

EFFECTIVE PAGE LISTING

CHAPTER 2

Table of Contents

Page	Amendment	
i	D	
ii	D	
111	D	

Text

Page	Amendment
2.0-1	D
2.1-1	D
2.1-2	D
2.2-1	D
2.3-1	D
2.4-1	D
2.5-1	D

Tables

Amendment

2.0-1 (Sheets 1 and 2)

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Amendment D September 30, 1988



TABLE OF CONTENTS

CHAPTER 2

Section	Subject	Page No.	
2.0	SITE CHARACTERISTICS	2.0-1	
2.1	GEOGRAPHY AND DEMOGRAPHY	2.1-1	
2.1.1	SITE LOCATION AND DESCRIPTION	2.1-1	
2.1.1.1	Site Location	2.1-1	1
2.1.1.2	Site Area Map	2.1-1	1.
2.1.1.3	Boundaries for Establishing Effluent Release Limits	2.1-1	
2.1.2	EXCLUSION AREA AUTHORITY AND CONTROL	2.1-1	1
2.1.3	POPULATION DISTRIBUTION	2.1-1	
2.1.3.1	Population Within Ten Miles	2.1-1	
2-1.3.2	Population Between 10 and 50 Miles	2.1-1	
2.1.3.3	Transient Population	2.1-1	
2.1.3.4	Low Population Zone	2.1-1	E
2.1.3.5	Population Center	2.1-1	
2.1.3.6	Population Density	2.1-1	
2.2	NEARBY INDUSTRIAL, TRANSPORTATION, AND MILITARY FACILITIES	2.2-1	
2.3	METEOROLOGY	2.3-1	
2.3.1	REGIONAL CLIMATOLOGY	2.3-1	10
2.3.2	LOCAL METEOROLOGY	2.3-1	



Amendment D September 30, 1988

TABLE OF CONTENTS

CHAPTER 2

Section	Subject	Page No.	
2.3.3	CNSITE METEOROLOGICAL MEASUREMENTS PROGRAMS	2.3-1	D
2.3.4	SHORT TERM (ACCIDENT) DIFFUSION ESTIMATES (X/Q)	2.3-1	
2.3.5	LONG TERM (ROUTINE) DIFFUSION ESTIMATES (X/Q)	2.3-1	
2.4	HYDROLOGIC ENGINEERING	2.4-1	0
2.5	GEOLOGY, SEISMOLOGY, AND GEOTECHNICAL ENGINEERING	2.5-1	1



Amendment D September 30, 1988



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LIST OF TABLES

CHAPTER 2

Table

Subject

2.0-1

Envelope of Plant Site Design Parameters

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Amendment D September 30, 1988

2.0 SITE CHARACTERISTICS

The System 80+ Standard Design is designed on the basis of a limited set of assumed site-related parameters. These parameters were selected to envelope most potential nuclear power plant sites in the United States. A summary of the assumed site design parameters is provided in Table 2.0-1.

Detailed site characteristics will be provided by the site operator for any specific application. The site operator will review these characteristics and compare them to the enveloping [] assumptions of Table 2.0-1. Should specific site parameters or characteristics, upon examination by the site operator, be outside the envelope of assumptions established by Table 2.0-1, any changes or alternatives required for the System 80+ Standard Design will be presented in the site-specific SAR.

The remainder of this chapter identifies specific assumptions related to site characteristics that are employed in the evaluation of the System 80+ design. Verification that a specific site does not violate any of these assumptions ? well as the enveloping assumptions of Table 2.0-1 will be include in the site-specific SAR.

TABLE 2.0-1

(Sheat 1 of 2)

ENVELOPE OF PLANT SITE DESIGN PARAMETERS

Ground Water 2 feet below grade Maximum Level: Flood (or Tsunami) Level (1) Maximum Level: i foot below grade Precipitation (for Roof Design) Maximum rainfall rate: 10 in/hr Maximum snow load: 50 lb/sg. ft. Design Temperatures Ambient 1% Exceedance Values Maximum: 100°F dry bulb 77°F coincident wet bulb Minimum: -10°F 0% Exceedance Values (Historical Limit) Maximum: 115°F dry bulb 82°F coincident wet bulb Minimum: -40°F Emergency Cooling Water Inlet: 95°F Condenser Cooling Water Inlet: \$100°F Extreme Wind 110 mph⁽²⁾/ 130 mph⁽³⁾ Basic Wind Speed: Tornado (4) 260 mph Maximum tornado wind speed: Translational velocity: 57 mph 453 ft Radius: Maximum atmosphere AP: 1.46 psid Missile spectra: per ANSI/ANS-2.3



Amendment D September 30, 1988

TABLE 2.0-1 (Cont'd)

(Sheet 2 of 2)

ENVELOPE OF PLANT SITE DESIGN PARAMETERS

Soil Properties

Minimum Bearing Capacity (demand):	(LATER)	
Minimum Shear Wave Velocity:	(LATER)	
Liquefaction Potential:	None (at	site
•	specific	SSE
	level)	

Seismology

OBE Peak Ground Acceleration (PGA):0.10 g (5)SSE PGA:0.30 gSSE Response Spectra:(LATER)SSE Time History:(LATER)

- Probable maximum flood level (PMF), as defined in ANSI/ANS-2.8, "Determining Design Basis Flooding at Power Reactor Sites."
- 50-year recurrence interval; value to be utilized for design of non-safety-related structures only.
- 100-year recurrence interval; value to be utilized for design of safety-related structures only.
- 4. 1,000,000-year tornado recurrence interval, with associated parameters based on ANSI/ANS-2.3. Pressure effects associated with potential offsite explosions are assumed to be non-controlling for the design.
- 5. Free-field, at plant grade elevation.



2.1 GEOGRAPHY AND DEMOGRAFHY

2.1.1 SITE LOCATION AND DESCRIPTION

2.1.1.1 Site Location

No specific assumptions were employed in the evaluation of the System 80+ design.

2.1.1.2 Site Area Map

No specific assumptions were employed in the evaluation of the System 80+ design.

2.1.1.3 Boundaries for Establishing Effluent Release Limits

(This information to be supplied when Chapter 15 is submitted.)

2.1.2 EXCLUSION AREA AUTHORITY AND CONTROL

No specific assumptions were employed in the evaluation of the System 80+ design.



2.1.3 POPULATION DISTRIBUTION

No specific assumptions were employed in the evaluation of the System 80+ design.

2.1.3.1 Populatic: Within Ten Miles

No specific assumptions were employed in the evaluation of the System 80+ design.

2.1.3.2 Population Between () and 50 Miles

No specific assumptions were employed in the evaluation of the D System 80+ design.

2.1.3.3 Transient Population

No specific assumptions were employed in the evaluation of the System 80+ design.

2.1.3.4 Low Population Zone

No specific assumptions were employed in the evaluation of the System 80+ design.



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2.1-1

2.1.3.5 Population Center

No specific assumptions were employed in the evaluation of the D System 80+ design.

2.1.3.6 Population Density

No specific assumptions were employed in the evaluation of the D System 80+ design.



2.2 <u>NEARBY INDUSTRIAL, TRANSPORTATION AND MILITARY</u> FACILITIES

As indicated in Table 2.0-1, pressure effects and missile spectra associated with the design tornado are considered to be controlling. The site operator will perform an evaluation to assure that this assumption is not violated for the specific site selected or will perform additional analysis for any potential hazards that are more limiting than the parameters given in Table 2.0-1. The results of this evaluation and any required analyses will be included in the site-specific SAR.

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2.2-1

2 3 RETSOROLOGY

2.3.1 REGIONAL CLIMATOLOGY

As specified in Table 2.0-1.

2.3.2 LOCAL MUTEOROLOGY

No specific assumptions were employed in the evaluation of the D System 80+ design.

2.3.3 ONSITE METIOROLOGICAL MEASUREMENT PROGRAMS

No specific assumptions were employed in the evaluation of the D System 80+ design.

2.3.4 SHORT TEP: (SOCIDENT) DIFFUSION ESTIMATES (X/Q)

(This information to La supplied when Chapter 15 is submitted.)

2.3.5 LONG TERM (ROUTINE) DIFFUSION ESTIMATES (X/Q)

(This information to be supplied when Chapter 15 is submitted.)







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2.4 HYDROLOGIC ENGINEERING

As specified in Table 2.0-1.



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2.5 GEOLOGY, SEISMOLOGY, AND GEOTECHNICAL ENGINEERING

(This information to be supplied when Section 3.7 is submitted.)

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