



African Americans at Los Alamos and Oak Ridge: A Historic Context Study



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(cover) African American workers pouring concrete foundations during the early construction of Oak Ridge, Tennessee, June 1944. Courtesy DOE photo collection.

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Abbreviations and Acronyms

AEC	Atomic Energy Commission
DOE	Department of Energy
DSC	Denver Service Center
MAPR	Manhattan Project National Historical Park
NAACP	National Association for the Advancement of Colored People
NARA	National Archives and Records Administration
NPS	National Park Service
ORNL	Oak Ridge National Laboratory
TVA	Tennessee Valley Authority

INTRODUCTION

This historic context study seeks to document and consider the work of African Americans in the research and deployment of US atomic weaponry during World War II and place those contributions and experiences within the national sociopolitical context of World War II and the development of nuclear arms. The study has been prepared for the Manhattan Project National Historical Park's (MAPR) staff's use to identify areas of future additional research and to support interpretive programming. This study effort is part of a larger initiative in the National Park Service to interpret the full history of the Manhattan Project and the early days of the Atomic Energy Commission by studying the contributions of diverse groups and individuals that have been less widely known or understood.

SCOPE OF THIS HISTORIC CONTEXT

This historic context study focuses on the Manhattan Project sites in Los Alamos, New Mexico, and Oak Ridge, Tennessee. It does not include the MAPR Hanford site in Hanford, Washington, because the National Park Service (NPS) staff in the Pacific West Region are collaborating with Washington State University to prepare a separate oral history project on African Americans' involvement at the Hanford site. There may be opportunities to incorporate the results of the Hanford oral history project into this study at a future time. In addition, the National Park Service will be looking to commission a similar study for Hanford and Chicago in the near future.

METHODS

A project team of cultural resource specialists from the Denver Service Center (DSC) worked closely with Intermountain Regional Office, MAPR, and other NPS staff to complete the project. The Denver Service Center provided project management, document development and production, editing services, and technical support. Regional staff were a part of the project team for guidance, review, and technical support. MAPR staff provided guidance, review, and technical support, and coordinated the clearances and transmittals as needed.

Development of this historic context drew from primary and secondary sources. Oral history interview transcripts or recordings were consulted where available, but additional interviews were not conducted as part of this project. Photographic collections were identified for future research, and digital copies of select photographs or other graphics were collected to illustrate the historic context where possible. The DSC study team coordinated with the MAPR staff to identify research repositories, libraries, and collections in which to conduct historical research. Two on-site research trips were made—one to Los Alamos and one to Oak Ridge. The study process and content follow the guidelines described in the National Register Bulletin: *How to Apply the National Register Criteria for Evaluation* and the NPS white paper, "The Components of a Historic Context: A National Register White Paper," by Barbara Wyatt, dated April 2009.

SUMMARY STATEMENT OF CONTEXT

This historic context study examines the roles African Americans played at the Manhattan Project sites of Los Alamos, New Mexico, and Oak Ridge, Tennessee. It covers the period from 1942, when the Manhattan Project was initiated, to 1958, when the Atomic Energy Commission (AEC) allowed a desegregated high school to be based out of Oak Ridge laboratory space. This study documents the work done by the Manhattan Project's African American workforce, how African Americans were recruited to Oak Ridge and not recruited to Los Alamos, and their social lives at the two sites.

LOS ALAMOS SOURCES

The suggestion that no African Americans were involved in the Manhattan Project at Los Alamos was first introduced to the study team during a conversation with historian Heather McClenahan, the then-executive director of the Los Alamos Historical Society. The study team worked to confirm or disprove this idea through a careful review of primary and secondary sources. Historian Clayborne Carson's comment in Katrina Mason's 1995 book *Children of Los Alamos* that his parents' move to Los Alamos in 1947 made them "pioneers" was the first suggestion that Ms. McClenahan's hypothesis was likely correct.

Other sources that lent credence to the idea that Los Alamos lacked an African American population did so implicitly. Jon Hunner's 2004 book *Inventing Los Alamos: The Growth of an Atomic Community* is an extensive social history of the town and contains valuable information on everything from Los Alamos' housing stock to the structure of the town's school system. Information on the experiences of Los Alamos' Native American and Hispanic workers is also included; however, there is no mention of African Americans. Similarly, in *Reminiscences of Los Alamos, 1943-1945*, nine men and one woman who lived in the town share their memories of the Manhattan Project years. None of these individuals reference African Americans in their accounts.

LOS ALAMOS REPOSITORIES

An in-person review of Manhattan Project-related files at the Mesa Public Library in Los Alamos failed to produce any information related to African Americans in the town's history. A separate visit to Los Alamos Historical Society Archives was more successful, but still ultimately unrewarding. Two photographs of African Americans, one featuring an Army unit and one featuring a cook, were located in the archives. The photograph of the Army unit included the names of several of the soldiers pictured in the photograph. It also identifies Fort Lawton, a former Army base in Washington State, as the location of the photograph. How the photograph made its way into the Los Alamos Historical Society's collections, and what connections any or all of the soldiers have to Los Alamos, could not be determined. The photograph of the cook does not possess any identifying information that would allow for follow-up research to occur.

OAK RIDGE SOURCES

Manhattan District History, Book I – General, Volume 12-Clinton Engineer Works of the official Manhattan District History produced by the Atomic Energy Commission in March 1947 provides a technical overview of the development of the central facilities and community in Oak Ridge, Tennessee, but never mentions African Americans or segregation. This is a common approach for official documents from the World War II era. Most official US Army and Oak Ridge publications do not mention race and ignore the fact that African Americans also worked at the site and led strikingly different lives from their white coworkers.

Two of the most-often referenced and cited sources of information about African Americans in Oak Ridge are articles published by correspondent Enoc P. Waters in the national African American newspaper *Chicago Defender*, “Negro Kids Can’t Go to School at Biggest Brain Center” (December 29, 1945) and “Negroes Live in Modern ‘Hooverilles’ in Atomic City” (January 5, 1946). These articles are some of the only contemporary accounts of life for African Americans living in Oak Ridge immediately following World War II. Their sensational details and depiction of conditions in the African American hutments are often repeated in secondary sources. (Photocopies of the articles are in the Oak Ridge Public Library-Oak Ridge Room “Blacks” vertical file.)

Elizabeth Peelle’s “A History of Segregation in Oak Ridge, 1943-1960,” documents segregation in employment, schools, housing, public services, and community organizations during that period. Elizabeth Peelle moved to Oak Ridge from Ohio in 1954 to work as a chemist at the K-25 plant and was shocked at the segregation faced by African American workers and residents in Oak Ridge. Peelle compiled “A History of Segregation” in August 1960 to support early work by the Oak Ridge Community Relations Council, an integrated group dedicated to improving conditions for African American residents. Peelle and the Council intended the report to document the current state of affairs and to be used as an organization tool for further integration efforts. While Peelle does not provide citations for primary sources, she states that she consulted approximately 50 people, including former and current African American Manhattan Project workers. The history includes information and anecdotes seemingly not captured in official Oak Ridge records or otherwise reported. (Photocopies of the unpublished report are available in the Oak Ridge Public Library-Oak Ridge Room.)

First published in 1981, Charles W. Johnson and Charles O. Jackson’s *City Behind a Fence: Oak Ridge, Tennessee, 1942-1946* is considered the definitive social history of Oak Ridge, Tennessee. The authors were able to access and analyze extensive Manhattan Project/AEC/Department of Energy (DOE) archival material before it was sent off site to the National Archives in East Point, Georgia. (The National Archives moved again in 2005 to Morrow, Georgia.) *City Behind a Fence* references racial tensions at Oak Ridge in “Chapter 3: Main Street by Order of . . .” and the epilogue.

Two more-recently published authors build upon *City Behind a Fence*. Peter Bacon Hales devotes a chapter to race across the three central Manhattan Project facilities in his social history *Atomic Spaces: Living on the Manhattan Project*. Russell Olwell discusses African Americans and the Manhattan Project in his PhD dissertation, published articles, and book *At Work in the Atomic City: A Labor and Social History of Oak Ridge, Tennessee* (2006). He also compiled “The History of Oak Ridge in the 1940s” (available in the Oak Ridge Public Library-Oak Ridge Room).

Additional sources that provide context for life as an African American in Oak Ridge during and after World War II include oral histories and local newspaper articles. The Center for Oak Ridge Oral History and K-25 Virtual Museum Oral History Project have oral history recordings and transcripts available electronically through the projects’ websites. A 12-part *Oak Ridger* series about the community of Scarboro that started running February 10, 1977, covers the history of the community, its relationship to Oak Ridge as a whole, and current issues facing Scarboro. The 5-part *Oak Ridger* series called “Oak Ridge Blacks Remember” was born out of a day-long program presented by the Oak Ridge branch of the National Association for the Advancement of Colored People (NAACP), and started running on February 8, 1982. (Photocopies of the articles are available in Oak Ridge Public Library-Oak Ridge Room “Blacks” and “Segregation” vertical files and on *Oak Ridger* microfilm.) The oral histories and *Oak Ridger* articles are not specific to the Manhattan Project time period and contain information about Oak Ridge’s black community into the 1970s that provides context about the continued struggle for civil rights.

OAK RIDGE REPOSITORIES

Because Oak Ridge was originally established as a secure and secret military reservation, the US Army and US Army Corps of Engineers were responsible for creating and managing the atomic facilities as well as the resulting on-site community of workers. The federal government gradually subcontracted aspects of community planning and management to companies more equipped to handle the day-to-day demands associated with operating what was then the fifth-largest city in Tennessee; however, all records related to Oak Ridge between 1942 and 1946 were classified. The Atomic Energy Commission, the government agency that was the successor to the Manhattan Project, continued to oversee all aspects of life and work in Oak Ridge through the opening of the city gates in 1949 and gradual shift to civilian control that culminated in Oak Ridge’s official incorporation in 1959. Records that predate 1959 have shifted between numerous government agencies and, ultimately, the Department of Energy transferred the entire AEC collection to the National Archives in Atlanta. It is unclear what records may have been lost since the Manhattan Project ended in 1946, but most records related to civilian matters were likely destroyed either when the Atomic Energy Commission assumed management after World War II or when the community fully transitioned to civilian management. Official memos, reports, and photographs taken by the US Army may survive as part of the AEC collection in the National Archives, but the extensive collection has not been fully catalogued.

The Oak Ridge Room of the Oak Ridge Public Library is the largest public collection related to Manhattan Project activities at Oak Ridge, Tennessee. The collection includes reference material related to development of the Oak Ridge community as well as vertical files of local newspaper clippings. Local history collections at the public libraries in the small neighboring communities of Harriman, Oliver Springs, Rockwood, and Clinton range from limited to nonexistent. Collections at the Tennessee State Library and East Tennessee History Center did not have information about African Americans, race, or segregation specific to Oak Ridge and the Manhattan Project, but provided context on the history of African Americans in the state and Jim Crow-era segregation.

ADDITIONAL RESEARCH OPPORTUNITIES

The National Archives and Records Administration (NARA) repository at Atlanta (Morrow, Georgia) could be valuable for additional primary sources and reports related to the Manhattan Project at Oak Ridge. The AEC collection includes approximately 5,000 cubic feet of records, the vast majority of which have not been individually catalogued. Considering the National Archives sources cited in Olwell's and Hales' works, the DOE collection could be a great repository for future original research, although it is uncertain what exactly is held in NARA's collection due to the collection's size and the type and extent of records that were transferred. At the time of this study, there is no timeline for further NARA cataloguing efforts.

HISTORIC CONTEXT

On August 6, 1945, the United States dropped the world's first atomic bomb on the Japanese city of Hiroshima. The bomb, nicknamed "Little Boy," exploded with the force of 20,000 tons of TNT. Between 90,000 and 166,000 people, more than one-third of Hiroshima's population, died from the bomb immediately and in the 4-month period following the explosion.

Preparing for his 7:45 p.m. broadcast on the evening of August 6, NBC News radio commentator H.V. Kaltenborn wrestled with how to describe Little Boy. The first draft of his script opened by describing the atomic bomb as "one of the greatest scientific developments in the history of man." For reasons that are still unclear, Kaltenborn opted to revise his introduction. When his broadcast aired that night, Americans around the country heard the new opening that the man known as "the Dean of American Commentators" had settled on. "Anglo-Saxon Science has developed a new explosive device 2,000 times as destructive as any known before," Kaltenborn declared.¹ In revising his words, Kaltenborn gave credit to the American scientists who had designed and built Little Boy. In framing the bomb as an "Anglo-Saxon" accomplishment, Kaltenborn overlooked the contributions that African American men and women and other ethnicities and people of color across the United States played in creating the bomb.

The Manhattan Project began in early 1942 when, having been prodded by Albert Einstein among others, President Franklin Roosevelt decided to proceed with a full-scale program to build an atomic weapon. The project was assigned to the US Army Corps of Engineers. Under the direction of Brigadier General Leslie R. Groves, the Corps set up the Manhattan Engineer District, so called because the initial headquarters was in Manhattan, New York. Other project sites were subsequently established across the country.² In time, five sites became particularly significant in the building of the atomic bomb: the Metallurgical Laboratory (known colloquially as the "Met Lab") in Chicago, Illinois; the Oak Ridge Reservation near Knoxville, Tennessee; the Los Alamos Laboratory near Santa Fe, New Mexico; and the Hanford Reservation in eastern Washington State. Work also continued in Manhattan at Columbia University.

African Americans are known to have worked in four of these sites. At the Met Lab in Chicago, African American scientists and technicians worked alongside their white counterparts in efforts to understand the fission process. Their work was complemented by African Americans at the laboratory at Columbia University in New York City, who sought to understand how uranium isotopes could be separated for an atomic bomb. In total, it is believed approximately 19 African Americans worked on the Manhattan Project at the primary sites as scientists or technicians.³ At Hanford and Oak Ridge, African American workers were limited to labor positions. Only at Los Alamos is there no evidence of African Americans working on the Manhattan Project.

1. Quoted in Paul Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age* (Chapel Hill: The University of North Carolina Press, 1994), 4.

2. A list of sites associated with the Manhattan Project is included in appendix A.

3. A list of known African American scientists and technicians who worked on the Manhattan Project is included in appendix B.



African American scientists were central to the success of the Manhattan Project. Dr. Moddie Daniel Taylor worked as an associate chemist for the Manhattan Project at the University of Chicago. Courtesy Smithsonian Institution Archives/ MAPR NPS site.

The social environment of the United States during the first half of the 20th century helped shape the Manhattan Project. In the years leading up to World War II, many states continued to enforce Jim Crow laws. These laws separated blacks and whites in education, housing, and other public spheres. Although Executive Order 8802 nominally prohibited discriminatory employment practices by federal agencies and companies involved in war-related work, housing for Manhattan Project workers remained segregated at Hanford and Oak Ridge.

The Manhattan Project workforce also reflected the influence of the Great Migration during the early 20th century. Beginning in 1916, and continuing for the next six decades, more than six million African Americans moved out of the South.⁴ They made their new homes throughout the North and the West, transforming the United States in the process. At the turn of the 20th century, Georgia, Mississippi, and Alabama were the three states with the largest African American populations. By 1970, New York, Illinois, and California had the most African Americans.⁵ Two of those states, New York and Illinois, were home to Manhattan Project sites. In 1939, physicists at Columbia University helped initiate the project by demonstrating that neutrons could split uranium atoms. In subsequent years, Columbia scientists and technicians researched the potential of the gaseous diffusion process to enrich uranium. Several African Americans assisted with this effort at various Manhattan Project sites.

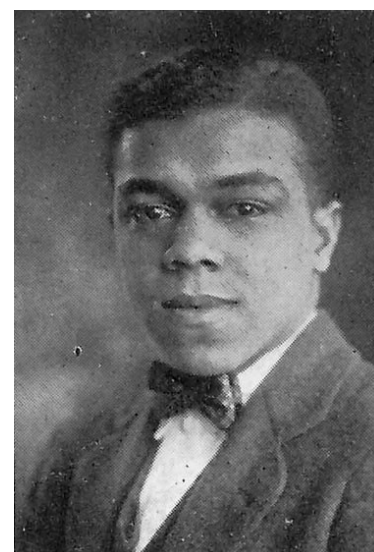
4. Isabel Wilkerson, *The Warmth of Other Suns: The Epic Story of America's Great Migration* (New York: Vintage Books, 2010), 8-9.

5. Greg Toppo and Paul Overberg, "After Nearly 100 years, Great Migration Begins Reversal," *USA Today*, (February 2, 2015).

Two of the African American scientists at Columbia were brothers. William and Lawrence Knox were natives of New Bedford, Massachusetts. As early as the 1830s, New Bedford had an established community of African Americans who were drawn to the whaling town for its diversity and economic opportunities. Men like Elijah Knox—the brothers' grandfather—and Frederick Douglass came to New Bedford in the decades leading up to the Civil War to become “Black Yankees” and join the unusually welcoming community of Quakers, abolitionists, and African Americans.⁶ Educated at the Massachusetts Institute of Technology and Harvard University respectively, the brothers represented 7% of the African Americans who received PhDs in Chemistry between 1916 and 1940.⁷ William joined the Manhattan Project in early 1943. Shortly after being hired, William was promoted to the head of an all-white work group. One year later, Lawrence was hired by a separate work group. Looking back, William Knox would say that his work on the Manhattan Project provided him with his first taste of membership in an active scientific community.⁸

In Chicago, the men and women working at the Met Lab included 12 African Americans. Arthur Compton, the director of the Met Lab, based the group's work at his employer, the University of Chicago. The university had admitted African American students since its founding in 1890. Although there is no evidence to suggest that Compton actively sought to recruit a diverse workforce, it is clear that he supported an egalitarian approach to hiring Manhattan Project scientists and thought the project's diverse workforce contributed to its ultimate success.⁹ Four of the 12 African Americans who worked at the Met Lab graduated from the University of Chicago prior to joining the Manhattan Project.¹⁰ Two others remained at the university after the war and earned advanced degrees.

One of the scientists employed by the Met Lab was J. Ernest Wilkins, Jr., an African American man who earned his PhD from the University of Chicago in 1942, when he was 19. In 1944, Wilkins' work group was transferred to Oak Ridge; however, he remained in Chicago. Sensing an opportunity, Los Alamos physicist Edward Teller wrote to Harold Urey, the Director of War Research at Columbia, “He is a colored man and since [his] group is moving to [Oak Ridge] it is not possible for him to continue work with that group. I think it might be a good idea to secure his services for our work.”¹¹



The Knox Brothers, Lawrence and William, used their Ph.Ds in chemistry to further Manhattan Project research related to uranium hexafluoride gas and quinine.

6. Stephen Weininger and Leon Gortler, “Perspective: Stumbling through History: Discovering Unsung African-American Chemists,” *Science*, (January 14, 2011), accessed July 2019, <https://www.sciencemag.org/careers/2011/01/perspective-stumbling-through-history-discovering-unsung-african-american-chemists>. New Bedford Whaling National Historical Park's website and interpretive programs provide additional interpretation and information about African Americans in the community before the Civil War.

7. Leon Gortler and Stephen J. Weininger, “Chemical Relations: William and Lawrence Knox, African American Scientists,” *Distillations*, (summer 2010).

8. Weininger and Gortler, “Perspective: Stumbling through History.”

9. Boyer, *By the Bomb's Early Light*, 139.

10. US Department of Energy, Legacy Management Program Update, (January-March 2016), accessed May 2019, https://www.energy.gov/sites/prod/files/2016/04/f30/2016_Q1final.pdf.

11. Quoted in Brittany Crocker, “Bias Kept Black Scientists out of Oak Ridge's Atomic Bomb Work,” *The Knoxville News Sentinel*, (February 25, 2018).



Mathematician and physicist J. Ernest Wilkins, Jr. worked on Manhattan Project research at the University of Chicago Met Lab but did not relocate to Oak Ridge when his team was transferred to the site in the fall of 1944.

There is no evidence to suggest that Urey followed up on Teller's appeal. Wilkins worked at the Met Lab for the remainder of the war. It is not clear if the Army formally banned Wilkins from relocating due to segregation at Oak Ridge facilities, but even if Wilkins had been allowed to accompany the other members of his work group to Tennessee, it is doubtful he would have done so. "He did talk about the fact that he would not go to any place that would put restrictions on where he lived, who he lived with, and the kinds of amenities he had grown accustomed to in places like Chicago," Wilkins' friend Ronald Mickens said in a 2018 oral history interview. "There was no possibility that he would ever go to Oak Ridge under the conditions in which blacks had to live."¹²

Mildred Summers was another African American who worked at the Met Lab. She is believed to be one of only two African American women employed by the Manhattan Project as scientific and technical staff. Born in Vicksburg, Mississippi in 1913, Summers moved to Chicago in search of work in 1931. A tip from a friend encouraged her to apply for a job with the Met Lab in the fall of 1942. Summers' aptitude for scientific work quickly became obvious. Beginning as a laboratory helper, she worked her way up to become a technician in the Extraction-Decontamination group. Although she was scheduled to leave the group on June 30, 1945, Summers was instead transferred to the Biology Division that April. Her work took her to Hanford and, eventually, back to Chicago, where she worked for Argonne National Laboratory following the end of the war.¹³

The struggle to secure African American civil rights accelerated in the decade following the end of World War II. President Harry Truman's issuance of Executive Order 9981 in 1948 began the process of integrating the US Armed Services. Six years later, in *Brown v. Board of Education*, the Supreme Court ruled that segregation in public education was unconstitutional. A new generation of civil rights leaders increasingly called attention to the chasm between the country's founding ideals and the reality of life for African American citizens. As new possibilities for African American advancement revealed themselves, the old threats of racial persecution and discrimination continued.

LOS ALAMOS

Geography and Development of the Site

Los Alamos, as it exists today, was largely developed during the Manhattan Project. Situated 7,000 feet above sea level on the Pajarito Plateau in the Jemez Mountains, the land surrounding the town was first settled much earlier, in approximately 10,000 BC. During the Coalition and Classic periods (AD 1150 to 1600), large pueblo villages were built on the plateau. The plateau was no longer used as a year-round residential area beginning in the mid-1500s. At this time, new pueblos were constructed along the Rio Grande.

12. Voices of the Manhattan Project, "Ronald E. Mickens' Interview," (July 23, 2018), accessed May 2019, <https://www.manhattanprojectvoices.org/oral-histories/ronald-e-mickens-interview>.

13. Ruth H. Howes and Caroline L. Herzenberg, *Their Day in the Sun: Women of the Manhattan Project* (Philadelphia: Temple University Press, 1999), 123-124.

The pueblo of Tsirege, occupied during the Classic period (AD 1325 to 1600), is on lands appropriated by the US government during World War II and is ancestral to the Tewa speakers of the Pueblo de San Ildefonso. In 1680, the Pueblo peoples revolted against the Spanish. At this time, several Ancestral Pueblo sites located on the Pajarito Plateau were reoccupied, as they offered natural protection and defense for groups of refugees. Evidence of Navajo and Jicarilla Apache occupation of the northern Rio Grande begins with the Spanish Colonial Period (AD mid-1500s to early 1800s). Pueblo, Athabaskan, Anglo, and Hispanic groups continued the seasonal use of the plateau for hunting, gathering, and grazing during the late 19th and early 20th centuries.

Black history in New Mexico dates back to 1539 when Esteban (sometimes referred to as Estevan, or Stephen) crossed what is now the American Southwest. Born in Morocco, the enslaved Esteban was brought to America in 1528 to support a Spanish colonial expedition and was shipwrecked off the coast of what is now Texas. Later, after gaining respect as a translator and healer, he traveled across the current state of New Mexico as part of an expedition to find the Seven Cities of Cibola. Other African soldiers and settlers were part of Coronado's 1540-1542 expedition and Spanish efforts to settle New Mexico in the 1590s.¹⁴ The remote nature of New Mexico provided additional freedom and opportunity to Africans during the Spanish colonial era, and Native Americans and individuals with African ancestry often intermarried, a tangible sign of the exchange of cultures and ideas on the southwestern frontier.¹⁵

The United States annexed New Mexico Territory in 1848 as a result of the end of the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo. Almost immediately, the question of slavery was introduced. In 1852, the first territorial governor suggested passing a resolution to ban free African Americans from settling in the territory. While the suggestion was initially opposed, the territory legislature passed a law in 1856 that banned any additional free African Americans from settling in the territory and outlawed interracial marriage. During the Civil War, the Confederacy attempted to spread slavery throughout the Southwest, although only 40 enslaved individuals were counted in the 1860 New Mexico territorial census, most of whom were owned by Southern-born military officers and government officials stationed at Army posts throughout the territory.¹⁶

Following the Civil War, New Mexico offered a variety of opportunities for African Americans seeking economic and social independence. Like other western states, New Mexico became a destination for black homesteaders during Reconstruction, although on a smaller scale. By 1910, 48 farms were operated by black New Mexicans.

14. Bruce A. Glasrud, "Under the Radar: Blacks in New Mexico History," in *African American History in New Mexico: Portraits from Five Hundred Years*, ed. Bruce A. Glasrud (Albuquerque: University of New Mexico Press, 2013), 3-4.

15. Dedra S. McDonald, "Intimacy and Empire: Indian-African Interaction in Spanish Colonial New Mexico, 1500-1800," in Glasrud, *African American History in New Mexico*, 25-48.

16. Glasrud, "Under the Radar," in Glasrud, *African American History in New Mexico*, 5-6.

Silver, gold, lead, copper, and coal attracted black miners to the territory; a substantial portion of the territory's black population lived in counties with mining into the 20th century.¹⁷ Cattle drives traveling through western Texas and eastern New Mexico brought African American cowboys to the territory, some of whom decided to settle in the area. Buffalo Soldiers, African American infantry and cavalry men in the US Army, were assigned to New Mexican outposts to help protect settlers. Another small wave of African Americans moved into New Mexico towns with the expansion of railroads, either as employees of the railroad companies or by working in industries associated with rail travel.¹⁸ However, the territory-wide population of African Americans stayed small, with approximately 1,600 African American residents in 1910.¹⁹

Formal homesteading on the Pajarito Plateau began in the late 1880s. During the homesteading years, families used the Pajarito Plateau for seasonal farming, ranching, and resource gathering. Many of these dry-land farmers—primarily Hispanic Americans from the nearby Rio Grande Valley settlements of San Ildefonso, Pojoaque, El Rancho, and Española—did not live on their claims throughout the year. Notable exceptions to the seasonal occupation of the Pajarito Plateau by Hispanic homesteaders included a few permanent ranches such as the Anchor Ranch. By the late 1930s, 36 individuals had patented claims under the terms of the Homestead Act or related land legislation. While there are records documenting centuries of African American exploration and settlement in New Mexico, African Americans are absent from the known early history of Pajarito Plateau. New Mexico was home to several African American homesteads, including the town of Blackdom in the southeastern corner of the state, but there is no evidence to suggest that any African Americans had a claim on the plateau. Los Alamos' selection as a Manhattan Project site did not change the racial demographics of the region. The historical record indicates African Americans did not reside in or around Los Alamos until 1947, a year after the work of the Manhattan Project was reconstituted as the Atomic Energy Commission.

Economic, Cultural, and Governmental Factors

From its origins, science was the focus of the Los Alamos site development. Although the site was an Army installation overseen by General Groves, the University of California was responsible for operating the laboratories. According to authors Kai Bird and Martin Sherwin, "The Army [controlled] access to the community, but it [did] not control the exchange of information among the scientists."²⁰

17. Glasrud, "Under the Radar," in Glasrud, *African American History in New Mexico*, 6-7.

18. Glasrud, "Under the Radar," in Glasrud, *African American History in New Mexico*, 8.

19. Glasrud, "Under the Radar," in Glasrud, *African American History in New Mexico*, 7.

20. Kai Bird and Martin J. Sherwin, *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer* (New York: Vintage Books, 2005), 211.

Approximately 100 scientists, engineers, and support staff lived and worked in Los Alamos when the site opened in 1943. As the work to build the bomb accelerated, the population increased. By 1945, 6,000 men, women, and children lived in Los Alamos—more than 4,000 of them worked in the laboratories.²¹

Racial dynamics in New Mexico in the early 20th century were rarely straightforward. Jim Crow policies existed, but they were not absolute. A law passed in 1925 by the New Mexico State Legislature allowed local school districts to segregate black students from whites.²² No equivalent policies existed at the University of New Mexico. The public institution had its first African American graduate in 1938.²³

These racial dynamics were not dramatically affected by the Great Migration. The African American population in Albuquerque, New Mexico's largest city, maintained an active community. In the 1920s and 1930s, as modest population growth took place, African American-owned businesses ranging from contracting and construction businesses to boardinghouses and restaurants sprang up throughout the city.²⁴ Notwithstanding these advances, New Mexico's African American population remained small. As of the 1940 census, African Americans comprised less than 1% of the state's population with only 4,672 recorded individuals.²⁵

The racial environment in Los Alamos during the Manhattan Project both reflected and stood apart from the larger trends of the state. The Army assigned housing to the town's workforce based on that person's position of employment at the laboratories. Since the nature of one's work was informed by the level of education that one had attained, this had the effect of separating the predominantly Anglo scientists and technicians from the Native American and Hispanic service personnel.²⁶ Despite its limitations, this policy would have allowed African American scientists to stand on equal footing with their white peers in Los Alamos. Why none of the African American scientists at the Met Lab or Columbia University were given this opportunity is a topic for future research.

21. Norris Bradbury, "Los Alamos – The First 25 Years" in eds. Lawrence Badash, Joseph O. Hirschfelder, and Herbert P. Broida *Reminiscences of Los Alamos, 1943-1945* (Dordrecht, Boston, London: D. Reidel Publishing Company, 1980), 162.

22. Glasrud, "Under the Radar," in Glasrud, *African American History in New Mexico*, 14.

23. Robert Bruce Slater, "The First Black Graduates of the Nation's 50 Flagship State Universities," *Journal of Blacks in Higher Education* no. 13 (Autumn 1996), 73.

24. Glasrud, "Under the Radar," in Glasrud, *African American History in New Mexico*, 15.

25. It is likely that African Americans were the third-largest minority group after Hispanics and Native Americans considering the historic demographics of the area, but federal censuses before 1970 did not record "Hispanic" as a separate race. The 1940 census reports 92.6% White, 0.9% Black, and 6.5% American Indian; Campbell Gibson and Kay Jung, "Historical Census Statistics on Population Totals by Race, 1790 to 1990, and by Hispanic Origin, 1970 to 1990, for the United States, Regions, Divisions, and States," (Washington DC: US Census Bureau Population Division, 2002), Table 46; George M. Cooper, "The Modern Civil Rights Movement in New Mexico, 1955-1975" in Glasrud, *African American History in New Mexico*, 201.

26. Los Alamos did recruit nonlocal service workers and laborers, but only in New Mexico. Even then, due to limited housing, site managers preferred to hire men and women already close to Los Alamos. Jon Hunner, *Inventing Los Alamos: The Growth of an Atomic Community* (Norman: University of Oklahoma Press, 2004), 30, 63.



(top) This undated photo is part of the Los Alamos Historical Society archives. "Fort Lawton" is written on the reverse, but no other identifying information is available and it is not clear why or how the photo became part of the Los Alamos collection.

(right) This photo, taken by an Army photographer associated with Los Alamos, is also part of the Los Alamos Historical Society archive. The date and location of the photo, and identity of the African American man in it, are unknown. Courtesy Los Alamos Historical Society.

What is clear is that there were relatively few African American scientists for J. Robert Oppenheimer, the laboratories' scientific director, to recruit. As historian Shane Landrum has argued, "The existence of Black atomic scientists within a culture which denied Black men's intellect demonstrated the possibilities of science as an egalitarian career. That there were so few was a testament to the structural racism of American education."²⁷

Social History of African American People

No evidence was found to indicate that African Americans resided in Los Alamos during the years of the Manhattan Project. An undated photograph in the Los Alamos Historical Society Archives shows sixteen Army soldiers, including one African American man. The photograph identifies its location as Fort Lawton, Washington. The soldiers' connections to Los Alamos, if any, are not known.

Equally unclear are the origins of a second undated photograph showing an African American cook tending to a barbecue pit. No additional information about this photograph, on either the cook or the location of the barbecue, was found. Los Alamos Historical Society archivist Rebecca Collinsworth positively identified the photographer of this image as being a Project Y (Los Alamos) military photographer. Ms. Collinsworth also noted, however, that this photographer spent a good deal of time in Santa Fe at the United Service Organizations there. Without any additional information on the cook, or where the barbecue took place, it is not possible to determine if the photograph is connected to the social history of Los Alamos during the Manhattan Project.



27. Shane Landrum, "In Los Alamos, I Feel Like I'm a Real Citizen': Black Atomic Scientists, Education, and Citizenship," (master's thesis, Brandeis University, 2005), 2.

Post-Manhattan Project Context

In 1947, Clayborne Carson, a 31-year-old World War II Army veteran, moved to Los Alamos. Carson came to the town after he was offered a civilian job as a security inspector at the laboratories. He is believed to be Los Alamos' first African American resident.

Two years after Carson moved to Los Alamos, his wife Louise, his daughter Gail, and his sons Michael and Clayborne Jr. joined him in town. "If you think growing up in Los Alamos was special for white kids, that was many times truer for me," Clayborne Jr. later recalled. "My upbringing made me totally exceptional as a black person. It set me apart from just about everyone."²⁸ In this environment, Clayborne Carson Jr.'s childhood appears to have been largely untroubled. Los Alamos schools were integrated and, for Carson, were a positive experience. "I knew I was pretty bright, but it took a lot to stand out, particularly since I was interested in math and science," he said. "I had a fascination with that area, and there were some precocious kids."²⁹ Outside of school Carson participated in Cub Scouts and had a newspaper route beginning at the age of 10. He also played baseball and basketball and would have played football had he not been limited by his smaller size.³⁰ His family's house—a new, two-story, three-bedroom half of a duplex—was "something we would not have been able to afford elsewhere."³¹ Although the Carsons are believed to be the first African American family to live in Los Alamos, they would not be the last. Over the next 5 years, two additional African American families, the Johnsons and the Stones, moved to Los Alamos.

Clayborne Carson Jr's experiences growing up in Los Alamos were predominantly peaceful. Despite the lack of Jim Crow laws in the town, Carson still had to contend with discrimination based on his race. "I encountered more racism in sports than in other areas," Carson said. "I played a lot of baseball. I remember the first day of practice of the Babe Ruth league [when I was a teenager], the coach said 'I don't care if you're nigger or white.' And I had a basketball coach who watched me jump, and said, 'You colored boys all jump well.'" Reflecting on the town's racial attitudes in general, Carson remarked "I think the anti-black feeling was stronger among the Spanish. There was also a lot of anti-Spanish prejudice [from the whites]. That was more upfront."³² As he grew into adulthood, Clayborne Carson sought to better understand the role of racial prejudice in American life. After earning a doctorate in American History from the University of California, Los Angeles in 1975, Carson was selected in 1985 by Coretta Scott King to edit and publish the papers of Martin Luther King, Jr. As of August 2019, he serves as the Martin Luther King, Jr. Centennial Professor of History and Ronnie Lott Founding Director of the Martin Luther King, Jr. Research and Education Institute at Stanford University.

28. Katrina R. Mason, *Children of Los Alamos: An Oral History of the Town Where the Atomic Age Began* (New York: Twayne Publishers, 1995), 158.

29. Mason, *Children of Los Alamos*, 159.

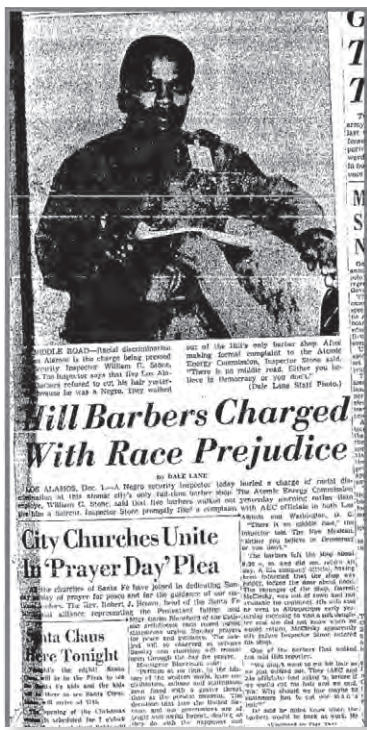
30. Clayborne Carson, *Martin's Dream: My Journey and the Legacy of Martin Luther King Jr.* (New York: Palgrave MacMillan, 2013), 21-22.

31. Mason, *Children of Los Alamos*, 159.

32. Mason, *Children of Los Alamos*, 159-160.



Army veteran Clayborne Carson moved to Los Alamos in 1947 and is believed to be the town's first African American resident. This photo, taken during the mid-1940s when the Carson family lived in Seattle, shows Carson, his wife Gail, and their young son Clayborne, Jr. Courtesy Carson family collection.



A December 1, 1950 article in the *New Mexican* chronicled William Stone's complaint against the Los Alamos barber shop where he was denied service. Courtesy Los Alamos Historical Society.

Carson's experiences with racial prejudice in his hometown were shared by one of Los Alamos' other African American residents. In July 1950, William Stone, a fellow security inspector with the Atomic Energy Commission, walked into Los Alamos' barbershop. He was refused service. Stone again attempted to get his hair cut that December. In response—despite AEC regulations banning discrimination based on race, color, or creed—each of the shop's five barbers walked off the job.³³ Stone was outraged. He filed a complaint with AEC officials in Los Alamos and Washington, DC. "There is no middle road," Stone told *The New Mexican* newspaper. "Either you believe in Democracy or you don't."³⁴ In a comment that may have reflected an underlying tension in Los Alamos, one of the barbers defended his colleagues' decision. "Why should we lose maybe 50 customers just to cut one man's hair?" he asked.³⁵ The Atomic Energy Commission eventually ruled in favor of Stone in his complaint. Two months later, in February 1951, Stone and two Santa Fe residents established the Santa Fe Chapter of the National Association for the Advancement of Colored People.

Other racial experiences in Los Alamos in the 1950s were considerably more positive. George Johnson was the patriarch of the third African American family in town. Unlike Clayborne Carson Sr. and William Stone, Johnson was a scientist at the laboratories. In November 1955, Johnson's life and work were the subject of a profile in *Ebony* magazine. In contrast to Stone's experience at the town's barbershop, Johnson claimed that "there is no racism at Los Alamos, the scientists mostly being very progressive people."³⁶ He continued, "Here I never get a chance to think about race because my neighbors won't let me."³⁷

Summary

Work on the Manhattan Project in Los Alamos was undertaken by a diverse, multiethnic workforce, but there is no evidence to suggest that African Americans played a role. It is believed that the town did not have its first African American resident until 1947. Jim Crow laws did not exist in Los Alamos, but issues of racial discrimination were still evident during the years immediately after the war. By their own admission, however, the African American families living in Los Alamos experienced a racially integrated social environment that was often dramatically different than that in much of the United States during the 1940s and 1950s.

33. Heather McClenahan, "Discrimination Controversy Erupted in 1950s Los Alamos." *Los Alamos Daily Post*, March 21, 2019.
 34. Dale Lane, "Hill Barbers Charged with Race Prejudice," *New Mexican*, (December 1, 1950).
 35. Lane, "Hill Barbers Charged."
 36. Quoted in Landrum, "In Los Alamos," 1.
 37. Quoted in Landrum, "In Los Alamos," 29.

OAK RIDGE

Geography and Development of the Site

Tasked with finding a site with the unique geographic location that had space, power supply, and available labor to support the massive undertaking needed for atomic research and development, the Army created a list of criteria used to vet potential sites for the Manhattan Project's central administration and production facilities. The selected site needed to be an area no less than 200 square miles that could accommodate up to four major production buildings in the same complex and provide separation between housing and the plants. The site would be ideally located somewhere between the Allegheny Mountains and Rocky Mountains to protect against coastal attacks and air raids. If possible, the site would allow individual plants and housing areas to be separated topographically to lessen the chance of radiation exposure or other hazards but be gently graded to facilitate excavation. It should be close to at least one, if not two, electric sources that could provide 150,000 kilowatts of power and a water source for industrial uses and cooling that could accommodate 370,000 gallons per minute. All construction material, supplies, and workers needed to be brought into the facility, so an established rail line and good roads were crucial. The location needed to be accessible to an available workforce and there needed to be space for a townsite that could serve approximately 5,000 people. Land at the site also had to be affordable enough to allow for forced acquisition in fee of the needed parcels.³⁸

Locations that appeared to meet at least some of the outlined criteria included several locations in Tennessee, a neighborhood near Chicago, the area near the Shasta Dam in California, and the area by the Grand Coulee and Bonneville Dam in Washington. Ultimately, 56,200 acres in Roane and Anderson Counties, Tennessee—less than 25 miles from Knoxville—was selected as the home of Clinton Engineering Works and administrative center of the Manhattan Project.³⁹ East Tennessee's topography, composed of ridges ranging between 100 and 300 feet high that created geographically separated valleys, was ideal for masking buildings from the air and ensuring separation for security and safety reasons. The site had plentiful electricity due to new Depression-era hydroelectric dams and ample water provided by the Clinch River. Rail lines through the valley were already in place. Potential workforce could be drawn from nearby large cities including Knoxville, as well as rural eastern and central Tennessee. After a site visit and approval from General Groves, the approximately 3,000 residents who lived on the land proposed for the site were given notice to vacate their property.⁴⁰ Construction crews arrived at the site in October 1942.

38. US Army, *Manhattan District History, Book I-General, Volume 12-Clinton Engineer Works*, 2.1.

39. The site, which was 93 square miles, did not meet the government's initial estimates but was still deemed large enough to accommodate necessary development and housing. The federally owned property was subsequently expanded to include more than 58,000 acres.

40. Atomic Heritage Foundation, "Civilian Displacement: Oak Ridge, TN," (July 17, 2017), accessed May 2019, <https://www.atomicheritage.org/history/civilian-displacement-oak-ridge-tn>.

In the 3 years between President Franklin Roosevelt's approval of the Manhattan Project in July 1942 and the height of employment and development at the site in the summer of 1945, the "Secret City" at Oak Ridge became the fifth largest town in Tennessee, the second largest consumer of Tennessee Valley Authority (TVA) electricity, and the largest area motor transportation system in the southeastern United States. At its peak, Oak Ridge employed more than 80,000 workers and had a population of 75,000.⁴¹ Oak Ridge was fundamentally different from other communities constructed for the Manhattan Project. The community's large population—which was roughly five times larger than that at Hanford, Washington, and thirteen times larger than Los Alamos, New Mexico—had more diversity, more elaborate infrastructure, and more opportunities for interaction among social classes than the other two sites combined.⁴² While Los Alamos was a gated community primarily composed of scientists, and the bedroom communities outside Hanford allowed workers to segregate geographically, Oak Ridge was envisioned as a fully functioning, diverse community inside the security fence. It was a purely planned site that rose out of the ridges of East Tennessee seemingly overnight; however, the planned nature and diversity of Oak Ridge did little to address or confront the racial inequalities faced during the 1940s in the American South.

Economic, Cultural, and Governmental Factors

East Tennessee was considered the most liberal portion of the state for race relations during the 19th and early 20th centuries. Knoxville—Tennessee's third-largest city and the population center of East Tennessee—had long been home to a sizable free black community dating back to the 1790s. As much as half of the city's African American population at that time was free.⁴³ An influx of northern industrial investment in Knoxville after the Civil War continued to grow the urban environment in East Tennessee's largest city and foster a strong, politically and socially active African American community.

Even with the growth and continued success of the city's African American community, Knoxville was not immune to racial violence. In the summer of 1919, Maurice Mays, a biracial resident of the city, was accused of murdering Bertie Lindsay, a white woman. On the afternoon following the murder, a mob of more than one thousand people gathered at Knoxville's Hill Street jail, demanding Mays be turned over to them.⁴⁴ When the mob discovered that Mays was not being held in the jail, they turned their rage on Knoxville's black neighborhood, prompting the city's black business owners to organize and defend their property.

41. US Army, *Manhattan District History*, S13.

42. Lindsey A. Freeman, *Longing for the Bomb: Oak Ridge and Atomic Nostalgia*, (Chapel Hill: The University of North Carolina Press, 2015), 2.1-2.8.

43. Enoc Waters, "Negro Kids Can't Go to School at Biggest Brain Center," *Chicago Defender*, December 29, 1945. For more information about the African American experience in Knoxville, see Robert J. Booker, *Two Hundred Years of Black Culture in Knoxville, Tennessee, 1719-1991*, (Marceline: Walsworth Publishing, 1994), and James B. Jones, *Knoxville's African-American Community, 1860-1920* (Tennessee Historical Commission/State Historic Preservation Office, 1989).

44. Jan Voogd, *Race Riots and Resistance: The Red Summer of 1902*, (New York: Peter Lang Publishing, 2008), 102.



In the aftermath, hundreds of Knoxville residents were wounded and seven people, six blacks and one white, were dead.⁴⁵ In the months that followed, hundreds of black families moved out of Knoxville.⁴⁶

By the 1940s, African Americans made up approximately 14% of Knoxville's population (16,094 recorded African American individuals) and, as reported by newspaper correspondent Enoc Waters in his 1945 article about Oak Ridge, "though denied admittance to theaters and restaurants, Negroes are treated courteously at most of the leading stores and shops in the city [Knoxville]. . . quite a large number [of African Americans] are distributed throughout the city living amicably side by side with their white neighbors."⁴⁷

Historically, East Tennessee's soils and topography—characterized by the Appalachian Mountains, thickly forested ridgelines, and high plateaus—limited the development of large Antebellum-era plantations. Instead, smaller independent farms that did not rely on slave labor as heavily as the large-scale plantation production of the Deep South appeared. While slavery was present, it did not solely define the regional economy.⁴⁸ East Tennessee's early 20th-century economy was based on subsistence farming, timber harvesting, and coal mining, along with manufacturing growth in Knoxville, Chattanooga, and smaller industrial and company towns such as Harriman and Rockwood in Roane County. The area that would become Oak Ridge was dotted with sparsely populated farm communities including Scarborough, Wheat, Robertsville, New Bethel, New Hope, and Elza. African Americans lived in these communities alongside white farmers.

Prior to 1942, the portions of Roane and Anderson Counties that became Oak Ridge were a patchwork of small farming communities and homesteads owned and worked by a mix of African American and white East Tennesseans. Courtesy DOE photo collection.

45. "Knoxville Race Riot (1919)" *BlackPast*, (2016), accessed July 2019, <https://www.blackpast.org/african-american-history/knoxville-race-riot-1919/>

46. Amy McRary, "Black History: Knoxville's 1919 Race Riot to be Remembered in Arts Program," *Knoxville News Sentinel*, (February 22, 2019).

47. Campbell Gibson and Kay Jung, "Historical Census Statistics on Population Total by Race, 1790 to 1990, and by Hispanic Origin, 1970 to 1990, for Large Cities and Other Urban Places in the United States," (Washington DC: US Census Bureau Population Division, 2005), Table 43; Waters, "Negro Kids Can't Go to School."

48. Waters, "Negro Kids Can't Go to School."

A major regional economic driver during the years leading up to the Manhattan Project and World War II was the Tennessee Valley Authority. Established in 1933 as one of the New Deal programs to help lessen the effects of the Great Depression in the rural Middle South, TVA's purpose was to address energy, environmental stewardship, and economic development in the Tennessee Valley. Starting with construction of the Norris Dam in 1933, the public corporation constructed 10 dams in East Tennessee over the next two decades, providing jobs, flood-control measures, and hydroelectric power to the region. TVA projects became the model that the Manhattan Project tried to emulate during World War II. In early 1942, when the TVA's war effort was at its peak, 12 hydroelectric projects were under construction, and design and employment reached 28,000 employees.⁴⁹ Many of the TVA workers came from rural portions of the state and lived at the construction site in dormitories and modest, prefabricated housing.

Executive Order 8802, signed by President Franklin D. Roosevelt on June 25, 1941, mandated that "there shall be no discrimination in the employment of workers in the defense industry of Government because of race, creed, color, or national origin." The order opened the possibility of African Americans working for the Manhattan Project but did nothing to support racial equality at the site. Once the 1896 US Supreme Court *Plessy vs. Ferguson* decision officially allowed "separate but equal" public facilities based on race, southern states and communities rushed to create new laws that codified strict racial segregation. By the 1940s, all aspects of life in the American South were segregated by race. Black Americans were forced to use separate water fountains, restrooms, restaurants, and hotels. They were required to sit at the back of public buses or in separate train cars when traveling and had separate entrances and waiting rooms for medical offices. Swimming pools, libraries, movie theaters, and state parks were off limits unless the facilities organized a day specifically set aside for African Americans.

While race relations seemed marginally better in East Tennessee than in the Deep South, Tennessee had enacted numerous laws that legally segregated schools, railroads, and trolley cars, and allowed "hotel keepers, carriers of passengers and keepers of places of amusement" to control access to their establishments and exclude anyone in the same manner of "that of any private person over his private house."⁵⁰ Although the US Army established Oak Ridge as a federal installation, which meant federal law preempted any state segregation laws, the government decided early on to adopt strict southern segregation policies at the site's facilities and throughout its neighborhoods. Under the Tennessee Valley Authority, work camps and temporary housing were racially segregated, providing a template for Oak Ridge's segregated workplace and living arrangements. A separate African American housing area was proposed during the first phase of site development in early 1943.

49. Tennessee Valley Authority, "The 1940s," *Tennessee Valley Authority*, accessed May 2019, <https://www.tva.gov/About-TVA/Our-History/The-1940s>.

50. "(1866) Jim Crow Laws: *Tennessee*, 1866-1955," BlackPast, (2011) accessed May 2019, <https://www.blackpast.org/african-american-history/jim-crow-laws-tennessee-1866-1955/>.

This initial approach to segregated living quarters snowballed into unequal employment and housing opportunities for whites and blacks across Oak Ridge. Segregation was so severe that Enoc Waters, a northern news correspondent for African American newspaper *Chicago Defender*, described it as such:

*“The situation existing at Oak Ridge is so foreign to the area that even white Knoxvilleians have been moved to express disapproval of the government’s treatment of Negroes in Oak Ridge. . . In any case, it is apparent that the government, far from adopting ‘local custom’ has introduced at Oak Ridge a social pattern that is actually foreign to the area.”*⁵¹

Considering the planned nature of the racial inequity within the Oak Ridge community and the federal government’s complicity in creating a new community as deeply entrenched in Jim Crow policies as the deepest areas of the American South, Waters concluded “There are few other areas of the South where the plight of Negroes, as compared with that of their white neighbors, is as wretched as it is here.”⁵²

People Who Lived and Worked There (Recruitment)

Although the Oak Ridge site was partially chosen because of its available workforce, the project immediately ran into issues recruiting enough individuals to sustain the rapid pace of construction at the site combined with operations associated with the four large-scale industrial plants that made up the core of Clinton Engineering Works. At its peak employment in May 1945, 82,000 people worked in Oak Ridge either as military, scientist, or civilian employees at the operational facilities; as part of construction crews; or as support staff.⁵³ Recruitment would continue to be an issue as the Manhattan Project competed with TVA projects, troop enlistment, and Middle Tennessee companies directly supporting wartime industries such as Alcoa (an aluminum manufacturer with a major plant and company town near Knoxville). The federal government expected its prime construction contractors to subcontract individual projects and jobs out to secondary companies that would ultimately be responsible for ensuring there was enough manpower to complete jobs. Demographics that were largely unwelcome in the workplace before the war—including the older undrafted southern poor, women, and African Americans—now became valuable potential workers. The US Army identified key groups from industries hit hardest by the Great Depression as potential sources for Oak Ridge workers: coal miners, farmers, and men and women employed in rural southern industries.

The coalfields of central Appalachia (West Virginia, southeast Kentucky, east Tennessee, and east Virginia) were a major destination for African Americans leaving the Deep South during the Great Migration between 1870 and the 1930s.⁵⁴

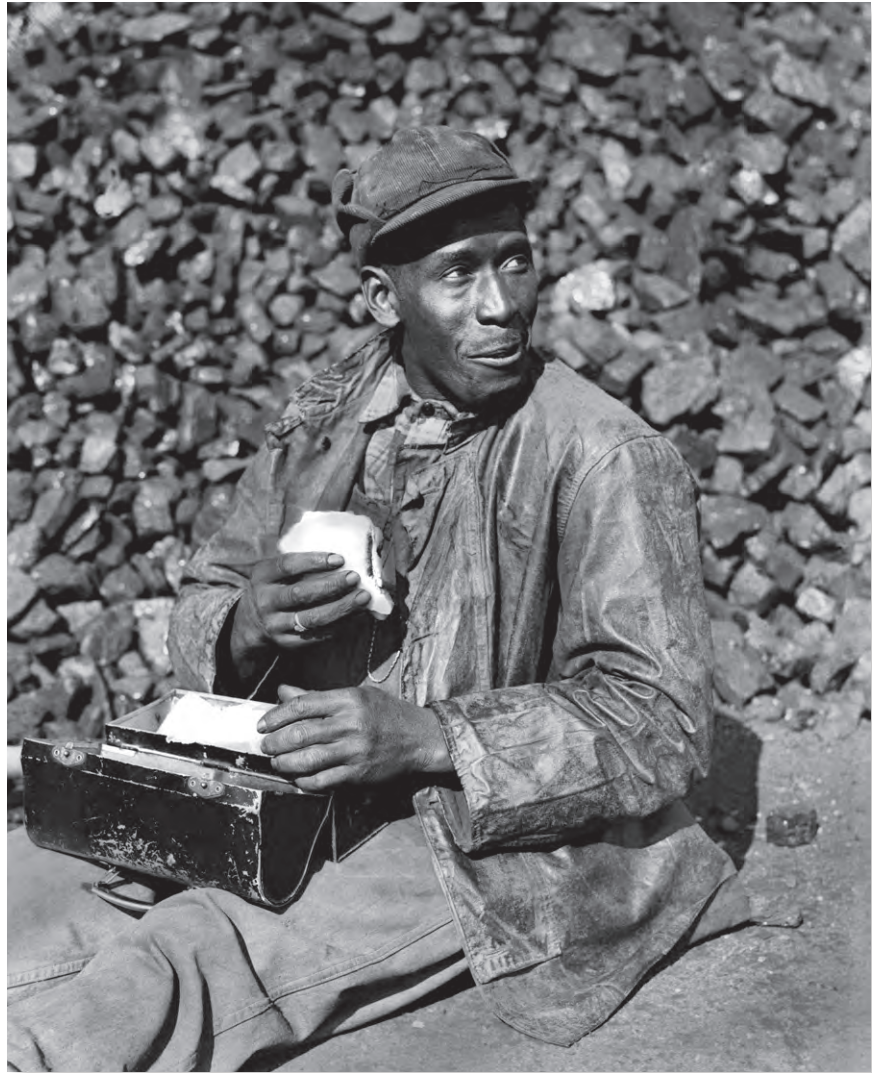
51. Waters, “Negro Kids Can’t Go to School.”

52. Waters, “Negro Kids Can’t Go to School.”

53. US Army, Manhattan District History, S1.

54. Althea Webb, “African Americans in Appalachia,” *Oxford African American Studies Center*, accessed May 2019, <http://www.oxfordaasc.com/public/features/archive/0213/essay.jsp>.

Coal mining was a major economic sector in Eastern Tennessee. Some Oak Ridge workers previously worked in Appalachian mines. This photo shows one of Oak Ridge's coal yard workers. Courtesy DOE photo collection.



By the 1930s, 20%–50% of miners in Appalachia were African American; they worked alongside white Appalachians and European immigrants, often for the same pay. While they may have faced incidences of racial discrimination at the workplace and segregated schools, African Americans living and working in Appalachian coal towns created by mining companies avoided some of the harsh conditions African Americans still faced in the Deep South. Black miners and their families were considered an integrated part of mining communities, where social hierarchy was primarily defined by income.⁵⁵ At the start of World War II, Tennessee was 10th in state coal production and 20% of men in Anderson County worked in mines.⁵⁶ The coal miners working in the mines of eastern Tennessee were used to hard physical labor and to the company town setting the Army envisioned for the Oak Ridge site.

55. John Edwin Mason, “These photos will change the way you think about race in coal country,” *Yes Magazine*, (March 15, 2018), accessed May 2019, <https://www.yesmagazine.org/peace-justice/these-photos-will-change-the-way-you-think-about-race-in-coal-country-20180315>.

56. Russell B. Olwell, *At Work in the Atomic City: A Labor and Social History of Oak Ridge, Tennessee*, (Knoxville: University of Tennessee Press, 2008), 13-15.

Expanded educational possibilities also drew some white mining families to the military reservation. Children in mining communities were often expected to join the workforce when they ended their schooling in eighth grade. Oak Ridge boasted a segregated high school, which attracted white mining families interested in allowing their children to continue their education. Education was not guaranteed for African American workers' families, but black miners who were working as unskilled laborers at Oak Ridge could expect higher pay than what they would earn as miners.

With the end of slavery following the Civil War, many poor whites and recently emancipated African Americans who could not afford to purchase property entered into contracts with landowners to rent equipment, livestock, tools, and land to work as either sharecroppers (individuals who paid a large share of their profits back to the landlord) or tenant farmers (individuals who paid a yearly cash rental and kept the majority of the earnings). In the early 1930s there were 5.5 million white and 3 million black sharecroppers or tenant farmers in the United States. In Tennessee, the practice peaked in the early 1930s when approximately one-third of all farms were operated by sharecroppers.⁵⁷ Historically, two-thirds of Tennessee's sharecroppers were white, but much higher percentages of African Americans worked under this system in the Deep South where, at its peak in the late 19th century, close to 80% of Mississippi's sharecroppers were black.

By the 1940s, sharecropping and tenant farming was in decline due to increased agricultural mechanization. The lack of work, combined with lingering effects of the Great Depression, made rural poverty a major issue throughout the South. Oak Ridge offered reliable employment, and some saw it as an opportunity to leave their farms and learn a new set of skills. Black and white farmers regarded employment at Oak Ridge as the opportunity to supplement their seasonal work on the farm for relatively high wages. Some workers opted to work at Oak Ridge during the week and return to their farms on the weekends to diversify their incomes and support their families. Some sharecroppers and day laborers left their farm positions with the hopes of earning enough money to purchase their own parcel of land once they returned from Oak Ridge.

Southern industrial workers were also enticed by the higher wages offered at Oak Ridge, which started at fifty-eight cents per hour for common laborers and were well above the forty-cent-per-hour minimum wage.⁵⁸ Nonwage incentives also drew the attention of potential workers and the mobile workforce. As part of a federal military reservation, Oak Ridge offered additional amenities to attract willing workers. The promise of on-site housing, paid utilities, a good educational system for children of white workers, and steady work for entire families added to the appeal.

57. Robert Tracy McKenzie, "Sharecropping," *Tennessee Encyclopedia*, (March 1, 2018), accessed May 2019, <https://tennesseencyclopedia.net/entries/sharecropping/>.

58. Elizabeth Peelle, "A History of Segregation in Oak Ridge, 1943-1960," (unpublished, 1960, available in Oak Ridge Room-Oak Ridge Public Library), 2.

Subcontracting companies immediately broadened their search for employees outside Middle Tennessee, sending recruiters to areas that were still feeling the harsh effects from the Great Depression, such as Alabama, Mississippi, and Georgia. Professional recruiters first targeted regional hubs, including Nashville, Memphis, Knoxville, and Chattanooga, as well as rural communities. Recruiters often offered to pay bus and train fares for potential workers willing to come to East Tennessee.⁵⁹ A.J. Johnson Construction Company, a major federal contractor for the construction of Oak Ridge, was accused of disregarding federal hiring policy put in place by the War Manpower Commission, the government agency created to oversee the allocation of labor between agriculture, industry, and the armed forces. An official complaint lodged with the Alabama War Manpower Commission stated that, in August 1943, “a Jones construction representative [backed up] a truck in the parking lot at the United States Employment Service office in Mobile and presumed to load it up with some forty Negroes to be transported to a construction job in Knoxville.”⁶⁰ While Jones Construction was charged with “labor pirating,” the company never paid a penalty and no additional information on a potential punishment was recorded.

Oral histories also trace the unofficial recruitment by word of mouth through African American communities across the South. Manhattan Project workers recall cousins, childhood friends, and coworkers telling them about the opportunities offered at the new federal reservation outside Knoxville. Younger men and women left their minimum wage jobs in the fields or in the service industry with the impression that they would be able to secure the type of skilled positions formerly denied to African Americans and earn enough money to justify being away from their parents, spouses, and children and help support their extended families.

Potential workers with highly prized construction skills, such as welding, plumbing, or electrical knowledge, were recruited through unions from as far away as New York City and Philadelphia. Most African Americans were not members of professional unions because of discrimination and the lack of opportunities for African Americans to acquire the experience and skills needed for specialized construction positions.⁶¹ Although there were African American scientists and technicians working in Chicago and New York during the early days of the Manhattan Project, none of these individuals relocated to Oak Ridge when the project moved its central facilities in 1943. It is not clear if they could have continued working at the central facility but individually decided not to move and face the racial discrimination and segregation of the Jim Crow South or if the Army decided not to integrate Oak Ridge’s labs.⁶²

59. Peele, “A History of Segregation.”

60. Olwell, *At Work in the Atomic City*, 13-14.

61. Peele, “A History of Segregation,” 2.

62. Peele, “A History of Segregation,” 2.

Social History of African American People

Housing. When considering the immense scale of the Manhattan Project and the quick timeline for development, the US Army acknowledged that it would have to create housing to accommodate its immense workforce. Creating an entire community in the Oak Ridge military reservation would allow for a higher level of security, keep outside interest and questions to a minimum, and better accommodate staggered shift work than relying on a population of commuters. The Army tasked leading architecture firm Skidmore, Owings, and Merrill of New York City to design a series of neighborhoods within the military reservation that would combine easy-to-construct prefabricated construction with amenities that would create a homey feeling for the young scientists, military officials, workers, and their families who would call Oak Ridge home. The initial phase of residential construction in spring 1943 imagined 13,000 residents living at Oak Ridge. The second phase of construction, initiated in fall 1943, provided for a total population of approximately 42,000 residents. By the spring of 1945, when Oak Ridge was nearing its peak employment of 80,000 workers, the third phase of neighborhood development increased housing and amenities for a total population of 66,000.⁶³ While housing management was originally overseen by the Army, management of housing, facilities, and utilities quickly shifted to subcontractor Roane-Anderson by the fall of 1943.

On-site housing was one of the nonwage incentives used to attract workers to Oak Ridge; however, options were extremely limited for African Americans, who were at the bottom of the housing hierarchy due to race and the types of unskilled jobs available to them.⁶⁴ Various housing options on the reservation were available to single white workers and white families. Family units, multifamily house units, prefabricated single-family homes based on TVA designs, apartment units, single-sex dormitories, and trailer camps were assigned through a housing lottery ranking system that considered military rank or tenure in government positions, income, and the size of the applying family.⁶⁵ Initially, a “Negro Village” that mirrored the residential, commercial, and recreational development seen throughout Oak Ridge’s white neighborhoods was planned for African American workers and families. When housing demands by white workers exceeded proposed housing stock in 1943, however, the community planners decided to construct East Village as another white neighborhood. Army personnel suggested that there was not enough interest from African Americans to justify the creation of a segregated neighborhood. Why this was the case was not immediately clear to housing managers, but they assumed part of the hesitation stemmed from African American women not wanting to adhere to security restrictions placed on Oak Ridge residents. In reality, black workers were hesitant to leave family members who would not have been allowed to live inside the Oak Ridge fence. Security in the Secret City limited visitors, and African American children were not allowed on the reservation until 1945.⁶⁶

63. US Army, *Manhattan District History*, 1.4.

64. Olwell, *At Work in the Atomic City*, 17.

65. For more information about the architecture of the Manhattan Project, see Peter Hales, *Atomic Spaces: Living on the Manhattan Project* (Urbana, University of Illinois Press, 1997); Volume XII, S9-10.

66. US Army, *Manhattan District History*, S6-7.



Two hutment areas for African American workers were created in Oak Ridge: one in the K-25 construction camp and the other near the Illinois Ave-Scarboro Road intersection. The men and women's huts were separated by a fence, as seen in the lower left of this June 1946, photo of the Illinois Ave hutments. Courtesy DOE photo collection.

With East Village's reassignment to white families, all African American workers living on site were relegated to single-sex hutments.⁶⁷ Two hutment areas were created to house African American residents. One was located in the K-25 restricted area, to allow those constructing the facility to occupy housing close to the worksite, and the other was situated near the present Woodland development. Sometimes called "shanties" or "shacks," hutments were the least permanent type of housing used at Oak Ridge and housed the lowest-paid Manhattan Project workers. The 16-foot by 16-foot structures were constructed of plywood and sat flush to the ground. Four unscreened, shuttered windows provided ventilation, but did not provide security, privacy, or a barrier from dust and insects. Each hutment had a central oil stove for heat and was designed to accommodate four beds in its one unpartitioned room, but the increasing demand for on-site housing sometimes resulted in five men or six women sharing one crowded hutment. Some hutments were also furnished with lockers, dressers, and chairs.⁶⁸ A communal bathhouse with four shower heads, four toilets, and four wash basins was shared by groups of 12 hutments that housed from 48 to as many as 72 residents. The hutment areas expanded to house approximately 2,000 African American workers by the summer of 1945.⁶⁹

Separate African American hutment areas were created for men and women. This arrangement forced black married couples who opted to live in Oak Ridge to be physically separated by their housing assignments, with one former worker remembering "We were told before we came that there would be no housing for me and my mate."⁷⁰ The men's and women's hutments were separated by a rough board fence made from scrap lumber and a guarded gate. The women's section earned the moniker "the pen" due to the guarded, prison-like environment.⁷¹

67. Waters, "Negro Kids Can't Go to School."

68. Charles W. Johnson and Charles O. Jackson, *City Behind a Fence: Oak Ridge, Tennessee, 1942-46*, (Knoxville: University of Tennessee Press, 1981), 87.

69. Enoc Waters, "Negros Live in Modern 'Hooverilles' in Atomic City," *Chicago Defender*, (January 5, 1946).

70. Mr. Leonard Crump, quoted in Valeria Steele, "Black History in the Ridge," (unpublished, 1981, available in Oak Ridge Room-Oak Ridge Public Library), 5.

71. Ronnie Griffin, "After Hutments, All Housing Up," *Oak Ridger*, (February 11, 1982).



Segregated single-sex hutments were the only housing available to African American workers throughout most of the war. The shared accommodations offered little in terms of privacy or personal space, as seen in this Army photo taken in February, 1945. Courtesy DOE photo collection.

The “women’s pen” had a strict 10 p.m. curfew and men were not allowed, although some oral histories and contemporary newspaper articles admit that well-worn footpaths leading to chairs propped up against the fence hinted at visits.⁷² Single white men, mostly construction workers, also lived in hutments, but these areas were not fenced. White women were banned from even visiting the area due to its reported harsh conditions and potential lawlessness to which the women could be exposed.

Police records no longer exist from the time Oak Ridge was managed as a federal military reservation, but violence was said to be common in the hutment areas. There were rumors throughout the technical community of scientists of one homicide per day in the hutments.⁷³ Such rumors were likely a reflection of bias and the superiority many military personnel and scientists felt over the white construction workers and African American workers living in hutments and the lack of awareness of what was actually occurring outside the insular community of technical workers; however, oral histories and contemporary accounts from African American hutment residents and Oak Ridge residents living in other types of housing confirm that life in the hutments was difficult. During a 1980 interview, Tommy Stevens said “I imagine there was a lot of outlawing done all over the city, but it seemed much higher [in the Black hutment area].”⁷⁴ The lawless atmosphere also fostered illegal activities such as prostitution and liquor trafficking, which were open knowledge, as well as Oak Ridge police being paid off by various residents.⁷⁵

72. Waters, “Negroes Live in Modern ‘Hooverilles.’”

73. Peelle, “A History of Segregation,” 1.

74. Thelma Present, *Dear Margaret: Letters from Oak Ridge to Margaret Mead*, (Knoxville: East Tennessee Historical Society, 1985), 37.

75. Peelle, “A History of Segregation,” 9.

This November 1947 photo shows the lack of amenities available within the African American hutment area. White construction workers had moved out of hutments by the end of the war, but African Americans continued to live in them until 1949. Courtesy DOE photo collection.



Sharing living space with other newly arrived workers led to additional problems. R.L. Ayers, who worked at the J.A. Jones Construction Company cafeteria and lived in the hutments near K-25, recounted how another woman living in her hutment stole their shared footlocker along with all of Ayers belongings. The theft, as well as violence in the hutment area, drove Ayers to briefly return to her home in Mississippi but she quickly returned to Oak Ridge when she couldn't find another job.⁷⁶ In a letter written to anthropologist Margaret Mead in May 1946, Oak Ridge resident Thelma Present also talked about a hutment renter leaving and abruptly packing up all of her belongings along with those of her three bunkmates.⁷⁷ The company that was subcontracted to manage the African American hutment area was accused of charging “double rent” if renters were as little as a day late in their payments and placing known “undesirable” renters in shared hutments to persuade the other inhabitants to pay for the space so that the difficult roommate would be removed.⁷⁸

Safety, lack of privacy, and questionable rent practices were not the only issues faced in the hutments. Although all of Oak Ridge struggled with rain and mud, the hutment area was not graded. Hutments sat flush to the ground and did not have drainage, which contributed to the muddy conditions about which numerous black and white Oak Ridge residents complained. The screenless windows could be shuttered to keep out rain, but that also limited ventilation through the living area. Rats were also an issue.⁷⁹ The encampment area inhabited by white construction workers closed in October 1945 when employment numbers dipped and the remaining white workers were shifted to more permanent housing. In contrast, the African American hutments continued to be used well after the end of World War II.⁸⁰

76. Libby Morse, “A Need for Me to Stay,” *Oak Ridger*, (February 14, 1977).

77. Present, *Dear Margaret*, 73-74.

78. Peelle, “A History of Segregation,” 6.

79. Ronnie Griffin, “Where the Jobs Were,” *Oak Ridger*, (February 12, 1982).

80. Peelle, “A History of Segregation,” 6.



Enoc Waters, correspondent for the *Chicago Defender*, claimed, “Oak Ridge is unique. It is the first community I have ever seen with slums that were deliberately planned. The concept back of the planning and operation of this small city is as backwards sociologically as the atomic bomb is advanced scientifically.”⁸¹ The US Army considered the housing offered to its African American workers to be “above the standard to which they were normally accustomed” in the American South.⁸²

Eventually, during the spring of 1944, 24 “family hutments” were created in the African American area.⁸³ The units consisted of two 16-foot by 16-foot hutments connected by a 16-foot by 16-foot shed, which allowed families to use a standard hutment and an 8-foot by 16-foot space to be used as a kitchen equipped with a small ice chest and a coal cooking range.⁸⁴ Residents used separate communal bathhouses for men and women, with a laundry sink added to the women’s bathhouse. The few family hutments created in 1944 was the first attempt at providing any African American housing other than the single-sex shared hutments, but the same problems that plagued the single-sex hutments were still present. The buildings had no electrical appliances, no running water, and no glass windows, and were located next to the hutments for singles. The distribution of the limited family housing stock was also problematic. Instead of accepting housing applications and applying the strict housing regulations and criteria used to assign accommodations on the reservation, housing management subcontractor Roane-Anderson distributed the 24 semi-private hutments on a first-come, first-served basis to anyone who could verify their marital status and provide the \$4 weekly rent in advance.⁸⁵ These would be the only “family” housing options available to African American workers throughout the course of World War II.

A group of African American workers pose in the hutment area in this undated DOE photo. Conditions in the hutments and restrictions on African American children in Oak Ridge led many workers to consider living outside Oak Ridge. Courtesy DOE photo collection.

81. Waters, “Negro Kids Can’t Go to School.”

82. Johnson and Jackson, *City Behind a Fence*, 112.

83. Johnson and Jackson cite a February 1944 memo from Major E.J. Bloch of the Army Corp’s Central Facilities Division authorizing creation of African American “family hutments,” but Elizabeth Peelle and other sources report that African American children were not allowed in Oak Ridge until 1945. “Family” could refer to married couples, as housing management company Roane-Anderson verified marriage status before assigning the houses, but there were also rumors that any African American woman who became pregnant would be removed from town, another challenge for married couples wanting to live together.

84. Johnson and Jackson, *City Behind a Fence*, 113.

85. Johnson and Jackson, *City Behind a Fence*, 113.

Almost immediately, African American workers drew comparisons between the slapdash family hutments and the more welcoming and comfortable family houses available to white workers. The Colored Camp Council—an unofficial group chaired by Robert H. Watkins, a general foreman for Roane-Anderson—worked to represent African American interest and needs to the Army and housing management subcontractor.⁸⁶ A July 1944 letter from the council outlined the concerns about the lack of adequate family housing and requested additional accommodations that were similar to white family units. Although the letter referred to East Village and the unrealized African American neighborhood, the council insisted “we are not asking for a whole Negro town, but if some twenty-five to thirty homes could be set aside for Negroes, we would appreciate it. If that be impractical, a group of family huts similar to the white family huts and away from the labor camp would suffice.”⁸⁷ Instead of addressing the issues put forth by the Colored Camp Council, the Army launched investigations into the backgrounds and employment records of the six council members who signed the letter.⁸⁸

In February 1946, 120 Victory Cottages located near Scarboro Road and Gamble Valley Warehouse Road were designated as African American housing.⁸⁹ Victory Cottages were the least desirable and least permanent family housing units at Oak Ridge. Constructed to help meet the unexpected demand for housing when employment at the facility continued to grow in 1943 and 1944, Victory Cottages were hastily built and considered to have a lifespan of approximately 3 years.⁹⁰ The small structures were made from prefabricated panels of plywood and flat-rolled roofing and consisted of two one-family units, each with a single bedroom and a combination kitchen-living room. The buildings included glass windows and were raised on stilts, which meant they were an improvement over the shared hutments in terms of security, privacy, and comfort, but they still provided limited space and amenities.⁹¹ Some single individuals rented space in the family cottages to escape the hutment area, but Victory Cottages were far from ideal.⁹² The cottages did not have refrigeration and used the same central stove for heating and cooking, which meant that the entire house was warmed in the summer whenever the family wanted to prepare food.⁹³ Before African American tenants moved into the shared cottages, the housing management company contracted to prepare the structures replaced the original oil stoves with coal grates under the impression that African Americans strongly preferred coal over the cleaner, oil-burning model.⁹⁴ Victory Cottages allowed African American couples to officially live together in Oak Ridge, but their shoddy construction represented continued housing discrimination. None of the more-permanent family housing built as part of the wartime effort was ever made available to African American workers under the reasoning that wage workers and laborers did not qualify for larger housing options through the government-housing lottery system due to their employment status and comparatively low wages.

86. A photo of Watkins appears in Waters, “Negro Kids Can’t Go to School.”

87. Johnson and Jackson, *City Behind a Fence*, 114.

88. Johnson and Jackson, *City Behind a Fence*, 114.

89. Peelle, “A History of Segregation,” 6.

90. Johnson and Jackson, *City Behind a Fence*, 28.

91. Waters, “Negroes Live in Modern ‘Hooverilles.’”

92. Present, *Dear Margaret*, 74-75.

93. Peelle, “A History of Segregation,” 6.

94. Peelle, “A History of Segregation,” 6.



In 1946, African American families could move into prefabricated duplexes called Victory Cottages. These temporary buildings were originally built for military families and were nearing the end of their expected 3-year lifespans by the time this photo was taken in 1948. Courtesy DOE photo collection.

Although approximately 7,000 African Americans are thought to have worked at Oak Ridge during peak employment in 1945, no more than 2,000 African Americans lived on site in Oak Ridge during the war years. Enoc Waters, portraying the dire setting in the African American hutment areas, reported that “those living in the Colored Hutment Area are of three types: (1) Those unable to find quarters in Knoxville; (2) those whose work makes commuting inconvenient; and (3) an ignorant lower class unaccustomed to anything better.”⁹⁵ African American children were not allowed in Oak Ridge until 1945, so workers either had to find someone not employed at Oak Ridge to watch their children while they were in Tennessee or bring their children and find housing outside the fence. Knoxville had an established black community and offered commercial services and recreational facilities not available in Oak Ridge and other smaller, rural communities in East Tennessee.⁹⁶ Knoxville also offered educational opportunities for black children including a high school that served African American teens. Some workers who lived in the shared spaces in the Oak Ridge hutments also rented rooms in Knoxville to safeguard possessions while they worked and lived on site.⁹⁷

Smaller communities neighboring Oak Ridge also provided rental opportunities for African Americans, although the size of the communities and their existing African American populations severely limited the number of renters they could serve. Harriman, Tennessee—a temperance town founded in 1889—was less than 15 miles away from the federal lands acquired to establish Oak Ridge. Construction workers, sometime accompanied by their families, poured into Harriman and other established towns including Oliver Springs and Clinton. A June 17, 1943 article in the *Harriman Record* reported that “not a single house, apartment, or room was available to rent.” The article reported that upstairs rooms were converted into apartments, mobile homes were added to lots, and more than 300 existing homes were renovated to better accommodate renters. Harriman was given the exemption to wartime restrictions on new home construction, platting the first subdivision in the town since 1891. Initially, mortgages for the new construction included a “no alcoholic beverage” clause, but after the Federal Housing Administration refused to back mortgages for dry housing, the clause was removed before the additional 100 housing units were complete in 1944.⁹⁸

95. Waters, “Negroes Live in Modern ‘Hooverilles.’”

96. Knoxville businesses are included in Green Books published throughout the 1940s.

97. Peelle, “A History of Segregation,” 6-7.

98. Walter T. Pulliam, *Harriman: The Town that Temperance Built*, (Maryville: Brazos Press, 1978), 677-681.



African American workers helped create the foundations of the atomic facilities and white neighborhoods in Oak Ridge. Courtesy DOE photo collection.

Work Places and Environment. The first wave of African American workers was part of the construction crews or domestic help.⁹⁹ Construction workers were crucial to the development and success of the site. Beginning in 1943, African Americans were part of integrated crews that cleared and graded buildings sites, poured concrete for facility construction, and placed the metal infrastructure to support the massive K-25, X-10, and Y-12 buildings. Hal Williams, one of the first skilled African American construction workers at the site, arrived in Oak Ridge as a young man looking to help serve his country during wartime. Williams was recruited out of North Carolina by J.A. Jones Construction as a skilled concrete worker and given the choice to work on projects for the Army in either Tennessee or Washington State. Not wanting to move across the country, Williams chose Tennessee and boarded the J.A. Jones chartered bus to Knoxville with other potential Oak Ridge workers. He helped lay the first concrete slab at the K-25 plant and worked on the construction crew that laid foundations for the Main Street and Jackson Square shopping centers (the main shopping centers for white residents), the Alexander Inn (the guesthouse for official army and government visitors), the Scarboro neighborhood, and the Oak Ridge hospital, earning the reputation as the best concrete finisher in Oak Ridge. Williams claimed to have earned \$1.37 per hour, rather than the 62 cents per hour the rest of crew earned.¹⁰⁰

99. Tommy Stevens, quoted in Present, *Dear Margaret*, 33-39.

100. Rose Weaver, "A Tribute to Hal Williams," *Oak Ridger*, (February 10, 2010), accessed May 2019, <https://www.oakridger.com/article/20100210/NEWS/302109987>.



Physical labor was not restricted to the male construction crews. A group of African American women laid the railroad ties and track for the Louisville and Nashville Railroad near the Elza Gate.¹⁰¹ Employment pressures caused by World War II led railroads to recruit female workers. By 1943, more than 100,000 women were employed by railroads (approximately 7.5% of the workforce).¹⁰² White women often secured skilled or administrative positions while black women were assigned manual tasks as part of track maintenance crews.¹⁰³

The need for domestic help in the form of African American maids, janitors, and other service positions increased as Oak Ridge's population continued to grow throughout 1943. In January 1944, the *Oak Ridge Journal* ran help-wanted ads for "colored" bootblacks and houseworkers. The subcontractor managing Oak Ridge housing also ran an employment service for African Americans and publicized positions for part-time waiters and maids.¹⁰⁴ African American women living in the on-site hutments either worked as house cleaners directly employed by white Oak Ridge families or as part of the cleaning crew for shared housing accommodations. The larger models of single-family Cemesto homes included separated accommodations for "colored maids."¹⁰⁵ However, not all of the women who worked in Oak Ridge lived within the fence. African American women living in Knoxville and the surrounding communities commuted into Oak Ridge daily to work as maids. One woman interviewed in the 1980s said she preferred to work for families that had relocated to Oak Ridge from the Northeast, as opposed to southern women who African American women felt would try to take advantage of them.¹⁰⁶

In this photo, made famous as the cover of Denise Kiernan's *The Girls of Atomic City*, several African American workers can be seen in the background, a metaphor for the majority of work done by African Americans at Oak Ridge during World War II. Courtesy DOE photo collection.

101. Griffin, "Where the Jobs Were"; Peelle, "A History of Segregation," 2.

102. Lily Anna Blouin, Mae Gilliland Wright, and Kaopua Sutton, "African American Women and the Railroads," *National Railroad Hall of Fame*, (November 30, 2017), accessed July 2019, <https://www.nrrhof.org/single-post/2017/11/30/African-American-Women-and-the-Railroads>.

103. For more information, see Theodore Kornweibel, Jr.'s *Railroads in the African American Experience* (Baltimore: Johns Hopkins University Press, 2010).

104. Peelle, "A History of Segregation," 2.

105. Hales, *Atomic Spaces*, 90.

106. Present, *Dear Margaret*, 73-74.



Top and center photos, dated September 4, 1944, show bricklaying crews employed by subcontractor J.A. Jones receiving an award. African American workers are included front and center in the crowd. (bottom) High wages and the opportunity to take skilled positions attracted many workers to Oak Ridge during the Manhattan Project. While African Americans assumed these jobs would be available to them, most supervisory positions were filled with white workers. Courtesy DOE photo collection.

Photographs taken in the early 1940s by Ed Westcott, the official Army Manhattan Project photographer at Oak Ridge, show a few examples of African Americans at work. Westcott created a prolific portfolio of work that sheds light on the work environment and living conditions of Oak Ridge residents during the “Secret City” years. However, African Americans appear in very few of the photos that have been saved and catalogued by the Department of Energy.¹⁰⁷ Publicly available photographs show African Americans constructing the foundation for Y-12 and grading the site, pouring a concrete floor slab in K-25, hauling coal, posing alongside a garbage-collection truck, and working in the community laundry. African American workers are also present in photographs of the Army presenting an award to J.A. Construction bricklayers in September 1944.¹⁰⁸

Regardless of the unskilled positions available to them, most African American workers were drawn to Oak Ridge to better provide for their families. One former worker interviewed in the 1980s summed up the general consensus during wartime: “Everyone was so happy to make money. We were not making money back home.”¹⁰⁹ High wages and secure employment attracted many Oak Ridge workers from the Deep South, but some workers felt they still had limited earning power and were somewhat misled by recruiters. Lee Crawford told the War Manpower Commission “I quit working for [former company] because [the recruiter] told me I could make 7-8 cents more per hour in Tennessee as a truck driver or tractor operator. Upon arriving here, I was told colored people were not allowed to drive trucks.”¹¹⁰ Although white and black employees were paid the same wages, in many cases African Americans were hired in “helper” or “assistant” positions that paid less and were overseen by unskilled whites. Mrs. Willie Mae Littlejohn left her job as a cook in Atlanta after a friend convinced her positions in Oak Ridge would offer more opportunity and higher wages; however, she initially earned \$5 per day as a maid, less than she had made in her hometown.¹¹¹

Even when employment reached 80,000 people during the summer of 1945, employment options for African Americans in Oak Ridge continued to be limited to construction, janitorial, domestic, cafeteria, and laundry positions.¹¹²

107. DOE photo collection available online and in the Oak Ridge Public Library, Oak Ridge Room. Although Westcott documented everyday life at Oak Ridge along with official activities, it is unknown how many photos he may have taken of African Americans considering the geographic separation, the Jim Crow segregation of facilities, and the unskilled positions many African American workers held that would have been behind the scenes in the service industry. Additional Westcott photos of African Americans in Oak Ridge during the war years could exist in personal collections, DOE files that have not been archived, or the National Archives.

108. “ARM 0110 Army Presenting an Award to J.A. Jones Construction Bricklayers,” (DOE Photo Collection, September 4, 1944); “ARM 0120 Army Presenting an Award to J.A. Jones Construction Bricklayers,” (DOE Photo Collection, September 4, 1944).

109. Mrs. Leonard Crump, quoted in Steele, *Black History in the Ridge*.

110. Lee Crawford, quoted in Olwell, *At Work in the Atomic City*, 20.

111. Griffin, “After Hutments, All Housing Up.”

112. James Overhold, ed., *These Are Our Voices: The Story of Oak Ridge, 1942-1970*, (Childrens Museum of Oak Ridge, 1987) 502-504.



When higher-skilled positions were vacated, African Americans with the necessary skills often would not apply, saying that it was useless to apply because black applicants were hardly ever selected and it would be difficult to obtain necessary union cards to accept the position if they were chosen.¹¹³ By 1946, a few black janitors were promoted to “laboratorians,” an unskilled position responsible for keeping laboratory equipment clean and mixing simple solutions, but almost all supervisory and semi-skilled positions were held by whites.¹¹⁴ Henry Teasley was one of the exceptions, rising to the position of “supervisor of janitors” at the X-10 plant.¹¹⁵

(top left, top right, bottom) African American workers were often assigned to menial tasks, as captured in these 1945 photos of the US Army stock room, coal yard, and laundry. Courtesy DOE photo collection.

113. Peelle, “A History of Segregation,” 2.

114. Waters, “Negroes Live in Modern ‘Hooverilles.’”

115. “Scarboro Community,” Scarboro Collection-Oak Ridge Public Library, Oak Ridge Room-Oak Ridge Public Library.

Oak Ridge Hospital employed several African American nurses in the 1940s. Courtesy DOE photo collection.



One of the few skilled positions available to African American women with an education was nursing. In early 1946, 14 women worked for the Oak Ridge hospital: seven were graduate nurses and seven were nursing students affiliated with Tuskegee University (a historically black college in Alabama) or Meharry Medical College (a historically black academic health science center in Nashville). The 14 women shared two Victory Cottages, one of which had its kitchen converted into additional sleeping quarters to accommodate the seven sets of bunk beds. Enoc Waters commented on how isolated the young women must have felt at Oak Ridge since they were denied access to the nurses' dining room and leisure facilities at the hospital, and their shared living quarters did not allow for entertaining.¹¹⁶

In his scathing critique of the living conditions faced by African Americans at Oak Ridge, Enoc Waters summarized the class hierarchy and racial divide seen at Oak Ridge as such:

“The thousands of persons recruited from every state in the union and brought here to combine brain and brawn to find the secret weapon that could save democracy from destruction can be divided roughly into three groups. They are: (1) scientists and intellectuals, (2) military personnel, (3) tradesmen and unskilled workers. However, since the project is located in the south, the whole pattern of living was based on race. Therefore, in Oak Ridge only two grounds become discernable. They were: (1) Whites, (2) Negroes. While the whites were represented in all three of the categories, all of the Negroes were in group three, there being no Negro scientists or soldiers on the reservation.”¹¹⁷

116. Waters, “Negroes Live in Modern ‘Hooverilles.’”

117. Waters, “Negro Kids Can’t Go to School.”

Construction at the site slowed after the atomic bomb was dropped in August 1945. The work being done in Oak Ridge was made public, leading to a decrease in overall employment. Some Oak Ridge workers voluntarily left the reservation, assuming that the end of the war would also mean the end of work at Oak Ridge. Mass layoffs began during the summer of 1945, with 14,000 people let go by October 1945. By the end of 1945, 4,420 African Americans were working on the project, with more than 1,000 of them in construction positions.¹¹⁸ By June 1946, only 2,000 construction workers remained out of a peak workforce of 47,000.¹¹⁹ Black workers were overwhelmingly affected by layoffs since they were limited to a few types of positions and could not easily switch into a different job.¹²⁰ Those who continued to work after construction slowed moved from higher-paying jobs pouring concrete or driving trucks to lower-paying service and janitorial positions.¹²¹

The layoffs in 1945 also bred insecurity among white workers who worried they would be replaced with African Americans willing to work for cheaper wages.¹²² Tommy Stevens recounted how wives of scientists and military men felt as if they were competing against African American domestic workers for the few available jobs in the plants. Because of this perceived rivalry, they preferred to see black women bussed in from the surrounding communities for federally contracted jobs so white Oak Ridge families would not lose good maids and black Oak Ridge residents would not take positions a wife might be interested in pursuing.¹²³

Life Outside of Work.

Segregation and civil rights: The strict segregation created through Jim Crow laws were fully accepted and replicated by the US Army when creating the community of Oak Ridge. This was manifested in separate bathrooms, separate water fountains, separate eating establishments, and even separate hospital wards. While they worked beside their white counterparts at construction sites or helped meet white workers' needs in service positions, African American workers in Oak Ridge faced constant reminders that they were not fully welcome in white spaces. The modest Medical Services Building, completed in summer 1943 as the first medical installation on the reservation, included separate entrances and wards for "Whites" and "Blacks."¹²⁴ Black and white workers in K-25, Y-12, and X-10 also had separate bathrooms, water fountains, and dining areas. African Americans prepared and served food in cafeterias at construction sites and facilities but could not eat in the same dining halls. Black workers could order and pay through a window and eat elsewhere.¹²⁵

118. Waters, "Negro Kids Can't Go to School."

119. Johnson and Jackson, *City Behind a Fence*, 169.

120. Russell Olwell, "The History of Oak Ridge in the 1940s," (PhD diss., University of Michigan, 1998).

121. Hales, *Atomic Spaces*, 202.

122. Hales, *Atomic Spaces*, 202.

123. Tommy Stevens, quoted in Thelma Present, *Dear Margaret*, 36.

124. US Army, *Manhattan District History*, S13; "Clinton Engr. Works Field Hospital Plumbing and Heating," Blueprint, July 15, 1943, available in National Oceanic and Atmospheric Administration Building (formerly Bldg. #R.A. 1910 T), 456 S. Illinois Street, Oak Ridge, TN.

125. R.L. Ayres, "Oral History of R.L. Ayres," interview by Keith McDaniel, March 13, 2012.



(top) Jim Crow segregation permeated all aspects of life at Oak Ridge, as seen in this 1943 Army photograph of outdoor toilets at the X-10 construction site. (bottom) Oak Ridge's bus network allowed African Americans access to other sections of the military reservation and worksites. Buses to the work areas and to neighboring communities provided one of the only opportunities for black and white workers to come together. Courtesy DOE photo collection.

Two of Oak Ridge's seven theaters provided a few separate showings for African Americans, but black residents were usually relegated to watching dated movies in the hutment recreation center.¹²⁶ Bowling alleys in white neighborhoods did not have segregated bathrooms, so black and white pin boys could not work together. Oak Ridge's recreation committee decided to fix the problem by using white pin boys at the Central Recreation Hall and African American pin boys at the other alleys on the reservation.¹²⁷ While the segregation and housing inequality at Oak Ridge was severe, it did not come as a surprise to the majority of African Americans moving to the site who were accustomed to previously living under Jim Crow segregation in Mississippi, Alabama, or Georgia.

Oak Ridge's substantial bus system allowed African American workers to commute to work from outside the fence, but it also strengthened geographic separation by race in the Oak Ridge community. While approximately 7,000 African Americans are thought to have worked at Oak Ridge during peak employment in 1945, only one-quarter (fewer than 2,000) lived on site. Public transportation in Oak Ridge evolved from truck and bus hauls between the clock alleys where workers punched in at the beginning and end of shifts and work sites to an official bus service established in fall 1943. By the height of employment in summer 1945, federal contractors were operating approximately 50 contract bus routes, some extending as far as 90 miles outside Oak Ridge and commercial bus lines connected the facility to Chattanooga, Knoxville, Nashville, and smaller local communities.¹²⁸ The No. 9 bus connected the African American housing area to the rest of Oak Ridge, providing much-needed transportation to work sites as well as shopping areas.¹²⁹ Most African Americans working in Oak Ridge did not have personal vehicles, making the bus system indispensable for those living in the hutment area to navigate the large facility or to get necessities from stores located in the shopping centers convenient to white neighborhoods. Buses were also the main connection to the outside world by allowing African Americans regular access to Knoxville to visit friends and family, pursue recreational opportunities, frequent African American-owned businesses, or catch another bus line to their southern hometowns. Outside bus lines also allowed workers the flexibility to live in a more desirable area and commute into Oak Ridge as needed.

The high level of site security, the number of guard stations near the hutments and around the base, the familiarity of most black workers with the Jim Crow segregation of the Deep South, and the transient nature of most black workers helped quell any major expressions of racial discontent in Oak Ridge.¹³⁰ However, racial tensions coalesced around Oak Ridge's buses, one of the only aspects of the reservation that was not completely segregated. African Americans were expected to ride in the rear of the vehicle following Jim Crow standards of the era.

126. Waters, "Negro Kids Can't Go to School."

127. Johnson and Jackson, *City Behind a Fence*, 115.

128. US Army, *Manhattan District History*, S27.

129. Present, *Dear Margaret*, 33-34.

130. Johnson and Jackson, *City Behind a Fence*, 115.

By the summer of 1944, some white workers began to behave violently toward African Americans who did not move quickly enough to the back of the bus and there were reports of white bus drivers refusing to stop for African American passengers. In response, African American children were accused of throwing rocks at passing buses and some white drivers were beaten up during the summer of 1945.¹³¹ An investigation found no proof of racial discrimination by bus drivers, but drivers were asked to be considerate of African Americans and not rush them as they moved to the rear of the bus to comply with Jim Crow segregation.¹³²

Once Oak Ridge's population of workers and residents dropped in late 1945, the community managers immediately considered cutting bus service throughout the facility and to surrounding communities. Those who lived outside Oak Ridge and rode the bus to work each day—such as the African American maids working in higher-ranking military men's or scientists' homes or workers who wanted to live with their families—faced the choice of moving into hutments or quitting their jobs when all contracted bus routes were terminated in September 1946.¹³³

Recreational opportunities: A common complaint from African American residents living in Oak Ridge was the lack of recreational opportunities. Planned neighborhoods for white workers included community facilities such as pools, schools, and shops, but a comparable development for African Americans was never constructed. The small commercial area developed near the African American hutments included a cafeteria, a necessity considering the basic communal accommodations and lack of food preparation space in the hutments; however, its limited hours meant those who worked long hours or night shifts potentially missed meal periods. Without other places to eat, some African American workers faced the choice of sleeping during their off-hours and missing meal times or sacrificing sleep to eat during the cafeteria's limited open hours.¹³⁴ Other facilities in the hutment area included a recreation center, a one-chair beauty shop, a barber shop, the Atomic Club—a juke joint that served fried chicken—and an administrative office, which employed white secretarial staff to oversee African American workers.¹³⁵

The bare-bones recreation center located in the African American hutment area took the place of the theaters, gymnasiums, and community buildings constructed in white neighborhoods. The recreation center became the location of weekly showings of dated “race” films—films with all-black casts produced for black audiences—card games, weekend dances, and church services.¹³⁶



During the Manhattan Project, eating options for the African Americans living in Oak Ridge were limited to the hutment cafeteria. Courtesy DOE photo collection.

131. Hales cites Johnson and Jackson, *City Behind a Fence*, 114-115; Hales, *Atomic Spaces*, 203, 411. Johnson and Jackson's research relied on the “Lee-Ross Study,” a report compiled by a public relations study commissioned in November 1944 that the authors accessed prior to 1981. Hales postulates that this report was lost in the transfer of Oak Ridge files from the DOE to the National Archives.

132. Johnson and Jackson, *City Behind a Fence*, 115.

133. US Army, *Manhattan District History*, S27.

134. Hales, *Atomic Spaces*, 200.

135. Waters, “Negroes Live in Modern ‘Hooverilles.’”

136. Tommy Stevens, quoted in Present, *Dear Margaret*, 36-37; Hales, *Atomic Spaces*, 199.



(top, bottom) Dances, card games, and movie showings, were held regularly at the African American recreation center. Courtesy DOE photo collection.

Enoc Waters described the facility in a 1946 *Chicago Defender* article as “a large bare barny structure, furnished with a few checkerboards, volleyball net, juke box, dilapidated piano, ping pong table, and few chairs, and a projection booth suspended from the ceiling,” and said that Army mess halls in remote jungle locations provided more amenities.¹³⁷ Ed Westcott photographed African American residents taking part in regular activities in the recreational hall. In one photograph, groups of men play cards while one gentleman poses next to a punching bag with boxing gloves.¹³⁸ Another photograph captures couples dancing, while a third shows a mixed group of women and men sitting at tables with beverages.¹³⁹

One of the few organized recreational opportunities available to African American men at Oak Ridge was baseball. An August 10, 1944 *Oak Ridge Journal* article mentioned the creation of a new African American baseball league that would be playing on the “colored ball diamond” located near the hutment area and the K-25 diamond. At the time, the five teams were named for the contractors that employed the players: Roane-Anderson; Stone and Webster; J.A. Jones; Ford, Bacon, and Davis; and Keith Williams and Carbide and Carbon.¹⁴⁰ This entirely African American league could have been the genesis of the “Oak Ridge Bombers,” a semi-pro team that was created and managed by Robert Lee as early as 1944. Lee organized African American men who were excluded from playing on white teams but wanted to travel and compete against other black men who were excluded from professional teams. There is no mention of the African American Oak Ridge plant teams after 1945, but the Oak Ridge Bombers, which was primarily made up of workers from the Oak Ridge facilities, continued to play into the 1960s, well after Jackie Robinson integrated professional baseball in 1947.¹⁴¹

The lack of organized recreational events or community development groups and substandard conditions in the African American hutments led a local white Baptist minister to call for more religious opportunities for African Americans of Oak Ridge, saying “much could be accomplished in the religious life of this group as a whole. . . if a qualified, high-type negro minister could be found.”¹⁴² Historically, churches had been the center of community for African Americans in the South, providing a place of security and the opportunity to build social bonds and community in a seemingly unjust and unpredictable world of Jim Crow segregation.¹⁴³ Several black churches were founded by Oak Ridge residents during 1945 and 1946 with the help of established Knoxville congregations. The government eventually constructed a community church called “Chapel on the Hill” near the African American housing to meet the community’s religious needs.

137. Waters, “Negroes Live in Modern ‘Hooverilles.’”

138. “REC 0110 People Playing Cards at a Recreation Hall,” (DOE Photo Collection, 1945).

139. “REC 0115 Teen Dance at a Recreation Hall,” (DOE Photo Collection, 1945); “REC 0120 People Sitting at Tables in a Recreation Hall,” (DOE Photo Collection, 1945).

140. D. Ray Smith, “Bombers-The Team That Lasted,” *Oak Ridger*, (August 4, 2009).

141. Smith, “Bombers”; Jay Nehrkorn, “A New Day for Bombers Baseball” (Scarboro Collection-Oak Ridge Public Library).

142. Johnson and Jackson, *City Behind a Fence*, 117.

143. Steele, “Black History in the Ridge,” 10.



(top) The Oak Ridge Bombers, a semi-pro black baseball team that played from the 1940s into the 1960s, traced its roots to the African American baseball league created in 1944 for Oak Ridge workers. This 1948 team photo was taken by US Army photographer Ed Westcott. (left) Oak Ridge Bombers games were also well-attended social events, as seen in this 1948 photo. Courtesy DOE photo collection.

Churches were the center of African American community; numerous congregations established in Oak Ridge first met in the hutment area recreation hall or cafeteria. Courtesy DOE photo collection.



A prayer group that began in 1944 in the hut of Mr. and Mrs. David Rodgers formally organized as A.M.E. Zion Church of Oak Ridge in July 1945.¹⁴⁴ The same month, a reverend from Knoxville came to Oak Ridge to help establish the First African Missionary Baptist Church, considered by the congregation to be the first Black Baptist Church in the city. The congregation first met in the hutment recreation hall, but eventually moved into the “Chapel on the Hill.”¹⁴⁵ Oak Valley Baptist Church was organized in October 1946. The City of Oak Ridge offered the fledgling congregation room to meet in an East Village building, but church leaders declined based on the proposed space’s inconvenient location; no African Americans could live in the East Village area, which was located miles from African American housing. Oak Valley Baptist Church instead met in “The House on the Side of the Road.”¹⁴⁶

Besides offering religious guidance, African American churches filled a social void in the black community of Oak Ridge.¹⁴⁷ They sponsored barbeques, singing groups, and fundraisers for church and member needs. Churches also helped organize the first adult education courses offered to African American workers in Oak Ridge. The First Methodist Church started an adult recreation program in the hutment area in 1947, which morphed into work-skill classes including typing, shorthand, sewing, reading, writing, and elementary arithmetic.¹⁴⁸

144. The church quickly changed its name to A.M.E. Zion Community Chapel and later to Spurgeon Chapel to honor Rev. Claude Spurgeon who connected the young congregation to Clinton Chapel A.M.E. Zion Church in Knoxville in August 1945; “History of Spurgeon Chapel A.M.E. Zion Church,” Scarboro Collection-Oak Ridge Public Library.

145. “Mt. Zion Missionary Baptist Church – 66th Church Anniversary Commemorative Book,” (Scarboro Collection-Oak Ridge Public Library, July 24, 2011).

146. The brief history does not give additional location information for “The House on the Side of the Road,” but it was likely near the African American hutment area due to the congregation’s desire to be close to the black community; Rev. Alonzo Sims, “History of Oak Valley Baptist Church,” Scarboro Collection-Oak Ridge Public Library.

147. Steele, “Black History in the Ridge,” 10.

148. Peelle, “A History of Segregation,” 3.

The Oak Ridge Recreation and Welfare Association, the program that administered activities on the reservation, was composed of an all-white “volunteer” council funded by vending machine sales, juke boxes, and beer sales. While these revenue sources targeted African Americans, most of the activities offered by the association were for white Oak Ridge residents. Events organized for African Americans were scant and planned without any input from the black community.¹⁴⁹ Even socializing with family and friends living outside Oak Ridge proved to be more difficult for African Americans than for their white counterparts. Before the city was officially opened to the public in 1949, the Army provided visitor passes to residents at various locations throughout Oak Ridge. Black residents also had to apply for identification passes from the administration office that cost twenty-five cents for processing.¹⁵⁰

Considering the limited facilities in Oak Ridge, Knoxville became the natural hub of Oak Ridge’s black workers, offering recreational facilities, opportunities to socialize, and the amenities of an established urban area to those living on the reservation and to those who chose to rent homes in Knoxville and commute. African Americans living in the Oak Ridge hutments did most of their shopping in Knoxville. While Knoxville’s African American community mostly welcomed Oak Ridge workers, the influx of Manhattan Project workers taxed the town. Knoxville’s black schools were overcrowded with the addition of Oak Ridge children. Knoxville banks and insurance companies complained that African American Oak Ridge workers were not investing or saving any of their earnings locally (it is likely that many workers were sending portions of their wages to their families that remained in the Deep South).¹⁵¹ Some Knoxville business owners opened cheap establishments to take advantage of African American workers willing to travel for entertainment. Enoc Waters reported on the extra charges at Knoxville bars for using paper cups and exorbitant check-cashing rates in his *Chicago Defender* articles that shed light on the unacceptable living conditions of African Americans in Oak Ridge.¹⁵²

School: There was no family housing and African American children were not allowed to live on the reservation until 1945.¹⁵³ Public schools for white students were established in 1943 and used as a nonwage incentive to attract white workers and their families; however, the first African American school in Oak Ridge was not created until 1946. The first year African American children were allowed on the reservation, they were bussed to segregated schools in neighboring Clinton, Tennessee. The Scarboro School, built in the 1930s to serve the population of the small, rural settlement of Scarboro, was vacated when the US Army created the Oak Ridge military reservation and was converted into the school for black students in 1946.¹⁵⁴

149. Hales, *Atomic Spaces*, 202, 411.

150. Peelle, “A History of Segregation,” 9.

151. Waters, “Negroes Live in Modern ‘Hooverilles.’”

152. Waters, “Negroes Live in Modern ‘Hooverilles.’”

153. Peelle, “A History of Segregation,” 6.

154. Dick Smyser, “City’s Most Unique Neighborhood,” *Oak Ridger*, (February 10, 1977).

Located at the intersection of Scarboro Road and Bethel Valley Road, the school was approximately 1.5 miles south of the African American hutments and 3.5 miles removed from the center of Oak Ridge's white community.¹⁵⁵ The segregated school served grades 1 through 8 while older students who chose to continue their education were bussed into Knoxville, an hour-long journey on the backcountry roads of East Tennessee, to attend Austin High School.

The elementary school faced the same issues as many small, segregated southern schools did under the "separate but equal" doctrine. During the fall term of 1947, 85 students were enrolled at Scarboro Elementary; 35 were in grades 5 through 8 that shared a classroom and teacher. There were more students than desks and no additional resources for arts, music, or physical education courses like those being taught in Oak Ridge's white elementary schools.¹⁵⁶ Plant busses were used to transport children from the Bethel Valley hutment site to the school and to after-school activities, which had to be organized with other African American elementary schools outside Oak Ridge due to continued segregation. Mrs. Arizona Officer, the African American principal hired by Oak Ridge to organize the Scarboro school in 1946, believed the school faced the same problems as any school serving a predominantly itinerant population with the desire to learn but little in the terms of social support and resources. "We soon realized," Officer said, "that the children were, with very few exceptions, the same as children everywhere else and that their undesirable habits and attitudes were natural results of unstable family life, bad housing, lack of recreational facilities, and the other ills usually found among any group of low income workers, poorly educated and feeling insecure as they move from place to place in search of jobs."¹⁵⁷

The Department of Energy and Superintendent of Oak Ridge Schools recruited Mrs. Arizona Officer (seated) to serve as the first principle of Scarboro Elementary. In this 1949 photo, Mrs. Officer is surrounded by Robert Officer (her husband and assistant), and Scarboro teachers Ms. Pickett (first name unknown), Mammie Lou Harper, and Arlie Teasley. Courtesy DOE photo collection.



155. The Scarboro school building is now part of the Oak Ridge Institute for Science and Education.

156. Peelle, "A History of Segregation," 3.

157. Steele, "Black History in the Ridge," 6.

Post-Manhattan Project Context

Unlike previous federal development projects in Tennessee, work at Oak Ridge did not immediately halt once construction was complete. TVA projects that quickly mobilized large workforces for large-scale construction projects normally lasted around a year, allowing the transient workforce to return to their hometowns or move onto the next project site. After the United States dropped the atomic bomb in August 1945 and World War II ended in September of that year, construction slowed to a crawl and mass layoffs took place. Oak Ridge Army officials assured workers and residents that the program would continue due to the government's continued interest in the control and development of atomic energy.¹⁵⁸ Disproportionately, the less-educated single adults that made up the bulk of the construction forces and low-wage support jobs left in the months following the war, allowing the Army to dismantle the trailer camps and other low-quality accommodations, such as the white hutment area.¹⁵⁹ The residents who stayed in Oak Ridge, mostly employed in skilled positions and accompanied by their families, began to see the development as a new, permanent home. Roane-Anderson, the housing management contractor, put efforts into landscaping, repainting, and cleaning up the segregated white neighborhoods as a first step toward transforming the "frontier boom town" into a desirable southern community.¹⁶⁰

After years of worker demand far outpacing the limited housing stock in Oak Ridge, voluntary separations and layoffs throughout 1945 and 1946 allowed the remaining white workers to move into vacant housing that better fit the size and needs of their families. However, development of new African American housing and facilities was slow. Hutments and Victory Cottages continued to be the primary types of housing available to African Americans in Oak Ridge until 1950. In April 1949, local reporters Helen Knox and Joe Hill published reports of the unacceptable housing conditions faced by African Americans.¹⁶¹ The Victory Cottages built in 1943-1944 for white military families and converted into African American housing had well-exceeded their lifespans and the hutments had disintegrated into ramshackle huts with leaky roofs and exposed electrical wires. Vermin infested the cafeteria and garbage littered the area.

In 1948, an oral history states that African American leaders (unnamed) were called together to select a site for the permanent black community of Oak Ridge as part of master city planning efforts. City planners offered two potential locations: East Village (the area near the Elza gate originally designated for a planned African American community) or the former location of the Gamble Valley trailer camp. While there is no documentation supporting the claim that African Americans chose Gamble Valley over another proposed location, the former trailer camp site was open for immediate construction and was the closest area to the African American hutments and Victory Cottages. It was also geographically separated from the developed white neighborhoods.¹⁶²

158. Johnson and Jackson, *City Behind a Fence*, 167.

159. Johnson and Jackson, *City Behind a Fence*, 171.

160. Johnson and Jackson, *City Behind a Fence*, 171.

161. Articles by Knox and Hill ran in the *Oak Ridger* April 7-9, 1949, referenced in Peelle, "A History of Segregation," 6.

162. Johnson and Jackson, *City Behind a Fence*, 221.



This February 25, 1948 Ed Westcott photo shows Ernest Wende (second from right), the Manhattan District engineer tasked with overseeing construction of some Oak Ridge sites, and architect John O. Merrill (pointing) talking with unnamed "Black Leaders." Henry Teasley (gray suit) was the first African American member of the Oak Ridge town council, first elected in 1946. Courtesy DOE photo collection.

Gamble Valley Elementary School, originally constructed for the white children of workers living in nearby trailer camps, became the school for African American children in 1949 and was renamed Scarboro Elementary. Courtesy DOE photo collection.



In 1949, in preparation for the move from the hutment area to the new housing development, African American students relocated from the Scarboro School to the existing Gamble Valley elementary school that had been constructed to serve the trailer camp. The segregated Gamble Valley school served grades 1 through 9 and had a staff of five teachers, a modest staffing increase from the Scarboro location.¹⁶³ The cafeteria and recreation buildings in the African American hutment area, the de facto center of the Oak Ridge African American community during the war years, were demolished.¹⁶⁴

The newly created African American community at the site of the Gamble Valley trailer camp, originally referred to as Gamble Valley as well, opened to residents in 1950.¹⁶⁵ Located in “a peripheral valley on the southwest side of Oak Ridge, enclosed on two sides by 300-foot-high ridges and on the third by the city dump,” the African American neighborhood was separated from the nearest white homes by “1½ to 2 miles and a four-lane highway.”¹⁶⁶ The initial site plan called for block houses identical to the two- and three-bedroom designs being constructed for white families in Woodlawn. Ultimately, only 15 two-bedroom block houses were completed before the design was abandoned in favor of less-expensive accommodations that low-wage workers could more easily afford.¹⁶⁷ The remainder of the community consisted of 143 two-bedroom, frame-construction duplexes, and seven dormitories.¹⁶⁸ The neighborhood followed the same geographic boundary as the previous trailer camp, with the houses small, modest, and close together. Streets were named after historically black universities in a nod to African American educational achievements. This naming scheme had the unintended result of allowing residents to immediately identify someone’s race by their address alone.

163. Peelle, “A History of Segregation,” 3.

164. Present, *Dear Margaret*, 37.

165. Johnson and Jackson, *City Behind a Fence*, 211.

166. Peelle, “A History of Segregation,” 7.

167. Peelle, “A History of Segregation,” 7.

168. Steele, “Black History in the Ridge,” 8; Johnson and Jackson, *City Behind a Fence*, 221.



This April 1949 photo of duplex construction on Houston Ave. shows development of the newly established Scarboro community. Courtesy DOE photo collection.

African American workers almost immediately began referring to their new community as “Scarboro” in honor of the former farming community located in the southern portion of what became Oak Ridge and the first African American elementary school on the reservation. The name change provided continuity to the community that started in the segregated hutments and meager family housing and allowed citizens to distance themselves from the negative connection between African Americans and gambling, which was a detraction of “Gamble Valley.”¹⁶⁹ By the end of the year, there were 1,300 residents in Scarboro Village, approximately 4% of Oak Ridge’s population.¹⁷⁰

Oak Ridge’s black churches also moved to the Scarboro area. Oak Valley Baptist Church moved into the Gamble Valley School building when “The House on the Side of the Road” was condemned. A few years later, the group purchased an old church building from outside Oak Ridge and moved it to the Scarboro neighborhood.¹⁷¹ First African Missionary Baptist Church moved from the hutment recreation center to the cafeteria and gymnasium of the old Scarboro School and then into the Gamble Valley cafeteria before the congregation moved into its own building in 1957.¹⁷² Fraternal organizations helped channel African American residents’ desire to create community and affect positive change in the housing area. The Oak Ridge Prince Hall Affiliated Freemason Lodge and Order of Eastern Stars organized in 1947 and the Elks Lodge was officially chartered in 1949.¹⁷³

169. Gamble Valley was named after a former area landowner and was used to describe the geographic area before the Manhattan Project. When the segregated white trailer camp was developed, however, at least one white Manhattan Project worker interviewed as part of oral history projects incorrectly attributed the area’s name to African Americans engaging in illicit gambling. City officials use the “Gamble Valley” name for the community well into the 1960s.

170. Peelle, “A History of Segregation,” 1. The 1950 census reports Oak Ridge’s total population as 30,205; Johnson and Jackson, *City Behind a Fence*, 169.

171. Oak Valley Baptist Church still meets at the site of the relocated chapel, 194 Hampton Road, Oak Ridge, TN; Sims, “History of Oak Valley Baptist Church.”

172. The congregation is now call Mt. Zion Missionary Baptist Church, located at 195 Wilberforce Avenue in Oak Ridge, TN; “Mt. Zion Missionary Baptist Church – 66th Church Anniversary Commemorative Book,” (July 24, 2011, Scarboro Collection-Oak Ridge Public Library).

173. Steele, “Black History in the Ridge,” 10-11.

Fraternal organizations including the Freemasons (seen in this 1949 photo), Order of Eastern Stars, and the Elks Lodge, offered African Americans opportunities to build relationships and initiate community improvement projects. Courtesy DOE photo collection; Scarboro Collection (Oak Ridge Room, Oak Ridge Public Library)



Residential segregation continued well into the 1950s through custom and policies used by the on-site housing management companies. African American housing applicants were automatically referred to “MSI #2,” a branch of the Management Services, Inc. housing company located in Scarboro. When questioned about housing segregation in 1955, Management Services, Inc. and the Atomic Energy Commission stated that no African American had ever asked to live anywhere in Oak Ridge outside Scarboro.¹⁷⁴ In June of that year, Charles Hargrave, an African American technical employee, successfully rented a room in Cambridge Hall dormitory after arguing the dormitory in Gamble Valley was “unsuitable.” Two African American tenants moved into the Brick Apartments in 1956 and 1957 after considerable consultation with their employer Carbine Carbon Co., the Atomic Energy Commission, and Management Services, Inc.¹⁷⁵ When the federal government undertook a wide-scale property disposal effort from 1956 to 1957, home ownership in Oak Ridge skyrocketed as real estate transitioned into private hands. Some Scarboro residents eagerly purchased their homes, but other houses in the community were bought by white Oak Ridge residents who assumed the roles of absentee owners and landlords for the black residents living in those properties.¹⁷⁶

174. Peelle, “A History of Segregation,” 7.

175. Peelle, “A History of Segregation,” 7.

176. Peelle, “A History of Segregation,” 8.

The neighborhood's reputation as "an area of the community that is geographically isolated and racially exclusive in its nature unlike that in most any other city north or south" was ultimately the last developable piece of land between Scarboro and the center of Oak Ridge zoned for industrial development in 1959 and 1960.¹⁷⁷ Scarboro remained so geographically and socially isolated from most of Oak Ridge that in 1977—over 25 years since Scarboro's creation—the local paper dedicated a series of 12 articles to the community regarding the history of Scarboro, its relationship to Oak Ridge, and current issues facing Scarboro residents. The first article in the series acknowledged that "many *Oak Ridgers* can count the times they have been to the Scarboro area on their fingers—even those who have made it a point to be active in interracial activities" and "Scarboro is an area [residents] know most by indirect contact. And like all indirect contact, that can leave some important voids of information."¹⁷⁸

School Integration

African American high school students continued to attend Knoxville's Austin High School into the 1950s. When a white Oak Ridge high schooler questioned why African American students his age did not have the opportunity to attend a local school, efforts began to establish the first high school classes available for black students. School officials offered 2.5 paid teacher positions and space in the Gamble Valley school building. The school opened in the fall of 1950 and, with the help of volunteer teaching staff pulled from the experts working at the Oak Ridge lab, offered courses in math, biology, and physics. Volunteer teachers also offered evening adult education classes, serving 60 adults during the winter of 1951. Volunteer teachers continued to supplement staffing until 1953, when all courses were taught by paid staff.¹⁷⁹ Former students remember the high-quality education they received from the instructors, many of whom were doctors or researchers in the subjects they taught.

In January 1955, the Atomic Energy Commission announced that Oak Ridge schools would be integrated in accordance with the *Brown v. Board of Education* Supreme Court decision issued in 1954. Previously, when planning the Oak Ridge community in 1943 and 1944, the US Army deferred to local customs related to race relations and implemented strict racial segregation of neighborhoods, recreational facilities, and restrooms to duplicate the Jim Crow conditions experienced throughout the American South. By 1955, the Atomic Energy Commission contended that, as a federal agency, it needed to implement integration "with all deliberate speed," as stated in the court decision. Forty African American children enrolled at Oak Ridge High School and 45 attended Robertsville Junior High in the fall of 1955, making Oak Ridge the first southern school system to integrate.

177. Smyser, "City's Most Unique Neighborhood"; Peelle, "A History of Segregation," 8.

178. Smyser, "City's Most Unique Neighborhood."

179. Peelle, "A History of Segregation," 3.

While the Oak Ridge City Council previously debated a contentious desegregation resolution in 1953, school integration occurred without controversy and remained outside the national spotlight due to the fact that Oak Ridge was still operated as a federally managed military reservation and not as a self-governing municipality.¹⁸⁰ African American students remembered the transition, characterized by the local newspaper as “calmness,” as mainly peaceful but not trouble-free. Racial slurs and fist fights between students occurred as the school worked to fully integrate. Former Oak Ridge High School students recall the isolation they felt being part of a large high school where an individual was often the only black pupil in class. Black students could join school sports teams but could not fully participate in competitions since all other East Tennessee schools were strictly segregated.¹⁸¹ Black students were also not invited to participate in field trips and extracurricular activities at state parks, movie theaters, and other segregated spaces.

After spending the day sitting side-by-side with white classmates, African American students still felt the racial divide outside of class. The geographic isolation built into the community at the planning stage and strengthened in the official development of the permanent Scarboro community starting in 1950 continued to be a barrier to full integration for decades after formal integration. The city’s other junior high school and eight elementary schools remained segregated for 12 more years as Oak Ridge continued to use the community school model set up by Skidmore, Owens, and Merrill in 1943. Scarboro Elementary School closed in 1967, which sent the 250 African American students to the eight other Oak Ridge elementary schools.

While the desegregation of Oak Ridge schools received little outside attention, the neighboring community of Clinton, Tennessee, made national headlines for the violent backlash experienced when integrating its high school in the fall of 1956. Twelve African American students enrolled and attended their first day of school on August 26, 1956, without issue, making Clinton High School the first state-supported southern school to desegregate under *Brown v. Board*, but outside pro-segregationists descended on the community. A riot broke out over Labor Day weekend, forcing the Clinton mayor to call in the National Guard to keep the peace—another first in school desegregation. The relative unease and outside aggression toward Clinton High school came to a head 2 years later, on October 5, 1958, when Clinton High School was bombed.¹⁸² The Atomic Energy Commission offered the vacant Linden Elementary School in the west section of the facility to be used while the community rebuilt their school.¹⁸³

180. Bob Fowler, “Before Clinton or Little Rock, Oak Ridge integration made history,” *Knoxville News Sentinel*, (February 16, 2009), accessed May 2019, <http://archive.knoxnews.com/news/local/before-clinton-or-little-rock-oak-ridge-integration-made-history-ep-410364049-359586141.html/>.

181. Fowler, “Before Clinton or Little Rock.”

182. Carroll Van West, “Clinton Desegregation Crisis,” *Tennessee Encyclopedia*, (October 8, 2017), accessed May 2019, <https://tennesseencyclopedia.net/entries/clinton-desegregation-crisis/>.

183. *Oak Ridger* provides detailed accounts of the bombing, AEC’s offer of Linden School, preparation, and the first week of classes between October 6 and 10, 1958.

Oak Ridge High School students welcomed the Clinton students, formerly their cross-county rivals, into the “new Clinton High School” on Thursday, October 9, 1958, with a performance from the Oak Ridge marching band, a flag-raising ceremony, and a shared Pledge of Allegiance before starting classes.¹⁸⁴ Through an outpouring of national support and fundraising efforts, the community was able to rebuild and reopen Clinton High School in 1960.

Employment

Factors that affected African Americans’ earning and growth potential during the Manhattan Project continued to plague employment into the 1950s. *Southern School News* ran a feature article on Oak Ridge in February 1955 that stated only two African Americans were employed at the technical level.¹⁸⁵ The employment gap continued well after World War II, as a 1960 employment inventory still showed a lack of African Americans in skilled positions. Elizabeth Peelle, summarizing her findings in “A History of Segregation at Oak Ridge, 1943-1960,” characterized employment as “Very few Negroes employed above low-skilled or janitorial level. Possibly two dozen technicians and white-collar workers employed.”¹⁸⁶ At least one program at the Oak Ridge National Laboratory (ORNL) seemed to have more success hiring and keeping African American employees. The mouse genetics program started in 1947 to study inheritable radiation damage, basic genetics, and reproductive biology relied on a team of African American men to care for the mice for its first three decades of work. While the animal caretaker positions in the “Mouse House” were not considered skilled, the African American men overseeing the animals would transfer mice between cages to clean and would often alert researchers to mutations they noticed during cage transfers. In the 1940s, all of the Mouse House technicians were female and “at a time when the scientific staff elsewhere at ORNL was still all white, the Mouse House technicians came to include three young African American women (one of whom was the first college-graduated African American technician hired at ORNL), and, later, two men.”¹⁸⁷



The “Mouse House” genetics program at Oak Ridge National Laboratory provided some of the earliest opportunities for African Americans to break into scientific careers. Elizabeth Phipps (front) and Georgia Guinn were two early lab technicians, seen here with mouse cages in the low-dose-rate gamma radiation room, circa 1970. Courtesy Article in *Mutation Research*, “The Mouse House: A brief history of the ORNL mouse-genetics program, 1947-2009.”

184. While Clinton High School became one of the main locations associated with early school desegregation in the south, very few African Americans were enrolled at the time of the school bombing. The article goes on to mention “The majority of the white students arrived on the 15 school buses or with their parents or in their own cars. The Negroes arrived in a station wagon”; Urith Lucas, “Oak Ridge Band Plays, Emotions Apparent as Linden Officially Becomes Clinton High,” *Oak Ridger*, (October 9, 1958).

185. Peelle, “A History of Segregation,” 2.

186. Peelle, “A History of Segregation,” 15.

187. Liane B. Russell, “The Mouse House: A Brief History of the ORNL Mouse-genetics program, 1947-2009,” *Reflections in Mutation Research* 753 (2013), 72-74.

Summary

Life for African Americans working at Oak Ridge during the Manhattan Project was painfully similar to the lives of African Americans struggling under Jim Crow laws in the Deep South. The federal government's decision to include strict racial segregation into the earliest plans for Oak Ridge communities duplicated southern practices that drew stricter lines between blacks and whites than what was typically experienced in East Tennessee. However, the majority of African Americans who moved to Oak Ridge for the unskilled, low-paying positions open to black workers at the facility were from Alabama, Mississippi, and Georgia and well acquainted with the double standards and hypocrisy that flourished in "separate but equal" accommodations. The inadequate housing options and lack of recreational opportunities, along with restrictive housing policies that did not allow for family members to live together, led the majority of the 7,000 African American workers associated with the Manhattan Project at Oak Ridge to live off site. Those who opted to live within the security fence in single-sex hutments or shared Victory Cottages pushed for improvements and the same amenities provided in the white neighborhoods, but their pleas for housing equality were ignored. In 1950, the establishment of Scarboro created a permanent African American community that continued to be geographically and racially isolated from the rest of Oak Ridge. African American residents' struggle for housing, economic, and social equality that started with the initial phase of community planning by the Army in early 1943 continued well into the 1970s.

HISTORIC CONTEXT CONCLUSIONS

There is no evidence that any African American workers were employed at or lived in Los Alamos during the years of the Manhattan Project. They were, however, employed at Oak Ridge. The Manhattan Project Engineer District assets and atomic energy activities were incorporated into the Atomic Energy Commission in 1947. That same year, as many African Americans continued to work in Oak Ridge, Los Alamos' first African American resident took his post as an AEC security inspector. The long reach of Jim Crow could be felt in both communities at times. For the most part, however, the post-war lives and circumstances of the African Americans living in Los Alamos differed dramatically from their counterparts in Oak Ridge.

CONCLUSION

This historic context study was prepared to document the contributions and experiences of African American men and women working on the Manhattan Project. Research confirmed that African American workers supported the development of the Manhattan Project when, where, and how they were permitted to do so.

No African Americans are believed to have worked on the Manhattan Project in Los Alamos. Although African American scientists and technicians worked on the Manhattan Project in both Chicago at the Metallurgical Laboratory, and New York at Columbia University, none of these scientists were ever transferred to Los Alamos or Oak Ridge.

The social, housing, and employment inequality that developed under Jim Crow laws in the Deep South was duplicated at Oak Ridge. Approximately 7,000 African Americans are thought to have worked at Oak Ridge during peak employment in 1945, largely in construction and service industries or in domestic positions. Only a small percentage of black workers opted to live in Oak Ridge. Those that chose to live on site during the war were relegated to single-sex hutments, although there were multiple housing options on the reservation available to single white workers and white families. These separate and unequal living conditions persisted in Oak Ridge even after the 1950 establishment of Scarboro, a permanent African American community built at the site of a former trailer camp a few miles south of Oak Ridge. Illuminating the history of African American workers' contributions to the supporting social, physical, and domestic structure of the Oak Ridge site during the Manhattan Project can provide a more complete understanding of the project, the people who made it a reality, and the meaning of its legacies.

While the focus of this study was limited to examining the lives of African Americans at Los Alamos and Oak Ridge during the Manhattan Project (1942-1946), opportunities for additional research are explored in Appendix C.

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APPENDIX A: NOTABLE MANHATTAN PROJECT SITES

The Columbia University laboratory, the Metallurgical Laboratory, and the Hanford, Los Alamos, and Oak Ridge laboratories were the most prominent Manhattan Project sites, but they were far from the only ones. Other notable sites, as identified by the Atomic Heritage Foundation, include the following:

- The Ames Laboratory at Iowa State University
- California Institute of Technology in Pasadena, California
- Harvard University and the Massachusetts Institute of Technology in Cambridge, Massachusetts
- The Dayton Project in Dayton, Ohio
- Grand Junction, Colorado (the center of the efforts to mine and refine uranium ore)
- Sylacauga, Alabama; Newport, Indiana; and Morgantown, West Virginia (the location of three DuPont plants that explored whether heavy water could be used to control the fission process)
- The Philadelphia Navy Yard in Philadelphia, Pennsylvania
- Princeton University in Princeton, New Jersey
- Purdue University in West Lafayette, Indiana
- The Linde Air Products Division of the Union Carbide Corporation in Tonawanda, New York (where uranium 235 was processed and nickel for the gaseous diffusion process was produced)
- The University of California in Berkeley, California
- The University of Rochester in Rochester, New York
- Wendover Airfield in Wendover, Utah

APPENDIX B: MANHATTAN PROJECT AFRICAN AMERICAN SCIENTISTS AND TECHNICIANS

The study team identified 19 African American men and women working on the Manhattan Project as scientists and technicians. Several of these scientists and technicians completed their work at sites other than Columbia University and the Met Lab. It is certainly possible that other African American men and women contributed to the project.

- Pearlline Boykin, Met Lab technician
- George Sherman Carter, Columbia University scientist
- Harold Delaney, Met Lab scientist
- Harold Evans, Jr., Met Lab scientist
- Ralph Gardner-Chavis, Met Lab scientist
- Jasper Jeffries, Met Lab scientist
- Lawrence Knox, Columbia University scientist
- William Knox, Columbia University scientist
- Blanche Lawrence, Met Lab technician
- Samuel Massie, Ames Laboratory, Iowa State University, scientist
- Robert Johnson Omohundro, Arizona-based technician
- Carolyn Parker, Dayton Project scientist
- Lloyd Quarterman, Met Lab scientist
- George Reed, Met Lab scientist
- Edwin Russell, Met Lab scientist
- Benjamin Franklin Scott, Met Lab scientist
- Mildred Summers, Met Lab technician
- Moddie Taylor, Met Lab scientist
- Jesse (“J”) Wilkins, Jr., Met Lab scientist

APPENDIX C: FUTURE RESEARCH

- **African American historic context for the entire Manhattan Project.** Considering African Americans' contributions to the broader war effort and the importance of the "Double V" campaign (victory against enemies abroad, victory against racism and enemies within the United States), a broader historic context of African Americans within the Manhattan Project could be created. Instead of focusing on the three main facilities that are now part of the Manhattan Project National Historic Site, a broader context would allow for research into African Americans' professional and personal lives at the supporting Manhattan Project sites across the country; African American-owned businesses that worked with the defense industry, such as B&T Metals in Columbus, Ohio; and military units that provided support for the bombings of Hiroshima and Nagasaki, Japan in August 1945.
- **African American historic context in Hanford, Washington.** At the time of this study, the NPS Pacific West Regional Office is overseeing a Cooperative Ecosystem Studies Unit oral history project to capture firsthand information about life in Hanford and the Tri-Cities during and immediately after World War II. Interviews collected as part of the project may be useful in creating a historic context of African Americans that parallels the work done for Los Alamos and Oak Ridge.
- **African American scientists at the Chicago Metallurgical Laboratory and Columbia University.** Leading African American scientists and some technicians are known to have worked in the labs that supported the Manhattan Project. Additional information about these individuals, their lives during World War II, and the choice (either individual or dictated by the US Army) to not continue their work on site in Los Alamos or Oak Ridge when research groups were transferred from the universities could provide an additional perspective on African Americans who worked on the Manhattan Project.
- **African American historic context of the Dayton Project.** In 1943, the Manhattan Engineering District hired the Monsanto Chemical Company to separate polonium, which would be used as the initiator for atomic bombs. Dr. Charles A. Thomas, Monsanto's research director, oversaw research facilities and scientific personnel at numerous labs near Monsanto's central research facility in Dayton, Ohio. After the war, the polonium-related work at the Dayton units was moved to the newly constructed Mound Laboratories in Miamisburg, Ohio, which was the first post-war Atomic Energy Commission site to be constructed in the United States. Carolyn B. Parker, an African American physicist, worked on the Dayton Project, but future research may uncover more information about African Americans associated with this part of Manhattan Project history.

- **Historic context of the Native Americans, Hispanics, and other groups involved at Manhattan Project sites (Hanford, Los Alamos, Oak Ridge).** The present historic context's scope did not allow for detailed research into the other minority groups working and living in the three main Manhattan Project communities. While African Americans were not present in Los Alamos during World War II, nearby Pueblo tribal members and Hispanics were hired primarily for unskilled positions. Hispanics and Native Americans were considered potential workers at Hanford and Oak Ridge as well, due to the demand for labor. An additional historic context or appendix could be dedicated to these other minority groups and their involvement at the three central Manhattan Project facilities or with the project as a whole.
- **Africans and Native American involved in uranium mining to support the project.** Uranium processed in Oak Ridge, and ultimately used to fuel the atomic bombs, was mined from sites in the Belgian Congo, Canada, and the western United States. Research related to the Africans working in Shinkolobwe Mine under Belgian colonial rule in present-day Democratic Republic of Congo and Navajo uranium miners in Arizona, New Mexico, and Utah after World War II would provide information on how people of color were essential to the success of the Manhattan Project from the earliest phases of development.
- **Medical and health-care conditions for African Americans at Oak Ridge.** African Americans living in the American South under Jim Crow laws were not offered the same quality of care experienced by white patients. Disparities in health care to racial minorities and other racial prejudices have been linked with persistent health inequalities and continuing civil rights issues throughout the 20th century. Oak Ridge residents relied on temporary medical clinics until the Army opened the Oak Ridge Hospital, complete with segregated wards, in November 1943. It is unknown what conditions African American workers and residents experienced when seeking health care at Oak Ridge during the Manhattan Project; additional research may provide information about the state of health care in the "Secret City" and how it may contribute to issues of environmental justice (see below).

- **Environmental justice and the legacy of the Manhattan Project.** Environmental justice, as defined by the US Environmental Protection Agency, is “the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” Historically, minority and low-income groups have been disproportionately affected by the environmental impacts of large-scale development by the government, military, and sometimes private entities. Locations for the Manhattan Project’s main facilities were in part selected because of the marginalized populations that resided in northern New Mexico (Pueblo tribal members and Hispanic homesteaders), East Tennessee (poor farmers and coal miners), and eastern Washington (Native American tribes and small agricultural settlements) during the early 1940s. Additional social and environmental justice topics at Oak Ridge include the decision to locate the permanent African American community of Scarboro near the Y-12 facility and the US Army’s selection of African American construction worker Ebb Cade as the first involuntary participant in radiation experimentation at Oak Ridge Hospital in 1949. Research into the prolonged health and environmental effects of Manhattan Project activities could highlight the continued injustices and negative effects to local minority populations and provide another opportunity to discuss the Manhattan Project’s complicated legacy.
- **Women and the Manhattan Project.** Denise Kiernan’s *The Girls of Atomic City: The Untold Story of the Women Who Helped Win World War II*, published in 2013, brought some long-overdue attention to the women who worked for the Manhattan Project. In addition, recently published articles have highlighted women scientists’ contributions to the project. Future research into the topic will likely provide even more insight into the lives of women workers and the spouses of workers running households in Manhattan Project communities.
- **“Silent Voices” of the Manhattan Project.** African Americans were only one of the minority groups working on the Manhattan Project that have long been overlooked. Considering the size and diversity of the Manhattan Project workforce, other groups were likely represented in Los Alamos, Hanford, Oak Ridge, and supporting sites during World War II. Research into those with “alternative lifestyles” or other marginalized groups would provide additional representation and context for future NPS interpretation.

- **Personnel and Security File of Manhattan Project Job Applicants and Workers.** Additional research relating to personnel files of Manhattan Project employees and contractors—especially the files related to individuals who did not receive security clearance or whose employment was terminated—may provide a wealth of information related to the type of “offenses” the US Army considered a threat to project security and the types of people who did or did not work for the Manhattan Project. It may be difficult to find these types of records considering most workers at Hanford and Oak Ridge were employed through a series of subcontractors and the tight security associated with wartime build-up and atomic development.
- **Espionage during the project.** Secrecy was one of the main tenets of the Manhattan Project, with workers constantly reminded that talking about their jobs or lives in the “secret cities” could lead to the United States losing the war. This preoccupation with security and controlling information may have bordered on paranoia, but workers provided Soviet intelligence with information directly from the Los Alamos laboratories. Information exists connecting German scientist Klaus Fuchs with the Soviet Union, but additional research into acts of espionage or individuals suspected of spying could provide interesting context when describing the heightened security and personnel screening at the Manhattan Project sites.

APPENDIX D: PREPARERS AND CONSULTANTS

Manhattan Project National Historical Park

Kris Kirby, Superintendent

Niki Nicholas, Site Manager for Oak Ridge Unit

NPS Intermountain Regional Office

Amy Cole, Chief of Cultural Resources

Astrid Liverman, PhD, Historian, Heritage Partnerships Program

NPS Southeast Regional Office

Barbara Judy, Acting Chief of Cultural Resources

Cynthia Walton, Historian

NPS Pacific West Regional Office

Elaine Jackson-Retondo, PhD, Preservation Partnerships and History Programs Manager

Christopher E. Johnson, Historian

NPS Denver Service Center—Planning

John Paul Jones, Visual Information Specialist

Carrie Miller, Project Manager

Westby Mize, Cultural Resource Specialist

Hilary Retseck, Cultural Resource Specialist

Christie Riebe, Contract Editor

Department of Energy

Emily Anderson, Library and Information Program Liaison, Office of Scientific and Technical Information

Padraic Benson, Program Analyst, Office of Legacy Management

Johnathan Sitzler, Director, Facilities, Information, and Reservation Management Division, Oak Ridge

Katatra Vasquez, Environmental Scientist, Oak Ridge

Los Alamos Historical Society

Don Cavness, Curator

Rebecca Collingsworth, Archivist

Heather McClenahan, Executive Director (Retired)

Los Alamos National Laboratory

Daniel Alcazar, Research Librarian

Alan Carr, Historian

Ellen McGehee, Historian (Retired)

Madeline Whitacre, Historian



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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