who has chosen to ignore the contract, hoping they can get out of town and the election will be over before this issue comes up.

How ironic that this issue of the failure of the Federal Government to honor its contract should come up just a little less than a week before the election. As I have stated, that repository was supposed to open in 1998. Failure to do so left the States to come up with their own solutions and subjects the taxpayers to billions of dollars in liability. High-level waste includes spent fuel rods removed from nuclear reactors. This Senator from Alaska introduced S. 1287 in this Congress to allow the high-level nuclear waste to go to the proposed Yucca Mountain high-level storage facility in Nevada for temporary storage as soon as the facility was licensed in 2006.

The California delegation voted against that bill and the Clinton administration vetoed the bill. We are one vote short of a veto override. One of the arguments made was that there was a possibility that the nuclear waste could seep into the water table and move into California. Imagine that. Now I don't believe that is possible, nor do a great number of respected scientist. However, isn't it ironic that Californians will now have to cope with those fears in their own backyard because Yucca is still not opened? Rather than worry about waste in Nevada, they get to worry about waste in California. The site at San Onofre has operational nuclear plants as well as a shut down research reactor. Unfortunately, once shut down begins, they have no place to take the waste, so the waste stays there on the area adjacent to the Pacific Ocean, an area not designed for long-term storage of waste. Nevertheless, there is no alternative because the Federal Government has failed to fulfill its obligation to take spent fuel beginning in 1998.

Let me make it clear, I don't believe there is any danger from the dry casks that will be stored at San Onofre, any more than there was a danger from the low-level waste that would have been effectively stored in the Mojave Desert that could not safely be stored at the Ward Valley site. This California solution—if it is a solution—simply confirms what we have been saying all along: No one wants this waste, but it has to go somewhere. It has finally come down and landed in San Onofre. If the waste isn't ultimately shipped to the temporary facility at Yucca Mountain, it is going to be stored at 80 sites throughout the United States. California now may have its own central repository, at least for Southern California Edison.

Mr. President, this solution is not a solution. And what people need to realize is this situation is really just the tip of the iceberg. While it is applicable to California today, there are over 80 sites throughout this country that will become de facto Yucca Mountains. That is the consequence of not opening up a permanent storage site. And many other states are in the same situation as California—waste to store and no place to store it. To give you some idea, in Florida, 16 percent of the electricity comes from nuclear plants, 5 nuclear power reactors, and almost 2,000 metric tons of waste is in storage. In Michigan, 24 percent of the electricity comes from 4 nuclear power reactors, with 1,500 metric tons of waste on hand there.

In Ohio, 11 percent of electricity is generated from nuclear energy by two nuclear plants with 520 tons of waste.

In Washington State, 6 percent of the electricity comes from nuclear, and there is about 300 tons of research reactor fuel.

In Pennsylvania, 38 percent of its power comes from nine nuclear reactors with 3,000 metric tons of waste.

This situation in California just proves what I have been saying all along. If we don't take responsible action now to solve our high-level waste problems by siting a repository in the Nevada desert, we will end up with somewhere in the area of 80 to 100 sites throughout the Nation storing this waste in environments that are not approved environments for long-term storage. What is happening in California today will happen all over the nation. They will now have, in California, their very own mini-Yucca Mountain for the next 50 years.

The voters in California, Pennsylvania, Michigan, Wisconsin, Ohio, Florida, and Illinois need to understand who bears the responsibility for this lack, if you will, of a conscientious effort to take the waste at the time it was contracted for in 1998.

I can only assume that Vice President GORE wants to keep this waste in the States near schools, and hospitals—wherever it is temporarily stored. And the reality of what happened in California today at San Onofre is simply the tip of the iceberg.

This administration has been totally inept in meeting its responsibilities to the nuclear industry; It has breached a contract, it has ignored the contribution of the nuclear industry and its contribution to providing 20 percent of the clean, emissions-free power generated in this country; and, totally ignored the reality that with that clean power comes the responsibility of determining how to handle the waste.

They have handled it all right. They set it in concrete in California in the new site, as I have indicated, at San Onofre, north of San Diego near La Jolla, CA.

Imagine creating a coastal nuclear waste just south of Orange County.

ANNIVERSARY OF THE SAVANNAH RIVER SITE

Mr. THURMOND. Mr. President, I rise today to congratulate the Savannah River Site, located in my hometown of Aiken, South Carolina, on it's fiftieth anniversary. On November 28, 1950, President Truman announced the construction of the Savannah River Site. In celebration of this important milestone, I would like to insert the following essay recounting the rich history of this American institution into the CONGRESSIONAL RECORD.

I would also like to extend my appreciation to Mr. James M. Gaver, the Director of the Office of External Affairs at the Savannah River Operations Office and the unofficial ''Savannah River Site historian'' for writing the following composition. I ask unanimous consent that his essay be inserted into the RECORD.

Without objection the essay was ordered printed in the RECORD.

ESSAY BY MR. JAMES M. GAVER

For the Central Savannah River Area (CSRA), the Cold War created greater change than the Civil War, an unlikely storyline in the deep South. Between 1950 and 1955 a transformation occurred with breathtaking speed that eradicated small railroad towns, farms, and mill villages typical of mid twentieth-century Southern life on the Savannah. These familiar agrarian settings were replaced with a technological complex built and operated by men and women who came from all parts of the country. International events and science had come to South Carolina and Georgia in the form of the Savannah River Plant. This industrial complex of nine manufacturing and process areas integrated into one plant was needed to produce plutonium and tritium for the nation's defense.

The participants in the making of the Savannah River Plant—scientists, engineers, construction workers, local politicians, community members, and uprooted residents—were a study in diversity. Yet each, driven by patriotism, contributed to the success of the project. The production line and laboratory were the chosen theaters of war for the scores of scientists, industrial managers, engineers, and support personnel of all descriptions. With families in tow, they became atomic age homesteaders within the Savannah River Valley. Environmental researchers joined their ranks, charting physical change within the plant area and helping give birth to the discipline of ecology. Construction workers and craftsmen came in droves to participate in an industrial and engineering ''event'' that ranked with the construction of the Panama Canal. Industrial boosters and state and local politicians crowed at the site selection that rooted atomic energy development in the CSRA. For them, the country's need marvelously coincided with the economic need of their constituencies. The final profile belongs to the 6,000 individuals or 1,500 families relocated from the 315 square mile area selected for the plant in Aiken, Barnwell, and Allendale counties, South Carolina. Their contribution was remarkable, changing the course of their family's histories.

With Japan's surrender on August 14, 1945, Americans began to celebrate the end of the war and make plans for the future. Their euphoria was shortlived. It was swiftly replaced by images of an Iron Curtain, Soviet domination and terror, mushroom clouds, fears of radiation, and the potential for mass destruction. The Cold War began in Europe over the remains of Nazi Germany as the Allies began planning for postwar Europe. Germany was divided into two nations and the U.S. Congress appropriated billions of dollars to our Allies in Western Europe for defense and economic aid.

Between 1945 and 1947, mistrust between the United States and Soviet Russia hardened into belief systems. The Truman Doctrine presented to Congress on March 12,

1947, sketched out the political situation. Two worlds were emerging, one in which people lived in freedom, while the second was bent on coercion, terror, and oppression. Global conflict resulted as opposing economic and social systems were pitted against one another on a technological battlefield. Furthermore, continued advancement within the atomic bomb program that had just ended one war was considered critical to wage the next.

After a job well done, some Manhattan Project scientists and engineers returned to the private sector. Du Pont, the main contractor for Hanford, also retired from the field of atomic energy. The Manhattan Project continued with a core group of atomic bomb project veterans under the direction of the indomitable General Leslie Groves. The nation's third and fourth plutonium bombs, Shot Able and Shot Baker, were tested at Bikini Atoll in the Pacific in July 1946. These tests gave an invited audience of military officers, congressmen, journalists, and scientists firsthand knowledge of the power of the bombs. The high profile of the tests ensured that atomic weapons research and development remained in the forefront of the nation's defense strategy during this uneasy peacetime.

Responsibility for America's atomic arsenal had been transferred from the military to the civilian Atomic Energy Commission (AEC) established by the Atomic Energy Act of 1946. The commission was composed of a five-member board that served full-time, assisted by scientific and military advisory committees. Headed by TVA veteran David Lilienthal, the AEC was in the process of recasting the nation's atomic energy program when the Soviets exploded their first atomic weapon on August 27, 1949. On September 23, 1949, President Truman announced the end of the U.S. monopoly in atomic bombs. The Soviet test, named Joe I by the American press, shocked the American public, its leaders, scientists, and intelligence agencies. The Commission and its advisors began a new evaluation of their proposed program energized by ''the old spirit of emergency.''

The need for the thermonuclear bomb provoked serious debate within a small circle of individuals that included the members of the AEC's General Advisory Committee, the AEC commissioners and staff, the Senate and House Joint Committee on Atomic Energy, Defense Department officials, and a group of concerned scientists. Would an H-bomb improve our retaliatory strength enough to justify the diversion of materials from the A-bomb program? Would large bombs such as the ''Super'' merely give the illusion of security? No consensus was reached. Truman then created a subcommittee of the National Security Council. Secretary of State Dean Acheson, Secretary of Defense Louis Johnson, and AEC Chairman David Lilienthal were appointed to provide direction. President Truman received the sub-committee's recommendation that the United States should proceed with an all-out nuclear effort. He signed this recommendation to develop all forms of atomic weapons, including the ''Super,'' on January 31, 1950. This recommendation would lead to the announcement of the Savannah River Plant by the close of the year.

Preliminary designs for the new hydrogen bomb required quantities of tritium, a radioactive isotope of hydrogen, to be fused with deuterium, another isotope of hydrogen, for energy release. While Hanford's production reactors were already producing tritium, weapon design in the early 1950s suggested a dramatic increase in the need for tritium. To provide tritium for design and testing purposes for the short term, Hanford's reactors would be used. For long term production, the AEC determined that two new production reactors of significantly different design were to be built at a new location. In May 1950, the cost of the new plant was forecasted at $247,854,000 and a base of operations was established in Washington in late June to shepherd the new plant into reality. Curtis Nelson was selected as the AEC manager for the new project. Nelson was a likely candidate. A civil engineer by training with experience in managing large construction projects, he was on assignment as U.S. liaison to Canada's nuclear program at Chalk River, Ontario, when he was posted as the manager for the new project. Highly enriched uranium (HEU) fuel rods were needed to increase tritium production, but the process for making tritium was not yet fully tested. Data from Canada's NRX heavy-water reactor that used HEU fuel rods could provide data for the American effort and Nelson was already on hand. Cooperation with the Canadian program could be helpful in America's bid to win the arms race.

Du Pont was chosen as the prime contractor for the plant. The chemical firm's work during the Manhattan Project at Oak Ridge on the X–10 complex; the design, construction, and wartime operation of the production facility at Hanford; and Du Pont's postwar role as technical advisors on various developing atomic energy projects positioned the Delaware-based firm for the job. Du Pont was released from its Hanford assignment in 1946 at its own request, turning over operation of the plant to General Electric. Four years later, the firm, then headed by atomic energy pioneer Crawford Greenewalt, was asked by the White House and the Commission to reprise its role. Du Pont's acceptance of the enormous job was announced on August 2, 1950. The Du Pont firm established the Atomic Energy Division (AED) within its Explosives Department and began putting together a team for the new project and division.

Planning began immediately with site selection and reactor design uppermost in mind. Du Pont worked closely with the AEC, helping to mold the plant it would operate. When the North Korean Army drove across the 38th parallel into the Republic of Korea in June 1950, the Atomic Energy Commission decided to add three more reactors to the two already planned, adding to the complexity of the proposed plant. With legislation in place to provide a legal basis for the AEC's intended acquisition, a tract in South Carolina's Barnwell and Aiken counties was chosen out of 114 candidate sites for the new plant. The search that began in June ended on November 10th with the search committee's recommendation for the South Carolina site. Water, abundant in supply and low in mineral content, topography, the isolated character of the site, an available labor pool, and military defense all figured into the Site's selection.

Reaction to the public announcement of the site selection on November 28, 1950 was jubilant in Georgia and South Carolina. Senator Edgar A. Brown and Augusta's Chamber of Commerce Secretary, Lester Moody, had been working for months to secure the new plant for the CSRA. Clark Hill Dam, Hartwell Dam, and the new H-bomb plant were evolutionary steps in the shaping of the area's industrial future. Atomic piles, known as reactors, would soon rub shoulders and share the river water with Graniteville and Augusta's textile mills. Newspaper headlines clamored that Augusta would become a metropolis, Aiken a ''fast growing city,'' and Barnwell and environs would quickly follow suit.

Slicing through the clamor were the voices of those displaced by the plant. Residents of Ellenton (population 600), Dunbarton (population 231), Hawthorne, Meyers Mill, Robbins, Leigh, and farmers and tenants within the outlying areas listened sadly and carefully as AEC, U.S. Army Corps of Engineers, Du Pont, and local officials outlined what was ahead for them. Eighteen months were allotted for the staged evacuation of 1500 families. Ellenton residents were to be evacuated by March 1, 1952, Dunbarton residents by June 15. Land appraisers would contact owners, beginning the acquisition process. Those in construction priority areas had six weeks notice. The many families who rented or sharecropped for their livelihood were also deeply affected. In a month usually filled with warm thoughts of home and the upcoming holidays, ''the DPs,'' those displaced by the federal taking, grappled with future plans under the scrutiny of reporters who told their story to the nation. Some displaced families chose to physically move their homes out of the area, relocating in the new town of New Ellenton, Jackson, or other environs. Others moved to existing neighboring communities.

The original boundaries also included the communities of Jackson and Snelling; when acquisition plans were finalized, these communities were not affected. In 1952, a corridor was added from the site to the Savannah River along Lower Three Runs Creek in Barnwell and Allendale counties. The South Atlantic Real Estate Division of the U.S. Army Corps of Engineers (COE) conducted the acquisition program, ultimately acquiring 1,706 tracts of land, totaling 200,742 acres. Seventy four percent of the acquired properties were farms cultivated in corn, cotton, and peanuts. Small tenant farms were in the majority; the agricultural labor pool was predominantly African American. The plant area was closed to the public on December 14.

Sign posted at Ellenton, South Carolina border. ''It is hard to understand why our town must be destroyed to make a bomb that will destroy someone else's town that they love as much as we love ours, but we feel that they picked not just the best spot in the U.S. but the best in the world. We love these dear hearts and gentle people, who live in our home town.''

Between January 1951 and 1955, the Atomic Energy Commission constructed a self-sufficient industrial plant that was considered the largest single construction job it had ever undertaken. Its magnitude and scope were unequaled, in a half century punctuated by immense engineering and construction projects such as the Panama Canal, Tennessee Valley Authority, and the AEC's own Manhattan Project-era plants at Oak Ridge, Tennessee, and Hanford, Washington. At peak construction in September 1952, 38,582 workers labored 54 hours a week under the direction of Du Pont engineers. South Carolina (25,019) and Georgia (13,776) contributed the majority of the project's construction force; however, forty-nine states and the Panama Canal Zone were also represented in the ranks.

Design flowed from Du Pont and its subcontractors drawing tables through the national laboratories and the Atomic Energy Commission. Five reactors, two chemical separations plants, a heavy water plant, a fuel and target manufacturing area, and laboratories were joined by over sixty miles of railroad, 230 miles of new roads, the state's first cloverleaf intersection, power plants, and other infrastructure. Three safety awards were earned by the project, a coup for Du Pont's Construction Field Manager Bob Mason. And an esprit de corps, shown in the project newspaper ''SRP News and Views'' and in athletics and other recreational events, was fostered by the schedule, secrecy, purpose, and magnitude of the project.

Between 1950 and 1960, the Savannah River communities grew substantially as they absorbed the incoming work force. Augusta grew by 25 percent, North Augusta tripled its population, while Aiken, Williston, and Barnwell doubled in size. Jackson, a rim community, achieved town status, as did New Ellenton located to the north of the plant.

The trailer cities that had housed the construction workers and their families were archaeological sites by 1960. More lasting were an estimated 5,465 homes built to accommodate operating staff and their families in the surrounding counties. The Housing and Home Finance Administration provided grants after AEC review to offset the expansion of basic community services. The affected communities experienced growing pains in all directions, as schools, roads, water and sewage systems, parks, and basic community needs were all impacted.

Inside the plant fence, the Community Chest Program was chosen by the plant management as a way for workers to show their community support. Each year money was energetically collected in support of this program, and contributors would indicate which community should receive their donation. In 1952, $50,908 were contributed; a year later contributions soared to $74,015. The new atomic community already had neighborhood pride.

In education, the AEC made great strides in the fields of science and technology. Under an agreement with the Southern Regional Education Board in 1956, a cooperative program began in which college students could attend classes and work at the plant alternating terms. Georgia Institute of Technology and University of Florida students were the first to sign up. Grants were also made to regional universities to fund the development of programs in atomic energy and related fields. At the high school level, science students were invited on Thomas Alva Edison's birthday to come to the plant and tour facilities to learn about the peaceful applications of atomic energy. Civic talks were given and science fairs held. Finally, membership in professional organizations abounded and local chapters of heretofore national organizations were established in the Central Savannah River Area.

Massive amounts of concrete, steel, rebar, lumber, and macadam were used to create the Savannah River Plant. Construction statistics are staggering, attesting to the epic nature of the undertaking. However, the construction activity was confined to an industrial core area, leaving a large buffer zone of land untouched by industrial construction. In this zone, an equally epic undertaking mostly orchestrated by nature occurred. A ''garden'' grew up around the machine.

The U.S. Forest Service, under contract with the AEC, set out about 10,000,000 pine seedlings along the plant perimeter for screening and erosion control in 1952–53, and then launched a forest management program for an additional 60,000 acres. Their efforts, combined with the retirement of thousands of acres of farmland from cultivation, the impact of intensive grading from construction, and human neglect factored into the making of a new landscape. A green space with an incredible diversity of plant and animal life grew up in its stead.

Scientific knowledge concerning the environmental impact of industry, atomic or otherwise, was limited in 1950. Ecology was a developing field. The AEC, with a strong sense of stewardship, invited scientists from the Universities of Georgia and South Carolina to collect baseline data on plant and animal communities that would provide a ''before'' picture with which to measure the impact of the Plant's processes on the environment. Du Pont, already a leader in the field of industrial ecology, was responsible for bringing a team from the Academy of Natural Sciences in Philadelphia under the leadership of Dr. Ruth Patrick to the plant to perform a biological study of the Savannah River. The University of Georgia developed a program that went beyond inventory, that became the Savannah River Ecology Laboratory. Under the direction of Dr. Eugene Odum, a large-scale study of ecological succession began. Ecologists studied the dynamics of change within the environment as the impress of centuries of agriculture disappeared and natural succession occurred. Radiation ecology studies were also an early research focus. While the Cold War mission was the prime mover in the shaping of the Savannah River Plant, the stewardship of the land acquired for that purpose was also part of the compact made with the American people.

Since those earliest days, the employees of the Savannah River Site have had sustained success in meeting their commitments to the nation. They have safely fulfilled their primary mission of producing plutonium and tritium for the national defense—to this day the Site has maintained a 100 percent on-time record of production and delivery of tritium to the Department of Defense. In the realm of basic science, they advanced the knowledge of particle physics with the proof of the existence of the neutrino in 1956. Their advances in nuclear materials production led to additional missions of creating radioactive isotopes for medical diagnosis and treatment; industrial and research programs; and NASA space missions, from Voyager to Cassini, now on its way to Saturn. They designed and built the largest radioactive waste vitrification facility in the world, the Defense Waste Processing Facility, where highly radioactive liquid waste is transformed into a solid glass form for safe storage and ultimate disposition. Their early concern for the environment and study of the ecological consequences of their operations led to the designation of SRS as the first National Environmental Research Park in 1972. They discovered the natural habitat of the bacterium that causes Legionnaires' Disease.

The end of the Cold War brought significant change to the Savannah River Site. The national defense mission continued with the recycling and replenishment of tritium from dismantled nuclear weapons, but increased attention was brought to bear on waste management and environmental restoration activities. This new focus included adapting defense-specific technologies to peacetime applications, which benefitted greatly from the Site infrastructure and the historical expertise of the Site workforce. For example, Site expertise in handling tritium (a form of hydrogen) has yielded hydride technologies that have applications in the transportation and energy industries. Advances in robotics and environmental monitoring and cleanup technologies, such as proving the existence of deep subsurface microbes and employing them for in-situ remediation of wastes, have led to applications not just at SRS, but across the country and around the world. The Savannah River Ecology Laboratory, widely recognized as the birthplace of the modern science of ecology, has a laboratory at Chernobyl, Ukraine, where scientists share their expertise in helping the Ukrainians recover from that disaster.

Today, the future of the Savannah River Site looks as bright as it did 50 years ago. In the area of stockpile stewardship, it will continue its key national defense mission as the nation's sole source for tritium using a new Tritium Extraction Facility now under construction. It will also provide a backup source for plutonium weapon components, called pits, should the nation require that increased capacity. In the area of nuclear materials stewardship, it will contribute to our nation's nonproliferation efforts to reduce the global nuclear danger. It will receive surplus weapons plutonium from other DOE sites for safe, secure storage pending disposition; some of the plutonium will be stored in one of the old reactors which previously created the plutonium. It will prepare that surplus plutonium for final disposition. One new facility will immobilize the plutonium in ceramic disks that will be encased in canisters of protective radioactive glass at the Defense Waste Processing Facility. Other new facilities, the Pit Disassembly and Conversion Facility and the Mixed-Oxide Fuel Fabrication Facility, will convert the plutonium from dismantled weapons into commercial reactor fuel which will provide electrical power while it is slowly converted into non-weapons-usable spent fuel. It will also down-blend weapons-usable highly enriched uranium into a low-enrichment form usable as fuel in commercial power reactors. In the area of environmental stewardship, it will develop technologies and practices to manage wastes and clean up the environment more efficiently and cost effectively. Its longstanding support for, and from, its neighbors in the Central Savannah River Area will reinforce its commitment to success in all these endeavors.

FAREWELL TO TOM MCILWAIN

Mr. LOTT. Mr. President, before this session of the 106th Congress comes to an end, I'd like to take the time to say farewell to Tom McIlwain, who served on my staff this year as a fellow from the National Marine Fisheries Service (NMFS). Prior to coming to my staff in March, he served as Fishery Administrator for the NMFS Southeast Fishery Center. Tom is a native of my hometown, Pascagoula, Mississippi. He understands the importance of oceans and fisheries issues to the Gulf Coast, and the Mississippi coast in particular.

This is Tom's second stint as a fellow on my staff. Back when I was a member of the other chamber, and Tom worked for the State of Mississippi, he spent a year as a fellow on my staff advising me on oceans and fisheries matters. Tom is a longtime expert in this area. His advice and counsel was just as vital to me this year as it was back then.

As a member of the Senate Committee on Commerce, Science, and Transportation, I have participated in development and passage of a number of oceans and fisheries authorization bills during this session, and Tom has advised me on every one of them. This year alone, he assisted in the enactment into public law of the National Marine Sanctuaries Amendments Act of 2000, Fishermen's Protective Act Amendments of 1999, Yukon River Salmon Act of 1999, and the Fisheries Survey Vessel Authorization Act of 1999, and the Senate passage of the Pribilof Islands Transition Act, the Coastal Zone Management Act of 2000, Atlantic Coastal Fisheries Act of 2000, Shark Finning Prohibition Act, Coral Reef Conservation Act of 2000, and Marine Mammal Rescue Assistance Act of