

St. Lucie Units 1 and 2
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FIVE YEAR POPULATION ESTIMATES
FOR THE TEN MILE AREA SURROUNDING
ST. LUCIE PLANT

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1. SITE LOCATION AND DESCRIPTION

1.1 Location

Florida Power & Light Company's (FPL) St. Lucie site is located on Hutchinson Island, St. Lucie County, Florida. The coordinates for St. Lucie Unit 1 are latitude 27° 20' 58" north and longitude 80° 14' 48" west. St. Lucie Unit 2 is located approximately 300 feet to the south of St. Lucie Unit 1. St. Lucie Unit 2 is located at latitude 27° 20' 55" north and longitude 80° 14' 47" west. The Universal Transverse Mercator (UTM) coordinates for the midpoint (FPL numbers) are 3025173 meters north and 574326 meters east.

The eastern boundary of the site is the Atlantic Ocean and the western boundary is the Indian River, a tidal lagoon.

1.2 Plant Site Area Description

A map of the St. Lucie site is shown on Figure 1. This map includes plant property lines, the site perimeter, and boundary lines of the exclusion area and low population zone. FPL owns approximately 1,132 acres of land on Hutchinson Island. The site is generally flat, and has dense vegetation characteristic of Florida coastal mangrove swamps. At the ocean shore, the land rises slightly to a dune or ridge approximately 19 feet above mean sea level. The area preempted by the plant is about 300 acres or approximately 27 percent of the total land owned by FPL. There are no industrial, commercial, institutional, or residential structures within the plant area.

The exclusion area and Low Population Zones (LPZ) are also shown on Figure 1. The radius of the exclusion area is 0.97 miles from the center of the St. Lucie Plant. The LPZ has been defined as the area within one mile of the St. Lucie Plant. The land within this area is owned by FPL. State Road (SR) A1A traverses FPL property in a north-south direction, approximately 1,000 feet east of the St. Lucie Plant. There are no residents within the LPZ. However, the Walton Rocks public beach access lies within the LPZ, and includes a parking area with an approximate 100-car capacity. Based on an average of four persons per vehicle, about 400 persons may be present at the beach opposite the plant. Recreational facilities for limited use by FPL employees and their families are also located within the LPZ.

1.3 Exclusion Area Control

1.3.1 Authority

As indicated and authorized within the Appendices to the St. Lucie Plant Radiological Emergency Plan, FPL controls the use of all land and water areas inside the site boundary (property) lines.

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1.3.2 Controls of Activities Unrelated to Plant Operation

All activities conducted within the plant (restricted) areas during plant operation are related to the facility operation. The plant area is the fenced-off area surrounding St. Lucie Units 1 and 2. As indicated in and authorized by the St. Lucie Plant Radiological Emergency Plan and the State of Florida Radiological Emergency Management Plan for Nuclear Power Plants, formal arrangements are made to control the traffic and activities of the public on SR A1A which traverses FPL property east of the plant area, and on the State and Federal waters and beach adjacent to the FPL property, if necessary, in the event of an emergency to assure the radiological health and safety of the public. Specific details are discussed in the St. Lucie Plant Radiological Emergency Plan.

1.3.3 Arrangements for Traffic Control

Formal arrangements are made for traffic control in the event of an emergency as described in the St. Lucie Plant Radiological Emergency Plan and the State of Florida Radiological Emergency Management Plan for Nuclear Power Plants.

2. GEOGRAPHICAL DESCRIPTION -- TEN MILE EMERGENCY PLANNING ZONE

2.1 Ten Mile Zone

Prominent cities within ten miles of the site include Ft. Pierce, approximately seven miles to the northwest of the site on the mainland; Port St. Lucie, four and one half miles to the west-southwest; and Stuart, eight miles to the south. Figure 2 shows the area within ten miles of the site.

Transportation corridors within five miles of the site include U.S. Highway 1 (US 1); SR A1A, SR 712, and SR 707; the Florida East Coast Railroad; the Atlantic Ocean; and the Intracoastal Waterway (i.e., the Indian River). SR A1A, the major north-south route on Hutchinson Island, traverses FPL property to the east of St. Lucie Units 1 and 2.

Most of the area within ten miles of the plant is in St. Lucie County. A small portion of the ten-mile area south of the plant is in Martin County.

Hutchinson Island extends along the entire eastern boundary of the St. Lucie Plant ten-mile area, as the remaining area east of the island is water. There are two portions of Hutchinson Island, the north island and the south island. A small portion of the north island is within ten miles of the plant. The entire south island is within the plant's ten-mile radius in both St. Lucie and Martin Counties.

2.2 Geographic Boundary Areas

The State of Florida Radiological Emergency Management Plan for Nuclear Power Plants describes the boundaries of the Areas. If a disaster is declared under the provision of Florida Statutes Chapter 252, the Governor's authorized representative, in consultation with the Chairperson of the County Board of Commissioners, may order an evacuation. The evacuation for a radiological emergency will be conducted using these areas. The descriptions of the Areas provided below are based on the geographic boundaries given in the state plan.

AREA 1 - Hutchinson Island North

Area 1 is the north portion of Hutchinson Island, and extends from the plant approximately ten miles north-northwest and beyond Ft. Pierce Inlet. Development is sparse immediately north of the site boundary. A mixture of condominiums, apartments, and residential housing exists toward the north end of the island. The northern side of the Ft. Pierce Inlet is included in this area. Residential development lies on the southern tip of the north island between Coral Cove and Ft. Pierce Inlet Recreation Area.

AREA 2 - Indian River Estates

Area 2 is primarily located from two to five miles west of the plant. In the area west-northwest of the plant, significant residential development is encountered where Indian River Estates, Gator Trace, and St. James Park are located.

AREA 3 - Ft Pierce

Area 3 is primarily located from 5 to 12 miles northwest of the plant and contains almost all of incorporated Ft. Pierce. Development is heaviest in the downtown Ft Pierce area located around US 1. Specifically, concentrated, development is located around Okeechobee Road (SR 70), the east-west thoroughfares of Orange Avenue, Delaware Avenue, and Virginia Avenue, and 25th Street (SR 615) running north-south.

Development is also extensive west of US 1 to Oleander Boulevard (SR 605), and continues west of SR 605 to Sunrise Boulevard and beyond, except for the area occupied by the Lawnwood Recreation Complex.

AREA 4 - White City

Area 4 is primarily located from five to ten miles west of the plant. This area includes White City, Indian River Estates, Lexington Square, River's Edge, and The Woodlands. Residential development prevails predominantly east of the Florida Turnpike. Development decreases west of the Turnpike. Midway Road and Oleander Boulevard provide additional development loci.



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AREA 5 - Port St. Lucie

Area 5 is primarily located from five to ten miles southwest of the plant. This area contains most of the fast growing Port St. Lucie development. Development in this sector is concentrated around major roadways, specifically, US 1, Walton Road, Westmoreland Boulevard, Lyngate Drive, Midport Road, Port St. Lucie Boulevard, Floresta Drive, and Prima Vista Boulevard.

AREA 6 - Eastern Port St. Lucie

Area 6 is primarily located from two to five miles southwest of the plant. This area incorporates part of the Harris Subdivision and Riverview Heights plus residential areas south of Walton Road and west of the Green River Parkway. The Savanna Club, an adult manufactured home community, is located here.

AREA 7 - Jensen Beach

Area 7 is primarily located from five to ten miles south of the plant and includes the Jensen Beach area as well as the towns of Sewall's Point and Ocean Breeze. The commercial development is the most prominent on Jensen Beach Boulevard. Savannah Road (SR 732) provides the focal point for the most numerous and dense housing unit construction in this area.

The intersection of SR 732 and US 1 has seen a growth in commercial business activity surrounding the Treasure Coast Mall. This commercial area derives most of its customers from Port St. Lucie and Martin County, including population centers outside of the ten-mile zone.

AREA 8 - Hutchinson Island South

Area 8 extends south-southeast from the plant approximately 13 miles to St. Lucie Inlet. Area 8 consists mostly of condominium developments south of the plant on Hutchinson Island. The island continues beyond the ten-mile radius, but the entire island is included in the evacuation area. The most intense development lies from four to six miles from the plant, however; numerous multistory condominiums and other enterprises span the length of the southern island. Many of the condominium communities are used on a seasonal basis.

3. POPULATION DISTRIBUTION

3.1 Population Within Ten Miles

In 1997, there were an estimated 190,768 people who resided within the ten-mile Emergency Planning Zone for the St. Lucie Plant.

3.2 Population by Geographic Boundary Areas

Figure 2 shows the division of the Ten-Mile Emergency Planning Zone into the geographic boundary areas described previously in Section 2. The table below shows the distribution of the resident population in these geographical areas:

AREA	LOCATION	1997
1	Hutchinson Island (north of plant) 0-10 miles	6,800
2	Indian River Estates (west of plant) 2-5 miles	12,000
3	Ft. Pierce (northwest of plant) 5-12 miles	48,500
4	White City (west of plant) 5-10 miles	25,000
5	Port St. Lucie (southwest of plant) 5-10 miles	55,000
6	Eastern Port St. Lucie (southwest of plant) 2-5 miles	14,000
7	Jensen Beach area (south of plant) 5-10 miles	21,760
8	Hutchinson Island south of plant. 0-13 miles	7,708 12,000*
TOTAL POPULATION IN TEN MILE ZONE		190,768

*Seasonal population - not included in the total population figure.

Population is concentrated in the cities of Ft. Pierce and Port St. Lucie, both in St. Lucie County. The most heavily populated geographical areas are Areas 3 and 5 which cover the towns and developments mentioned in Section 2. The most heavily populated geographical area in the ten-mile radius is Area 5 with a total of 55,000 residents, which includes much of the City of Port St. Lucie.

3.3 Principal Cities and Towns

The largest population centers within ten miles are the cities of Ft. Pierce and Port St. Lucie. The nearest population center to the plant, as defined by 10 CFR Part 100, is the city of Port St. Lucie. The city of Port St. Lucie lies west, southwest and south of the plant in geographic Areas 4, 5, and 6. Its city boundaries range from about 3 miles to 13 miles from the plant. Port St. Lucie encompasses a relatively large portion of the area within ten miles of the plant. In 1980, this city's population was 14,690. Since that time, the number of persons

residing in Port St. Lucie increased to 73,000 in 1997, an increase of 397 percent. Much of this growth has occurred within ten miles of the St. Lucie Plant. Development of the area between five and ten miles has been primarily in the form of single-family homes. Overall, the city is a preplatted, single family residential community. There is very limited existing opportunity for medium to large scale multi-family, commercial, or industrial development within the city limits. Most multi-family developments have remained close to US 1.

The city of Ft. Pierce lies northwest and north-northwest, primarily in geographical Area 3. Most of its area is located between 5 and 12 miles from the plant to the northwest. Although the city of Ft. Pierce has a much lower population than Port St. Lucie, this city is more densely populated. The 1997 resident population in Ft. Pierce was 48,500. The city has experienced a population growth of 43 percent over its 1980 population of 33,802. Future growth for the city will depend on the redevelopment and conversion of lower use areas to higher intensity uses or through the annexation of additional property into the city. Development to the west has typically been residential with the exception of an emerging commercial area around the intersection of Virginia Avenue and Okeechobee Road.

3.4 Seasonal Transient Population

The period between November 1 through April 30 each year, the population within the ten-mile Emergency Planning Zone of the St. Lucie Plant increases due to the influx of a seasonal transient population. The population is concentrated in the area south of the plant on Hutchinson Island, corresponding to geographic Area 8. The population in this area experiences an increase of 12,000 people. This estimate is based on that portion of Area 8 located in St. Lucie County. The county estimate is based on occupancy of available condominium units in this Area during the seasonal period.

4. PROJECTED POPULATION

The population within ten miles of the St. Lucie Plant is expected to increase by about 23.3 percent over the five-year period between 1997 and 2002. The 2002 resident population is projected to be 235,217.

AREA	LOCATION	1997	2002
1	Hutchinson Island (north of plant) 0-10 miles	6,800	7,140
2	Indian River Estates (west of plant) 2-5 miles	12,000	16,200
3	Ft. Pierce (northwest of plant) 5-12 miles	48,500	50,925
4	White City (west of plant) 5-10 miles	25,000	41,250
5	Port St. Lucie (southwest of plant) 5-10 miles	55,000	68,750
6	Eastern Port St. Lucie (southwest of plant) 2-5 miles	14,000	18,550
7	Jensen Beach area (south of plant) 5-10 miles	21,760	23,573
8	Hutchinson Island south of plant. 0-13 miles	7,708 12,000*	8,829 12,000*
---	Total Population for All Areas	190,768	235,217

*Seasonal population - not included in the total population figure.

The continued development of Port St. Lucie and Hutchinson Island are expected to be the largest contributors to this growth. The most significant population increase in Port St. Lucie will be attributed to St. Lucie West, a 4,600-acre tract of land currently being developed. St. Lucie West is located near I-95 in Area 4. Most of the development is between five and ten miles of the plant, with some of it extending beyond the ten-mile radius. The St. Lucie West planned development also includes a professional baseball spring training sports complex, new college campuses for Indian River Community College, Florida Atlantic University, Barry University, public schools, an industrial park, office park, and a regional mall. The seasonal transient population is also expected to remain at approximately the same level. The lack of change in the transient population is based on no projected future condominium development between 1997 and 2002.

5. BASIS FOR POPULATION ESTIMATES

The data in this report was provided by the St. Lucie County Department of Public Safety and Martin County Emergency Management. St. Lucie County data was specifically tabulated by the Department of Community Development for St. Lucie County (Florida). Martin County data was

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obtained from weighted average estimates of population growth based on the April 1990 census. The per category change in population per year, as provided by the counties, was multiplied by five and added to the counties' population figures for 1997. This calculation provided the population estimates for the year 2002 in each of the geographic areas of the ten-mile Emergency Planning Zone.

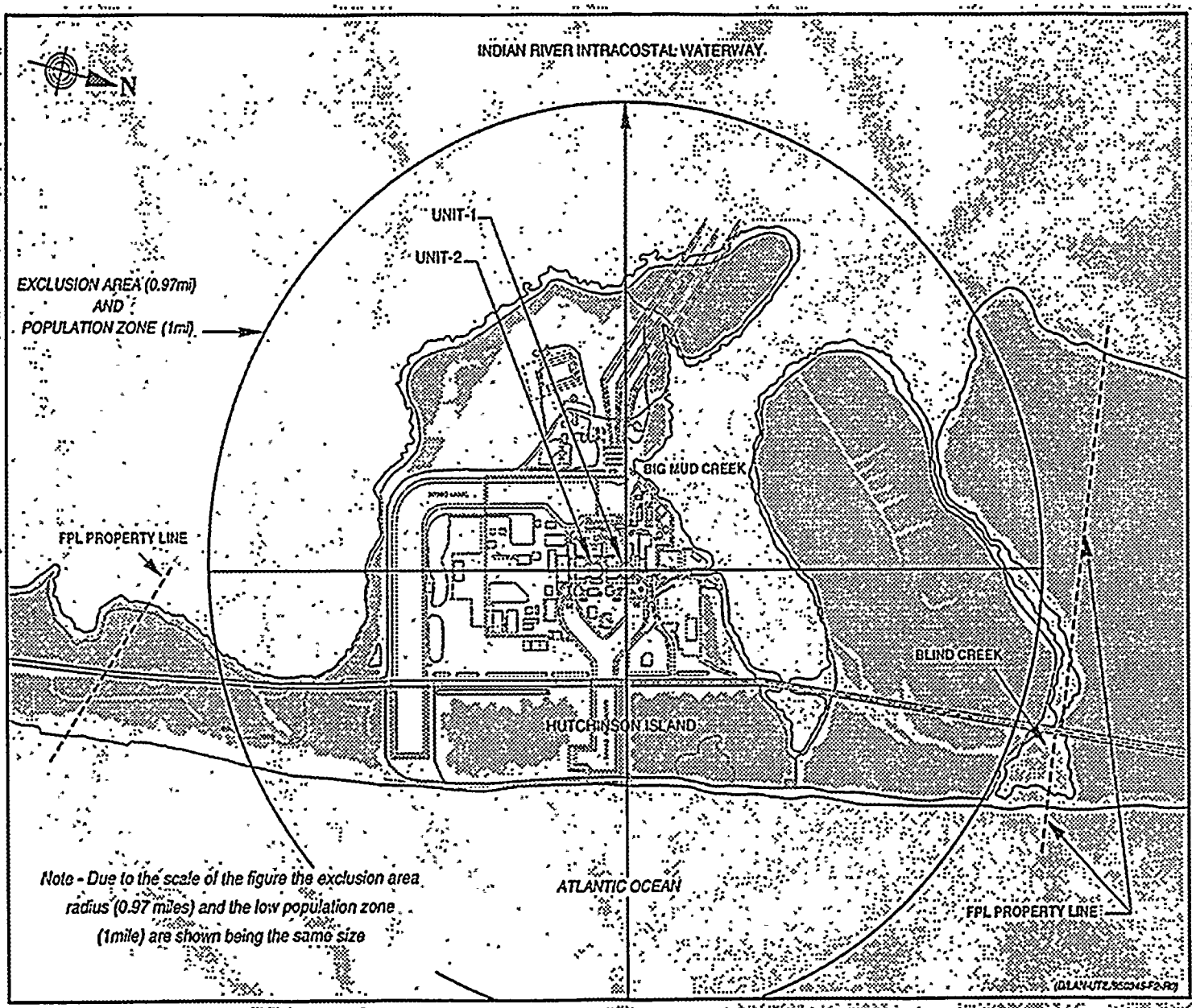


Figure 1 St. Lucie Plant Site
(Source: St. Lucie Plant UFSAR)

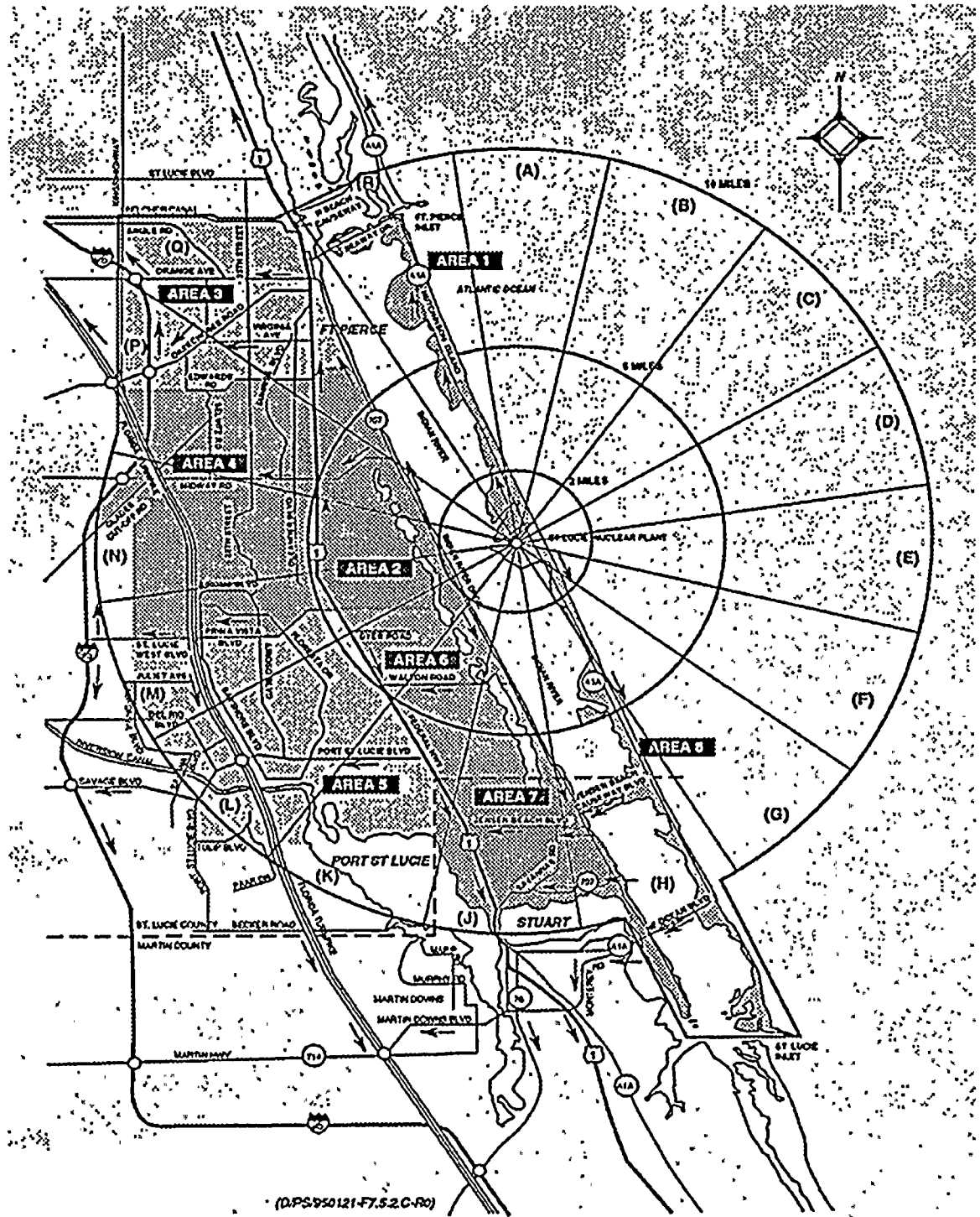


Figure 2 Ten-Mile Emergency Planning Zone
(Source: St. Lucie Plant Radiological Emergency Plan)

