

2.2 SITE DESCRIPTION

The information contained in this section is considered historical with the exception of Section 2.2.3 and Table 2.2-10, which are periodically updated. Estimated populations for the surrounding counties within a 10-mile radius are reviewed and updated if determined necessary for state and local emergency planning purposes.

2.2.1 Location

The site is located on the north shore of Wheeler Lake at river mile 294 in Limestone County in north Alabama. The site is approximately 10 miles southwest of Athens, Alabama, and 10 miles northwest of the center of Decatur, Alabama. Figures 2.2-1 and 2.2-2 show the site location.

The plant site and adjoining areas are shown in Figure 2.2-4 which is considered historical and is not being updated. The site contains approximately 840 acres which are owned by the United States and are in the custody of TVA. The site has been developed to accommodate three units.

2.2.2 Population

2.2.2.1 Resident Population

The populations of the various towns and cities within 60 miles of the site are shown in Table 2.2-2. Only 21 towns or cities within a 60-mile radius of the site had population over 2,500 in 1990. Most of the smaller communities showed only small changes in population between 1980 and 1990. The largest center of population is about 30 miles from the site and the nearest city with a population of 25,000 or greater is Decatur. The projected growth of the larger centers of population is shown in Table 2.2-3. The greatest change in population is projected for Huntsville and Decatur.

Population distributions from the site for various directions and distances for the years 1970, 1980, 1986, 1990, 2000, 2010, and 2020 are shown in Tables 2.2-4 and 2.2-5. Within a 4-mile radius of the site, the 1990 population was 1425 persons for a density of about 45 persons per square mile, with a slight increase expected through 2020, as shown in Table 2.2-6.

The population within a 10-mile radius of the site is expected to increase from 26,740 in 1970 to 33,340 by 2020 with a corresponding increase in population density from 101 to 126 persons per square mile. There are only three towns within a radius of 20 miles (Athens and Decatur, 10 miles to the northeast and south, south-southeast, respectively and Moulton, 18 miles to the southwest), having a 1980 population greater than 1,800 persons. The population of Athens is expected to increase from 14,360 in 1970 to 18,600 in 2020. The population in Decatur is

expected to increase from 38,044 to 54,000 in the same time period. Within a 60-mile radius the largest city is Huntsville, located approximately 30 miles due east from the site. The population of Huntsville is expected to increase from its 1970 level of 139,282 to 177,100 by 2020.

2.2.2.2 Transient Population

Transient population consists of visitors to recreation sites, students in schools, and employees at industrial facilities.

Recreation--Estimated and projected peak hour visitation to recreation facilities within 10 miles of the plant are contained in Table 2.2-7. The visitation is based on the maximum capacity of facilities plus some overflow. Capacities are based on an inventory done in 1989. There are no recreation facilities beyond 10 miles which are large enough to cause significant variations in the total population within any annular segment.

Schools--Eleven schools are located within 10 miles of the Browns Ferry Nuclear Plant. In 1993 these schools served 4,350 students, distributed as shown in Table 2.2-8.

Industries--Industries located in the 5 to 10 mile area are shown in Table 2.2-8. Employment in 1993 ranges from 80 to 1,700 for the day shift.

2.2.3 Land Use

Few centers of population exist within a 60-mile radius of the site. The dominant character of the land is small, scattered villages and homes in an agricultural area. Employment in the counties near the site is shown in Table 2.2-9. In 1990 agriculture employment was a higher percent of the labor force in Lawrence and Limestone counties than Morgan and Madison Counties where there was a greater concentration of manufacturing employment.

The area immediately surrounding the site is primarily agricultural with industrial areas concentrated along the Tennessee River primarily at the large centers of population. The closest industrial area is adjacent to Decatur. 3M Company, the NUCOR Steel Company, Worthington Steel Company, United Launch Alliance, and the Ascend Performance Materials, LLC, Plant are the largest industries in Morgan County and are approximately 4 to 7 air miles from the site. Browns Ferry, GM, and Steel Case are the largest industries in Limestone County. GM is located approximately 10 miles from the plant and Steel Case is located approximately 9 miles from the plant. The largest industrial complex is at the Redstone Arsenal, which is located approximately 25 miles east of the site. This is the NASA center for research and development and is the principal single economic force in the area. The remaining industrial area is located in the quad-cities area.

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The nearest site boundary is approximately 4,000 feet northeast of the reactor building. The nearest house is approximately 5,400 feet north-northwest of the center of the site.

There are no railroads or principal highways penetrating the site. The closest railroad tracks are those of the Louisville and Nashville railroad approximately 8 miles east of the site running in the north-south direction, and those of the Southern railroad about 6 miles south of the site running in the east-west direction, as shown in Figure 2.2-2. The nearest principal highways are U.S. 72, about 6 miles north of the site, and State Highway 20, about 4.5 miles south of the site.

The Browns Ferry Nuclear Plant is located on a 9-foot deep navigable channel on Wheeler Reservoir. Table 2.2-10 shows the total amount of certain hazardous materials shipped past the Browns Ferry Nuclear Plant from 1983 to 1993 on a yearly basis. The product listed as gasoline on the table is actually RU250.

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The nearest missile testing facility is located on Redstone Arsenal about 25 miles east of the plant. The current range of any tested missile is approximately 8 kilometers (about 5 miles) which is well within the maximum range of any tested missile which is approximately 15 kilometers (about 9 miles). Adequate safety precautions are exercised at all times during all testing to prevent impacts outside the test range.

There are no airports within five miles of the site. The Athens-Decatur Airport is about 10 miles east of the plant. The nearest commercial airport is located in Huntsville about 25 miles from the site. The Athens-Decatur field may serve up to 10 jets, 10 turboprops, and 100 light (under 150 horsepower) aircraft operations on a busy day.