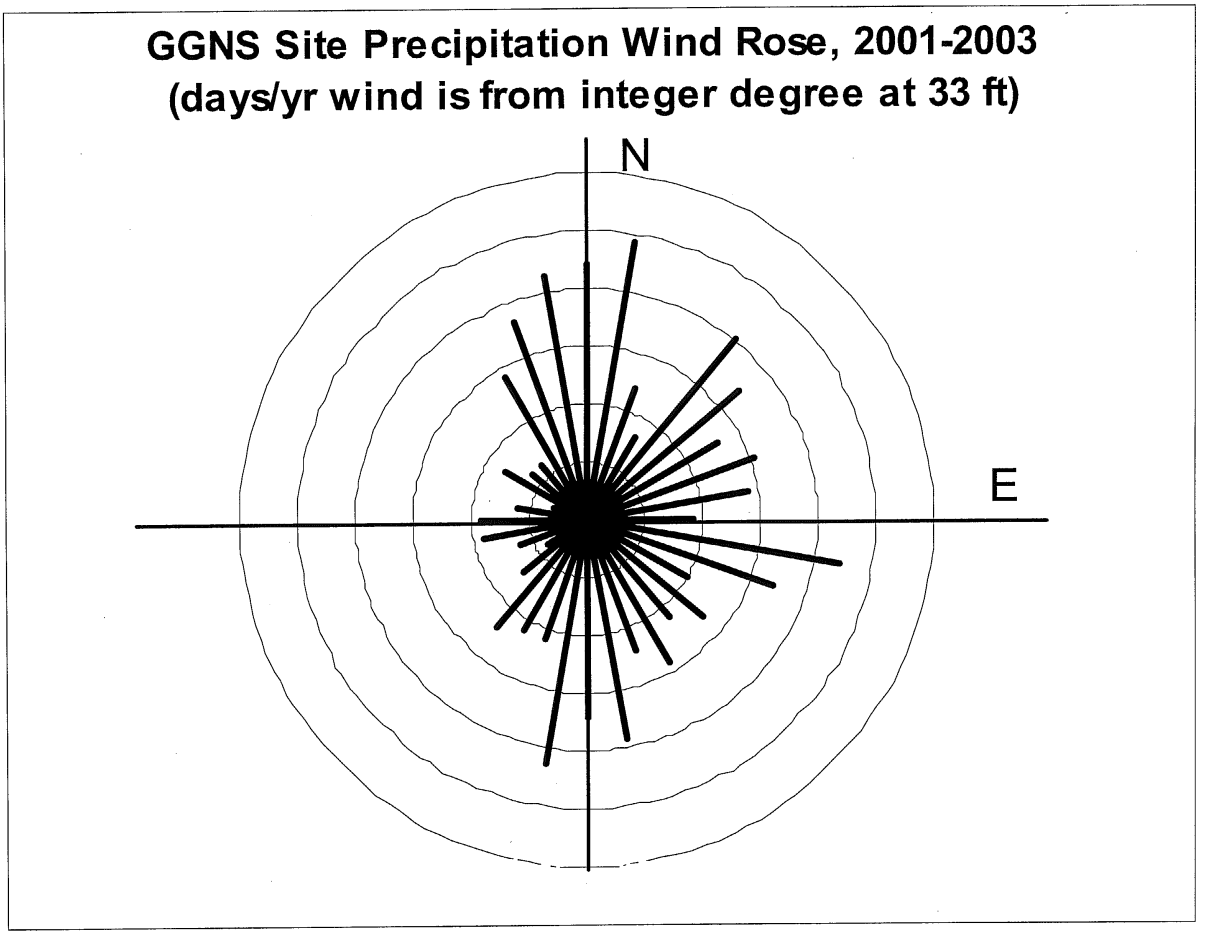
ANNUAL PRECIPITATION WIND ROSE
(PERCENT OF TOTAL OBSERVATIONS)
JACKSON, MISSISSIPPI
(UFSAR FIGURE 2.3-5)

FIGURE 2.3-17 REV. 1



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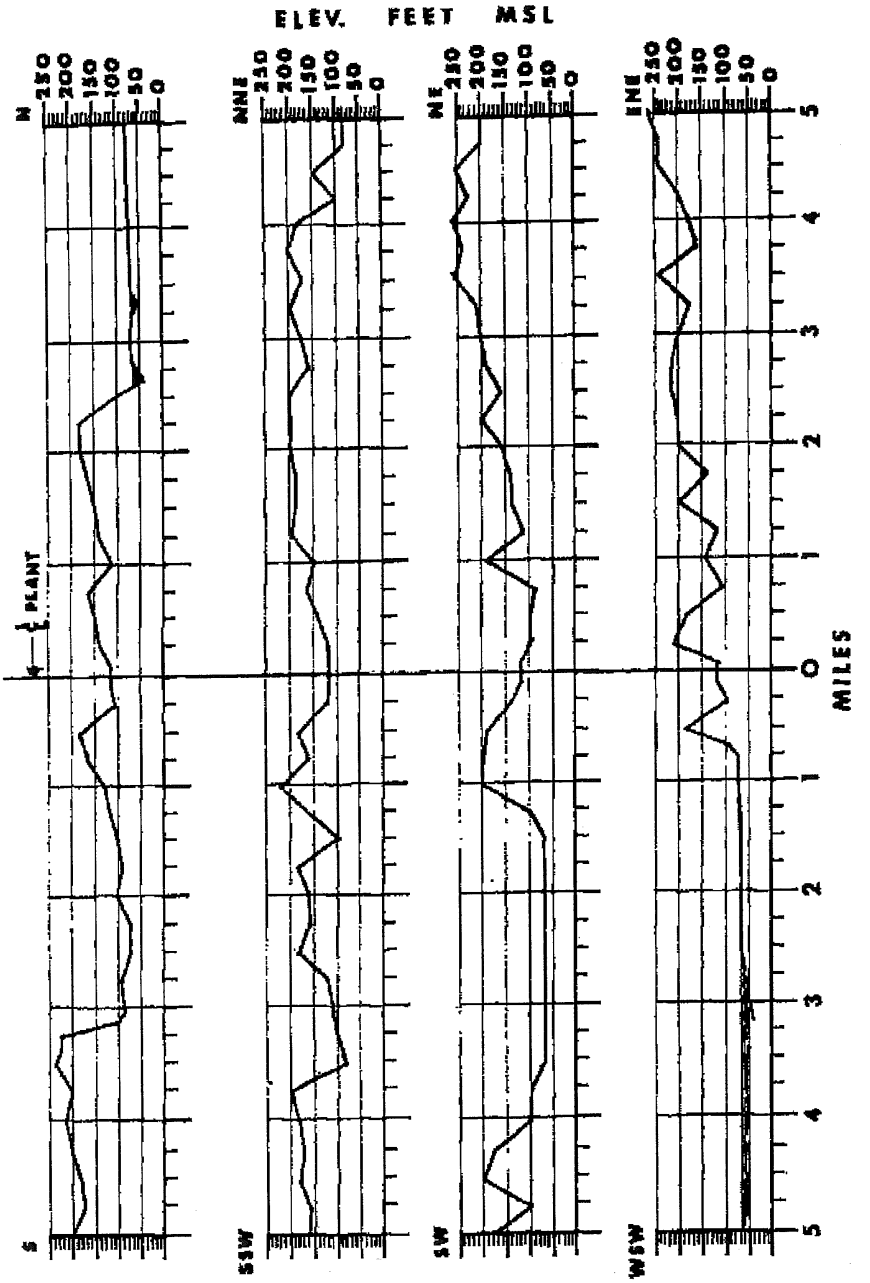
GGNS SITE PRECIPITATION WIND ROSE, 2000-2003

FIGURE 2.3-18 REV. 1



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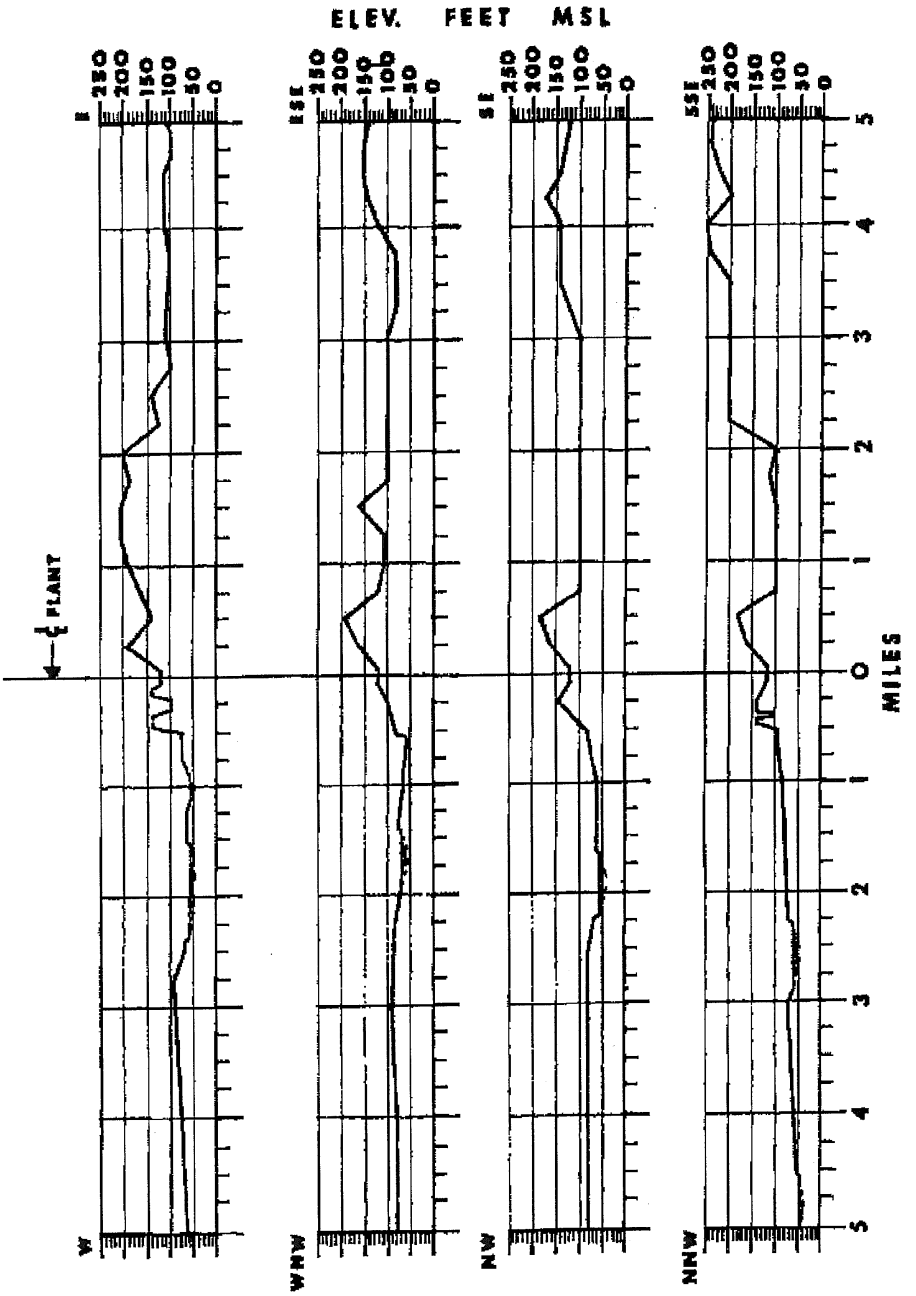
TOPOGRAPHIC PROFILES
(UFSAR FIGURE 2.3-8)

FIGURE 2.3-19 REV. 1



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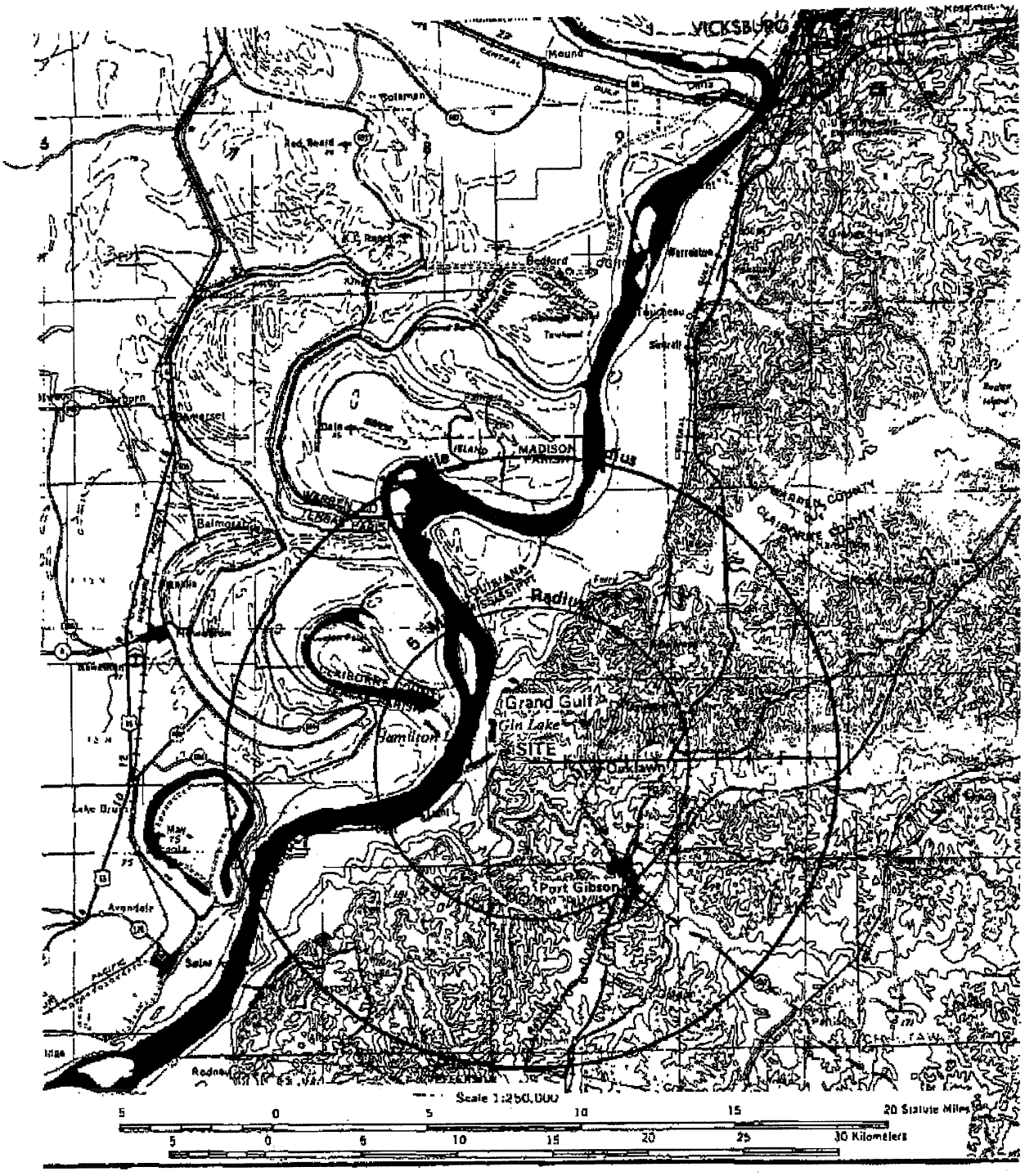
TOPOGRAPHIC PROFILES
(UFSAR FIGURE 2.3-9)

FIGURE 2.3-20 REV. 1



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TOPOGRAPHIC PLAN OF AREA
WITHIN 5 AND 10 MILES OF PLANT
(UFSAR FIGURE 2.3-10)

FIGURE 2.3-21 REV. 1