

Letter from Dr. Luis Alvarez to his Son about the Atomic Bomb, August 6, 1945

August 6th
10 miles off the Jap
Coast at 28,000 feet

Dear Walter:

This is the first grown-up letter I have ever written to you, and it is really for you to read when you are older. During the last few hours I have been thinking of you and your mother and our little sister Jean. It was tough to take off on this flight, not knowing whether I would ever see any of you again. But lots of other fathers have been in the same spot many times before in this war, and I had a job to do, so I can't claim to be any sort of hero.

I wonder if you will remember the time in Albuquerque, when you climbed all through a B-29 Superfortress. Probably you will remember climbing thru the tunnel over the bomb bay, as that really impressed you at the time. Well, I have been in this B-29 for eight hours so far, and we won't be back for another five or six.

The story of our mission will probably be well known to everyone by the time you read this, but at the moment only the crews of our three B-29s, and the unfortunate residents of the Hiroshima district in Japan are aware of what has happened to aerial warfare. Last week at the 20th Air Force, stationed in the Marianas Islands, put over the biggest bombing raid in history, with 6000 tons of bombs (about 3000 tons of high explosive). That means that the days of large bombing raids, with several hundred planes, are finished. A single plane disguised as a friendly transport can now wipe out a city. That means to me that nations will have to get along together in a friendly fashion, or suffer the consequences of sudden sneak attacks which can cripple them overnight.

What regrets I have about being a party to killing and maiming thousands of Japanese civilians this morning are tempered with the hope that this terrible weapon we have created may bring the countries of the world and prevent further wars. Alfred Nobel thought that his invention of high explosives would have that effect, by making wars too terrible, but unfortunately it had just the opposite reaction. Our new destructive force is so many thousands of times worse that it may realize Nobel's dream.

After that little sermon, I'll try to describe what it is like to go into combat for the first time. I had not made up my mind to go on the mission before I left the states, but I was pretty well convinced that I would end up by going. I thought the thing through on at least a dozen nights, while I was trying to go to sleep. I think these mental trips were the worst part of the deal.

When I arrived in the Marianas, I told the commanding officer that I thought I should go. I got cleared after a lot of radio messages to and from Washington. The mission was held up for several days by weather, and this was tough. We would get keyed up and read to go, and then the weather experts

would call it off. Finally we got the go-ahead sign and then worked most of the day checking instruments. We had several briefings which were quite exciting. I had attended bombing briefings in England for the RAF, but it is quite different when you are to go on the mission yourself. Data on anti-aircraft batteries and enemy fighters becomes of great personal concern. One of the planes of our squadron had come home with large flack holes in its wings two days before, so we felt some concern in that score. We were told a lot about landing the plane in the ocean. The big worry, of course, was landing on the Empire and being captured by the Japs. They have been particularly savage with ordinary pilots, and I am sure they would have a special reason for disliking us immensely.

We were to take off at 2:45 A.M., and this last waiting was the worst part. We saw a movie until 9:30, and then packed up last minute supplies for the plane. Then we got equipped with our combat flying suits, which weight about seventy or eighty pounds. First comes a survival vest, with fish hooks, drinking water its, first aid packages, food, and a host of other things useful to a man forced down on the ocean. Over that was our parachute harness, to which could be clipped a chest chute pack, and a one-man liferaft. With this equipment, it is possible to go into the water from a plane, some distance from anyone else, and survive. Over this already bulging mess, we wore our flack suits, to protect our bodies shell fragments. This is a very heavy and clumsy thing, like a suit of armor, but we were glad to put up with the discomfort during our 65 minutes over the Empire. Finally, we wore a cloth helmet with an oxygen mask attached, and over that a flack helmet to protect our heads.

We arrived at the plane an hour and a half early, as there were lots of historic pictures to be taken with the aid of a big batter of lights. It looked just like the opening of a gas station in Hollywood. We had our pictures taken in front of the place which held the big bomb in its bombbay, and then went to our own plane. By this time all my tension had gone away and I haven't felt any since, with the exception of a little tingling sensation when the Japanese shores appeared on the horizon. All of the civilians had thought we would be scared over the empire, but I can say truthfully that I was completely at ease, and so were my two companions. We weren't excited, as we were too busy with our work. After the bomb was dropped we made an accordingly sharp turn to get away from the blast. We got 2 g's, which made our 80 pounds weigh 160.

A few moments after we completed the turn, the plane was hit with the blast wave from the explosion. It gave the ship a couple of good jolts, but only about what we expected. We went to the portholes to see the results of the explosion. It was awe-inspiring. Already the smoke cloud was up to 35 or 50,000 feet. The ground was covered with a layer of smoke so that the city was blotted out from view. I forgot to mention the most spectacular effect of all — the light flash. It was many times brighter than the sun when we were seven miles away. I had looked at it directly, through dark glasses, on the trial shot in New Mexico last month.

Well, here we are over Iwo Jima, and on the home stretch, so I'll stop writing and go up and talk to the pilots. I wanted to tell you about this while it was still fresh in my mind.

With much love from

your Father

P.S. When I saw the pilots, they said they saw flack bursting a mile below us. The Japs apparently didn't have their good anti-aircraft in this region.