

# Criticality

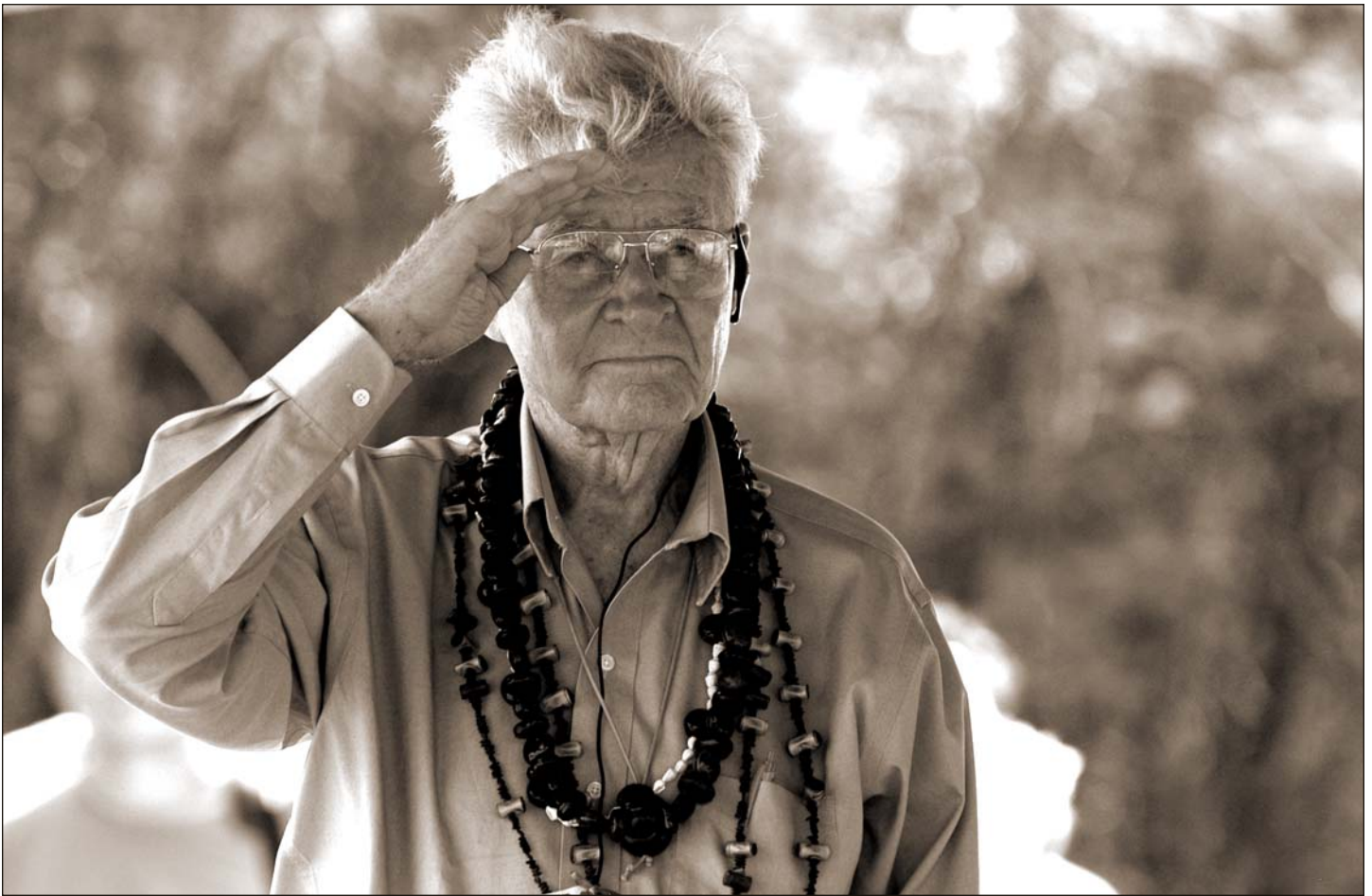
*The pilot of the Enola Gay talks about his bombing run.*

*Tinian held its own ceremony on June 16 to commemorate the return to the island of Enola Gay crew members Paul Tibbits, pilot and Commanding Officer of the 509th Composite Group, electronics officer Morris Jeppson, and navigator Theodore "Dutch" Van Kirk.*

*General Tibbits gave speeches and interviews on Saipan and Tinian throughout the week of the commemoration. This speech however, at the official unveiling of the pits where the atomic*

*territories of Europe and Japan. You will be self supported. You will operate in the best secrecy that can be provided by yourself, your people, and for you." Well, I was all of 29 years old at that moment, a lot of the seriousness of that didn't really come home. I had to get into the job, had look at what was going on, to realize how serious it really was. Not that I ever did anything with my career in the military that was*

that I dropped on Hiroshima. It was never intended to be the production bomb. Because little boy used pure uranium, and the world's supply of uranium, especially to the United States, was short. We'd buy the ore from the Belgian Congo and we'd bring the ore to the United States and they had a place up in the state of Washington [Hanford Engineer Works] where they separated the ore and the material in it. So, the bomb, Little Boy, as I said was almost fool proof. It gained a critical point and fission, by driving a portion, which would be 50%, that was in the front of a 75mm cannon. The other 50% is in the rear in front of powder. When it ignited, it would drive those two certain distance, I don't remember the length of that thing, it was in meters, and if I had to guess, it was in inch-



*bombs were loaded into the bomb bays of the Enola Gay and Bock's Car, was the only one that detailed the Hiroshima mission. It is a fascinating story, told by the man who helped change the course of modern history.*

Thank you ladies and gentlemen. I am truly honored and delighted to be here. The atomic weapons. I was appointed, I was told (back in those days they used to tell you what to do,) I was told "You will organize a training unit that will drop these weapons simultaneously in occupied

stupid....Along with it I was briefed on what the United States was doing, what they thought the Germans had been doing and even the Japanese, with trying to split the atom or as the scientist said "Get fission", not with a line and a hook, this is talking chemistry.

We had available at that time two schemes working to do just that particular thing. One scheme was known to be almost fool proof, it had to work because it was so simple. That's the Little Boy bomb

es it was probably about 37-40 inches. And when that happens, you had this explosion, caused by criticality. That was going to work. Both bombs came close to being 10,000 pounds in weight, but no two of them ever weighed the same because they were made by hand, they were made out of metals that might not have had the same densities that the one before it had.

Let's get down to the night we were out here, in this particular area. We had become acquainted with and indoctrinated

in the system of the 20th Air Force to launch airplanes. We were isolated from everybody else. Isolation was good. It kept our guys close together. They were dedicated people. There were about 1800 of them. Dedicated as anybody could be and I think one of the things that worked so well was it melded, welded, or whatever word you'd like to use, that group of men together to do one job. And that was to put a bomb on the target.

We got ready. We could not drop the weapon until the President had authorized it. Now he was at, at this time period I'm talking about, he was at Potsdam with Churchill, talking with Stalin and so forth, and I'm told that Stalin at that time told Mr. Truman, "Oh we know what you're doing. You can go ahead and talk about it if you want to." I don't think Truman did anything about it, I don't think he talked to him because if he had said anything Stalin would have been 100%. And Truman didn't want him to be one step ahead I'll tell you for sure.

When I came out at about I don't know 'bout midnight I guess, because we had a late supper, and Lord this place was lit up. Movie cameras, Jesus I never saw so much stuff in my life. This is something that General Groves ordered. He wanted a pictorial record of what happened.

Well after the surprise was over with, I went right on about my business as did the rest of the guys. We got in the airplane after checking. I didn't do too much checking, I had a wonderful flight engineer, and I trusted him implicitly with my airplane. His name was Duzenbury, and he was the only man in the outfit older than me, he was older than me by six months or something right at six months. And I'd say, "Dooz, are we ready to go?", "Yes sir, we're ready to go." Well see he had to ride in the same airplane I was going to be in, so I didn't think he'd lie to me. I looked at Dutch Van Kirk, I said "Dutch, what time do we board this machine?" and he gave me a time, because he knew how long it was going to take to get there and he knew if it was just about right he always gave me the information to go. Dutch was my computer. He could read the stars, he could read the sun, and put it all down on paper and say, "Well we got to go, we got to do this". My orders say that we would bomb at 9:15 in the morning, Tinian time. That allowed us to use a window. Over Honshu where you had about a two hour period of weather and that two hour period of weather usually ran between 9 and 11 or maybe 9:30 and 11:30. So we wanted to be there for that one.

I had two airplanes accompany me at a distance, I told the men we're not going to fly in formation for six hours. I don't want

you to, I want you to be out there behind me, one on one wing and one on the other. Keep me in sight, I want to keep you in sights using my tailgunner. And we just leisurely go on up and we make our landfall and we get up to the point where we begin our run on the target. It worked perfectly. We had good weather. Oh, I want to say one thing, the night before we took off, there was a couple of airplanes from one of the other groups, there was one for sure, I think two of them actually went in the boondocks, but one of them lost an engine, it couldn't stay on the runway. It went out through the boondocks, it ran through the fuel dump and ended up in the ammunition dump and there was real fireworks going. And that caused Navy Captain [William] Parsons, who was working with us, I would say we worked for him actually, and Parsons came up with the idea we can arm that bomb in the air, we don't have to do it on the ground. I'm not going to give you anymore technical information than that, cause I don't know all of it.



Morris Jeppson, left, was the weaponeer on the *Enola Gay*. Theodore "Dutch" Van Kirk was the navigator. They wear the traditional *mwar mwar* flower head lei during commemoration ceremonies.

We then were on the run. I don't know how long we ran. Dutch, you're sitting out here in front of me, you shake your head yes or no, but we were somewhere seven or eight minutes on that run if I remember, and it was basically a westerly run. So when we got there I was worried about the other airplanes, are they in position? Now what they were going to do, they were going to listen to me, I was going to tell them that we were over the initial point. They would then be alerted to listen to my voice, 'cause I said I will tell you and I will go down the line on the clock basis, until we get down to 10 seconds and by that time I will only use

the minimum number of words, 10, 9, 8 and all that kind of stuff. With that we were on our way to drop the first atomic weapon. Everything was quiet in that airplane, and so calm. I told everybody it's the most damn boring flight I ever made. And that's true, nothing happened that wasn't supposed to happen and that's a little bit unusual. We were coming down and before I'm counting down Ferebee's [Thomas Ferebee, *Enola Gay* bombardier] busy telling me over the interphone how far out we are. He's looking at his bomb sight, and when we get down to the last ten seconds, I'm hearing Tom, he didn't talk too much but he did utter some noises. [He was saying] something about the correction of the thing, I don't remember what it was, but Tom said, "Help, it's going down the track, I can't correct anything". Credit Mr. Van Kirk with that. He put him on there, had the wind drift and everything all cranked into the problem. Okay, we get down there, when the bomb leaves the airplane there's a lurch, also, we had a dial tone on there, a single tone, when that tone quit that told the guys in the other two airplanes the bomb's gone and that allowed them to make this turn to get away from it. I said to Oppenheimer, I said, "How do I get away from it?" He said, "Real simple, turn tangent to the ever expanding shock wave that comes up." I said "Yes, sir. I've had a little physics; I've had some trigonometry, what is tangency in this case?" He said without hesitating he said, "159 degrees either direction. Turn 159 degrees either way as that thing comes up to get tangent to it and you get your greatest distance."

Now I had to practice that turn, because you don't take an airplane the size of a B-29 and go up to 30,000 feet and just, you know, piddle around and make a turn, you got to get it done a certain number of seconds. They're big and they're high and they're harder to turn than a fighter. Much harder. But I practiced with that enough until I got to the point that I felt confident I had the answer. My hands would start to tremble, and I'd hold onto it until I just didn't have any guts to go any further because I was afraid to snap the tail off. My co-pilot helped on that, I think Dutch helped me too. From the time we started to turn, I could get that airplane around there in between 40 and 42 seconds.

As soon as that thing left and I got into the turn, I'm watching on my gyro, and as soon as I get to the point I've got to level it, I do, I level it. I had dropped the nose to keep my airspeed up. I pulled the nose up to come level with the horizon and the whole sky in front of me lit up with the most awesome blues and purples and whites and reds that you ever saw. It was

like a, I don't know what you call it, but anyway, it was the atmosphere reacting to that thing and it was very colorful. I guess that was something that happens when a ray of sunshine is on a certain place and you get a rainbow, same thing. But anyway, that's where, and when that did happen I tasted it, well how do you taste the bomb exploding? When I was a kid you got a cavity in your tooth, folks took you to the dentist, and the dentist started drilling and cleaning that cavity out. And he packed some kind of material, it was cotton, with some kind of a metallic type material that was easy to mold and wield around and he put that in there and then with a hammer he'd impact that stuff tight, so that you had a filled tooth, and it worked real good. But I learned before atom bombs that you've got something when you put a spoon of ice cream in your mouth and then taste that damn thing and you've got electrolysis right now and you quit. It left a dirty taste in your mouth.

I wanted to get that airplane out of there

**“This is where it started, right here, when we loaded the bombs.” - Paul W. Tibbits**

and out over the Sea of Japan as fast as I could because I thought had I been on the ground as a Japanese, I'd sacrifice anything I had to sacrifice to get that airplane to find out what happened. We got out of there pretty fine, things settled down after a bit and everything had been done that had to be recorded except that Ferebee had to put into his log the time of bombing that we supposed to do it at 9:15. Ferebee asked Dutch what time to bomb. Well Dutch says “9:15 plus 15 seconds”. Ferebee hesitated and he said “Jesus Christ, what lousy navigating!” Dutch never been outdone yet, I thought, but he said “If you had told me you were going to take 40 seconds for the damn thing to fall I would've adjusted the course.”

Well then everything quieted down and we'd been on our feet doing a lot of things for quite a few hours. We had a box lunch and I took my box lunch and ate part of it. And I told the co-pilot, Bob Lewis, I said, “Bob, you watch this thing, I'm going to take this parachute and put it back up here behind my head and I'm going to get some sleep.” Well, I did. I think slept about 2 hours, which was very refreshing at that point, worked out real good.

Normally I would take the airplane to its regular revetment, [but] that didn't work because there was a “Follow Me” jeep out there and they kept flashing their lights for me to follow them so all I know is I landed and he took me someplace, and I'm hoping

that Mr. Farrell [Marianas historian Don Farrell] can tell me where that someplace was.

There were more high powered brass in different uniforms then you can possibly imagine. I had been ordered to not open the door, don't get out of the airplane until we have men on the sides with Geiger counters. To see what kind of radiation the airplane got, whether it's safe for people to be near it. And of course the people on the ground got the same information. I don't think it took 3 minutes, with two Geiger counters on each side, going on and they gave the signal. Now Oppenheimer, I'd asked him about radiation and he said “Don't worry about it...just flash through a cloud or two and it'll wash off”. And that's just exactly what happened, it washed off.

See people, when we first talked about this they talked about radiation and all that sort of stuff, getting burned, and what not. Well you did if you did something wrong, but if you did what you were told by some of those people that knew what they were doing everything worked out real well. I

was in awe of those people, because they could give you a lot of theoretical answers. In practicality what took place is exactly the way it happened. So that's about the gist of the first bomb as such.

I'll hasten to say that the second bomb the guys ran into trouble with weather, because, not necessarily their fault, they couldn't get started on time and all that. It was, again, it was a rush to get the thing done. They would've been in an airplane called “the Great Artist” in honor of their bombardier, because he was Kermit Beahan from Houston Texas. Beahan and Ferebee were buddies and they were two guys that knew how to handle a bomb sight. I wouldn't say either one of them was better then the other one. And we had a navigator on that airplane, Jim Van Pelt. Jim was a wonderful navigator. Flight engineer, was also a wonderful guy, but the most sourpuss bastard you ever talk to. John Kuharek was his name. And John was, he was all business. Oh I mean he was *all* business. But again he was like Duzenbury. I would've taken John on any flight, you know, if I couldn't take Dooz. I trusted him so much. I trusted those guys, and they trusted me. That's why we got along so damn well. So I didn't have any trouble.

I want to tell you that I'm delighted to be here, I said that to start with. I didn't know what to expect when I came here. First off

I said I don't want to go to the Marianas. And then I thought, “No that's not fair. I do want to go again, to the Marianas. I want to go particularly because the people that live there have heard my name or something about me for years. And I want them to see me as I really am, instead of thinking that I might have horns in my head, a tail and so forth. I said, “I want them to know who Paul Tibbits is and what makes him tick”. And it has just been so damn nice you can't believe it. All you people are so wonderful...I didn't know what to expect. But it's a reward what I got and I'm proud of you.

*A short question and answer period that included Morris Jeppson and Theodore Van Kirk followed the speech.*

Question: If there was one lesson that you had learned from your personal experience of World War II what would that be?

Tibbits: Calmness, perseverance. That's the lesson. Too many people got excited and got killed in airplanes because they were excited and didn't know what the hell to do.

Q: If there was one thing you could tell youths today about World War II, what would you say?

Van Kirk: Don't do it again.

Tibbits : That's right, hell of a mess.

Jeppson: That's right.

Van Kirk: Don't do it again.

Q: General Tibbits I have a question. General Tibbits if you could just describe for us your emotion seeing the bombpits unveiled today.

T: Well, look it. It could be a hell of a lot worse. I can see the shape. I see the thing there, and I understand, particularly with this cover on it now. I can't complain over the years because nobody really understood what was going on and why this thing should not be filled with trash. But anyway, it has a historical significance for this area. This is where it started, right here, when we loaded the bombs.



Atomic Bomb Pit No. 1 was unveiled at the end of the official ceremonies marking the return to Tinian of members of the *Enola Gay* crew.