

EG:323-L1

BURNING JAPAN

The poor results achieved by the XXI Bomber Command prompted General Arnold to replace Brigadier General Hansell in January 1945 with Maj. Gen. Curtis E. LeMay, a veteran of the European air campaign and second commander of the XX Bomber Command in China.

Under pressure from Washington to improve results, LeMay changed tactics in March. Instead of high-altitude, daylight precision attacks, he decided to conduct low-altitude incendiary (firebomb) raids at night. Reasoning that dispersed factories could be destroyed and civilian morale shattered by igniting massive fires, LeMay ordered his crews to bomb by radar entire cities or major sections of cities.

Gambling that enemy defenses would be slight, LeMay ordered each B-29 stripped of its guns, ammunition, and three crewmen to lighten the aircraft and increase its load of bombs, most of them incendiaries.

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EG:323-L2-S2
incendiary bomb

MODEL M-50 INCENDIARY BOMB

Along with the Model M-69 and M-47 incendiary bombs, the M-50 proved to be an effective weapon for burning Japanese structures. B-29s released bundles of individual M-50s, which burst at a preset altitude and scattered individual bomblets. Although not as effective as the jellied-gasoline-filled M-69, the magnesium-filled M-50 was nearly impossible to extinguish.

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EG:323-L2a-P2a
photograph

Loading incendiary bombs into the bomb bay of a XXI Bomber Command B-29, spring 1945.

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EG:323-L2b-P2b
NASM photograph
3A-03851

Tokyo aflame following the raid of May 25, 1945.

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EG:323-L2c-P2c
photograph

Maj. Gen. Curtis E. LeMay (center) confers with Brig. Gen. Lauris Norstad (left) and Brig. Gen. Thomas Power (right) shortly after Power returned from leading the March 9-10 raid on Tokyo.

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EG:323-L3

SYSTEMATIC DESTRUCTION

The firebombing campaign, which began in earnest with the great raid against Tokyo on the night of March 9-10, proved far more devastating than expected. During the next five months, LeMay's bombers razed one half of the total area of 66 cities--burning 460 square kilometers (178 square miles). By the summer of 1945, Japan's productive capacity had been lowered as follows: power generation by 50 percent, oil by 85 percent, and overall industrial production by 60 percent. The destruction was so complete that LeMay warned his superiors that he would run out of targets by September.

Hiroshima, Kokura, Niigata, and Nagasaki were largely spared from the aerial onslaught. The task of destroying them would be given to a unit recently arrived at Tinian's North Field--one trained to drop atomic bombs.

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EG:323-L3a-P3a
NASM photograph
3A-03731

Flames consume large sections of Nagoya following a night raid, May 1945.

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EG:323-L3b-P3b
NASM photograph
3A-03924

Yokohama burns fiercely after a daylight incendiary attack, June 1945.

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EG:323-L3c-P3c
NASM photograph
3A-03492

Incendiary clusters rain down on Kobe,
already ablaze from earlier bombing, June
1945.

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EG:323-L3d-P3d
NASM photograph
3A-03914

One of the final raids of the war destroyed
99.5 percent of the city of Toyama, August
1945.

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EG:330-L1
main title

THE WORLD'S FIRST ATOMIC STRIKE FORCE

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EG:330-L2
main text

"Start a program of training crews to drop this bomb, if and when we make it and drop it."

Henry H. "Hap" Arnold, Commanding General, Army Air Forces, to his deputy Lt. Gen. Barney Giles, 1944

By the summer of 1944, Manhattan Project scientists had made significant progress on the atomic bomb, and the Army Air Forces had worked most of the glitches out of the B-29. The time had come to create and train a combat unit to deliver the new weapons.

To ensure secrecy, the Army Air Forces created a uniquely organized, self-contained atomic strike force. For eight months, the 509th Composite Group trained in isolation for a mission, the details of which were kept secret even from them. Only when the Enola Gay returned safely from its atomic attack on Hiroshima, would the men of this group understand that serving their country had earned them a unique place in history.

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EG:330-L2a-P2a
to be selected

Courtesy of

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EG:331-L1

CREATING THE 509TH COMPOSITE GROUP

"Never before and never again would such a group exist."

Paul Tibbets, 1993

Almost a full year of planning went into selecting squadrons and a commanding officer for the new atomic strike force. Aided by an extensive and rigorous review of personnel files, the Army Air Forces chose the squadrons that would form the composite group and the man who would be its commanding officer, Lt. Col. Paul W. Tibbets. The Army Air Forces allowed Tibbets to bring into the group additional airmen with whom he had worked in Europe, Africa, and the B-29 testing program.

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EG:331-L2

PAUL W. TIBBETS (1915-)

Paul Warfield Tibbets was an obvious choice to command the 509th. In 1937 he had abandoned his medical education to pursue a career in the U.S. Army Air Corps. By fall 1944, he had acquired extensive combat and leadership experience in the European and North African theaters. He was also a veteran of the B-29 testing program and one of the most experienced Superfortress pilots.

According to his memoirs, he had "gained a reputation as an independent type of operator. In the European theater, [he] was called on to do things for which no formula or standards had been established." His talent as an innovator would serve him well as commander of the unconventional 509th.

Tibbets was told he would command a unit that would be responsible for dropping an atomic bomb. But in 1944 "atomic power" had little meaning. Only after he learned that the atomic bomb would have "an explosive power equal to that of several thousand tons of TNT," did he begin to understand the special significance of his mission.

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EG:331-L2a-P2a

Col. Paul Tibbets wearing the Distinguished Service Cross immediately after returning from the Hiroshima mission, August 6, 1945.

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EG:331-L2b
free floating quote

"You have to put together an outfit and deliver this weapon. We don't know what it can do.... You've got to mate it to the airplane and determine the tactics, the training, the ballistics--everything. These are all parts of your problem.... If this is successful, you'll be a hero. But, if it fails, you'll be the biggest scapegoat ever."
Maj. Gen. Uzal Ent, Commanding General of the 2nd Air Force, to Lt. Col. Paul Tibbets

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EG:331-L3

THE SQUADRONS

B-29 bomb groups comprised three squadrons, plus maintenance and ordnance squadrons. The 509th Composite Group had only one bomb squadron with its own dedicated support squadrons under one central command-- an unorthodox but necessary strategy for maintaining secrecy.

The Army Air Forces selected the 393rd Bomber Squadron, then completing its combat training in Nebraska, to serve as the core of the new 509th. The 393rd had expected to move out to the Pacific, not to another stateside airbase. Given little information about their transfer, the 393rd viewed their orders with "surprise and disappointment."

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EG:331-L3a-P3a
photo of Classen

Lt. Col. Tom Classen, a distinguished combat veteran and experienced pilot, commanded the 393rd until it became a part of the 509th under Tibbets' command.

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EG:331-L3b-S3b

A-2 leather flight jacket with the insignia of the 393rd, worn by Fred Bock, The Great Artiste pilot on the Nagasaki raid.

Lent by Fred Bock

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EG:331-L3c-S3c
Artifact accompanied by
looseleaf binder with
book pages showing the
squadron photos.

This 509th pictorial album was compiled on
Tinian immediately after the end of the war.

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EG:331-L4

OLD FRIENDS: TIBBETS' PRIVATE AIR FORCE

Faced with training an entirely new group of men, commanding officers often asked to transfer men with whom they had flown in combat. Granting Tibbets' unusual leeway, the Army Air Forces met all his requests.

Tom Ferebee, who had been the bombardier in Tibbets' regular crew in Europe, was his first choice. Ferebee recommended "Dutch" van Kirk, the regular navigator, and Wyatt Duzenbury. Tibbets also selected a number of airmen he had met in the B-29 training program, including pilots Robert Lewis, Charles Sweeney, and Don Albury, and gunnery instructor George Robert Caron.

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EG:331-L4a-P4a

Left to right: Lt. Col. Tibbets, Lt. van Kirk, Lt. Lockhart, Lt. Ferebee, and rest of crew of the B-17 Red Gremlin, England, 1942.
Courtesy of Theodore Van Kirk

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EG:331-L4b-S4b
Ferebee's orders

Tom Ferebee's orders to proceed to Wendover, Utah, Air Force Base, where the 509th trained. Ferebee served as the bombardier on the Hiroshima mission.

Lent by Tom Ferebee

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EG:331-L4c-P4c

Ferebee recommended Kermit Beahan,
bombardier.

Courtesy of Fred Olivi

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EG:331-L4d-P4d

Tibbets recruited James van Pelt, navigator.

Courtesy of

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EG:331-L4e-P4e

Wyatt Duzenbury "could coax magic out of aerc
engines," according to Tibbets, 1944.

Courtesy of the National Archives

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EG:331-L4f-P4f

Charles Sweeney, 1945.

Courtesy of

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EG:331-L4g-P4g
photograph of Albury

Don Albury, according to Tibbets, was "about
the most competent twenty-five-year-old I had
ever known."

Courtesy of

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EG:331-L4h-P4h
photograph of Lewis

Tibbets considered Robert Lewis to be "a bit
of a wild lad, but a natural pilot."

Courtesy of Ken Eidnes

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EG:331-L4i-P4i

Tibbets' rapport with non-commissioned
officer Bob Caron was characteristic of his
"independent" interpretation of Air Force
protocol.

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EG:332-L1

WENDOVER AIR FORCE BASE: "LEFTOVER, USA"

In the fall of 1944, the various squadrons of the newly formed 509th Composite Group met at Wendover Air Force Base in Utah. Described as "Leftover Field" by Bob Hope, Wendover was "the end of the world, perfect" according to Tibbets. The base was close to a bombing range, reserved for the 509th's use, and close to Los Alamos, where Manhattan Project scientists were designing the atomic bombs.

Tibbets knew that his men would detest Wendover's primitive conditions and isolation. But he also felt that because the base offered so few distractions, the mission would command their full attention.

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EG:332-L1a-P1
map of Utah showing
Wendover and relationship
to Los Alamos

No label needed

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EG:332-L2

ARRIVAL AT WENDOVER

"Don't ask any questions. Don't answer any questions from anybody not directly involved in what we will be doing.... Don't ask what the job is. That is a sure-fire way to be transferred out."

Paul Tibbets to the 393rd, September 1944

Rats, desert conditions, rudimentary housing, rancid drinking water, and termites welcomed the 509th to Wendover. Barbed wire and military police were everywhere. The Manhattan Project sent 50 special agents to help the military police unit monitor the 509th. They tapped phone calls, censored mail, and used subtle means to remind the unit that they were always under surveillance.

Nothing within sight gave them a clue to why they had been transferred to another stateside base instead of the Pacific. Tibbets told them only that they had been "brought here to work on a very special mission," but did add, "You are going to take part in an effort that could end the war."

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EG:332-L2a-P2a

Lt. Jacob Beser at Wendover, May 1945. Beser later recalled, "The place sounded so...awful that there just had to be a good reason for my being there."

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EG:332-L2b-P2b
photo of "What you See
Here...Stays Here"

This sign greeted servicemen at Wendover.

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EG:332-L3

"PUMPKIN" MISSIONS

On some training flights from Wendover, 509th bomber crews dropped bombs filled with high explosives. Shaped like the "Fat Man" bomb and painted bright orange, these bombs earned the nickname "pumpkins." These training exercises prepared the 509th to carry out their final mission.

The bomb drops also provided information for Manhattan Project scientists, who were still developing and testing the ballistics and fusing mechanism of the bombs. Stationed at a safe distance from the aiming point, they analyzed each bomb's flight pattern, watched to see if the bomb's fusing mechanism worked, and investigated the bomb's impact.

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EG:332-L3a-P3a

Manhattan Project scientist and Navy Capt. William "Deak" Parsons helped develop a fusing device that would trigger the atomic bombs to explode at a specified altitude above their targets. He also helped design the casings for the two atomic bombs.

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EG:332-L3b-P3b

A "pumpkin" waits to be loaded onto a B-29.
Courtesy of Cheryl Debejare

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EG:332-L4

LEARNING TO GET OUT OF THE BOMB'S WAY

Manhattan Project scientists calculated that the bomb's explosion would cause a shock wave powerful enough to destroy an airplane flying too close. To prepare their crews to escape the predicted shock wave, Tibbets and Classen taught the crews to roll their planes in a steep, diving turn to pick up speed after they dropped their bomb load. They expected their pilots to learn to execute the highly unorthodox maneuver, but did not tell them why it was crucial.

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EG:332-L4a-P4a

George "Bob" Caron waves from his tail-gunner's position, Wendover, 1944. Caught by surprise the first time he experienced the escape maneuver, Tibbets' tail-gunner said it felt "like a roller coaster."

Courtesy of Ken Eidnes

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EG:332-L5

OFF DUTY

A perfectionist, Tibbets had great expectations for the 509th. Tension levels rose as his officers and enlisted men followed an intensive training schedule, performed unorthodox flying maneuvers, and worked under seemingly excessive security precautions. Hiking in the canyon country surrounding the base relieved the tension.

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EG:332-L6

SPECIAL TRAINING: BATISTA FIELD, CUBA

After four months at Wendover, the 509th was becoming restless. Recognizing their growing impatience and desire to get into action, Tibbets sent 10 of his 15 crews to Cuba. He hoped the temporary transfer would give them the opportunity to train in Pacific-like conditions and would relieve tension.

While they trained in Cuba, they found time to blow off steam. Invoking the project's code name, "Silverplate," rescued them from the consequences. They soon earned the reputation of being "untouchable." To some extent Tibbets encouraged his crews' spirited off-duty antics, as he believed they helped build esprit de corps.

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EG:332-L6a-P6a

Under Tom Classen's charge, the crews carried out long-distance navigational training over water at night. They also continued practicing high-altitude bomb runs.

Courtesy of Charles Levy

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EG:333-L1

OVERSEAS: THE 509TH ON TINIAN

In June 1945, the 509th Composite Group arrived at its overseas base on the small Pacific island of Tinian. One step closer to the war, the 509th practiced dropping conventional bombs, grew increasingly impatient with security measures, and tried to entertain themselves while they eagerly awaited the day when they would finally carry out their mysterious mission.

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EG:333-L1a-Pl1a

The 509th headquarters on Tinian, 1945.

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EG:333-L2

TENSION ON TINIAN

By the time the 509th Composite Group arrived, the 313th Bombardment Wing was already well established at Tinian's North Field and had flown dozens of missions over Japan. From the moment Tibbets' crews showed up, tensions arose between the 313th and the 509th.

Why, the crews of the 313th asked, was the 509th fed in a separate mess and allowed to displace 313th combat veterans from some of the island's best accommodations? Why had the 509th supplied its own mechanics instead of using the already existing support squadrons? Why did the 509th fly small-formation strikes instead of standard 100-plane raids? And why did they refuse to divulge information about their mission?

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EG:333-L2a-P2a

B-29s of the 313th Bomber Wing fill North Field.

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EG:333-L2b-P2b
"Nobody Knows" poem

Envy and curiosity sparked a clerk in base operations to write a poem razzing the inactive and seemingly unimportant 509th. Some of the members enjoyed it and put it in their yearbook.

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EG:333-L2c-P2c
cartoon map

Tinian had reminded one New York City-born Seabee of Manhattan Island, so he laid out the streets accordingly. The section reserved for the 509th Composite Group was in the "Columbia University" district.

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EG:333-L2d-S2d

Pilot Willam "Locke" Easton of the 509th traded a fifth of whisky for this scooter, constructed from an abandoned Japanese bicycle and a B-29 auxiliary engine.

Lent by William "Locke" Easton

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EG:333-L2e-P2e
Levy's crew in scooter

Members of Fred Bock's crew drove another type of scooter.

Courtesy of Charles Levy

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EG:333-L3

INTO COMBAT

Training missions began on June 30, each focusing on a different aspect of combat flying, including navigational techniques, instrument calibration, and visual and radar-aided bomb drops. Nearby islands provided targets for the crews in training.

On July 20, 1945, the 509th made its first airstrike on Japan, dropping "Fat-Man"-shaped high-explosive bombs, called "pumpkins." Because of poor weather conditions, however, only five crews were able to bomb their primary targets visually. Four used radar to drop their bombs on secondary targets. Engine failure forced another to jettison its bomb load in the ocean.

The 509th flew three more "pumpkin" missions to Japan. Largely due to variable weather conditions, the results of these missions ranged from "fair to unobserved" to "effective and successful."

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EG:333-L3a-P3a

Intelligence officer Hazen Payette briefs crews on Tinian, 1945.

Courtesy of Charles Levy

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EG:333-L3b-P3b

Members of the 509th attend target-study classes.

Courtesy of Charles Levy

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EG:333-L3c-P3c

Before takeoff, crews invited visitors to the flight line to autograph bombs.

Courtesy of Charles Levy

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EG:333-L3d-S3d
map

The Bockscar crew's flights, 1944-45. A "flurry of excitement" accompanied the announcement of the group's first combat mission, during which five crews bombed a Japanese airfield.

Courtesy of Charles Levy

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EG:333-L4

SURVIVAL GEAR

The commander of the 313th Bombardment Wing quickly learned that Tibbets' crews "knew more about airplanes and navigation" than his combat veterans. But the 509th had much to learn about air-sea rescue, ditching and bail-outs, dinghy drill, and survival. Each crew member was fitted with a survival vest equipped with items to aid him if he had to abandon his airplane.

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EG:333-L4a-S4a

Map of wind and ocean currents.

Courtesy of Richard Nelson

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EG:333-L4b-S4b

Pilot's guide to the Pacific.

Courtesy of William "Pappy" Hulse

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EG:333-L4c-S4c

Signal mirror.

Courtesy of William "Pappy" Hulse

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EG:333-L4d-S4d

Waterproof watch box with compass.

Courtesy of William "Pappy" Hulse

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EG:333-L4e-S4e

Collapsible fishing pole.

Courtesy of William "Pappy" Hulse

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EG:333-L4f-S4f

Sewing kit and first aid kit.

Courtesy of William "Pappy" Hulse

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EG:333-L5

WAITING TO "WIN THE WAR"

As at Wendover, the 509th followed a rigorous training schedule on Tinian. Swimming, horseshoes, baseball, and racing scooters helped them bide their time until Tibbets called on them to carry out the mission that was "going to win the war."

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EG:333-L5a-P5a
Special Services
Activities memo

No label needed

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EG:333-L5b-P5b
Playing cards

Courtesy of Charles Levy

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