The Invisible Issue: Southern Women and Nuclear Opposition in the Tennessee “Nuclear” River Valley, 1974-2011

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Abstract

“You are not going to build the plant there. We detest you there. We will not have your plant there,” screamed Tennessean Faith Young in response to the Tennessee Valley Authority’s 1974 announcement to build the “world’s largest nuclear plant” in Hartsville, Tennessee.1 Throughout the late twenty-first century, Southern women acted as the vanguard of the anti-nuclear movement, bringing the invisible issue of radiation into the public sphere. In bringing the public health and environmental effects of radiation to light, Southern women challenged the dominant and official narrative on nuclear safety promoted by the nuclear industry and the federal government. Helping to spread the message of the dangers of radioactivity were physician-activists equipped with epidemiological studies forecasting frightening public health and environmental effects from low-level radiation.

This case-study includes the anti-nuclear activities of Faith Young and Jeanine Honicker, two local Tennesseans who challenged the TVA’s nuclear expansion for over three decades. Also included is TVA nuclear whistleblower Ann Harris, a local from East Tennessee who contributed to the vanguard of Southern anti-nuclear voices by exposing a history of unsafe practices from inside the TVA. Harris became known as the one of the TVA’s most outspoken opponents and prevailed in six whistleblowers cases against the TVA. In some ways, their collective experiences speak to the larger “No Nukes Movement” of the late twentieth century, led primarily by women, exposing the public health and environmental dangers of nuclear radiation in the public sphere.2 In other ways, because of the power and influence wielded by the TVA and the nuclear industries on the region, as well as the South’s political adherence to Cold War orthodoxy, Southern women’s anti-nuclear activities can be read as transgressing and challenging the nuclear patriarchy and Conservative political culture of the time.

Keywords: Tennessee Valley Authority, Faith Young, Jeanine Honicker, Ann Harris, anti-nuclear protest, anti-nuclear movement, nuclear whistleblower

1 “N-Plant Won’t be Built, Group Tells TVA Board,” The Tennessean, February 9, 1975, 13.
“You are not going to build the plant there. We detest you there. We will not have your plant there,” screamed local activist Faith Young in response to the Tennessee Valley Authority’s 1974 announcement to build the “world’s largest nuclear plant” in Hartsville, Tennessee.4 Echoing molecular biologist and Tennessee State University Professor S.E. Ballad’s proclamation that Americans must wake up and scream in opposition to nuclear production, Faith Young formed a group of local Tennesseans, mostly women, to organize against the Tennessee Valley Authority’s nuclear expansion and the increased nuclear proliferation occurring around the US South.5 Concerned with the public health and environmental effects of radiation exposure, Young said “where atomic electricity rages, so does radioactive genetic disorders, shortened lives and other uglies.”6 Her approach to challenging the TVA included letter writing efforts, protests, marches, legal interventions and direct action campaigns. Throughout the late twentieth-century, Young became infamous for direct confrontations with the male TVA board members, openly challenging the nuclear patriarchy that held a tight grip on the region. Although women protesting the nuclear industry were typically associated with California or the East Coast, in the mid-1970s, Southern women created campaigns against nuclear production that spoke to the public health and environment effects of the increasingly “nuclear” South.

Contributing to the vanguard of nuclear opposition in the US Southeast was Nashvillian, Jeanine Honicker, who brought the first lawsuit against the atomic industry following her daughter’s diagnosis with leukemia. Honicker coined the phrase, “The solution to pollution by dilution when it comes to radiation is fallacious.”7 She had a number of anti-nuclear distinctions including founding member of the Southern anti-nuclear group, the Catfish Alliance, founder of the citizen-based group. Safe Energy for Tennessee (SAFE), and plaintiff in the first lawsuit against atomic power.8 The court case, Honicker v. Hendrie, alleged the nuclear fuel cycle was a violation of the Constitution because the known biological effects of ionized radiation were harmful to all living things, caused adverse health effects, and genetic damage.9 As a private

This essay is a selection from a monograph in progress on the history of the anti-nuclear movement in the US South in the late twentieth and early twenty-first centuries. The work is tentatively titled No Nukes Y’all: A History of Southern Opposition to Nuclear Weapons, Nuclear Energy and Nuclear Waste, 1964-2014.

4 “N-Plant Won’t be Built, Group Tells TVA Board,” The Tennessean, February 9, 1975, 13.
citizen, Honicker claimed that the Atomic Energy Act of 1946 establishing the Atomic Energy Commission adversely affected the public health and safety interests of all American citizens. The case marked a milestone in nuclear history for several reasons. Paramount to the case was the testimony of leading radiological scientists, including Dr. Alice Stewart, Dr. John Gofman, and Dr. Ernest Sternglass, whose expertise on radioactive contamination and public health served as the scientific basis for the adverse biological effects of ionized radiation. Stewart, Gofman and Sternglass emerged as leading physician-activists forecasting the dangers of low-level radiation. As physician-activists, Drs. Gofman and Sternglass represented a cadre of atomic scientists from inside the Atomic Energy Commission (AEC) who turned physician-activists by the 1960s as the effects of nuclear radiation began to make manifest in the body politic. Their scientific studies on the radiological effects of nuclear production were rebuked by the AEC and rejected within the atomic industries. The lawsuit helped to shine specific attention on the contested scientific debate about the public health effects of low-level radiation. Although the Supreme Court did not hear the case, Honicker’s role as anti-nuclear torchbearer demonstrates the willingness of Southern women to challenge the nuclear industry in uncharted ways.

Throughout the late twentieth-century, Honicker and Young collaborated on several anti-nuclear campaigns and used the local media to bring visible scrutiny to the “invisible” issue of radiation in the Tennessee River Valley. To highlight the invisible, Honicker and Young directly challenged the nuclear industry at public gatherings and focused critical attention on issues related to the public health, the environment, and the cost of nuclear production for local taxpayers. Their efforts received considerable attention in local newspapers, specifically, Nashville based paper, The Tennessean. The focus on nuclear intervening women in the local papers was due in part to Jeanine Honicker’s husband, Dolph Honicker, who served as one of the editors of The Tennessean. The decision to report on the anti-nuclear efforts of his wife, and in extension expose the machinations of the TVA, generated its own controversy among the staff of The Tennessean. Editorials published in The Tennessean often featured opinions from local engineers and TVA supporters, who openly criticized Honicker’s editorial decision to publish articles critical of the TVA. Accusations of communism were also commonplace and demonstrated the public backlash against local anti-nuclear advocates. This tension evident in the local newspaper was emblematic of the larger social, political and economic transformation occurring in the US South in the 1970s.

Identified in The Tennessean as the “TVA’s most vocal critic,” Ann Harris worked for the Tennessee Valley Authority for nearly sixteen years and in that time prevailed in six whistleblower cases against the TVA. As a nuclear whistleblower, Harris’s insider testimonies offered numerous revelations about the TVA’s nuclear practices including violations of worker’s safety, worker intimidation, and a cultural disregard for safety. Harris described the TVA’s attitude toward safety as “corrupt.” As a nuclear whistleblower, Harris’s experiences actualized many of the public’s worst fears about the inefficiencies of the TVA’s stewardship of its nuclear production. More immediate, however, was the claim that the TVA was “cooking the books,”

12 The Tennessean, June 24, 1998, 5B.
obfuscating the health and environmental dangers of its practices.\(^\text{13}\) Like Honicker and Young, Harris’s role as anti-nuclear activist, and in her case, unintentional anti-nuclear activist, spanned decades and had a profound influence on public opinion. In 2011, Harris was featured in an episode of CBS news to discuss potential dangers to American nuclear reactors, particularly those run by the TVA, following the nuclear disaster at Fukushima, one of the worst radiological and public health disasters of the twenty-first century.

Throughout the atomic era, women served as the primary conduit exposing the dangers of nuclear radiation to the public by countering the official narrative of atomic safety promoted by the industry. Across the country women actively campaigned against nuclear weapons, nuclear testing, nuclear proliferation, nuclear waste disposal, and nuclear energy.\(^\text{14}\) Much of this activism was fueled by the desire to bring the invisible effects of radioactive fallout and radioactive exposure into the public sphere. Because the effects of radiation often went unnoticed for decades, galvanizing support for the invisible issue presented numerous challenges. Women often included the efforts of physicians and scientist-activists in gaining popular support for their cause, hoping to sway the public and politicians with scientific evidence. Efforts to bring intense political and public scrutiny to the public health and environmental dangers of radiation began in the 1950s at the apogee of US nuclear testing. On November 1, 1961, nearly 50,000 American women walked out of their homes and jobs in a nationwide strike for peace and against US atomic testing for the sake of the world’s children.\(^\text{15}\) Although US nuclear testing was occurring in the Southwest, and throughout the Pacific, a blanket of radiation hovered over North America by the end of decade, creating a number of problems including radiated milk, increased numbers of infant mortality in the US Southeast, and cancer epidemics. Women in the South, as their counterparts in other parts of the country, worked to bring the invisible issue into the public sphere, and in so doing, challenged the nuclear patriarchy and Cold War orthodoxy of the time.

Within the context of the atomic age, the anti-nuclear position was interpreted as one diametrically opposed to and at odds with the tenets of the Cold War. Critics, opponents, and nuclear insiders turned whistleblowers were met with hostility, and accusations of Communism often followed. Even the mothers of Women Strike for Peace were called before the House Un-American Activities Commission (HUAC) to investigate the potential Communist leanings of its members. Related women’s groups such as the International League of Women Voters were also deemed subversive by the FBI. By the early 1970s, the anti-nuclear position became inexorably linked with the women’s, peace, and environmental movements, even though clear ideological lines fragmented New Left organizations. The “No Nukes” movement of the 1970s was an amalgamation of activists from these three movements working in a decentralized organizational space. Much of the emphasis was placed on making the invisible effects of radiation on people

\(^{13}\) “Nukes, TVA, Health, & Safety, the NRC & the Nuclear Industry with Ann Harris,” interview with Ann Harris, Labor Video Project, July 9, 2011, video, https://youtu.be/77vkuPqN4A.


and the environment public. Taking the anti-nuclear position, even for mothers, remained a politically subversive act throughout the Cold War, particularly in the South.\textsuperscript{16}

This analysis proceeds in two sections. The first part is a case-study of the organizing tactics used by Faith Young and Jeanine Honicker to oppose the TVA’s nuclear expansion, and the specific ways these women challenged the official narrative on the safety of atomic power. This gendered case-study examines the contributions of Honicker and Young exclusively, even though women across the South including African-American, Native American, and middle-class whites alike were involved in anti-nuclear campaigns opposing nuclear weapons, waste, and energy.\textsuperscript{17} The decision to focus on Honicker, Young, and Harris exclusively is twofold: These women presented direct challenges to the TVA and are representative of what can be called “regionally transgressive behavior” due to the long history of patriarchy and conservative gender identities in the region. The second reason is the exposure in \textit{The Tennessean} and other local newspapers.

The next section is a micro-study on Southern nuclear whistleblower, Ann Harris. Described in \textit{The Tennessean} as one of the TVA’s most vocal opponents, this rural Tennessee native’s experience is representative of many TVA nuclear whistleblowers. When she started to document safety concerns, she was intimidated, harassed, and threatened with physical violence. Harris successfully prevailed in six cases against the TVA and acquired both bachelor’s and master’s degrees in Science as part of the settlement. Harris brought to the public’s attention the extensive health risks associated with working in the nuclear plants, including mental anguish. Although this case-study focuses on Harris’s role as nuclear whistleblower, her experiences are in concert with the testimonies of other Southern women nuclear whistleblowers employed in and outside of the TVA who noticed a similar pattern of disregard for public health and worker safety.\textsuperscript{18}

Embedded within these case-studies is a gendered analysis of the measures taken by the nuclear industry to silence women critics, as well as the measures taken by the nuclear industry to make its product more “appealing” to women. Through their collective efforts, these Southern anti-nuclear activists helped to generate popular skepticism about the TVA’s ability to effectively manage its nuclear responsibilities and rebuked the official narrative on atomic safety. These women cast a serious cloud of doubt that added to growing public distrust. The exposure of mismanagement, negligence and intimidation as common practices of the TVA in the local presses only confirmed the public’s worst fears. Employing a collection of evidence including Southern newspaper articles, interviews, records from anti-nuclear groups, and the


nuclear industries, this work offers critical insight into the public interplay between the Southern women anti-nuclear activists and the nuclear establishment in the US South in the late twentieth-century.

Part I: No Nukes in the Tennessee Nuclear Valley: Jeanine Honicker and Faith Young, and the Fight against the TVA’s Nuclear Expansion

Fearing the harmful effects of radiation to her community, in August 1974 Faith Young coordinated a march against the Tennessee Valley Authority’s (TVA) proposed site for its latest 2.5 billion dollar nuclear reactors outside of Hartsville, Tennessee. Coordinated by Young’s group, Concerned Citizens of Tennessee, two other organizations, including Citizens for Safe Energy, coordinated by Jeanine Honicker, and Southerners for Safe Power, peacefully marched from the highway to the proposed site to bring the public’s attention to radioactivity and its “dangers to future generations.” The march brought interested people to the site of Hartsville in an attempt to imagine the effects of the large nuclear reactor on the local people and environment.

Throughout the spring and summer of 1974, these organizations held weekly meetings around Hartsville and Nashville with the goal to “acquaint the public with the hazards of ionizing radiation.” Young and Honicker engaged in a public awareness campaign to bring intense scrutiny to the dangers of atomic power and the practices of the nuclear purveyors. The women understood the limitations of citizen activism in the South, particularly since opposing nuclear production meant challenging the nuclear colossi known as the Atomic Energy Commission (AEC), the TVA, and the later Nuclear Regulatory Commission (NRC). Contributing to the controversy, TVA’s nuclear proliferation plans also included partnering with the AEC to build a Metal Fast Breeder nuclear reactor at the Oak Ridge National Laboratory. The public health and environmental dangers associated with the Metal Fast Breeder included radioactive containment from plutonium, one of the deadliest substances on earth. Opposition to the rapid “nuclearization” of Tennessee and the unchecked power of the TVA was mounting due in part to increasing public scrutiny in the press.

For Young, the decision to become a nuclear intervenor in the Tennessee River Valley was personal. The TVA selected nearly 1900 hundred acres of land near the Old Hickory Reservoir, three miles from Hartsville, in Dixon Springs, to build its megawatt boiling reactors across from her family’s 140-acre home built in 1788. Her ancestral roots were a common talking point when discussing the impetus for her activism as a nuclear intervenor. In many ways, Young represented the stereotypical white, middle class anti-nuclear woman of the “No Nukes” movement. And yet, in many ways Young was not the average East Tennessee woman. She attended the University of North Carolina and worked for Walter Cronkite at CBS News in New York before returning to Tennessee. As a nuclear intervenor she understood the imperative of mobilizing public support through the media and possessed savvy media skills in order to galvanize popular support.

20 Ibid.
Capitalizing on the national media stories about nuclear power making headlines due to the Energy Crisis, Young brought in popular speakers to educate the Nashville public. In April 1974, Concerned Citizens of Tennessee co-sponsored Ralph Nader to speak at a public lecture hosted at Vanderbilt University. In the 1970s, Nader emerged as the face of consumer advocacy, unaligned with the bipartisan political dialectic of the day. Nationally, Nader was one of the leading figures in opposition to nuclear energy and was considered “public enemy number one” within the nuclear industry. Nader discussed a number of pressing issues including rate-payer hikes, alternative energy solutions, and exposing the politics of energy options.

On the heels of the August march, the groups met in September to engage in a peaceful anti-nuclear protest that would actively disseminate its message of the dangers of radioactivity to people around the community. On Monday, September 2, 1974, at the proposed site outside of Hartsville, fifty protestors, mostly residents, released helium balloons filled with messages about radiation, cancer, and health risks associated with proximity to nuclear reactors. Most of the messages focused on the dangers to children and women. Individuals were asked to return the messages indicating where the balloon was found.

For Young and others, challenging the TVA represented a “David and Goliath” scenario. As a public utility created by the federal government during the New Deal to “modernize” the rural South, the TVA possessed endless resources to withstand legal challenges. However daunting the task throughout the mid-1970s, citizen groups continued to pose legal interventions to the TVA, often in partnership with environmental groups. In 1975, Concerned Citizens for Tennessee joined in a lawsuit with five other organizations, including the state of Tennessee, as “intervenors” against the TVA. The intervenors had a number of reasons why the plant should not be built in Hartsville including its cost, potential environmental impact to the Cumberland River, the stress on the city’s infrastructure, and the threat to the milk supply. In 1975, a discovery was made that could disrupt the TVA’s nuclear expansion. In the lush shoals of the Cumberland River, the pink mucket pearly mussel was identified. A similar creature, the snail dart, famously prevented the TVA from completing its Tellico Dam project outside of Knoxville. The snail dart appeared on the endangered species list and effectively curtailed the project, and the hope was that the pearly mussel might also be protected through its classification as an endangered species.

Among the objections listed by the citizens of Hartsville were the unintended consequences of the TVA’s nuclear plans. In an interview, Mayor James Donoho expressed anxiety over housing, traffic, and potential evacuation routes for the community’s one lane road. Many other members of the rural community wanted to preserve the natural spaces of the pastoral landscape and feared the nuclear expansion would pollute the biosphere. Other residents questioned the TVA’s ability to act as responsible nuclear stewards. A 1979 survey of the citizens of Dixon Springs found that of the thirty citizens polled in this Southern town, seven supported the plant, and sixteen were opposed. In many ways, the nuclear opposition was read as a repudiation of the TVA. By the late 1970s, local people had grown tired of the TVA’s pattern of seizing Southern lands through eminent domain. Seventy-year-old Wyatt Allen stated, “When these

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23 Nuclear Regulatory Commission-Public Information Files, 1969-1981. National Archives and Records Administration, Atlanta, GA.
24 “Nader to Discuss Fuel Pinch, N-Power,” The Tennessean, Friday, April 12, 1974, 14.
25 “50 March to Protest N-Plant” The Tennessean, September 1, 1974, 6.
26 “16 Answer No, 7 Yes in Hartsville Facility: Survey Finds Dixon Springs N-Plant Foes,” The Tennessean, Tuesday, October 16, 1979, 2(A).
TVA boys came around here they expect us to roll over like a good possum in a stump and grin. Well, I ain’t doin’ much grinning.” Allen’s distrust and suspicion of the TVA and the federal government gestures toward a longer history of resistance in the region. 

Throughout 1975, Young mounted an organized, public campaign aimed at challenging the TVA’s nuclear expansion. In response to negative media attention, the TVA held its first public meeting in years to quell public anxiety over the Hartsville plant, rate hikes, and deferred pay for workers. Outside of the TVA’s offices, Young and Honicker led a group of picketers including Honicker’s daughter, Linda, recovering from leukemia. Inside, Honicker interrogated the TVA board about its decision not to pursue other forms of renewable energies. She referenced a new process supported by the state of Tennessee and engineered at the University of Tennessee as a less harmful avenue for generating electricity. When Young had the opportunity to speak to the board, she referred to a meeting in which none of the members had showed, demonstrating their limited interest in receiving public feedback on nuclear siting. Throughout her interaction with the TVA, Young was increasingly frustrated by its bureaucracy, arrogance, and seeming unwillingness to engage the public in meaningful, substantive dialogue about the realities of radiological exposure.

In October 1975, the TVA held a public licensing hearing with three representatives from the Nuclear Regulatory Commission (NRC). Opponents labeled the hearing a farce as the NRC had a history of approving a nuclear license to every company applying for one. To illustrate this point, Nashville’s Glen Fisher brought a stuffed animal kangaroo as a symbol of what he called a “kangaroo court.” The groups hired lawyers and presented more than thirty speakers that argued the new reactors would not only raise rates but place the environment and public health in peril for generations to come. Implementing more direct-action tactics from the late 1960s, the activists disrupted the hearings by singing songs, reading poetry, and breaking out into tears. Two women with leukemia said they were protesting to prevent highly toxic waste from poisoning others. This was certainly perceived as transgressive behavior for middle-class Southern women. Backlash toward the women ensued as Young’s husband was punched in the face on the steps of the building. According to a newspaper account in the Murfreesboro Daily News Journal, an electrical union worker punched Young’s husband, Billy Martin Young, ostensibly for his wife’s actions and for threatening future employment at the plant.

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29 Nat Caldwell, “TVA Defends open Hartville N-Plant,” The Tennessean, January 17, 1974, 4A.
30 Ibid.
32 Ibid.
33 Ibid.
36 Ibid.
Throughout the postwar era, the South became known for its pro-nuclear position. Public support for the nuclear industry was evident throughout the community. Clearly, one of the main reasons for public support for nuclear industry were the economic opportunities and prospect of jobs. However, other Southern communities interpreted the anti-nuclear position as one aligned with not only New Left activism but also Communism. In 1979 a peaceful protest of approximately three hundred people, mostly women and children, met outside of the Hartsville plant to hear from a number of speakers, including Faith Young from Concerned Citizens of Tennessee, Ruth Alvey, Chairwoman of the Fund to Stop TVA Increases, and Walter Searsey of the National Association for the Advancement of Colored People (NAACP). A counter-protest in support of nuclear power and the TVA was led by Reverend Mel Perry of Nashville’s Grace Bible Presbyterian Church, who known to take to engage in public demonstrations to support Conservative religious, political and social ideas. 37According to their placards, the anti-nuclear power position was aligned with Communism. In response to NAACP’s Searsey saying, “black people have more than a cultural interest in the struggle against nuclear power,”38 Perry told reporter Martha Highers that the anti-nuclear protestors were “the same crowd as against the Vietnam War.”39 Clearly, local residents understood the nuclear issue not only in terms of their own communities but within the broader social, cultural and political transformations of the 1970s.40

Despite TVA Chairman Aubrey Wagner’s declaration that public input was critical for the TVA’s nuclear success, board members were openly hostile to the nuclear intervening women. In March 1977, the three-man NRC federal licensing board met again. Young and Honicker attended the meeting, along with many of their supporters, and when Young, who was told not to speak, continued to question the health risks associated with radiation, TVA board chairmen, Aubrey Wagner, said “No, no, no, you cannot speak. You cannot speak!”41 In response to Young’s insistence to be heard Wagner walked out of the meeting and stopped the proceedings.42 The two other members of the board stayed in an attempt to quell the tension. Director William Jenkins remained to lecture the women on decorum and public speaking. He suggested, “I think we are obligated to hear the general public, but at the right time.” When asked why Honicker believed she had the authority to intervene, she said “my status as an electric ratepayer, a taxpayer, and a mother with a son at the University of Tennessee give me standing to intervene.” She followed that by stating, “I intend to stop the plant, not delay it. […] I have so many questions that I have never been able to get answered that I have brought up here. If I am not granted the opportunity to intervene, this board will cease functioning and the hearing will never be held, and these questions go unanswered.”43 At a hearing in 1985, the two grandmothers were arrested for interrupting a TVA meeting, and again in 1995 for speaking without permission at a

39 Ibid.
41 “Nuclear Plant Cost Hike Passes Despite Critic,” The Tennessean, Friday, August 26, 1977, 19.
42 Ibid.
Typically, the board was not responsive to the women’s questions and demonstrated hostility toward the women’s inquiries. Following the 1985 arrest the two grandmothers were held in the Knoxville County jail until the meeting was over. Increasingly, anti-nuclear activists understood the burden was not on the industry to prove nuclear power was safe, the burden was on the citizen to prove radiation dangerous.

Proving the dangerous effects of radiation was difficult, but discussing the cost of nuclear reactors to the ratepayers proved an effective way of stimulating public discourse. Since the construction of the Browns Ferry Plant in the mid-1960s, ratepayers experienced a 200% hike in electric bills due to the billions in cost for the TVA’s nuclear expansion. The charge that the TVA had manufactured an “electricity crisis to fuel its nuclear ambition” was leveled by a number of TVA ratepayers. In response to the proposed announcement of another rate hike to pay for the TVA nuclear expansion, the TVA drew crowds at meetings in seven cities, including Nashville, on August 22, 1980. Ratepayers, as well as anti-nuclear activists, expressed their unwillingness to pay an increased rate of nearly 13% for the completion of the nuclear reactor. Although differing in their objections to the TVA, one singular message emanated from the meeting: TVA ratepayers across the state did not believe the TVA’s insistence that there was no alternative to increasing rates. Honicker took the floor, and even led a walk-out of the meeting among her supporters. She shouted, “How can you come to us and tell us you’ve got to build more when your own charts show it (annual growth in the demand for power) is going down?”

As a team Honicker and Young proved a formidable duo against the TVA, and yet each was revolutionary on her own. Following her daughter’s diagnosis and cancer surgery, Honiker helped Congresswoman Clifford Allen of Tennessee draft a press release about the severe underestimation of radiation released into the biosphere from the nuclear fuel cycle. He had received alarming information from Dr. Walter Jordan, Chairman of the Atomic Safety and Licensing Board, and Director of Oak Ridge National Laboratories. In what became known as the “Jordan Memorandum,” information disclosed that the estimated release of radon gas from nuclear fuel was 100,000 times too low. The prediction from these numbers indicated as many as one hundred deaths could eventually result each day the nuclear power industry continued its operation. In the weeks that followed, Allen passed away, leaving a vacant seat in the Tennessee legislature. Honicker ran for his seat in Congress, unsuccessfully, and began focusing specific efforts on closing the atomic industry.

Honicker was a founding member of the Catfish Alliance, an anti-nuclear organization formed in 1977 of activists from eight Southeastern states establishing a decentralized communication network for opposing the TVA’s nuclear expansion. Interested members met at the Monte Sano State Park outside of Huntsville, Alabama, to formally establish the organization. Like Concerned Citizens of Tennessee in 1974, the Catfish Alliance members dropped hundreds of multi-colored helium balloons at nuclear reactors in the Southeast in the summer of 1977. The balloons contained messages that read “Nuclear waste can hurt your

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44 Anne Paine, “Public has list of advice for TVA: Nuclear, debt issues addressed,” *The Tennessean*, Wednesday, September 20, 1995, 2(B).
47 Ibid.
children and theirs too” and “if this message reached you so can radioactivity.” Anti-nuclear activists congregated at nuclear power stations around Alabama, Georgia, Tennessee, North Carolina, Mississippi, and South Carolina, many of whom were women demonstrating along with their children. The Catfish Alliance invited TVA Board Member David S. Freedman to the event. Honicker couched the event as helpful to the TVA in that the Catfish Alliance was providing a public service to track invisible radiation around adjacent communities. Serving as the Catfish Alliance spokesperson, Honicker said she would enjoy an opportunity to speak with the TVA board of directors in order to “have a face-to-face dialogue about nuclear-cost effectiveness and long-range health effects, the type of health effects—leukemia and cancers—that never show up on the utility’s accident charts.”

On July 30, 1978, The Tennessean published an article announcing Honicker’s intention to file a 152-page petition with the NRC calling for discontinuance of nuclear power. “As a mother of a child who had leukemia and survived against overwhelming odds, I ask for due process. Under the Constitution, no American may be deprived of his life without due process of law. For all those who may be afflicted with radiation diseases in the years to come, and who may have neither money or laws nor the ability to defend themselves, I plead for their constitutional rights.” To end the country’s pursuit of nuclear power, Honicker would demonstrate the dangerous effects of low-level radiation in a court of law.

The 1978 court case, Honicker v. Hendrie, was groundbreaking for several reasons. Since nuclear energy had its origin in the Manhattan Project, the nuclear energy companies adopted similar secret practices and policies. Critics of nuclear power charged that the nuclear industry was not transparent about the public health and environmental effects of its product. Furthermore, the onus was placed on citizens to demonstrate the dangers of low-level radiation rather than the nuclear industry to prove it was safe. Among the scientists called to the stand were Alice Stewart, Ernest Sternglass, Dr. John Gofman, all leading radiological experts, each also considered “rogue scientists” among the nuclear establishment. Sternglass and Gofman were former Atomic Energy Commission scientists whose epidemiological work on low-level radiation challenged the dominant narrative on the safety of nuclear generated power. The testimonies of radiological experts revealed to the public a little-known history of the politically-charged scientific space debating research into the effects of ionized-radiation, and the industry’s unwillingness to take seriously the dangers to the public.

Throughout the atomic period, women and young children represented some of the most vulnerable groups in society, and groups without political capital or avenues for political mobilization. According to historian Sean Malloy, Manhattan Project scientists and the U.S. military were well aware of the biological risks associated with exposure to radiation when they decided to use the atomic bombs on the civilian populations of Nagasaki and Hiroshima. A 1955 study on atomic bomb survivors indicated the specific ways radiation affected women, children and biological reproduction, contributing to the growing scientific literature on the biological and genetics effects of ionized radiation.

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51 “Mrs. Honicker Petition Calls for N-Power End,” The Tennessean, Sunday, July 30, 1978, 5A.
52 Sean L. Malloy, “‘A Very Pleasant Way to Die’: Radiation Effects and the Decision to Use the Atomic Bomb Against Japan,” Diplomatic History 36, Issue 3 (June 2012).
Stewart, published research on the dangers of X-rays to pregnant women and fetuses, which supported the scientific link between exposure to ionized radiation and genetic birth defects. Referred to as the “Woman Who Knew Too Much,” Dr. Stewart’s research was rebuked and dismissed by the atomic industry even as she became a leading figure in the anti-nuclear movement in England. Her work only confirmed the studies on radiation produced by American radiological scientists. In 1975, Stewart’s findings produced the first statistical evidence that radiation was killing nuclear workers near the Hartford plant in Washington, D.C.

Dr. Stewart was only one of a group of scientists challenging the official narrative carefully produced and maintained by the Atomic Energy Commission. Dr. John Gofman, former associate director of the Lawrence Livermore Laboratories, told the courtroom that there was “no safe amount of radiation that could prevent people from being poisoned by the particles.” He questioned the standards and language established by the Atomic Energy Commission with terminology such as “acceptable” and “permissible” levels, as well as the formulas to measure exposure. Not only was he concerned with the radiation generated to make nuclear power, but also accidents, leaks, nuclear waste accumulation, and other unforeseen events when dealing with the most dangerous substances on earth. Gofman’s research demonstrated a direct link between radioactivity and human cancer. He asserted, “we believe the operation of these plants is in violation of everyone’s right to due process under the Constitution.” As a Manhattan Project scientist, Gofman helped to develop plutonium, and as physician-activist, he became one of its most vocal opponents equating the licensing of nuclear power plants with premeditated murder because of the excessive number of fatalities caused by plutonium. Gofman’s use of the term poison was deliberate, as the term was fiercely rejected by the nuclear industry. Citing NRC statistics showing the effects of radiation to be harmful, Gofman said, “they are going to kill some people. The question is how many. The question is, is it legal to issue permits to commit murder? It is a question of constitutional law.”

One of the more controversial testimonies was delivered by Dr. Ernest Sternglass, a former Atomic Energy Commission nuclear scientist and University of Pittsburgh physicist turned public advocate against the nuclear industry. Sternglass’s work had particular immediacy for Southern women as his research linked growing infant mortality rates in the region to exposure to radiation. Throughout the 1960s, Sternglass published a prodigious amount of scholarship on the effects of low-level radiation on children and fetuses. Infant mortality, which was in decline since the 1930s and 40s, began to rise again in the 1950s, particularly in the US South. An ominously titled article in the September 1969 issue of Esquire, “The Death of All Children,” forecasted a dire cancer diagnosis for children in the US Southeast. His explanation was that the South lay in the path of fallout from the Nevada bomb tests. After the 1963 Partial Test Ban

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57 Ibid.
Treaty was ratified and bombing ceased, infant mortality decreased, only to rise again with the proliferation of nuclear reactors around the country.

Testifying to the specific adverse health dangers to children, Sternglass spoke of the high levels of strontium-90 in milk during the 1950s and early 60s. Between 1958 and 1970, Washington University in St. Louis measured strontium-90 in baby teeth from above ground atomic testing fallout known as “Project Tooth Fairy.” In the 1960s, studies concluded that atomic testing was exposing children to dangerous levels of strontium-90, which most notably caused bone cancers and leukemia. The epidemiological research from Shippingport, one of the first commercial nuclear power plant in Pennsylvania, indicated that milk of cows grazing within a radius of 10 miles of the nuclear plant contained 300-400% excess radioactivity. He also observed that childhood leukemia cases rose 50% in Western Pennsylvania. During his testimony he reminded the court that radiation was more harmful to sensitive populations including women, pregnant mothers, children and people at and above working age.

Honicker’s complaint was grounded in the Constitutional basis that there “must be a human right not to be genetically engineered by nuclear powers” and a mechanism for citizens to mobilize against the unchecked abuses of power. Following the testimonies of Sternglass and Gofman, a federal judge said he would take the case under advisement to determine whether the court had jurisdiction. US District Judge L. Claire Morton questioned if he even had jurisdiction to rule on the request of the complaint given the specific position of the NRC in the federal government. He said, “I honestly don’t think I have jurisdiction in this matter, but I will allow both sides to file additional briefs, so I can hear more evidence about the parameters established for this court by Congress.” Arguing that at least 100 people will die each day in the future from nuclear power plants, Honicker’s attorney petitioned for an immediate restraining order against the NRC, which the judge denied. Numerous lawsuits were filed against the US due to radiation exposure, but Honicker’s was the first. In 1979, a Congressional investigation began into the atomic testing in Nevada that exposed humans and sheep to deathly levels of radiation. In the 1984 case, Irene v. US, Judge Jenkins ruled that radioactive fallout caused human deaths and the government was negligent in failing to warn residents.

By means of persistent lobbying efforts, Honicker and Young helped to successfully block the Hartsville reactors. In 1984, the fate of the Hartsville plant was finally determined. According to a July 17, 1984, article in the Anniston Star, the TVA scrapped the plans to complete the Hartsville Plant, and the proposed nuclear site at Yellow Creek near Corinth, Mississippi. It appeared a monumental victory for local activists. Although the TVA never publicly stated that Honicker’s or Young’s interventions served as a justification for the closures, the wave of opposition generated by these women certainly played a role in the TVA’s decision to abort the projects. In response to the news, Honicker said, “I’m just thankful our milk is safe,

62 The project was revived from 1998-2006 by the Radiation and Public Health Project, created by Dr. Ernest Sternglass and Dr. John Gofman.
63 The research continues into the twenty-first century. In 2011, the Nuclear Information Research Service published a paper authored by Mary Olson, another Southern anti-nuclear activists and researcher, who examined the specific ways radiation exposure effects ovaries, embryos, and the overall effects of radiation to women’s reproductive tissue. Olson called the outcome of this effect, “atomic eggs.”
our water is safe, and our air is safe.”\textsuperscript{68} Paradoxically, the TVA announced its continued efforts to complete the Watts Bar nuclear plant at the same time it announced its decision to suspend the other sites.

Part II: Ann Harris, the TVA’s Most Vocal Opponent and Whistleblower

Throughout the atomic era, some women became involved in anti-nuclear campaigns because of concerns for children, ideas about motherhood, and others as eco-stewards for future generations. Other women assumed public anti-nuclear positions as a consequence of employment within the nuclear industry. For most Americans, Karen Silkwood was the most popular example of a woman “taking on” the nuclear industry. Nuclear whistleblowers, particularly Southern women, continued to provide critical testimonies against the nuclear industry following Silkwood’s mysterious death in 1974.\textsuperscript{69} One of the most vocal opponents of the TVA, nuclear whistleblower Ann Harris worked for the TVA for nearly sixteen years and throughout her tenure exposed decades of unsafe practices, worker intimidation, and mismanagement by the TVA.

Harris’s background was quintessentially Southern. A local of East Tennessee, her family were dairy farmers, with deep ties to the land. In 1982, she returned to her family’s farm after nearly two decades of working in the textile industry. When Harris returned to East Tennessee and needed a job, her mother suggested working for the TVA because it offered good pay, benefits, and an avenue to a middle-class life for a high-school educated single mom returning to the labor market in the post-industrial South. In an interview Harris remarked, “in East Tennessee, you either work for TVA, DOE or Wendy’s near the interstate.”\textsuperscript{70} In 1982, she was hired as a document clerk in the instrumental engineering department of the Watts Bar Nuclear Plant. Even though her male boss claimed she wouldn’t last two weeks, Harris stayed in that position for over nine years.

Years before filing the first complaint in 1985, Harris noticed several suspicious workplace practices. When she began working with the TVA, she was stationed at the Watts Bar nuclear plant. Aware of the “boys-club” environment of construction job sites, Harris says she was prepared for a certain level of male-chauvinist behavior as a woman working in the nuclear industry, and she experienced a variety of types of harassment. The nuclear industry infamously operated in a secretive, inclusive manner also described as a “nuclear priesthood” due to its lack of women.\textsuperscript{71} Even though the men she worked with claimed she would only last a few months in her position, the forty-two-year-old Harris went from a file clerk to documenting safety and worker violations. As Harris recalls, as early as 1985, she started to document safety concerns,

\textsuperscript{68} Patricia A. Paquette, “TVA Mulls Axing Plants: Customer Would Foot Bill,” \textit{The Anniston Star}, Tuesday, July 17, 1984, 8A.


worker complaints, and most troubling, accounts of worker intimidation by management and supervisors.

Like many others working in the nuclear industry in the South, Harris did not intend on becoming a nuclear whistleblower. However, through her position she witnessed numerous incidents of workplace safety issues, falsification of documents, and a disregard for public safety that compelled her to come forward with evidence. She first filed a complaint against coworkers falsifying documents stating that a nuclear component was successfully placed inside of the Watts Bar reactors when the part did not exist. She also revealed incidents of workers becoming radiated, and instead of receiving immediate treatment, being sent home to avoid the appearance of workplace accidents. Furthermore, the paperwork was doctored so it would not reflect accidents. After the first complaint with the Department of Labor, the TVA expected Harris to leave her position. Instead she stayed and continued to serve as a conduit for other nuclear whistleblowers at the TVA. In 1990, the Department of Labor heard her five complaints and ruled on in her favor. In her settlement with the TVA, they agreed to pay for Harris to complete an undergraduate degree in science education and master’s degree in science with a certification in nuclear documentation from the University of Tennessee. In 1995, she went back to the job site, which was difficult for a number of reasons including health problems, safety issues, and operating under duress. Following a suit in 1996, her job was eliminated, and she filed an additional suit against the TVA for lost wages and retirement benefits.72

Throughout her tenure as whistleblower, Harris not only exposed the safety problems for workers but also revealed the alarming public health concerns attributed to the TVA’s nuclear program. According to Harris, the public health and environmental costs were considerable. Each reactor housed the nuclear waste produced by the plant, and, therefore, “every nuclear site in America is a nuclear waste dump.”73 The generational health effects of working or living in close proximity, downwind, or downriver from nuclear plants had taken a toll on regional communities.74 The specific public health problems associated with local people living around nuclear facilities in East Tennessee included breast cancer, throat cancer, leukemia and other bone cancers, kidney and liver cancer, and other effects from beryllium exposure. Furthermore, the nuclear waste buried at Watts Bar had the potential to leak from the cement encasements into the local groundwater, contaminating the drinking water with plutonium, tritium, and other radiological material. Contributing to the unique stress within the nuclear industry, Harris described the profoundly intense emotional and psychological toil of working in the nuclear industry. Images of the control room with rows of flashing lighting were famously dramatized in the 1979 film, The China Syndrome, and made manifest in the news images from the Three Mile Island nuclear accident in Pennsylvania the same year. Fear of contamination was used as a weapon to silence workers. Through her work Harris became a conduit for other nuclear workers seeking justice for intimidation, radiation exposure, or other workplace safety concerns.

From a family with deep roots in East Tennessee, Harris had a multi-generational history of interaction with the nuclear industry. Her mother worked as a “cauldron girl” at the Oak Ridge National Laboratory during the mid-1940s. Oak Ridge was widely known as one of the most secretive facilities of the Manhattan Project and the TVA worked closely with the government agencies building and managing the project. Secrecy was so instilled in the workplace and

74 Ibid.
community culture that the majority of workers at Oak Ridge were not aware of what they were building. Operating since the 1940s, Oak Ridge produces uranium for the country’s nuclear weapons and served as one of the central research laboratories of the Cold War Era. However transformative ORR was for the region, after seventy years of nuclear production, radiological exposure, and nuclear waste storage, the facility has also created a cancer public health crisis in the region. Harris’s mother was employed at the plant and was radiated after an accident in which “yellow cake uranium” erupted in her face. From that point in the 1950s to her death in 2011, Harris’s mother experienced massive cancerous tumors on her face resulting from breathing in radioactive material. Harris worked for years to get her mother’s paperwork accurate in order to receive employee compensation for irradiation at nuclear facilities. Harris worked with the employees of Oak Ridge to access moneys made available by the Energy Employees Occupational Illness Compensation (EEOIC) Program Act of 2000, which made available federal compensation moneys for nuclear workers exposed on the job during specific years and at specific Nuclear Weapons Complexes. The burden of proof was also placed on the worker to demonstrate the specific cause and date of any exposure. In addition, the EEOIC process required access to documentation, a lawyer, and even resources that most rural, sick workers had difficulty accessing.

One of the most revelatory aspects of Harris’s testimonies as a nuclear whistleblower brought to light a historical pattern of harassment of TVA workers coming forward with safety concerns. After the first complaint was filed in 1985, she continued to work at the TVA even though she was harassed and threatened. Harris claims retaliatory measures taken by the TVA for her reporting unsafe practices included tampering with her car, an attempted firebombing, threatening her daughter at her work site, bugging her office telephone, and general harassing behavior on a regular basis. Harris was not the only TVA employee to experience this type of retaliation and harassment for reporting safety concerns. In 1985, one of Karen Silkwood’s attorney asked the state of Tennessee to open an investigation into the death of 41-year-old Judith Pensley, a Watts Bar whistleblower who had complained about safety issues. Fearing retaliation as the motive for her death, the attorney reported that Pensley’s car was also riddled with bullets weeks before her murder. A 1993 NRC report indicated that of the 609 complaints of management retaliation filed with the NRC since 1989, 152 were filed by TVA employees. Furthermore, the TVA holds the record for the number of whistleblower complaints among nuclear power companies.

Adding to the cacophony of TVA nuclear whistleblowers was Joni Johnson. A 52-year-old TVA engineer, Johnson’s testimonies recall a defined history of safety violations, safety report manipulations, and a culture of workplace intimidation. Johnson points to managerial bonuses.

78 Associated Press, “FBI May Investigate Watts Bar Shooting,” The Jackson Sun (Jackson Tennessee), Tuesday, October 8, 1985, 19.
79 “TVA Heads Whistleblower Complaint,” The Jackson Sun (Jackson, Tennessee), July 17, 1993, 5A.
for rapid installation of equipment, an interesting incentive for an industry riddled with safety accidents, leaks and dire safety consequences. In addition, three reactors at Browns Ferry ran continuously even though repairs were necessary. Similar to Harris, Johnson reported a system in which safety concerns were dismissed and retaliation against those raising safety concerns was common practice. A report by the TVA Inspector General supports Johnson’s claims about equipment safety concerns in the emergency cooling system. Johnson said, “You retaliate against enough of the people and the people are not going to come forward, and that is the real safety significance.”

Throughout atomic history women have challenged the official narrative on nuclear safety promoted by the industry. The AEC understood the key to commercial reactor success was support among women. A 1975 Cambridge Report featured a collection of information from national surveys on public attitudes about atomic power. The company’s research showed that support for nuclear power was “lowest among women, the less educated, lower-income people, the young, and blacks.” The report suggested that if women were convinced of nuclear power’s safety it would have a cumulative effect on children, and other groups. The memo also suggested using women spokespersons in order to appeal to other women. This report mirrors the 1975 Westinghouse Employee Training Presentation on the “Anti-Nuclear Opposition” presented to nuclear insiders during the “No Nukes Movement.” The presentation suggested that opposition to nuclear energy originated with the work of environmentalists such as Rachael Carson and that women were the most receptive to the anti-nuclear position. Photographs of women protesting in California, holding anti-plutonium signs were shown throughout the presentation, focusing almost exclusively on the mobilization of women. In the presentation, the advice to those within the nuclear industries was to win over women. The use of women and women’s pro-nuclear groups, such as Nuclear Energy Women (NEW), was key to providing a gendered space for women to feel invited and included within the traditionally male-nuclear space.

In addition, the Atomic Industrial Forum created local “pro-energy” groups to spread a pro-energy message. The Atomic Industrial Forum listed 600 member organizations including universities, unions, suppliers, utilities, financial institutions, mining companies, hospitals, and environmental research facilities. Ironically, in the creation of these spaces, the industry was admitting to its reputation for engaging in a pattern of hostility toward women.

Conclusion

Reflecting back over sixty years, it is clear the public had reasons to be concerned with the TVA’s expansion into nuclear power. The TVA’s nuclear expansion occurred as the invisible issue became visible with new scientific research generating troubling and immediate questions about the impact of nuclear power on human biology and the natural world. Working as the vanguard of the movement, Southern anti-nuclear activists forced the nuclear industries to address the public health and environment concerns of nuclear power. As the nuclear industry continued to insist its product was safe, the onus was placed on citizens to prove nuclear power

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83 Public Information Files, 1969-1981. Nuclear Regulatory Commission, National Archives and Records Administration, Atlanta, Georgia.
84 “Nuclear,” The Palm Beach Post Sun Times, Sunday, April 22, 1979, 25.
and the low-level radiation stored at every nuclear reactor site was dangerous to human and environmental health. On a national level, it was the trailblazing work of Southern anti-nuclear women, such as Jeannine Honicker, who used scientific evidence to sue the federal government to end atomic power in order to save the biological future. On the local level, Faith Young was one of the first women in the South to lead peaceful demonstrations against the TVA’s nuclear expansion. Contributing to this vanguard was Ann Harris, whose role as nuclear whistleblower openly challenged the dominant powers of the TVA. In Tennessee their efforts to inform the public about the dangers of radiation were aided in part by a sympathetic editor at The Tennessean, who increasingly felt obligated to expose the machinations of the TVA.

The TVA did not expect Southern women to serve as torchbearers for the anti-nuclear movement. And yet collectively, their actions and arguments demanded not only transparency within the secretive practices of the nuclear industry, but accountability for the public health and environmental problems the industry created. Although not credited with helping to curb the TVA’s nuclear expansion, Honicker, Young, and Harris contributed to the regional rejection of increased nuclear production due in part because of their tenacity in keeping the public informed on possible public health hazards. Incorporating the scientific voices of physician-activists, such as Godman, Sternglass and Stewart, added legitimacy to their position both in the media, the court room, and in the court of public opinion.

Throughout this history a fierce debate waged in both private and public circles regarding the dangers of low-level ionizing radiation. The debate has yet to end. In addition, the contested scientific debate over “acceptable” or “permissible” levels of radiation represents a troubling yet persistent rhetorical paradox of the atomic world. As noted by historian Natasha Zaretsky, “this debate about radiation thresholds registered a historically new way of thinking about the human body and its relationship to the environment.”85 In the atomic world, this also meant new anxieties about dangers of low-level radiation to children, women’s reproduction and the genetic health of future populations; all items not typically discussed in the all-male board rooms of nuclear executives. The nuclear industry, from its own admissions, viewed women as hostile and suspicious of its product, and it is not surprising to find that the purveyors of the nuclear projects in the South were also hostile to the public health and environmental challenges led by Southern women anti-nuclear activists.

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85 Zaretsky, Radiation Nation: Three Mile Island and the Political Transformation of the 1970s, 31.