

ANTI-TRUST

DEC 18 1971

Docket No. 50-302A

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Mr. Edward J. Bauser, Executive Director
Joint Committee on Atomic Energy
Congress of the United States

POOR ORIGINAL

Dear Mr. Bauser:

This is to inform the Joint Committee that the Commission has received interim antitrust advice from the Attorney General in connection with Florida Power Corporation's operating license application for Crystal River Unit No. 3. This advice is rendered pursuant to subsection 105c of the Atomic Energy Act of 1954, as amended.

A copy of the Attorney General's letter dated December 7, 1971 is enclosed. In his letter he states:

"Our study of applicant's proposed activities under the license has raised certain questions which have been discussed with the applicant. Applicant has indicated its desire to resolve them prior to formal submission of our advice to the Commission, in the hope that this action will make possible advice that an antitrust hearing would not be required.

"Because it appears possible to resolve this matter satisfactorily within a few weeks, we deem it appropriate to pursue the matter further with the applicant. We will communicate additional, more detailed, advice to the Commission in the next several weeks."

Sincerely,

(Signed) Lyall Johnson

Lyall Johnson, Director
Division of State and
Licensee Relations

Enclosure:

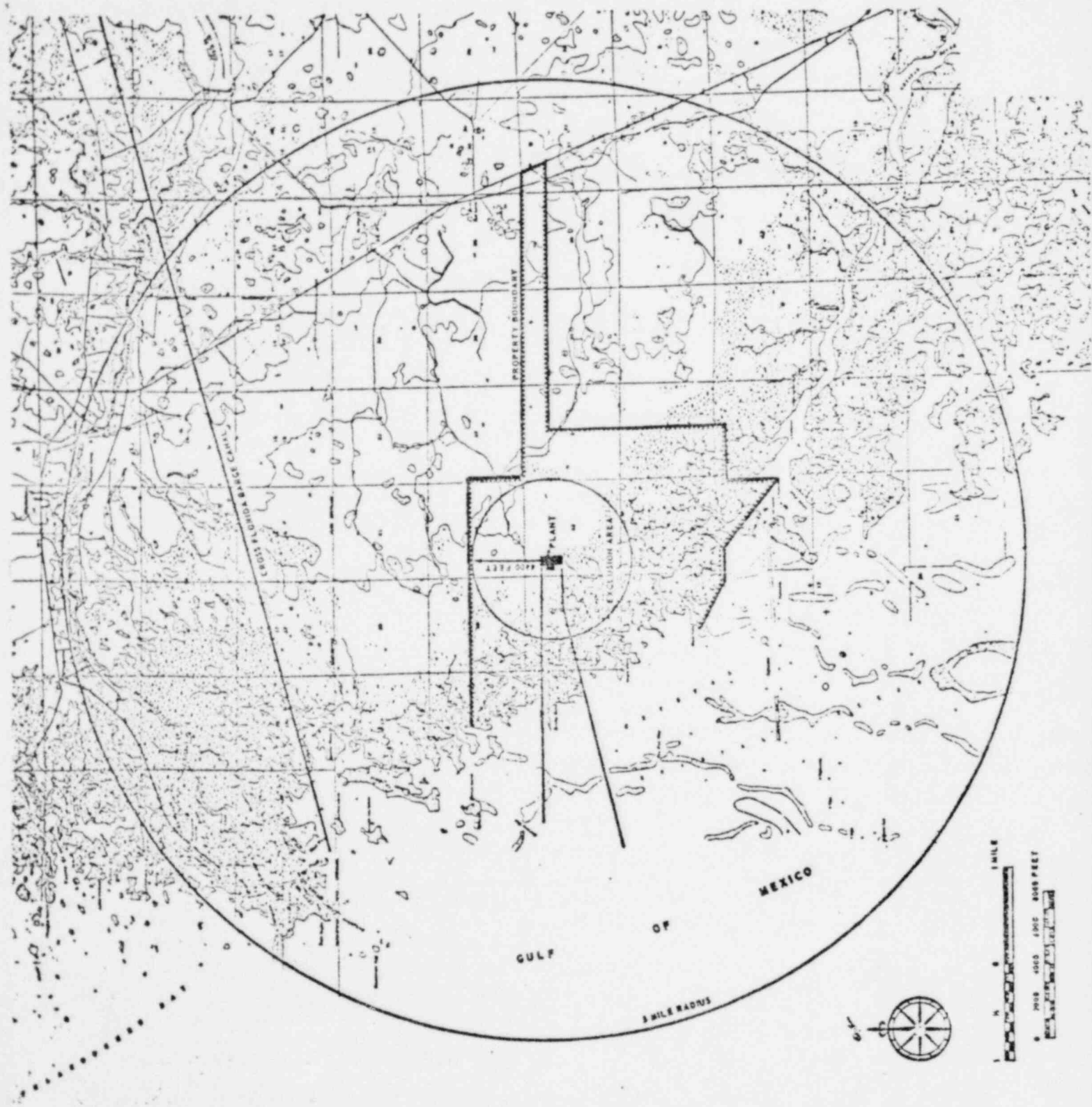
Attorney General's Interim

OFFICE ▶	Advice	SLR ABraitman/hh	SLR LJohnson	CONG. REL. 8008180753 LIS	
SURNAME ▶				12/10/71	U
DATE ▶		12/9/71	12/9/71		

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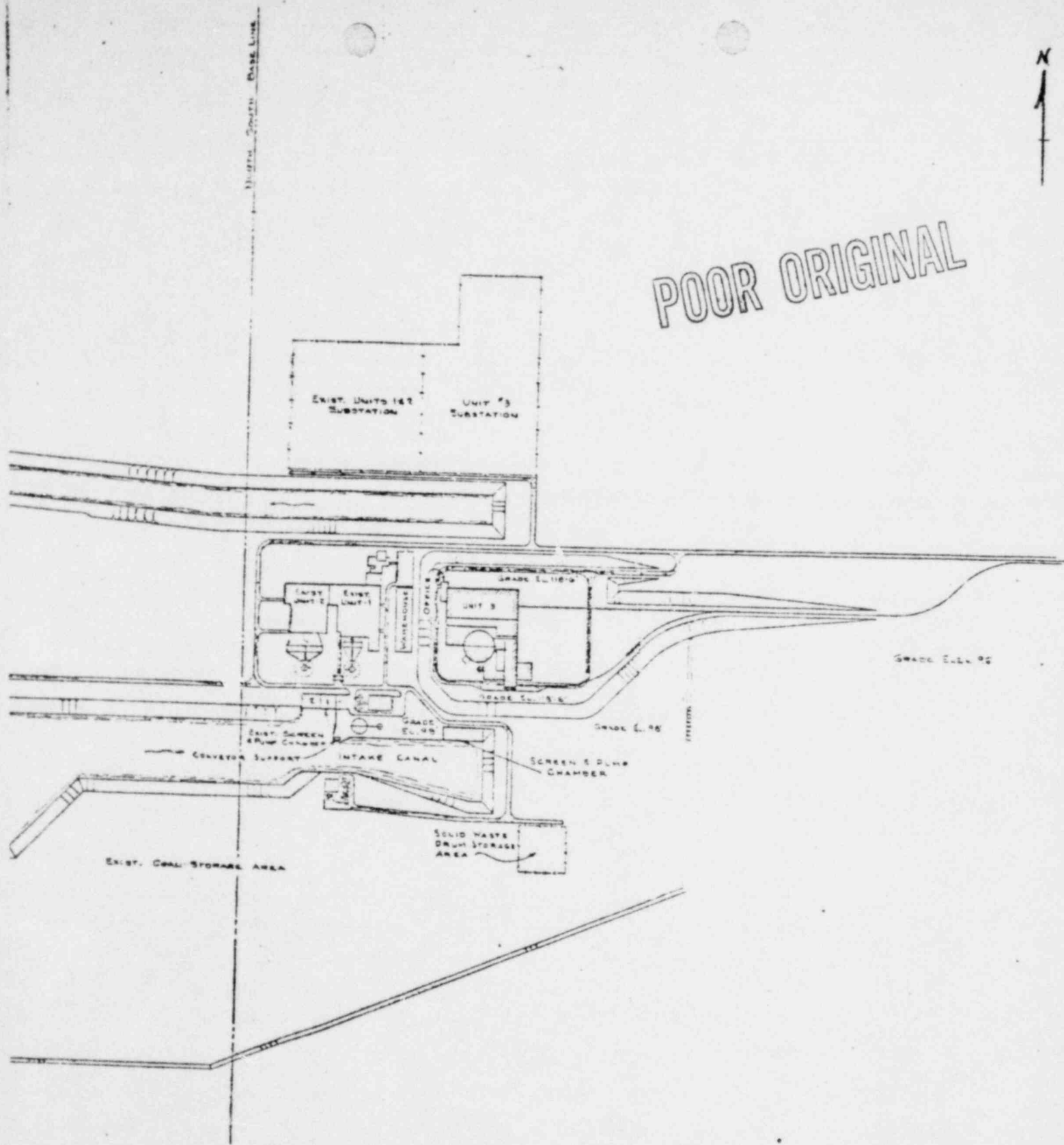
SITE TOPOGRAPHY
WITHIN A 5 MILE RADIUS
CRYSTAL RIVER UNIT 3

FIGURE 2.1



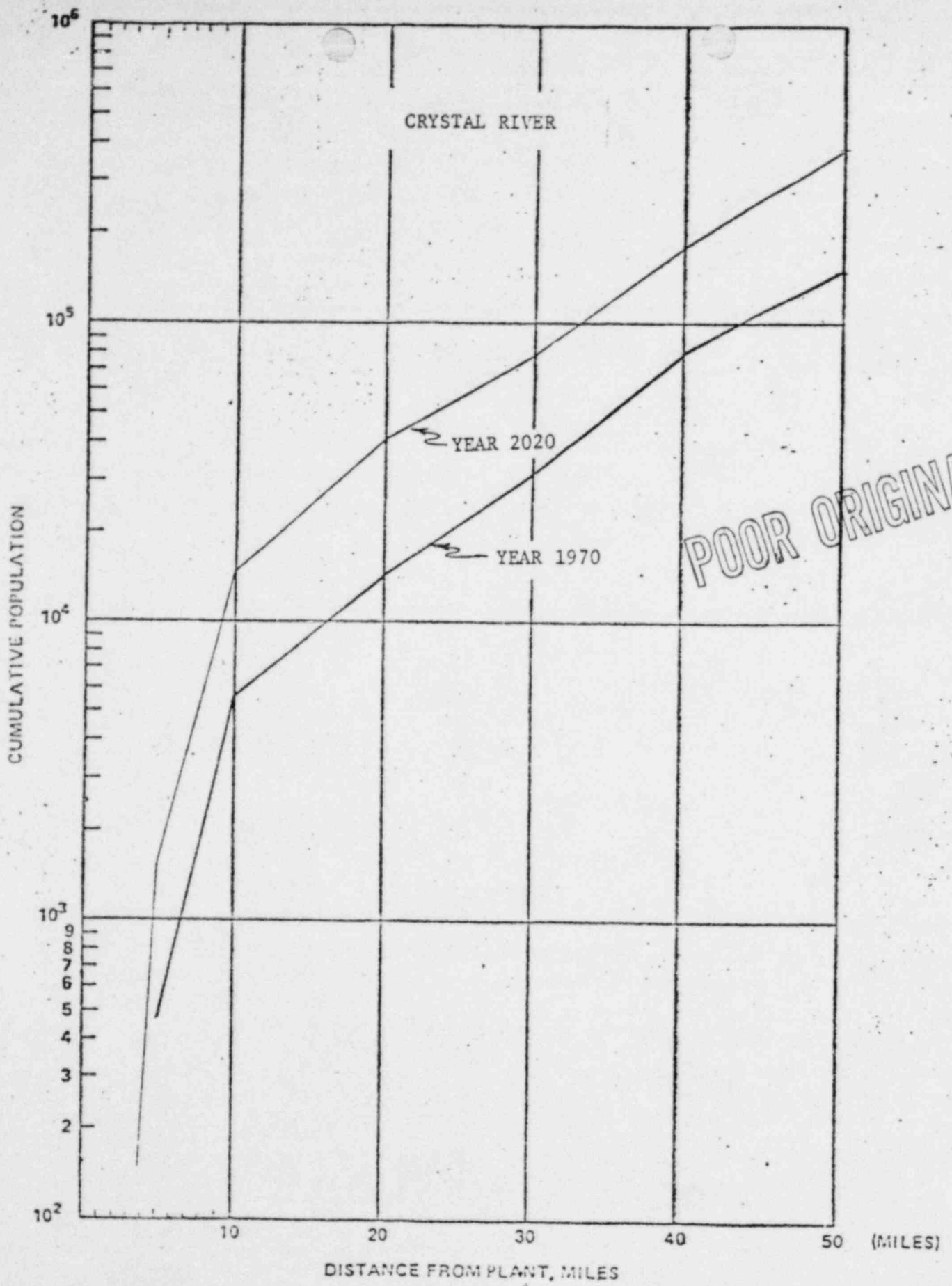


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100 50 0 50 100
SCALE IN FEET

FIGURE 2.2



CUMULATIVE POPULATION DISTRIBUTION

FIGURE 2.3



FIGURE 2.4

2.1 GEOGRAPHY & DEMOGRAPHY (Cont'd.)

The population within the five-mile LPZ was about 500 in 1970. The nearest population center (as defined in 10 CFR Part 100) with a population exceeding 25,000 is Gainesville, Florida, which is located 55 miles NNE of the site.

At the present time, the land bordering the Crystal River site is sparsely populated and of a rural nature. The Gulf of Mexico is used for transportation, boating, and extensive commercial and sport fishing. The major waterways in a five-mile radius of the plant are the Cross Florida Barge Canal (only a western section has been constructed) and the Crystal River site entrance channel with a maximum 14-foot draft which extends 14 miles out into the Gulf of Mexico. The public facilities within a 10-mile radius of the plant include four schools and the Crystal River Indian Mounds Museum Park.

The major agricultural land use in the vicinity of the Crystal River site consists of approximately 60% woodlands and 20% range and pasture lands. Little of the available land is used for crop production. Recreational land and water use in the area of the Crystal River site consists of fishing, boating, and small game hunting. According to the applicant, the Crystal River Indian Mounds Museum, located approximately 6 miles southeast of the site, has an annual attendance in excess of 47,000.

2.1 GEOGRAPHY & DEMOGRAPHY (Cont'd.)

We have concluded that land and water uses have been adequately considered and are not critical with respect to the operation of the plant. On the basis of the applicant's specified population center distance, minimum exclusion area distance, and low population zone distance, and potential radiological dose consequences of design basis accidents (discussed in Section 15.0 of this report), we have concluded that the exclusion area radius, low population zone, and population center distances meet the guidelines of 10 CFR Part 100, and that the Crystal River Unit 3 site is acceptable.

2.2 NEARBY INDUSTRIAL TRANSPORTATION & MILITARY FACILITIES

There is no significant manufacturing or storage of hazardous materials within a 10 mile radius of the plant site. There is a dolomite quarry located approximately 4 miles from the site which uses approximately 1000 pounds of TNT equivalent per blasting event, but does not store explosives. There are oil storage facilities at Yankeetown (4.3 miles) and at Inglis (5 miles). The two oil fired plants at the Crystal River site are supplied by approximately 3 oil barges per week which deliver oil to the site via a 14-mile long channel and intake canal. The Seaboard Coast Line Railroad Company tracks are located approximately 3-1/2 miles east of the site. The closest road, US 19, passes approximately 3 miles from the structures of the nuclear facilities. There are no airports within a 5-mile radius of the plant site. There is a small sod covered airfield

2.2 NEARBY INDUSTRIAL, TRANSPORTATION & MILITARY FACILITIES (Cont'd.)

located approximately 8 miles southeast of the site which is used by small aircraft. There are no natural gas pipelines passing near the nuclear facility. There are no missile bases in the area of the Unit 3 nuclear generating station.

In view of the large plant exclusion radius and the low industrial activity within 5 miles of the plant, we conclude that offsite hazardous materials will not effect the safe operation of the Crystal River Unit 3 nuclear facility.

Section 6.2 CONTAINMENT SPRAY SYSTEM

In addition to its heat removal function, the containment spray system is also used for iodine removal from the containment atmosphere following a postulated LOCA. Sodium hydroxide and thiosulfate are added to the containment spray solution to enhance the iodine scrubbing function of the system. The system is designed to inject a sufficient quantity of NaOH to raise the equilibrium pH in the containment sump to a minimum value of 9.5. The system, if functioning as designed, is expected to be effective for removal of all three forms of iodine (i.e., elemental, organic, and particulate). However, no pre-operational testing of the chemical addition and mixing function of the system has been proposed by the applicant. Our evaluation of the system is based on the assumption that verification tests

Section 6.2 CONTAINMENT SPRAY SYSTEM (Cont'd.)

demonstrating the capability of the system to function as designed will be performed. Such testing, including a test to verify the additive addition function of the system, therefore, will be incorporated into the technical specifications for this system.

In our evaluation of the iodine removal effectiveness of the system, we calculated first order removal coefficients of 7.6 hrs^{-1} , 0.11 hrs^{-1} , and 0.45 hrs^{-1} , for elemental, organic, and particulate iodine, respectively. The equilibrium sump pH of 9.5, and the quantity of thiosulfate injected, is considered adequate to achieve and maintain a decontamination factor (DF) of 1000 for the elemental and organic forms of iodine in the containment atmosphere.

6.4 HABITABILITY SYSTEMS

The applicant proposes to meet General Design Criterion 19, Control Room, of Appendix A to 10 CFR Part 50, by use of adequate concrete shielding and by installing redundant 43,500 cfm recirculating full-flow charcoal filters in the control room ventilation system. These filters will be automatically activated upon an accident signal, or a high radiation signal. We have calculated the potential radiation doses to control room personnel following a LOCA. The resultant whole body gamma and thyroid doses are within the guidelines of Criterion 19. The applicant will be required to provide protective clothing and eye protection to assure that the beta dose is kept within the exposure guidelines in the event of an accident.