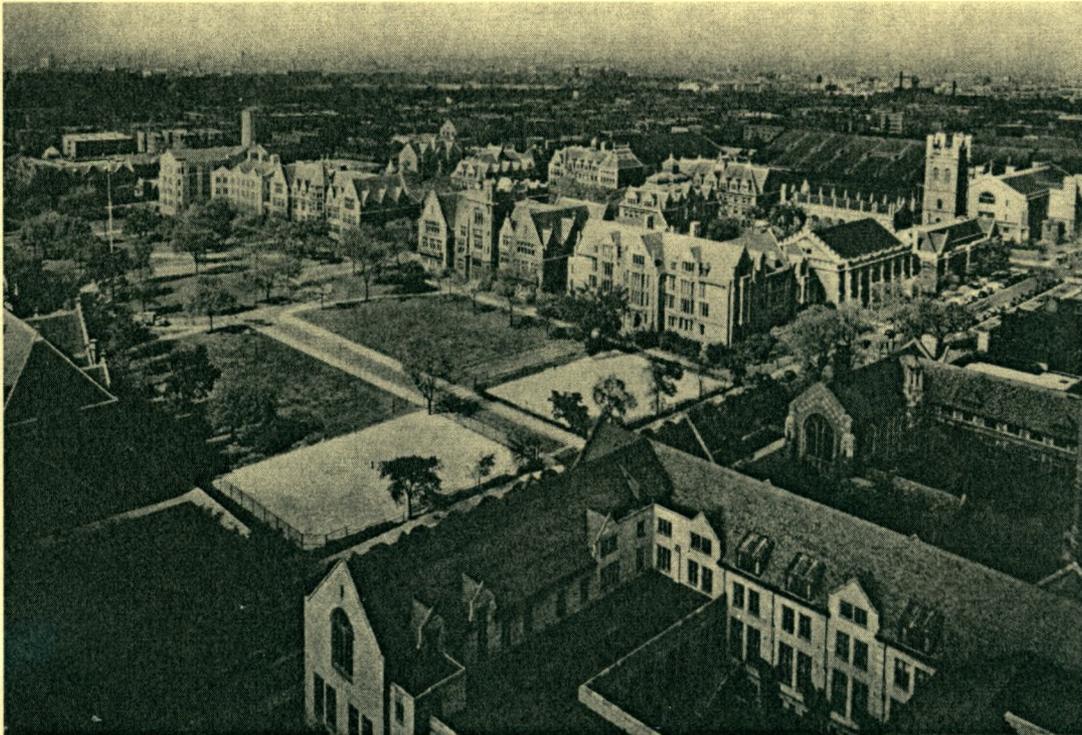


## On the Postal Trail of the Atomic Bomb



The origin of the atomic bomb as an American instrument of war began with Albert Einstein's August 2, 1939, letter to President Franklin D. Roosevelt, which read in part:

Some recent work by E. Fermi and L. Szilard, which has been communicated to me in manuscript, leads me to expect that the element uranium may be turned into a new and important source of energy in the immediate future. . . .

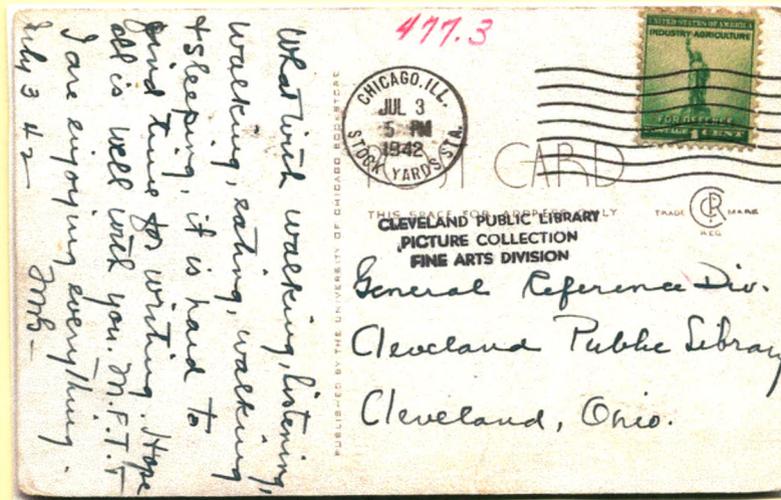
In the course of the last four months it has been made probable — through the work of Joliot in France as well as Fermi and Szilard in America — that it may be possible to set up a nuclear chain reaction in a large mass of uranium, by which vast amounts of power and large quantities of new radium-like elements would be generated. Now it appears almost certain that this could be achieved in the near future.

This new phenomenon would also lead to the construction of bombs, and it is conceivable — though much less certain — that extremely powerful bombs of a new type may thus be constructed. A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port together with some of the surrounding territory. . . .

On December 2, 1942, the chain reaction predicted by Einstein, Fermi, and Szilard became a reality in a successful experiment conducted by Fermi in a squash court underneath the Stagg Field stadium at the University of Chicago, shown in the upper right of this photograph. Part of its importance was to demonstrate that uranium could be transmuted into plutonium, the principal fuel for a nuclear fission bomb. That overcame doubts among physicists, notably Hans A. Bethe, who became the head of the theoretical physics division of the Manhattan Project, that such a bomb was technologically practical.

The era of nuclear war had arrived.

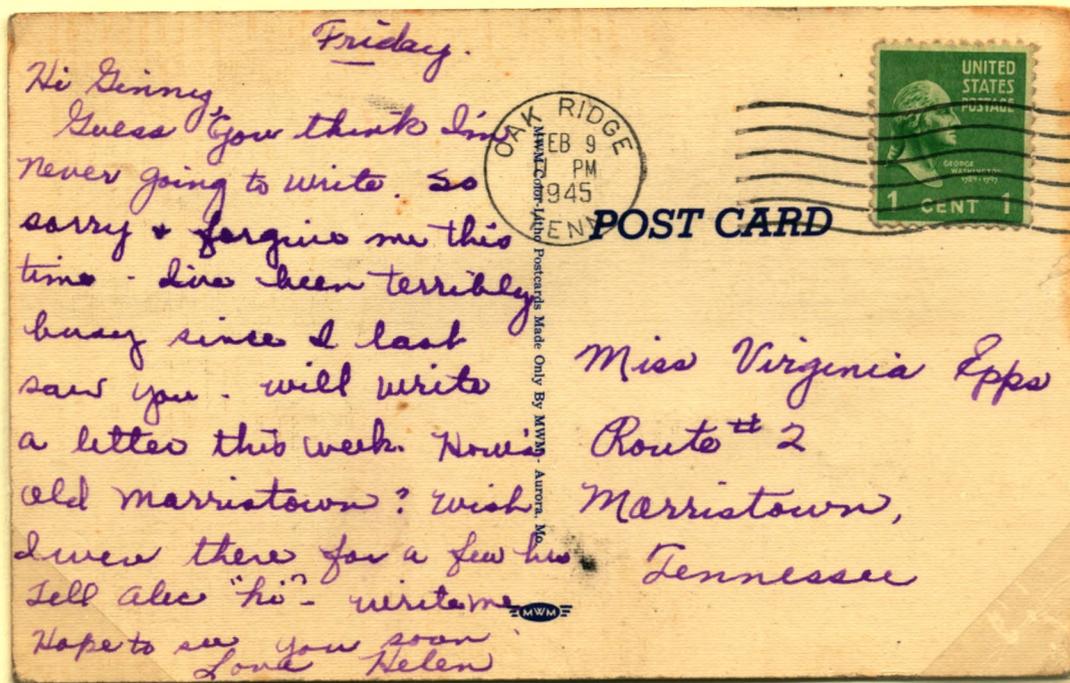
## Chicago Metallurgical Laboratory 1942



The University of Chicago Metallurgical Laboratory, “Met Lab” for short, was a code name for secret Manhattan Engineer District experiments in nuclear fission conducted by a team of physicists led by Enrico Fermi. At the time this postcard was mailed in July 1942, Fermi and other Manhattan Project physicists were housed at the International House dormitory, a lodging for the University of Chicago’s special guests.

## Clinton Engineer Works

Scientists had advised Manhattan Project chief Brigadier General Leslie R. Groves that the fissionable material to power an atomic bomb could be either uranium-235, a rare isotope of the element, or plutonium-239, an element that did not naturally exist on earth. Both could be obtained from uranium ore. Plutonium could be transmuted from natural uranium in a reactor like the one Fermi had built at Chicago. The rare U-235 isotope could be extracted from natural uranium, which otherwise consisted almost entirely of unsuitable U-238, by one of three enrichment methods or by a combination of them. In September 1942 Groves acquired 59,000 acres in Tennessee to produce a quantity of U-235 sufficient to fuel atomic bombs at a secret location designated Clinton Engineer Works. The CEW Y-12 plant employed the electromagnetic separation method; the K-25 plant, gaseous diffusion; and the S-50 plant, liquid thermal diffusion. A fourth plant designated X-10 was the world's second nuclear reactor after Fermi's in Chicago, which processed uranium into plutonium, but not in sufficient amounts to construct an atomic bomb. District Engineer Colonel James C. Marshall named the secret atomic city Oak Ridge in July 1943. A post office was established August 16, 1943, with mostly Women's Army Corps members assigned to monitor mail and local media for breaches of security. Not on any map, Oak Ridge became the fifth largest city in Tennessee with a population of 75,000.



The sender of this February 9, 1945, postcard was Helen Schultz, a skilled technician at the Y-12 plant. She had earned a so-called Q clearance, the highest level of security, and was aware that the purpose of her work operating and performing maintenance on a calutron (a device that used powerful electromagnets to separate the isotopes) was to enrich uranium, though she had no knowledge of the weapon it was meant to arm. She later worked in the X-10 laboratory.

# Clinton Engineer Works

Oak Ridge remained a restricted area until March 19, 1949.

OR-12—A View of one of the Processing Areas at Oak Ridge, Tenn.,

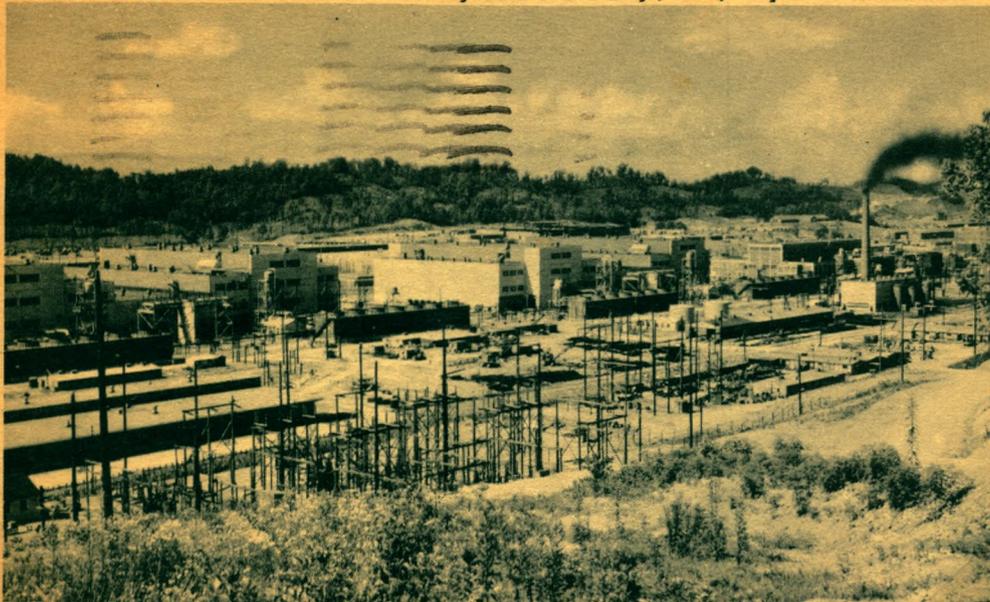


"City of the Atomic Bomb"

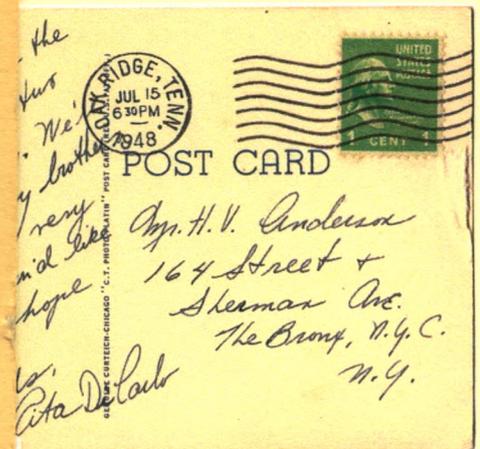
D-8068



OR-15—A View of one of the Processing Areas at Oak Ridge, Tenn., "City of the Atomic Bomb"



D-8071

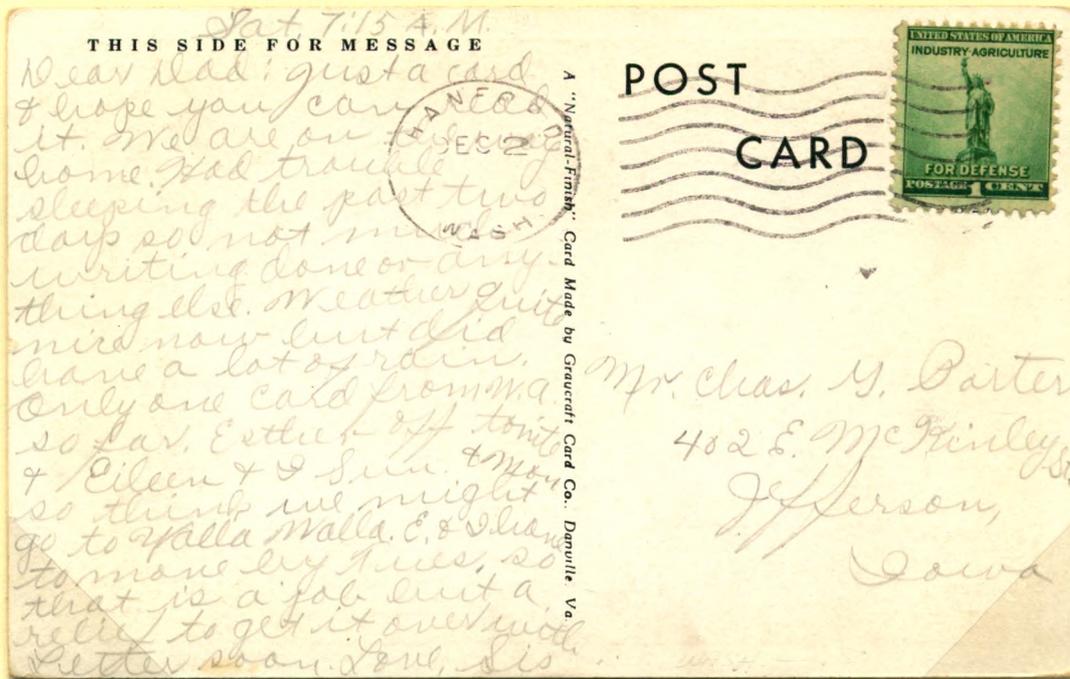


The Y-12 electromagnetic separation plant consisted of nine buildings that contained more than 1,000 enclosures called calutrons, fitted with the world's largest and most powerful magnets. Two views, mailed May 9, 1947, at LaFollette and July 15, 1948, at Oak Ridge.

## Hanford Engineer Works

Groves had planned to produce plutonium at Oak Ridge. The success of the Chicago project, which had been conducted in cramped quarters on a squash court beneath the Stagg Field sports stadium, proved that plutonium could be manufactured from the fission of natural uranium. But the laboratory test yielded only microscopic quantities of the new element, far too trivial to build a bomb. Even the huge Oak Ridge facility was too small and too close to the Knoxville population center to be safe in the event of an accidental explosion or radiation release.

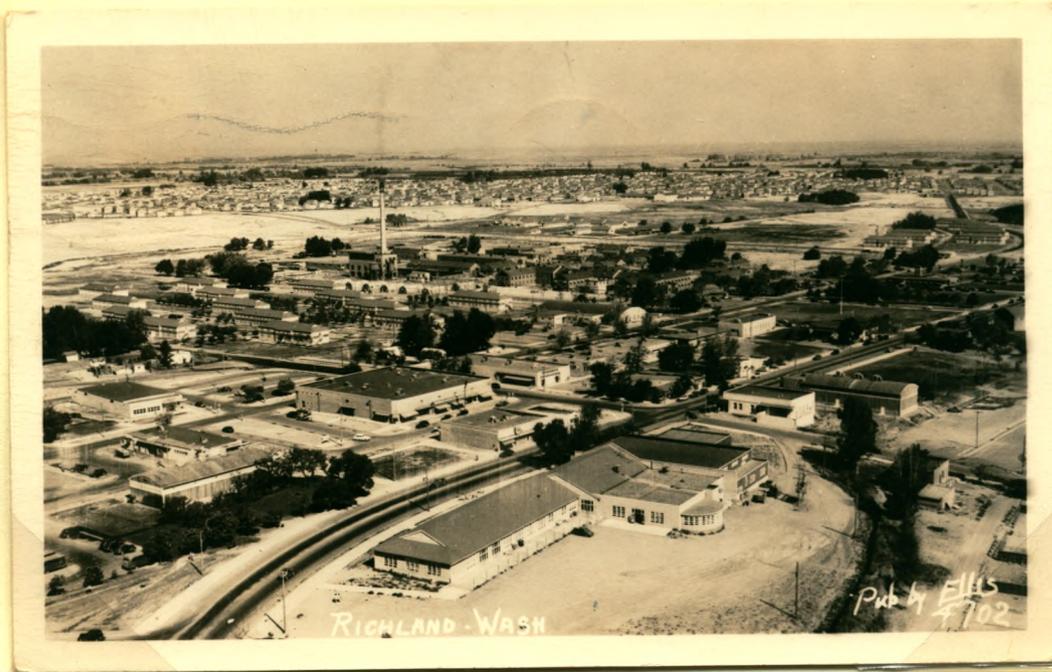
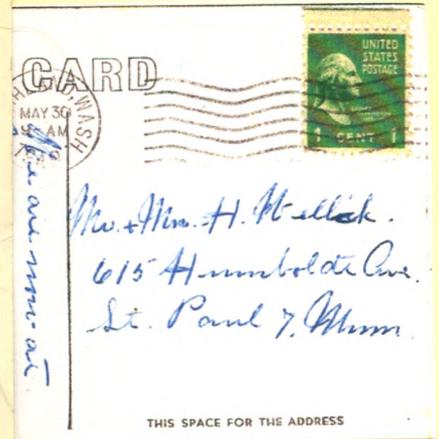
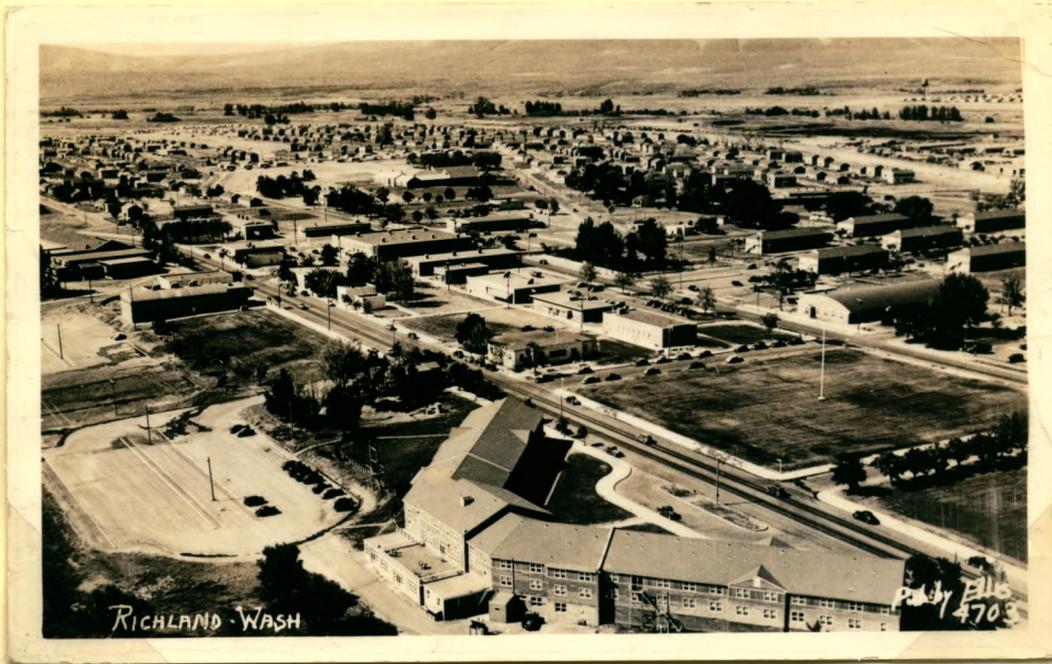
In mid-December Groves decided that the facility for processing uranium into plutonium should be located in a remote part of the Far West. His representative flew over the Columbia River basin on Washington and Oregon, and recommended the area of Washington near Hanford, White Bluffs, and Richland as the most suitable site. Groves toured Hanford in person on January 16, 1943, and approved the choice. Eviction of local residents of those towns, about 1,500 people, began in February. Many were given just 48 hours to pack up and leave. The White Bluffs post office closed May 31; no one lived there any longer. A new Hanford Branch post office opened May 31, 1943. Both Hanford and Richland were restricted-access locations closed to outsiders; Hanford still is. Mail from residents was subject to censorship and posted at Seattle to keep the locations secret. As a consequence, war-dated mail showing evidence of those origins is almost impossible to collect, except for philatelic favor cancels. By 1945 Richland had a population of 50,000.



The December 2, 1942, cancellation date on this post card is coincidentally but ironically the very day that Fermi's team achieved controlled and sustained nuclear fission in Chicago, the event that sealed Hanford's fate and led to the eviction of its residents.

## Hanford Engineer Works

Richland Village, where most Hanford staff members resided, was a restricted area during the war. The telephone directory was classified. Mail was subject to censorship, and outbound letters were postmarked at Seattle to help conceal the location.

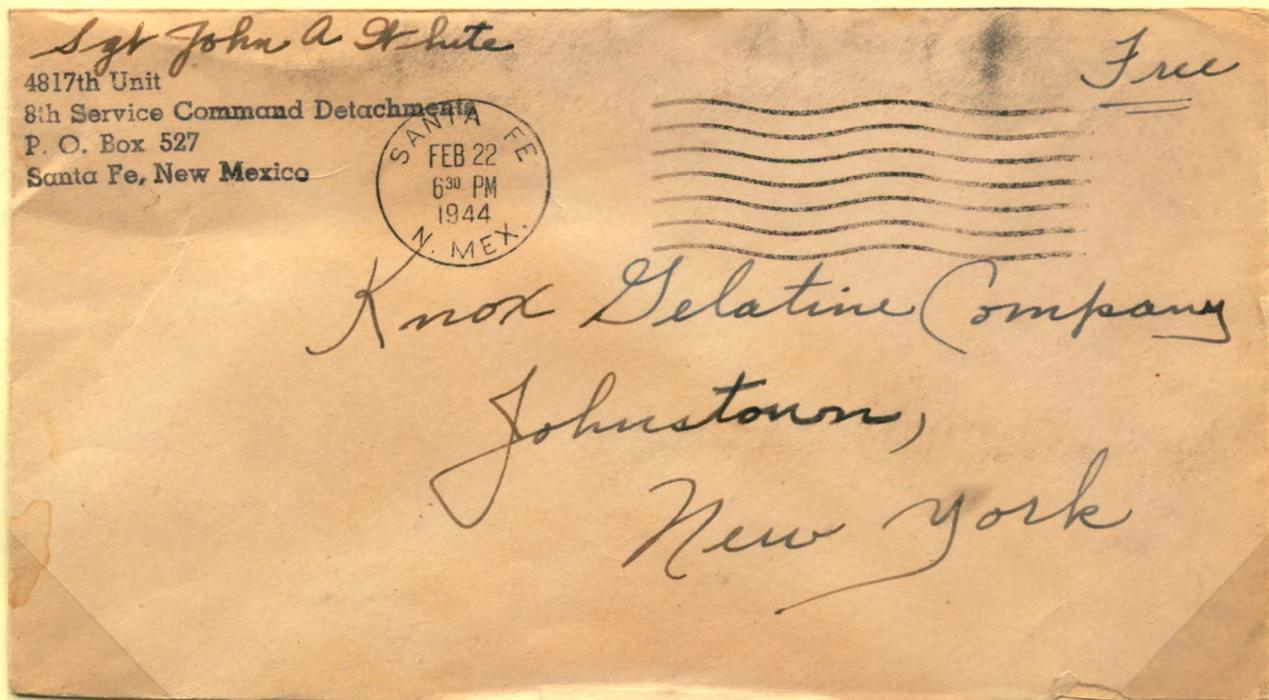


Two views of the town on cards mailed in 1949, one posted May 30 at Richland, the other posted June 24 at Pasco.

## Los Alamos Scientific Laboratory

Early in 1943 the Manhattan Project established the Los Alamos Scientific Laboratory in New Mexico as its most secret location. Under the direction of physicist J. Robert Oppenheimer, its mission was to perform the necessary research, develop the technology, and manufacture atomic bombs in time to affect the outcome of the war. The Army acquired the campus of the exclusive private Los Alamos Ranch School in December 1942 and ordered that the property be vacated by mid-February 1943. Scientists began arriving in mid-March; by war's end the secret atomic city had a population of 6,000.

A seasonal post office near the school, previously named Otowi, had been renamed Los Alamos in 1941. It was appropriated and maintained as a fourth class office by the M. M. Sundt Construction Co., the Army's contractor, for use of Sundt employees, and was discontinued November 8, 1943, after their work was done. The Army concealed the location of its atomic bomb laboratory by using remote undercover addresses at Santa Fe. Army couriers carried mail back and forth between Los Alamos and Santa Fe. In October 1945 the Army disclosed the six Santa Fe post office boxes that had been used as secret mail drops for Los Alamos personnel: Boxes 169, 180, 527, 1036, 1539, and 1663. Collectors have never found covers addressed to or from Box 169 or Box 1036. About 300 covers have been recorded for Box 1663; about 60 for Box 180; fewer than 10 for Box 1539 (which was actually the postal address for the Manhattan District management and recruiting office in Santa Fe, not the Los Alamos lab); and only two from (none to) Box 527.



Post Office Box 527 Santa Fe was the undercover address assigned to the Los Alamos security detail, which guarded the gate, patrolled the perimeter, censored the mail, and escorted three daily mail runs between Los Alamos and Santa Fe. Sergeant John A. White was a member of the Los Alamos Military Police.

## Santa Fe Unit 1 also served Los Alamos

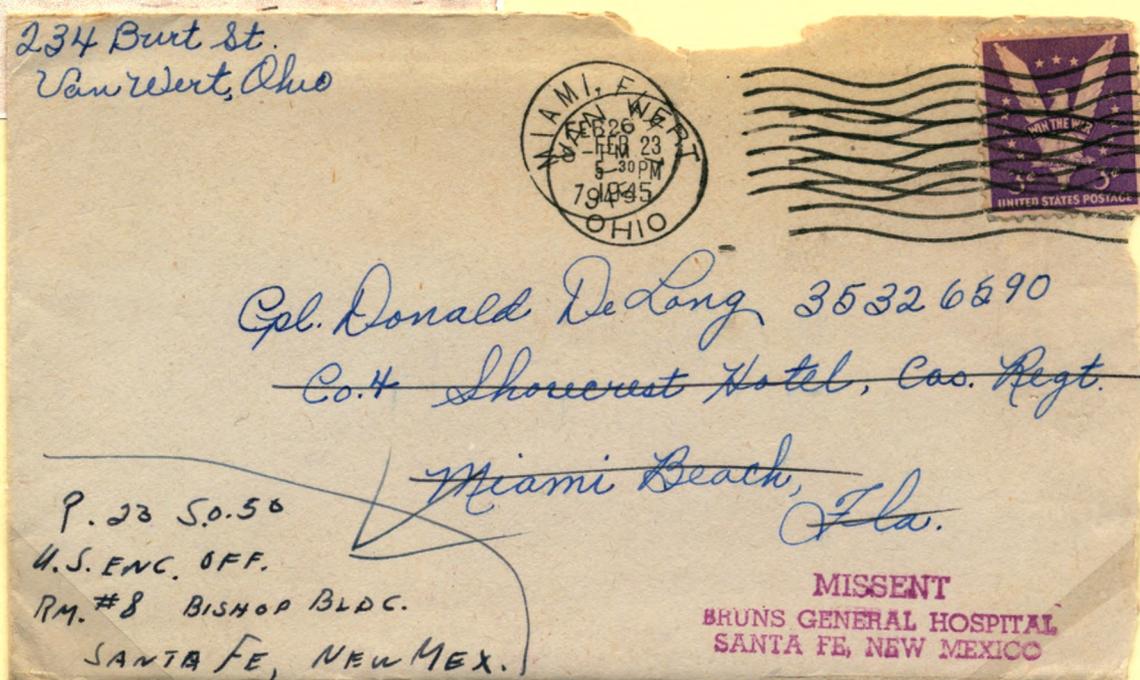
The Army opened the 1,575-bed Earl H. Bruns General Hospital at Santa Fe, 40 miles away from Los Alamos, in April 1943. Its purpose was to treat casualties from the Pacific war, but it also became an important health care facility for Los Alamos personnel. The laboratory grounds had only a five-bed infirmary for civilians and a three-bed infirmary for military personnel, which were insufficient for any condition that required special treatment or prolonged hospitalization, including maternity care complications. Over the three-year period of the laboratory's top-secret existence, 206 babies were born to resident families and 30 residents died. It's a safe bet that many of them were among the hospital's guests. Los Alamos community religious activities were coordinated with the hospital chaplain until the community got its own Army chaplain in August 1944. A Santa Fe Unit 1 post office was established at the hospital post exchange on April 1, 1943. From that date Santa Fe Unit 1 also served a Military Police PX branch at Los Alamos, which provided money order and COD services for Los Alamos residents until October 1945.



A July 12, 1943, post card from Rev. A. Morton Jenkins, the Bruns Hospital chaplain, bears the Santa Fe Unit 1 postmark. Unit 1 backstamps on all recorded war-dated inbound letters suggest that security personnel monitored the mail before delivering it to addressees.

## Los Alamos Special Engineer Detachment

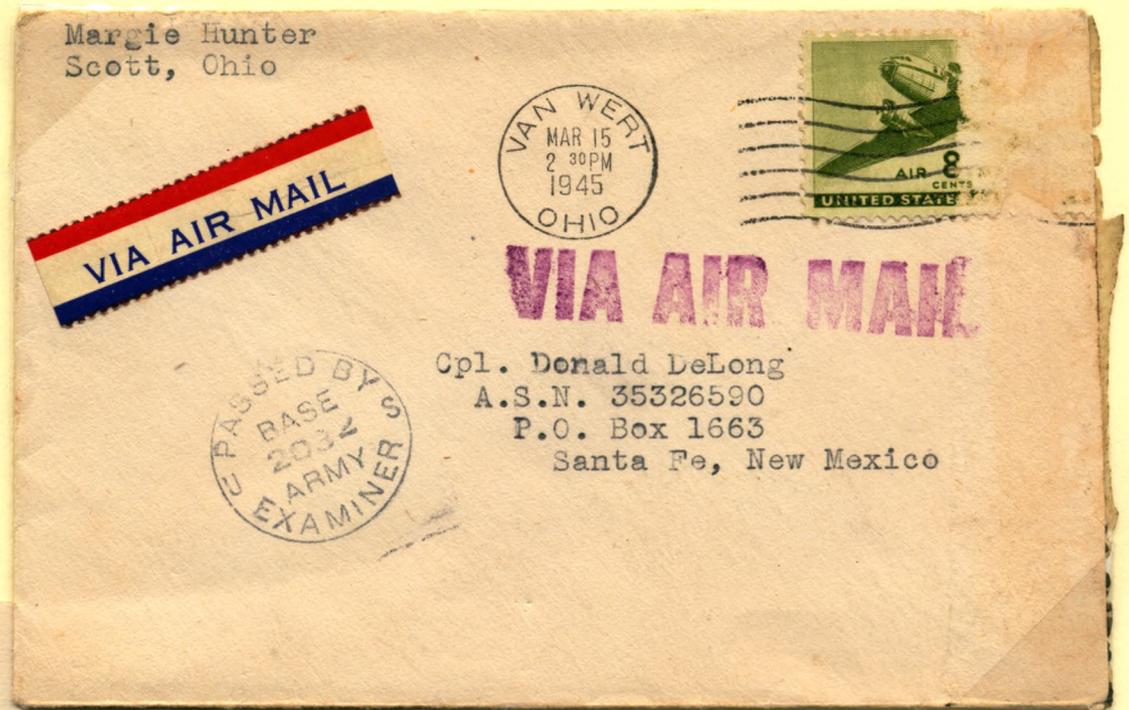
The Special Engineer Detachment provided trained military technicians to augment the civilian scientists at Los Alamos. To avoid compromising the secret location, they were ordered to report for duty at the Army's Manhattan District management and recruiting office at Room 8 of the Bishop Building at 123 W. Palace Ave., Santa Fe. After being cleared and provided with identification badges they were transported to the laboratory. Letters mailed to Corporal Donald R. De Long shed light on these security arrangements as they influenced postal services for Los Alamos personnel.



Posted February 23, 1945, at Van Wert, Ohio, to Corporal de Long at Miami Beach, Florida, forwarded February 26 from Miami to the U.S. Engineer Office, Room 8, Bishop Building, Santa Fe, which was not an address that received mail. The Santa Fe post office directed the letter to the Unit 1 station, where it was marked "MISSENT BRUNS GENERAL HOSPITAL SANTA FE, NEW MEXICO" and backstamped March 4 with the Unit 1 round dater, but actually delivered at the Los Alamos laboratory.

## Los Alamos Special Engineer Detachment

A second letter to Corporal De Long was sent after he had notified family and friends of his new address, but without disclosing the true location. The curious sender asked, "How come the post-office box number or can't you tell?"



Wed. March 14th.

Dear Don,

Say, What in the world are you doing down in Santa Fe? I've often sang about it in songs but I never thought I'd be writing to someone there. How come the post-office box number or can't you tell?

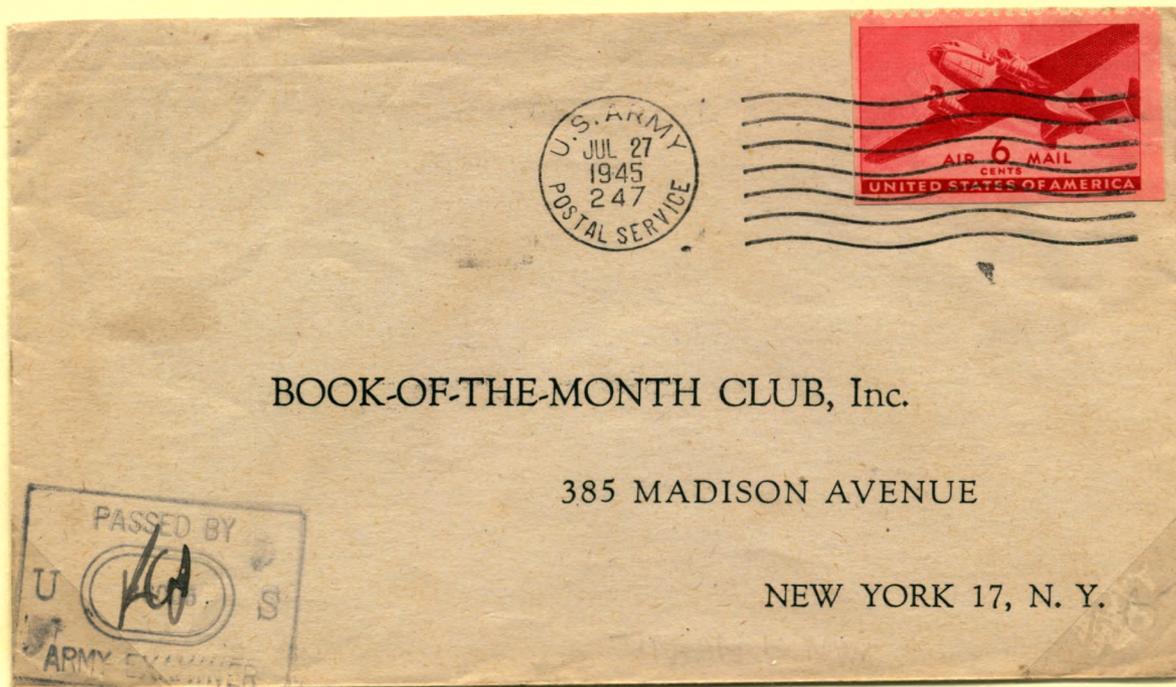
March 15, 1945, cover, Van Wert, Ohio, to the Box 1663 Santa Fe undercover address for Los Alamos civilian and military technical personnel. Removing the censor's tape to open it defaced the postage stamp. In May of 1945 the Special Engineer Detachment was assigned a separate undercover address, Box 180 Santa Fe.

## Tinian Atoll Air Base, Mariana Islands

Army Air Forces chief General Henry H. Arnold selected veteran pilot Colonel Paul W. Tibbets Jr. to command the atomic bomb mission. Tibbets trained his 393rd Bombardment Squadron at Wendover Field in Western Utah and at Batista Field in Cuba. The 393rd and its support squadrons became components of the 509th Composite Group. As the war in Europe came to an end in May 1945, the 509th transferred to Tinian Atoll, Mariana Islands, in the western Pacific Ocean, where Navy Seabees had built the world's largest airfield to base long-range Boeing B-29 Superfortress heavy bombers for attacks on Japanese cities. The Tinian address was Army Post Office 247 San Francisco.

On July 26 at Potsdam the leaders of the United States, Great Britain, and China issued an ultimatum that concluded, "We call upon the government of Japan to proclaim now the unconditional surrender of all Japanese armed forces, and to provide proper and adequate assurances of their good faith in such action. The alternative for Japan is prompt and utter destruction." From August 1 to 5, long-range aircraft rained 5 million warning flyers on 35 Japanese cities, including Hiroshima and Nagasaki, which declared:

Read this carefully as it may save your life or the life of a friend or relative. In the next few days, some or all of the cities named on the reverse side will be destroyed by American bombs. . . . the American Air Force . . . now gives you warning to evacuate the cities and save your lives.

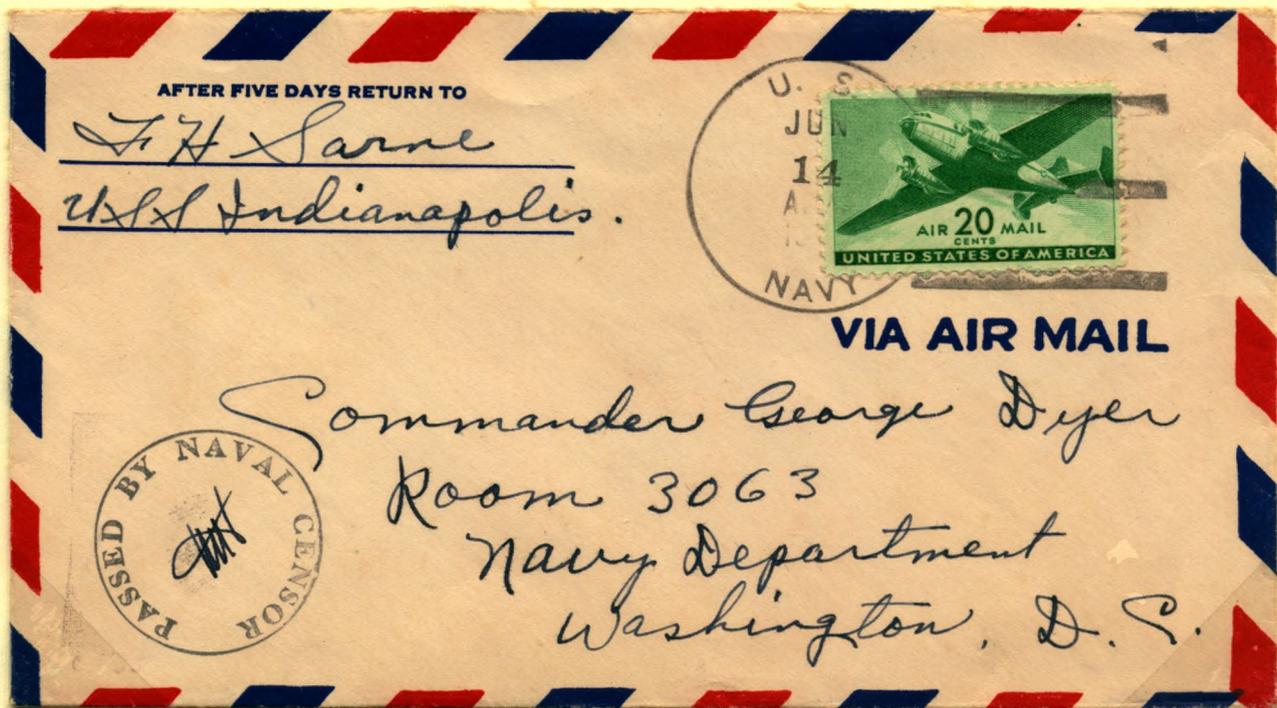


July 27, 1945, the postmark date on this APO 247 cover posted at Tinian, was the date (at Tinian, west of the International Date Line, July 26 in Europe and America) of the Potsdam Declaration issued by the United States, Great Britain, and China, which demanded that Japan surrender unconditionally or face "prompt and utter destruction."

## Cruiser USS *Indianapolis*

On July 16, 1945, just hours after the successful Trinity Test explosion at Alamogordo, the Navy cruiser USS *Indianapolis* departed Hunters Point Naval Shipyard at San Francisco with a secret cargo, the principal components of the Little Boy atomic bomb, including about half of the world's supply of enriched uranium. She arrived at Pearl Harbor three days later. Continuing onward without a protective escort, she delivered the device to Tinian on July 26. Two Los Alamos security officers brought the remaining components and fission material aboard Douglas C-54 Skymaster transport airplanes, which arrived on July 28 and July 29.

Four days after the *Indianapolis* had delivered the bomb to Tinian, fatal hits by two torpedoes from a Japanese submarine sank her en route from Guam to the Philippines.



Some aspects of this June 14 USS *Indianapolis* cover cannot be perfectly understood. Because it was examined, marked, and passed by a Navy censor, the year can only be 1942-1945. The sender, Philippine-born Felix Heluz Sarne, was a steward (mess man) on the *Indianapolis* from 1939 to 1944, which would have qualified him to use the 6¢ per half ounce military concessionary air mail rate. Yet his rank does not appear on the envelope, and the 20¢ Twin-Engine Transport air mail stamp appears to have paid the civilian single letter air mail rate from Hawaii to the United States. Perhaps Sarne had been discharged at the time this letter was posted. He died in 1986.

## August 6, 1945, the Hiroshima Atomic Bomb

The Japanese government rejected the Allies' surrender demand on July 29, 1945. At 2:45 a.m. Tinian time on August 6 the B-29 bomber *Enola Gay* lifted off Tinian with Tibbets at the controls. At 9:15 a.m., the crew dropped the Little Boy bomb on Hiroshima in the world's first act of nuclear warfare, unleashing unprecedented destruction. Approximately 66,000 Japanese civilians died and 69,000 were injured by the blast; many more suffered and died later from radiation exposure.

Print the complete address in plain block letters in the panel below, and your return address in the space provided. Use typewriter, dark ink, or pencil. Write plainly. Very small writing is not suitable.

No. \_\_\_\_\_

**To** T/5 John A. Mitchell 31114447 R. J. Mitchell  
812 Sig. Serv. Co.  
APO 782 c/Postmaster, New York N. Y.

**From** R. J. Mitchell  
(Sender's name)  
13 Highland Avenue  
(Sender's address)  
Randolph, Vt.  
Aug. 13th, 1945  
(Date)

(CENSOR'S STAMP)

Dear Jim; Well, it looks as if this war would soon be over, with the atomic bomb and Russia declaring war on Japan it would seem that the end should

R. J. Mitchell  
13 Highland Ave.  
Randolph, Vt.

**V... MAIL**

T/5 John A. Mitchell 31114447  
812 Sig. Serv. Co.  
APO 782 c/Postmaster, New York  
N. Y.



UNITED STATES POSTAGE 3c

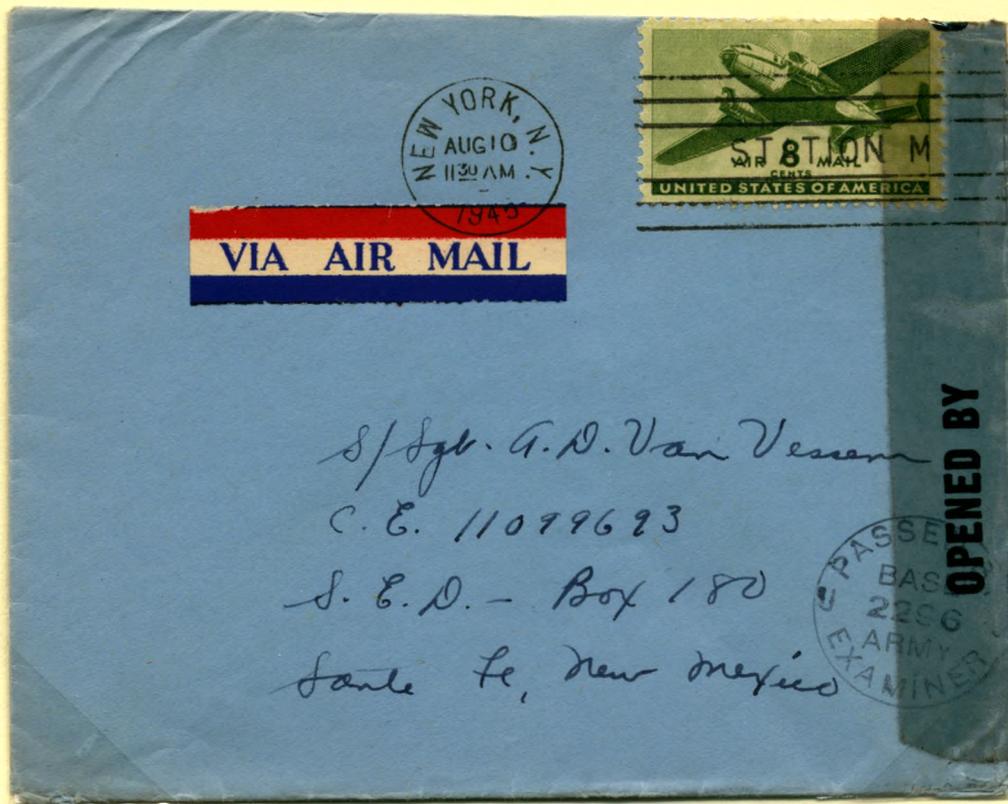
News of the atomic bomb brought hope to Americans on duty overseas and to their loved ones on the home front that the war would end quickly and that families would soon be reunited, as shown in an August 13, 1945, unprocessed V-Mail from a father in Vermont to his son in the Army stationed at Leghorn, Italy, posted two days before Emperor Hirohito broadcast his announcement that Japan would surrender.

## August 9, 1945, the Nagasaki Atomic Bomb

Staff Sergeant Alvin D. Van Vessem, a member of the Special Engineer Detachment at Los Alamos, was a member of the team that assembled the Fat Man plutonium bomb at Tinian Air Base in July. After he had carried out that assignment, the Army flew him to Kwajalein in the Marshall Islands for passage back to the United States.

In his August 6 official announcement of the Hiroshima bomb, President Truman summarized the bomb's history and publicly disclosed the locations of the formerly secret sites at Oak Ridge, Hanford, and Los Alamos. He noted that the Japanese leaders had rejected the Potsdam ultimatum, and declared, "If they do not now accept our terms they may expect a rain of ruin from the air, the like of which has never been seen on this earth."

With no response from Japan to Truman's second warning, on the morning of Aug. 9 the B-29 bomber *Bockscar*, piloted by Major Charles W. Sweeney, dropped the Fat Man bomb on Nagasaki. On that occasion, about 39,000 were killed and 25,000 injured immediately, with a continuing toll of suffering and deaths afterward.



Van Vessem's wife, the former Helen Lucas, mailed her letter to him one day after the bomb he helped build had devastated Nagasaki on August 9, 1945, the most memorable event of his life. The two had wed in February, after he had been stationed at Los Alamos for several months. Helen would have known of the bombing from news reports, but she could not have known that Alvin had departed Kwajalein aboard a Navy transport on July 30 and was at sea on the fateful day. He arrived at San Pedro on August 12; her letter to him at the Box 180 undercover address, censored upon arrival, awaited his return to Los Alamos.

## September 2, 1945, V-J Day, Japanese Formal Surrender

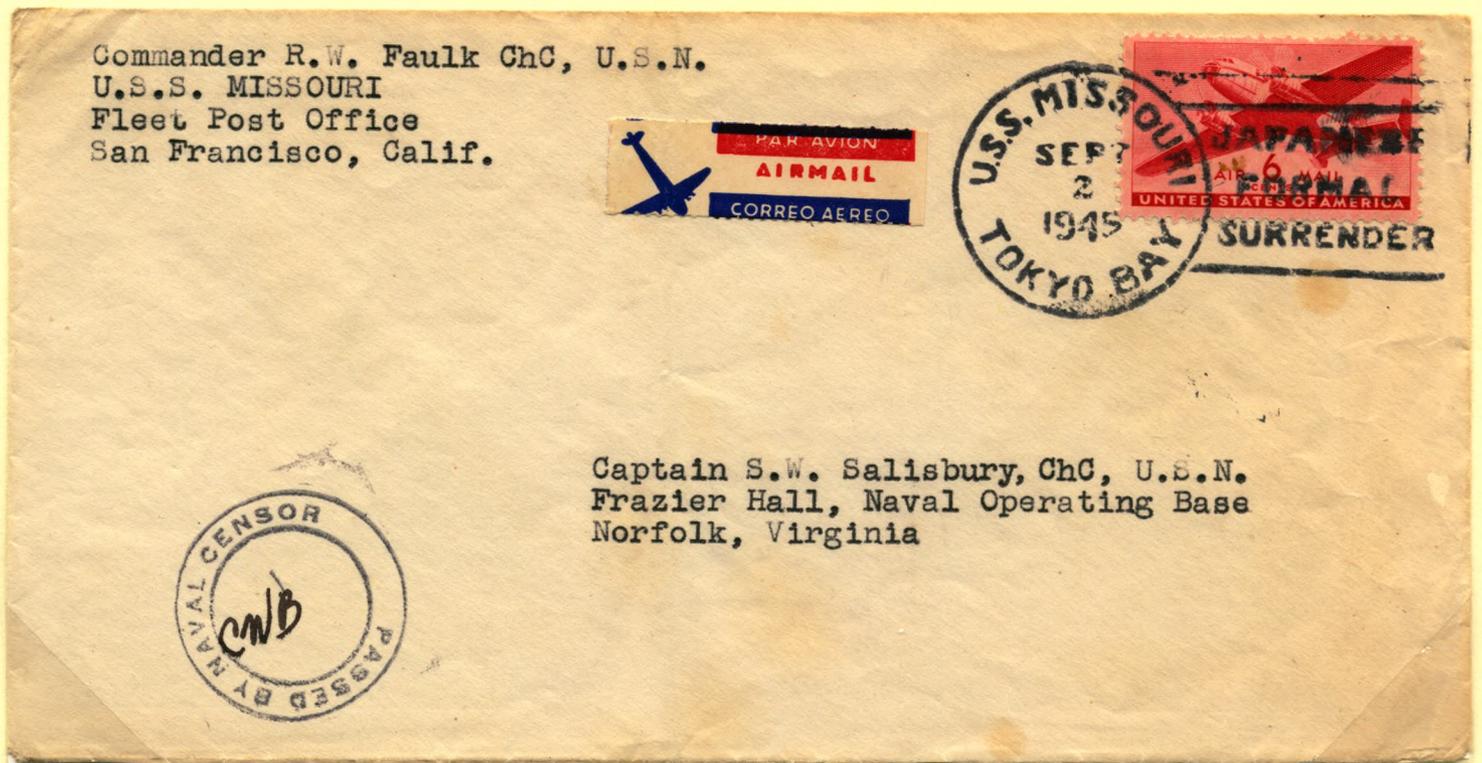
Navy Chaplain Roland W. Faulk delivered this prayer at the surrender ceremony:

*Eternal God, Father of all living, we offer our sincere prayer of thanksgiving to Thee on this day which we now dedicate in peace among the nations, remembering another Sabbath Day that was desecrated by the beginning of this brutal war. We are thankful that those who have loved peace have been rewarded with victory over those who have loved war. May it ever be so!*

*On this day of deliverance we pray for those who through long years have been imprisoned, destitute, sick and forsaken. Heal their bodies and their spirits, O God, for their wounds are grievous and deep. May the scars which they bear remind us that victory is not without cost and peace is not without price. May we never forget those who have paid the cost of our victory and peace.*

*On this day of surrender, we turn hopefully from war to peace, from destroying to building, from killing to saving. But peace without justice we know is hopeless, and justice without mercy Thou will surely despise. Help us, therefore, O God, to do justice and love mercy and to walk humbly before Thee.*

*We pray for Thy servant, the President of the United States, and for the leaders of all lands that they may be endowed with wisdom sufficient for their great tasks. Grant unto all the peoples of the earth knowledge of Thee, with courage and faith to abide within the shelter of Thy sovereign law. Amen.*

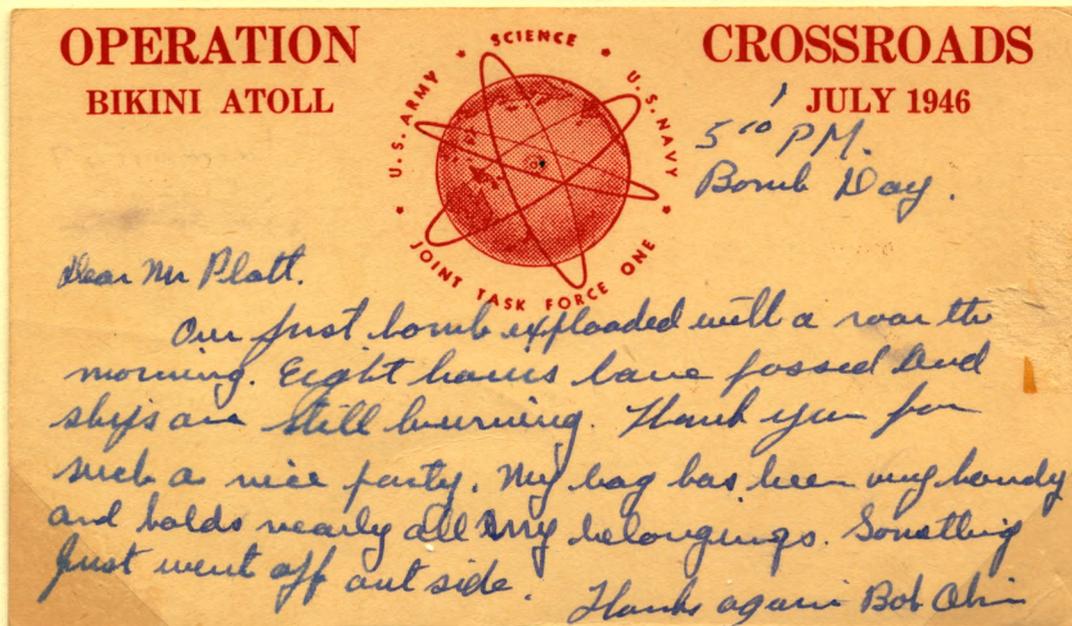
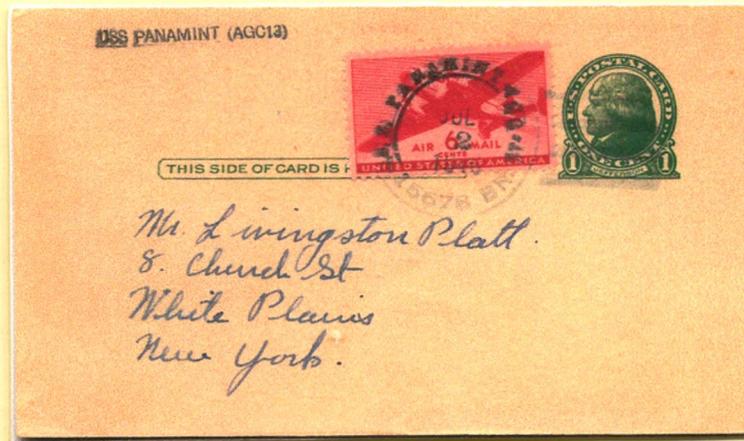


Faulk posted this cover there on that historic occasion. Today the original manuscript of his prayer is on display at the Douglas MacArthur Library in Norfolk, Virginia.

## July 1 and 25, 1946, Operation Crossroads Atomic Bomb Tests

In a July 1946 joint operation called Operation Crossroads, the U.S. armed forces conducted two atomic bomb tests in the lagoon of Bikini Atoll in the Marshall Islands after evicting 167 indigenous Pacific Islander residents. The purpose of the tests was to study the effects of nuclear weapons in naval warfare.

Shot Able on July 1 was an air burst dropped from a B-29 bomber. Shot Baker on July 25 was an underwater blast from a depth of 90 feet below the surface. These were both plutonium bombs, the final Manhattan Project devices. On January 1, 1947, the civilian Atomic Energy Commission took control of the nation's nuclear program, replacing the Army's Manhattan Engineer District. The MED was officially abolished on August 15.



On this postal card Robert M. Akin Jr. sent his eyewitness account of the July 1, 1946, Operation Crossroads atomic bomb test from the Navy's observation ship USS Panamint. Akin was the chairman of Hudson Wire Co., a military contractor that supplied high-temperature conductors and insulators for advanced weapons systems. The addressee Livingston Platt was chairman of the Republican Party in Westchester County, New York.