

The crew of the *Enola Gay* guessed—but had not been told—what the weapon in its bomb bay was.



# Atomic Mission

By John T. Correll

**O**n Sunday morning, Aug. 5, 1945, the clouds that had hung over southern Japan for a week began to clear and the weather forecast said conditions would be right on Monday for daylight visual bombing. That was the news that a group of airmen on Tinian had been awaiting. Special Bombing Mission No. 13 was on.

Shortly after noon, the weapon that would be used was removed from a secure assembly hut at North Field on Tinian, covered with a tarpaulin, and hauled on a trailer to a loading pit. A B-29 Superfortress was towed into position straddling the pit and the

weapon was hoisted by hydraulic lift into the bomb bay.

Among those who watched the loading was Col. Paul W. Tibbets, 30, commander of the 509th Composite Group. He would fly the B-29 on its mission to deliver the bomb. Up to then, the bomber was identified by side number 82 stenciled on its aft fuselage, but it had not been given a name. Tibbets sent for a painter, who printed “Enola Gay”—Tibbets’ mother’s name—in neat block letters below the cockpit window on the left side of the nose.

The weapon had a name as well: “Little Boy,” even though it was 12 feet long and weighed more than 9,000 pounds. It

*The crew of the Enola Gay. Paul Tibbets, the pilot, is standing fourth from left.*

was the world’s first atomic bomb, and Special Mission No. 13 would drop it on Japan. The primary target was Hiroshima.

Through the summer of 1945, the Japanese home islands were reeling from massive firebomb attacks by B-29s flying from Guam, Tinian, and Saipan in the Marianas chain. Despite the certainty of defeat, Japan refused to surrender and the war dragged on with mounting casualties on both sides.

The 509th had been on Tinian a little more than a month, operating from tightly guarded facilities at North Field. It was a

different kind of group in several ways. It had only one bomb squadron, and was self-contained with its own transport aircraft, maintenance, military police, and engineers. Its crews did not fly regular bombing missions. When they did fly, they dropped practice munitions called “pumpkins” because of their color (orange, for visibility) and unusual shape (resembling an atomic bomb). The 509th, secretive and strange, was not popular with the other groups on Tinian.

The mystery deepened July 26, when the cruiser *Indianapolis* arrived with a special cargo. The ship’s captain did not know what it was, only that if the ship went down, he must ensure that it was loaded into one of the available lifeboats. En route, it had been in the custody of two standoffish persons (supposedly Army officers, but they wore their corps insignia upside down) who kept the crate in their cabin, chained to the deck. What the *Indianapolis* carried was the main assembly of the atomic bomb. The remaining parts were brought to Tinian by one of the 509th’s C-54 transports July 29.

That same day, Gen. Carl A. Spaatz landed on Guam to take command of strategic air forces in the Pacific. He brought with him a special order from the War Department directing that the 509th “deliver its first special bomb as soon as weather will permit visual bombing after about 3 August 1945, on one of the targets: Hiroshima, Kokura, Niigata, and Nagasaki.”

The target committee in Washington used several criteria. The target would be a large urban area of importance where the damage could convince the Japanese of the destructive force. To make it clear the damage was not from previous incendiary attacks, the target would be a city not previously bombed. Several cities had thus been “saved” as potential targets for the atomic bomb.

Hiroshima fit the criteria. The headquarters for the Japanese Second Army, with a garrison of more than 25,000 troops, was there. So were major armament plants, including Mitsubishi Electric Corp. and Japan Steel Co., an ordnance supply depot, an infantry training school, and a factory that turned out 6,000 rifles a week. The port was a major assembly point for naval convoys. US planners believed that Hiroshima was the only one of the target cities where there were no allied POWs. In fact, 23 American prisoners were held in 400-year-old Hiroshima castle, now occupied by the army.

Paul Tibbets had been an outstanding B-17 pilot and squadron commander

in the Combined Bomber Offensive in Europe and a test pilot for the B-29, the biggest and best American bomber of the war. In September 1944, almost a year before the atomic bomb was ready to use, Tibbets was chosen to organize and train a B-29 group to deliver it against targets in Germany and Japan.

The organization was named the 509th Composite Group to indicate that it was self-contained, with all of its own support elements. It reached its authorized strength of 225 officers and 1,542 enlisted members at Wendover Field in an isolated part of northwestern Utah where security could be maintained. The men were told only that they would “take part in an effort that could end the war.” The atomic bomb was not mentioned.

### Outrunning the Shock Wave

The mission had the highest priority, but recognizing that too many people had heard that story before, the Pentagon gave Tibbets a code word, “Silverplate,” which would be recognized and honored, even by those who knew nothing of the program.

Tibbets pulled in men he knew and trusted, including four who had flown with him in Europe: Maj. Thomas W. Ferebee, bombardier; Capt. Theodore J. “Dutch” Van Kirk, navigator; SSgt. George R. Caron, tail gunner; and SSgt. Wyatt E. Duzenbury, flight engineer. Ferebee and Van Kirk had a special relationship with Tibbets. He named them group bombardier and group navigator for the 509th.

The long training period was necessary for several reasons. Elsewhere in the war, lead crews took bomber formations to the release point and brought them home again. The circular error probable—the standard measure of bombing accuracy—was about 1,000 feet. Tibbets announced that every crew would be able to navigate precisely over land or water and bomb from 30,000 feet with a CEP of 200 feet. Van Kirk and Ferebee would show them how.

The big requirement was outrunning the shock wave of the atomic bomb. To survive, a B-29 needed to be at least eight miles from the explosion. If the aircraft was at an altitude of 31,000 feet, the slant range distance from the target would be six miles. The bomb would fall for 43 seconds before detonation, after which the shock wave would take another 40 seconds to travel eight miles. It would be a close call.

“The most effective maneuver would be a sharp turn of 155 degrees,” Tib-

bets said. “This would put considerable strain on the airplane and would require a degree of precision flying unfamiliar to bomber pilots.” Nevertheless, all of the 509th pilots would be trained to do it.

Tibbets ordered that the group’s modified B-29s be delivered stripped of guns, turrets, and armor plate except for the tail. “I quickly learned that the stripped airplane could operate about 4,000 feet higher than one fully equipped, that it was faster and more maneuverable, and that I could turn inside a P-47 that was flying against us,” he said. “Also, once the P-47 made an attack and turned to come back again, he could not catch us.”

In May 1945, Tibbets picked out his personal aircraft at the Martin plant in Omaha. A foreman pointed to No. 82 on the assembly line and said it was the best airplane in the factory. “That’s the one you want,” he said. “It was built at midweek, not on a Monday.” Even the screws in the toilet seat had been given an extra turn.

The war in Europe ended May 8, before the atomic bomb was ready. All 18 of the group’s B-29s soon deployed to the Pacific.

Tinian was just 12 miles long and six miles wide, crowded with B-29 hardstands, Quonset huts, and docks. There were two airfields, each with two 8,500-foot runways, the longest operational runways in the world.

On July 16, the atomic bomb was tested successfully at Trinity site in the New Mexico desert. Only one operational bomb was immediately available, and it was on its way to Tinian. By the end of July, everything was in place.

On Saturday, Aug. 4, radio reports from Mao Zedong’s partisan forces in China said the skies were clearing and good weather was moving eastward toward Japan. That was sufficient indication to gather the crews for their first mission briefing.

There would be seven B-29s in all, including the *Enola Gay*. Three weather airplanes would take off an hour ahead of time to visually check conditions over Hiroshima and the two alternate targets. One B-29, a spare, would accompany the mission as far as Iwo Jima, where it would take the bomb on board in case the *Enola Gay* had to abort. A bomb-loading pit had been dug and was ready at Iwo Jima.

Two B-29s would go along with Tibbets to the target. Maj. Charles W. Sweeney in *The Great Artiste* would drop instruments to measure the shock wave, radioactivity, and other factors of the



detonation. Capt. George W. Marquardt would fly the yet-unnamed No. 91 as the photo airplane.

The Saturday briefing was conducted by Navy Capt. William S. “Deak” Parsons, the senior ordnance official for the Manhattan Project, which had developed the atomic bomb. Parsons would be aboard the *Enola Gay* as weaponeer, and had been at Trinity site for the test.

Parsons told the crews that the bomb was the “most destructive weapon ever produced” and that the mushroom cloud would rise to 30,000 feet, preceded by a flash of light brighter than the sun. He passed out protective goggles for the crews to wear. The word “atom” was not uttered.

That weekend, Tibbets made two changes for security reasons. Tokyo Rose—perhaps informed by Japanese stragglers in the hills—had twice referred to the distinctive insignia, an arrow in a circle, on the tails of the 509th aircraft. Tibbets had it painted out on the seven B-29s and replaced with a large R, the tail insignia of neighboring unit, the 313th Bomb Group. He also changed the group’s call sign from “Victor” to “Dimples.” The *Enola Gay* would fly as Dimples Eight-Two.

On Saturday evening, Parsons watched as bombs and ammunition exploded when a B-29 crashed on takeoff. Concerned that the *Enola Gay* might crash and cook off the atomic bomb, Parsons decided to arm the bomb in flight. As soon as the weapon was in place on Sunday, he climbed into the bomb bay and practiced until he was confident that he could perform the 11 necessary actions in the air.

At the final crew briefing just before midnight on Sunday, Tibbets said, “We

are going on a mission to drop a bomb different from any you have ever seen or heard about. This bomb contains a destructive force equivalent to 20 thousand tons of TNT.”

### A Long Trip

There would be 12 people aboard the *Enola Gay*: the nine regular members of the aircrew, plus Parsons and two other Manhattan Project specialists. After the final briefing, the flight surgeon gave Tibbets a small cardboard pillbox with 12 cyanide capsules. Tibbets gave one to Parsons and kept the others. He intended to offer them to the crew if the airplane went down over Japan and they faced torture and slow death by angry mobs.

If the aircraft cleared the Japanese coastline, the rest of the distance was patrolled by Navy “Dumbo” flying boats, cruisers, destroyers, and submarines that would pick up the crew if they had to ditch at sea.

The three weather airplanes went first, and were away at 1:37 a.m.

The mission almost took a fateful turn when Duzenbury, the flight engineer, made his pre-takeoff inspection and found two containers on the catwalk in the bomb bay. They contained the tools and explosive charge Parsons would use to arm the bomb, but Duzenbury did not know that. Before he could remove the containers, he was distracted by bright lights and went to check. It was the klieg lights for motion picture cameras. Duzenbury never got back to the boxes.

When Tibbets and the rest of the crew got there, the *Enola Gay* was bathed in floodlights for motion picture filming ordered by Gen. Leslie Groves, head of the Manhattan Project. Tibbets let

***The Enola Gay touches down on the runway at Tinian on Aug. 6, 1945. Its crew had just dropped the atomic bomb on Hiroshima, Japan.***

the photography go on for a while, then ordered the floodlights cut off, and Duzenbury started the engines. Ground crews pulled the chocks at 2:30 a.m., and the *Enola Gay* taxied more than a mile to the southwest end of the runway for takeoff.

Tibbets had already decided to make use of every inch of the runway. The aircraft was heavily loaded with fuel and the 9,000-pound bomb, and was 15,000 pounds over the usual takeoff weight. He released the brakes, advanced the throttles, and rolled down the long runway, gathering speed. Tibbets resisted the urge to attempt takeoff before the aircraft reached its best speed possible.

“I held firm until we were a little more than 100 feet from the end of the pavement,” Tibbets said. “Thanks to our extra speed—we were at 155 miles an hour—the plane lifted off easily and climbed steadily.”

It was 1,700 miles from Tinian to the south coast of Japan. Eight minutes after takeoff, Parsons and his assistant, Lt. Morris R. Jeppson, lowered themselves into the bomb bay. Jeppson held a flashlight while Parsons armed the bomb. It took 25 minutes.

About 4:30 a.m., Tibbets crawled back through the access tunnel to visit with the crew in the waist. Tail gunner Caron had also come up from his turret in the rear of the aircraft. Caron asked, “Are we splitting atoms today, Colonel?” Tibbets replied, “That’s about it.”

When they reached Iwo Jima, the backup aircraft landed, and Sweeney and Marquardt, who had been flying around

10 miles behind, tightened up on the *Enola Gay*. At 6:07 a.m., they turned northwest toward Japan. They crossed the Japanese shoreline at 8:30 a.m. at their bombing altitude of 30,700 feet and received a coded message from Maj. Claude R. Eatherly, flying the weather plane *Straight Flush*. The cloud cover over Hiroshima was less than three-tenths at all altitudes. They would strike the primary target as briefed.

Hiroshima came into view at 9:07 a.m. When they reached the initial point for their bomb run, 152 miles east of the center of Hiroshima, they took a heading almost due west toward the target. They could see eight large ships anchored in the nearby harbor. Tibbets reminded the crew to put on their protective goggles.

Van Kirk's navigation had brought them to the target precisely on time. Now it was up to the bombardier, Tom Ferebee, crouched over the Norden bombsight in the forward-most position of the B-29's Plexiglas nose canopy.

His aiming point, selected ahead of time, was the T-shaped Aloi Bridge on Ota River.

Ten miles out, Ferebee said, "OK, I've got the bridge." He adjusted the bomb sight—which was linked to the autopilot—for wind drift and synchronized it with movement of the aircraft relative to the target. Ninety seconds before release, Tibbets took his hands from controls and told Ferebee, "It's all yours." Sixty seconds before drop, Ferebee flipped a toggle switch for automatic release. It activated a high-pitched tone, which would sound in the headphones of the crew until it stopped abruptly with release of the bomb.

The bomb fell at 9:15 a.m.—crew time plus 17 seconds, exactly 17 seconds behind planned release time. It was 8:15 local time in Hiroshima.

The aircraft was instantly 9,000 pounds lighter and the nose leapt up sharply. Tibbets made a hard, 155-degree diving turn to right. He lost 1,700 feet of altitude in the turn and was heading away from target at full power. Sweeney in *The Great Artiste* dropped three instrument packages, suspended by parachutes, and made a corresponding diving turn to the left. The centrifugal force pinned the crews to their seats. Marquardt's photo airplane had remained 15 miles from Hiroshima and did not need escape measures.

Tibbets and the co-pilot, Capt. Robert A. Lewis, found they could not fly the airplane through this difficult maneuver with the goggles. Dark glasses blacked

out the instrument panel, so they pushed the goggles back on their foreheads. Ferebee, watching the bomb's fall, forgot to put his glasses on.

### Recognition Long Delayed

At 8:16 a.m., Hiroshima time, after a 43-second drop, the atomic bomb exploded at the preset altitude of 1,890 feet. More than half of the city was destroyed in a flash and about 80,000 Japanese were killed instantly. A brilliant flash of light swept the aircraft, and the mushroom cloud rose more than three miles above the devastation of Hiroshima.

Tail gunner Caron was the only member of the crew with a direct view. He could see the shock wave approaching at almost 1,100 feet per second, the leading edge made visible by condensing moisture. The *Enola Gay*, according to Tibbets, was nine miles from the point of detonation when it was rocked violently by the shock wave.

According to enduring myth, co-pilot Lewis said, "My God, what have we done?" In reality, he said nothing of the sort. Tibbets announced over the intercom, "Fellows, you have just dropped the first atomic bomb in history."

Tibbets gave the radio operator, Pfc. Richard H. Nelson, a message to transmit to Tinian, reporting that the primary target had been bombed visually, with good results, no opposition by fighters or anti-aircraft fire. Parsons made a more detailed report in code. The mushroom cloud was visible to the crew for another hour and a half as they flew southward.

Sweeney and Marquardt reduced speed so the *Enola Gay* could land first, touching down at 2:58 p.m. Spaatz met Tibbets on the ramp and pinned the Distinguished Service Cross on his flight coveralls.

The death toll from Hiroshima and Nagasaki, where the second atomic bomb fell Aug. 9, was staggering, but these two missions finally brought an end to the war in the Pacific, where more than 17 million people had died at the hands of Imperial Japan. The war's end also meant that the planned invasion of the Japanese home islands—an operation several times larger than the D-Day landings at Normandy, with expected casualties exceeding Hiroshima and

Nagasaki put together—would not be necessary.

The Japanese surrender on Aug. 15 was formally confirmed on V-J Day, Sept. 2.

With few exceptions, Americans at the time approved of using the atomic bombs to end the war. Gradually, opinion began to shift. On Aug. 31, 1946, *The New Yorker* devoted its entire editorial space to "Hiroshima," a treatise by John Hershey that began the tradition of emphasizing Japanese suffering instead of Japan's aggression and refusal to end the war.

In the years that followed, Tibbets and the crew of the *Enola Gay* fared poorly in historical and popular remembrance.

At the end of World War II, all of the B-29 groups on Tinian—except one—were awarded the Distinguished Unit Citation. The 509th Composite Group never received an official decoration or recognition, and neither did any of its component squadrons.

In 1990, surviving members of the group requested that some award be approved retroactively, but they were rebuffed by the Pentagon bureaucracy.

It was not until 50 years after the mission that *Enola Gay*'s crew received the national acclaim that had eluded them before. Ironically, it happened as the result of a plan in 1994 by the Smithsonian Institution to use the restored *Enola Gay* as a prop in a political horror show presenting the Japanese in World War II as victims rather than aggressors. The radical program was canceled when the public, Congress, and even much of the news media rallied to the support of the mission and the crew. In the process, the nation came to a more balanced understanding and regard for the atomic missions.

In 1999, the crew asked the Air Force Association to help. AFA, working with various USAF agencies and directly with Air Force Secretary F. Whitten Peters, earned the crew reconsideration.

The Air Force approved the Outstanding Unit Award with device for valor for the 509th Composite Group for the period July 1 to Aug. 14, 1945.

The award was presented Oct. 16, 1999, at a 509th reunion at Andrews AFB, Md. Among the veterans present for the ceremony was Paul Tibbets, then 84. ■

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*John T. Correll was editor in chief of Air Force Magazine for 18 years and is now a contributing editor. Two of his previous articles, "The Decision That Launched the Enola Gay" in April 1994 and "The Invasion That Didn't Happen" in June 2009, address the broader issues about the Hiroshima mission.*