

2.5.4 Environmental Justice

Environmental Justice refers to a federal policy under which each federal agency identifies and addresses, as appropriate, potential disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," in 1994 to address environmental justice issues. The order directs federal agencies to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations (Reference 2.5.4-1). Tennessee Valley Authority's (TVA's) policy is to consider environmental justice in its environmental reviews.

The Council on Environmental Quality has provided guidance for addressing environmental justice in *Environmental Justice: Guidance Under the National Environmental Policy Act* (Reference 2.5.4-2). The U.S. Environmental Protection Agency (EPA) also provided guidance in *Final Guidance For Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* (Reference 2.5.4-3). On August 24, 2004 (69 Federal Register 52040), the U.S. Nuclear Regulatory Commission (NRC) issued its "Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions."

This subsection identifies, locates, and describes minority populations and low-income populations, addressing the information needs specified in NRC's NUREG-1555, *Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Environmental Standard Review Plan* and RS-002, *Processing Applications for Early Site Permits*. The purpose of the environmental justice analysis is to:

- Describe the racial, ethnic, and special characteristics of all minority populations located within the potentially affected area of the proposed project
- Define the income characteristics of all low-income populations located within the potentially affected area of the proposed project
- Describe the resource dependencies, customs and practices, circumstances of living (e.g., migrant labor), or preconditions (e.g., pre-existing health conditions or access to particular facilities or locations) of particular minority or low-income populations that may make them likely to experience disproportionate environmental effects from the proposed project

2.5.4.1 Methodology

TVA considered information requirements for environmental justice determinations in the NUREG-1555 and the NRC's *Environmental Issues Associated with New Reactors Interim Staff Guidance* (Combined License and Early Site Permit COL/ESP-ISG-026). The guidance documents also contain a methodology to identify the locations of minority and low-income

populations of interest. The guidance suggests that a 50-mile (mi) radius (i.e., the Clinch River Nuclear [CRN] Site region) could reasonably be expected to contain the area of potential effect and that the state could be considered an appropriate geographic area for comparative analysis. U.S. Census Bureau demographic data provide the necessary information on race, ethnicity, and individual and family poverty.

NRC guidance recommends use of American Community Survey (ACS) 5-Year (yr) Summary Data at the census block group level. The most recent ACS 5-yr data on race, ethnicity, and poverty are for the 2008 to 2012 time period. It is acceptable to use the 10-yr U.S. Census data on race and ethnicity if it has been recently released and there is no significant change when compared to the ACS information. (The 10-yr Census does not provide the necessary poverty data.) The 2010 Census data for race and ethnicity were selected for use in this analysis. The two data sets were compared and no significant change between the 2010 count and the 2008 to 2012 estimate was identified. Also, the 2010 Census is based on a count of all United States residents while the ACS is based on estimated projections and small sample sizes. The ACS 2008 to 2012 data were used for the low-income population analysis.

The demographic data are used in conjunction with geographic information system software (ArcGIS) to determine the minority and income characteristics of resident populations by census block groups. Block groups represent the smallest subdivision of census tracts for which the U.S. Census Bureau tabulates detailed demographic data. If any part of a block group is included within the 50-mi radius, the entire block group is included in the analysis. A total of 759 block groups were evaluated for this analysis.

In addition to demographic data, the NRC guidance recommends requesting information from local planning departments, social service agencies, other local offices, and state agencies to identify minority or low-income groups that may not be identified through the census data. The methodology contained in the NRC guidance to identify and locate minority and low-income populations within the region was used in this environmental justice analysis. The specific methods employed for this analysis related to obtaining relevant local information (beyond the use of demographic data) are described in Subsection 2.5.4.4.

Potential health or environmental effects on minority or low-income communities are identified and discussed in Sections 4.4 and 5.8.

2.5.4.2 Minority Populations

NRC guidance considers individuals who identify themselves as members of the following racial and ethnic categories in the census to be minority individuals:

- Black or African American
- American Indian or Alaska Native
- Asian

- Native Hawaiian and other Pacific Islander
- Some other race
- Two or more races (i.e., multiracial)
- Hispanic, Latino, or Spanish origin (may be of any race)

According to the U.S. Census Bureau, Hispanic ethnicity is not a race. Therefore, a Hispanic individual can be counted in any of the race categories as well as the Hispanic origin category. Each minority category was evaluated separately and the total of all minority categories combined was evaluated as the “aggregate” minority population. (Aggregate minority population is calculated as the total population minus people who identified themselves as White, Not Hispanic or Latino). NRC guidance indicates that a minority population exists if either of the following two conditions occurs:

1. The minority population of an affected area exceeds 50 percent (the “census block group” is the recommended affected area), or
2. The minority population percentage of the affected area is meaningfully (at least 20 percentage points) greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. (The State of Tennessee is the geographic area chosen for comparative analysis for the CRN Site.)

All census block groups that are located within or are intersected by the boundary of the CRN Site region were included in this analysis. The region extends into three states: Tennessee, North Carolina, and Kentucky. For each of the 759 block groups within the 50-mi radius, the percentage of the block group’s population represented by each minority category was calculated. If any block group minority percentage exceeded 50 percent then the block group was identified as containing a minority population. Each state served as the geographic area of comparison for the block groups within that state that fell within the 50-mi radius. Percentages of each minority category within each state were calculated. The individual block group percentages were compared to the appropriate state percentage. If any block group percentage exceeded the corresponding state percentage by 20 percentage points or more, then a minority population was determined to exist within that block group.

Table 2.5.4-1 presents the results of the minority population analysis. The table includes the total number of block groups for each county located within the 50-mi radius, the number of block groups in an individual county meeting either of the criteria for each category of minority population, and the totals for the complete 50-mi radius. The percentage of each minority category within the three states, which forms the basis for determining block groups that meet the 20-percentage point criterion, is also presented. The distributions of aggregate minority and Hispanic ethnicity block groups within the 50-mi radius are displayed in Figure 2.5.4-1.

Minority populations vary among the three states. For each of the 759 block groups within the 50-mi radius, a total of 18 met the NRC criteria for Black minority population; one block group

met the criteria for a minority population of some other race. A total of four block groups met the criteria for Hispanic minority populations. A total of 20 block groups met the criteria for aggregate minority populations. For all categories except the North Carolina aggregate minority population, 20 percentage points greater than the state average was the limiting criterion. For the aggregate minority population in North Carolina, 50 percentage points was the limiting criterion. Only one block group, located in Sevier County, Tennessee, met the criteria for two or more minority categories.

The majority of the block groups with a minority population are located within the geographical area of interest discussed in Subsection 2.5.2 (i.e., Anderson, Knox, Loudon, and Roane counties). Most of the block groups (18 of 20) with an aggregate minority population fall within Knox County, Tennessee, within the boundaries of the City of Knoxville. The largest number of block groups (3 of 4) with a Hispanic minority population occurs in Loudon County, Tennessee. No block groups in Roane County (in which the CRN Site is located) or in Anderson County contain minority populations (Figure 2.5.4-1). The identified aggregate minority population closest to the CRN Site is in census tract 9801 block group 01 located approximately 20 mi to the east in Blount County, Tennessee. The closest Hispanic minority population is located in census tract 602.02 block group 04 in Loudon County, Tennessee, approximately 9 m southeast of the CRN Site.

In addition to the identification of minority populations based on census data, two locations of potential significance to minority communities were identified: the Wheat Community Burial Ground and the community of Scarboro. The African American Wheat Community Burial Ground is located approximately 1 mi northwest of the northern boundary of the CRN Site on the east side of Tennessee State Highway 58. Approximately 90 to 100 graves with no inscribed markers are present within this cemetery. It is presumed that slaves and their dependents that lived and worked on plantations and farms in the area are buried here. Historical records indicate the cemetery dates from the mid-19th century. (Reference 2.5.4-4) The Scarboro community is a small residential area in Anderson County within the City of Oak Ridge, approximately 0.5 mi from the Oak Ridge Reservation Y-12 plant. It is separated from the Y-12 plant by Pine Ridge. The community was established in 1950 to provide housing and an elementary school to African American Oak Ridge residents. Scarboro has remained predominantly African American. (Reference 2.5.4-5)

2.5.4.3 Low-Income Populations

NRC guidance defines low-income populations as individuals or families living below the poverty level based on statistical poverty thresholds from the U.S. Census Bureau. A population is considered low-income if either of the following two conditions is met:

1. The low-income population of an affected area (i.e., census block group) exceeds 50 percent, or

2. The percentage of the population below the poverty level in the affected area is meaningfully (at least 20 percentage points) greater than the low-income population percentage in the geographic area chosen for comparative analysis. The geographic area chosen for comparative analysis for the CRN Site is the individual states.

The same geographic area used in Subsection 2.5.4.2 was used for this analysis (i.e., all census block groups that are located within or are intersected by the boundary of the CRN Site region). The ACS census data for poverty status were used for the identification of low-income populations per NRC guidance. The U.S. Census Bureau determines poverty status for the ACS by comparing a person's total family income in the last 12 months with the appropriate poverty threshold for that person's family size and composition (i.e., number of family members under 18 yr old). The poverty thresholds are arranged in a matrix based on size of family unit cross-classified by number of children. Anyone meeting the matrix criteria for poverty is counted as an individual in poverty. A family is considered to include the householder and individuals living in the household who are related by marriage, birth or adoption to the householder. For individuals not living with anyone related, the person's own income is compared with his or her poverty threshold. (Reference 2.5.4-6)

The number of low-income individuals in each census block group was divided by the total number of individuals within that block group to obtain the percentage of low-income persons per block group. These were compared to the respective state percentages to determine the block groups with low-income populations that meet either of the NRC criteria listed above. Table 2.5.4-1 and Figure 2.5.4-2 illustrate the number and distribution of low-income block groups within the 50-mi radius based on the NRC criteria. Table 2.5.4-1 also displays the percentage of low-income individuals within each state. Among the 759 block groups within the 50-mi radius, 60 met the NRC criteria. Within the geographical area of interest, a total of 33 block groups have low-income populations. The majority of the low-income population (27 block groups) in the geographical area of interest is in the City of Knoxville, in Knox County, Tennessee. There is one low-income population block group in Roane County where the CRN Site is located. The closest low-income population to the CRN Site is located in census tract 602.02 block group 01 in Loudon County, Tennessee, approximately 7 mi southeast of the CRN Site. As seen on Figures 2.5.4-1 and 2.5.4-2 there is some overlap between the locations of minority and low-income population groups.

2.5.4.4 Communities with Unique Characteristics

NRC guidance (NUREG-1555) recommends the identification of any unique economic, social, or human health circumstances and lifestyle practices of minority and low-income populations that could result in disproportionately high and adverse impacts to these populations from plant construction and operation. Such circumstances and practices may include, for example, exceptional dependence on subsistence resources such as fish and wildlife, unusual concentrations of minority or low-income population within a compact area (e.g., Native American settlement), or pre-existing health conditions within a community that might make it more susceptible to potential plant-related impacts.

In order to identify minority or low-income populations that may not be identified using census data, NUREG-1555 and ISG-026 recommend supplementing those data with inquiries to local agencies such as planning departments, social services agencies, and other local offices. The NRC guidance focuses on populations with unique characteristics that are located next to or in close proximity to a proposed plant site, indicating that potential impacts could disproportionately affect those populations more than the general population. Various organizations were contacted to identify any uniquely vulnerable minority or low-income communities located near the CRN Site. Table 2.5.4-2 lists the agencies, organizations, academic institutions, and businesses contacted. Telephone calls were made and emails were sent to local and county agencies and organizations within Anderson, Knox, Loudon, and Roane counties, Tennessee as well as to east Tennessee regional organizations. The persons contacted were asked if they are aware of any concentration of minority or low-income populations within a compact area, and whether any of those populations historically obtain or supplement their food supply through hunting or fishing. Their responses produced no information that would help identify subsistence populations. Any recommendations to contact another agency or organization were pursued. Research was extended to contacting local sporting goods and bait and tackle shops in an effort to identify subsistence populations. The responses by those businesses produced no pertinent information.

County health departments for Anderson, Knox, Loudon, and Roane counties, Tennessee were contacted to identify any pre-existing health conditions through which minority or low-income populations could be disproportionately adversely affected by the proposed project. Loudon County provided no response to the information request. Anderson, Knox, and Roane counties responded; however, the responses produced no information that would help identify pre-existing health conditions.]

National and state online sources of public health-related information were consulted, including the Centers for Disease Control and Prevention (CDC) and Tennessee Department of Health (TDOH). The CDC has national data that identify examples of health disparities in racial and ethnic minority populations. The *CDC Health Disparities and Inequalities Report–U.S. 2013* identifies key factors that affect health and lead to health disparities in the United States, including environmental hazards (Reference 2.5.4-7). The identified hazard that could potentially be relevant to the proposed project is related to location: minorities, foreign-born persons, and persons who speak Spanish or another non-English language at home were more likely to be living near major highways. This suggests increased exposure to traffic-related air pollution. However, no minority or low-income populations have been identified along the access roads to the CRN Site (see Figures 2.5.4-1 and 2.5.4-2).

The TDOH Division of Minority Health and Disparity Elimination maintains data on population health issues. Priority areas to reduce health disparities include diabetes and heart disease/stroke (Reference 2.5.4-8; Reference 2.5.4-9). However, county-level reports are not provided.

No CDC or TDOH data profiling pre-existing health conditions were found specific to Anderson, Knox, Loudon, or Roane County, Tennessee or the other counties in the region.

The Agency for Toxic Substances and Disease Registry (ATSDR) conducted a public health assessment (published in 2004) to evaluate the releases of uranium from the Y-12 plant in regard to past and current exposures to residents living near the Oak Ridge Reservation, including residents of the Scarboro community in Anderson County. Scarboro was used as the reference community that represents the City of Oak Ridge. The Scarboro community is a residential area within the city, approximately 0.5 mi from the Y-12 plant, which was established in 1950 to provide housing to African American Oak Ridge residents. Scarboro has remained predominantly African American. As part of its public health assessment, ATSDR examined three investigations conducted between 1997 and 2001 to address community health concerns. The Scarboro Community Health Investigation (conducted in 1997 and 1998 by CDC and TDOH) focused on a reported excess of respiratory illnesses in the Scarboro neighborhood and included a community health survey and follow-up medical evaluation of children. The rates of asthma and wheezing among children in Scarboro determined by the survey were found to be within the ranges reported throughout the United States and internationally, respectively. The medical examinations did not indicate any unusual pattern of illness among children in Scarboro. An Environmental Study (conducted in 1998 by the Environmental Sciences Institute at Florida Agricultural and Mechanical University for the U.S. Department of Energy [DOE]) sampled soil, sediment, and surface water in the Scarboro neighborhood to address community concerns about the validity of environmental monitoring. An Environmental Sampling Validation Study (conducted in 2001 by the EPA) re-sampled a portion of the locations investigated in the Environmental Study. The results of the DOE and EPA sampling efforts are consistent with each other and indicate that chemical, metal, and radionuclide concentrations are not elevated above a regulatory health level of concern and the residents of Scarboro are not being exposed to harmful levels of substances from the Y-12 plant. (Reference 2.5.4-5)

Health conditions within the Roane County community were investigated in regard to the release of fly ash following a dike failure at the TVA Kingston Fossil Plant in December 2008. The plant is located west of the CRN Site between the cities of Harriman and Kingston in Roane County. TVA funded an independent health screening of people who resided near the ash spill, which was conducted by Oak Ridge Associated Universities and physician medical toxicologists from Vanderbilt University Medical Center. A total of 214 people representing 112 households participated voluntarily in the screening process; all were residents of Roane County. Approximately half lived within 2 mi from the spill and half lived outside the 2-mi radius. Participants lived in four cities: Harriman (73 percent), Kingston (22 percent), Ten Mile (3 percent), and Rockwood (2 percent). The majority of participants (98 percent) self-identified as white and 2 percent as black (compared to 96 percent white and 3 percent black in Roane County as a whole). No other racial or ethnic categories were represented. The most common symptoms reported by participants were related to upper airway irritation, including runny nose, cough, and congestion. As part of the medical evaluation, lung function tests were done for all participants older than six years of age. The majority of the participants had normal lung

function tests, with 25 percent having mild to severe abnormalities. There was a similar distribution of abnormalities for those living within and outside of the 2-mi radius from the spill. The study concluded that these abnormalities may be due to multiple factors, such as emphysema, smoking, asthma, and respiratory infections at the time of testing.(Reference 2.5.4-10)

In summary, the investigation described in this subsection did not identify any unique economic, social, or human health circumstances and lifestyle practices of minority and low-income populations that could result in disproportionately high and adverse impacts to these populations from plant construction and operation.

2.5.4.5 Migrant Populations

Migrant farm workers are individuals whose employment requires travel to harvest agricultural crops. These workers may or may not have a permanent residence. Some migrant workers may follow the harvesting of crops, particularly fruits and vegetables, throughout the eastern United States rural areas. Others may be permanent residents near the CRN Site who travel from farm to farm harvesting crops.

Migrant workers may be members of minority or low-income populations. Because they travel and can spend a significant amount of time in an area without being actual residents, migrant workers may be unavailable for counting by census takers. If uncounted, these workers would be “underrepresented” in U.S. Census Bureau minority and low-income population counts.

Information on migrant workers is collected by the Census of Agriculture. The most recent data source for this information is the 2007 Census of Agriculture. Farm operators were asked whether any hired or contract workers were migrant workers. Table 2.5.4-3 provides information on farms in the region that employ hired workers who are migrant workers and that employ temporary farm workers. Information is included for the counties within a 50-mi radius of the CRN Site. Farm operators were asked whether any hired workers were migrant workers, defined as a farm worker whose employment required travel that prevented the worker from returning to his permanent place of residence the same day. Migrant workers tend to work short-duration, labor-intensive jobs. Temporary farm laborers include those working fewer than 150 days per year. It is assumed that the migrant workers are included in the temporary worker values reported.

According to the 2007 Census of Agriculture, as shown on Table 2.5.4-3, there were a total of 11,083 farms in the region, with 3881 temporary farm workers (those working fewer than 150 days per year) employed on 1718 of those farms. The county with the greatest number of temporary workers (623 on 202 farms) was Knox County, Tennessee. Roane County, Tennessee, reported 178 temporary workers on 82 farms. A total of 153 farms in the region reported hiring migrant workers. Monroe County, Tennessee, had the greatest number of farms with hired migrant workers (22 farms), followed by McMinn County, Tennessee (21 farms). Only

one farm in Roane County reported employing migrant workers. Impacts to migrant workers are discussed in Sections 4.4 and 5.8.

2.5.4.6 References

Reference 2.5.4-1. Executive Order 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994).

Reference 2.5.4-2. Council on Environmental Quality, "Environmental Justice, Guidance Under the National Environmental Policy Act," Executive Office of the President, Washington, DC, December 10, 1997.

Reference 2.5.4-3. U.S. Environmental Protection Agency, "Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses," April, 1998.

Reference 2.5.4-4. AECOM, "Final Clinch River Site Land Use and Recreation Technical Report - Revision 2," Greenville, SC, Tennessee Valley Authority, October, 2014.

Reference 2.5.4-5. Agency for Toxic Substances and Disease Registry, "Public Health Assessment Y-12 Uranium Releases, Oak Ridge Reservation (USDOE), Oak Ridge, Anderson County, Tennessee, EPA Facility ID: TN1890090003," January 30, 2004.

Reference 2.5.4-6. U.S. Census Bureau, American Community Survey and Puerto Rico Community Survey - 2012 Subject Definitions, Website:
http://www.census.gov/acs/www/Downloads/data_documentation/SubjectDefinitions/2012_ACS_SubjectDefinitions.pdf, 2012.

Reference 2.5.4-7. Centers for Disease Control and Prevention, CDC Health Disparities and Inequalities Report - U.S. 2013, Website:
http://www.cdc.gov/disparitiesanalytics/Docs/CHDIR13_factsheet_nov_20_2013_final_508.pdf, November, 2013.

Reference 2.5.4-8. Tennessee Department of Health, Racial and Ethnic Minority Tennesseans and Diabetes, Website: <http://health.state.tn.us/dmhde/diabetes.shtml>, 2014.

Reference 2.5.4-9. Tennessee Department of Health, Racial and Ethnic Minority Tennesseans and Heart Disease and Stroke, Website: <http://health.state.tn.us/dmhde/hdandstroke.shtml>, 2014.

Reference 2.5.4-10. Oak Ridge Associated Universities, "Kingston Project Surveillance Program: Baseline Medical Screening Results," ORAU 10-OEWH-1174, August 17, 2010.

Reference 2.5.4-11. U.S. Department of Agriculture, Census of Agriculture, Table 1. County Summary Highlights: 2007 - North Carolina, Website:
<http://www.agcensus.usda.gov/Publications/2007/>, 2007.

Reference 2.5.4-12. U.S. Department of Agriculture, Census of Agriculture, Table 1. County Summary Highlights: 2007 - Tennessee, Website:
<http://www.agcensus.usda.gov/Publications/2007/>, 2007.

Reference 2.5.4-13. U.S. Department of Agriculture, Census of Agriculture, Table 7. Hired Farm Labor - Workers and Payroll: 2007 - North Carolina, Website:
<http://www.agcensus.usda.gov/Publications/2007/>, 2007.

Reference 2.5.4-14. U.S. Department of Agriculture, Census of Agriculture, Table 7. Hired Farm Labor - Workers and Payroll: 2007 - Tennessee, Website:
<http://www.agcensus.usda.gov/Publications/2007/>, 2007.

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Table 2.5.4-1 (Sheet 1 of 3)
Minority and Low-Income Populations within 50-Mile Radius¹

STATE/County	Total Number of Block Groups	Black	American Indian or Native Alaskan	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Multiracial ²	Aggregate ³	Hispanic	Low-Income ⁴
		Minority or Low-Income Block Groups								
TENNESSEE	745									
Anderson	53	0	0	0	0	0	0	0	0	3
Bledsoe	8	0	0	0	0	0	0	0	0	0
Blount	78	1	0	0	0	0	0	2	0	3
Bradley	6	0	0	0	0	0	0	0	0	0
Campbell	32	0	0	0	0	0	0	0	0	4
Claiborne	4	0	0	0	0	0	0	0	0	1
Cumberland	32	0	0	0	0	0	0	0	0	3
Fentress	12	0	0	0	0	0	0	0	0	3
Grainger	6	0	0	0	0	0	0	0	0	0
Hamilton	2	0	0	0	0	0	0	0	0	0
Jefferson	12	0	0	0	0	0	0	0	0	0
Knox	242	17	0	0	0	0	0	18	0	27
Loudon	31	0	0	0	0	0	0	0	3	2
McMinn	34	0	0	0	0	0	0	0	0	2
Meigs	6	0	0	0	0	0	0	0	0	0
Monroe	28	0	0	0	0	0	0	0	0	3
Morgan	15	0	0	0	0	0	0	0	0	0
Overton	3	0	0	0	0	0	0	0	0	1

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Minority and Low-Income Populations within 50-Mile Radius¹

STATE/County	Total Number of Block Groups	Black	American Indian or Native Alaskan	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Multiracial ²	Aggregate ³	Hispanic	Low- Income ⁴
		Minority or Low-Income Block Groups (continued)								
Pickett	1	0	0	0	0	0	0	0	0	0
Polk	7	0	0	0	0	0	0	0	0	0
Putnam	2	0	0	0	0	0	0	0	0	0
Rhea	19	0	0	0	0	0	0	0	0	2
Roane	41	0	0	0	0	0	0	0	0	1
Scott	16	0	0	0	0	0	0	0	0	3
Sevier	39	0	0	0	0	1	0	0	1	2
Union	14	0	0	0	0	0	0	0	0	0
White	2	0	0	0	0	0	0	0	0	0
KENTUCKY	4									
McCreary	2	0	0	0	0	0	0	0	0	0
Whitley	2	0	0	0	0	0	0	0	0	0
NORTH CAROLINA	10									
Cherokee	3	0	0	0	0	0	0	0	0	0
Graham	5	0	0	0	0	0	0	0	0	0
Swain	2	0	0	0	0	0	0	0	0	0
50-mi Region Total	759	18	0	0	0	1	0	20	4	60

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Minority and Low-Income Populations within 50-Mile Radius¹

STATE/County	Total	Black	American Indian or Native Alaskan	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Multiracial ²	Aggregate ³	Hispanic	Low-Income ⁴
	State Population	%	%	%	%	%	%	%	%	%
TENNESSEE	6,346,105	16.7	0.3	1.4	0.1	2.2	1.7	24.4	4.6	17.3
KENTUCKY	4,339,367	7.8	0.2	1.1	0.1	1.3	1.7	13.7	3.1	18.6
NORTH CAROLINA	9,535,483	21.5	1.3	2.2	0.1	4.3	2.2	34.7	8.4	16.8

¹ Block groups where minorities and low-income populations exceed 50 percent or exceed the state average by 20 percentage points or more.

² Persons who identified themselves as a member of two or more races.

³ Everyone except persons who identified themselves as White, Not Hispanic or Latino.

⁴ Based on poverty status of individuals in family households and in non-family households.

Table 2.5.4-2 (Sheet 1 of 2)
Organizations Contacted to Identify Communities with Unique Characteristics

Local, County, and Regional Agencies, Organizations, and Institutions

Anderson County Economic Development Office
Anderson County United Way
Catholic Charities of East Tennessee
Centro Hispano of East Tennessee
City of Knoxville, Community Development Department
City of Oak Ridge Community Development
East Tennessee Development District
East Tennessee Quality Growth
Highlander Research and Education Foundation
Hindu Community Center of Knoxville
Kingston Public Library
Knox County Public Library
Knox County United Way
Knoxville Area Rescue Ministry
Knoxville Area Urban League
Knoxville Chamber of Commerce
Knoxville-Knox County Metropolitan Planning Commission
Legal Aid of East Tennessee
Loudon County Chamber of Commerce
Loudon County Economic Development Agency
Loudon County United Way
Maryville College
Nourish Knoxville
Oak Ridge Chamber of Commerce
Oak Ridge City Clerk's Office
Oak Ridge Public Library
Pellissippi State Community College
PlanET
Roane County Chamber of Commerce
Roane County United Way
Roane State Community College
Tennessee Department of Economic and Community Development
Tennessee Department of Health, Office of Minority Health and Disparities Elimination
Tennessee Housing Development Agency
Tennessee Wildlife Federation - Hunters for the Hungry
Tennessee Wildlife Resources Agency
The Hindu Community Center of Knoxville
The Roane Alliance
Trinity Out-Reach Center of Hope (TORCH)
University of Tennessee, Knoxville
University of Tennessee Extension - Anderson County Agriculture Office
University of Tennessee Extension - Knox County Agriculture Office
University of Tennessee Extension - Loudon County Agriculture Office

Table 2.5.4-2 (Sheet 2 of 2)
Organizations Contacted to Identify Communities with Unique Characteristics

Hunting and Fishing Suppliers

Smoky Mountain Pawn

County Health Departments

Anderson County Health Department

Knox County Health Department

Loudon County Health Department

Roane County Health Department

Note: Attempts were made to contact additional organizations, but were unsuccessful.

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Table 2.5.4-3
Farms that Employ Migrant Labor in the Clinch River Nuclear Site Region, 2007

County ¹	Total Farms	Number of Temporary Workers ²	Farms with Temporary Workers	Farms with Hired Migrant Workers
NORTH CAROLINA				
Graham	126	ND	15	1
TENNESSEE				
Anderson	538	138	69	3
Blount	1154	395	162	15
Campbell	404	163	73	7
Cumberland	842	431	140	9
Fentress	623	283	121	13
Knox	1224	623	202	10
Loudon	768	263	124	12
McMinn	1204	443	171	21
Meigs	367	ND	76	0
Monroe	935	387	145	22
Morgan	407	ND	59	4
Rhea	449	231	59	7
Roane	580	178	82	1
Scott	261	117	49	2
Sevier	707	229	89	8
Union	494	ND	82	18
Region Total	11083	3881	1718	153

¹ Includes counties with more than approximately half their area within a 50-mi radius of the CRN Site.

² Hired workers that have worked less than 150 days in 2007.

Notes:

ND Number withheld by U.S. Department of Agriculture to avoid disclosing data for individual farms. (Region Total does not include any withheld data.)

Sources: (Reference 2.5.4-11; Reference 2.5.4-12; Reference 2.5.4-13; Reference 2.5.4-14)

Clinch River Nuclear Site
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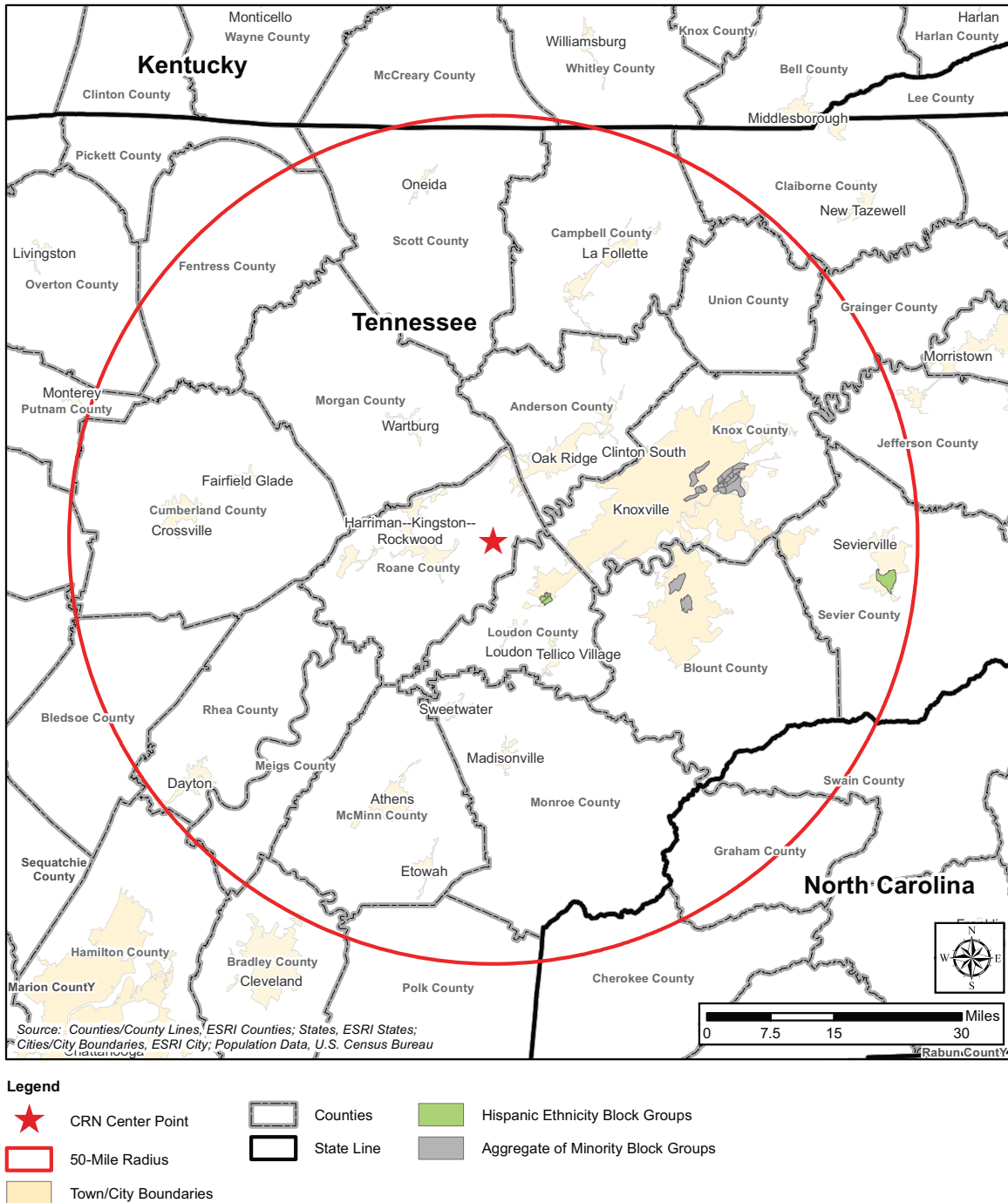


Figure 2.5.4-1. Minority Population Block Groups Within 50 Miles of the CRN Site

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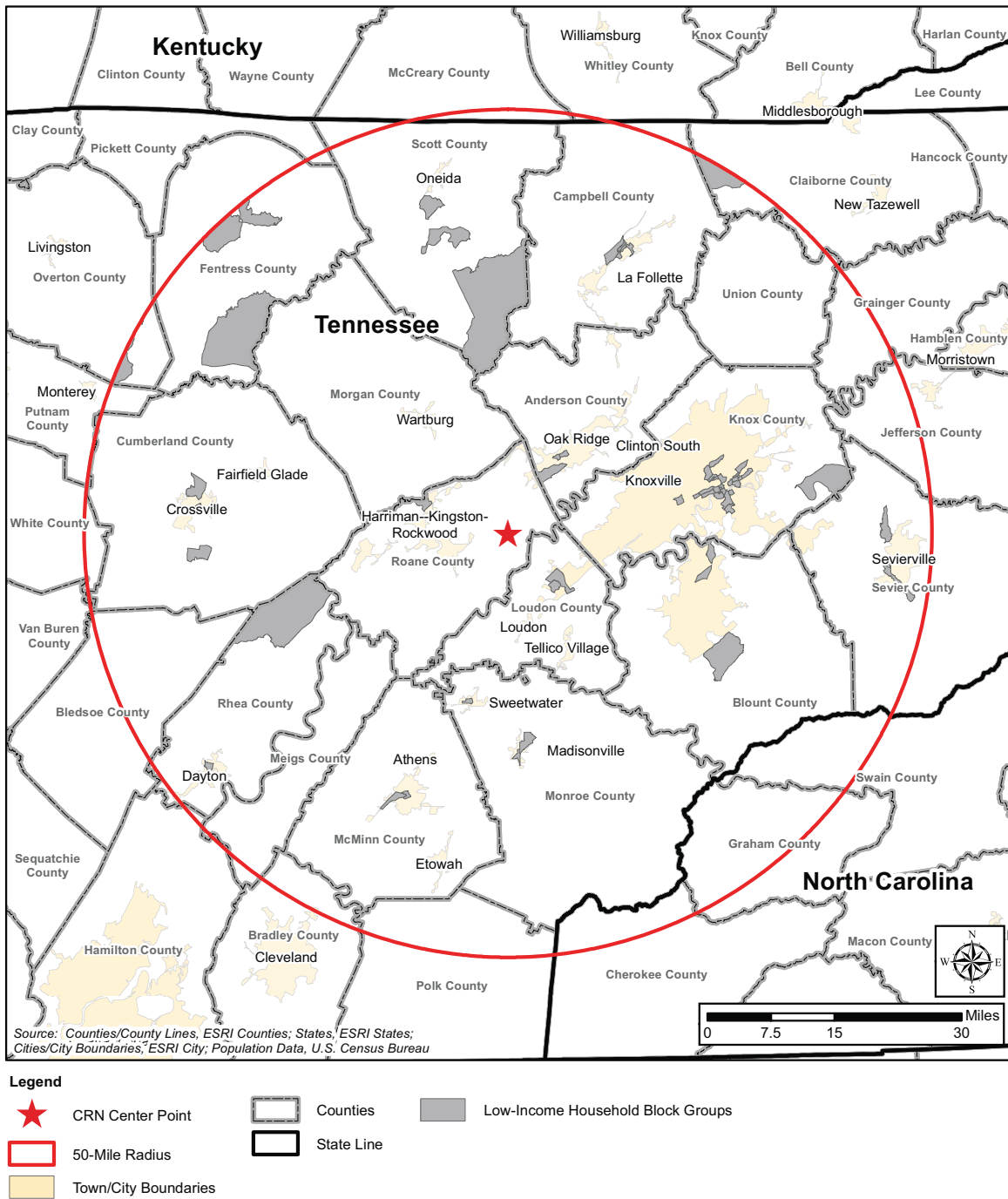


Figure 2.5.4-2. Low-Income Population Block Groups Within 50 Miles of the CRN Site