

Helen

APR 14 1974

Honorable Silvio O. Conte
House of Representatives

Dear Mr. Conte:

Because of my association with the accident at Palomares, Spain, Mr. O'Neill has asked me to respond to your letter of April 10, 1974, relative to the inquiry from Ms. Houston dated March 29. Ms. Houston is referring to the accident between a tanker plane and a B-52 during aerial refueling on January 17, 1966, off the southeast coast of Spain. The B-52 caught fire and the four nuclear weapons aboard were released. The parachute on one opened at once; it fell into the sea and was eventually recovered. The parachutes on the other three opened partially so they continued in a ballistic trajectory, modified by partially opened parachutes, to land at Palomares, a dispersed village of about 1300 people, that is, houses separated by fields. One weapon landed in a dry river bed and did not explode; the other two underwent the expected "one-point" chemical explosion which disrupts the weapon without a nuclear explosion. The "one-point" disruption does scatter the special nuclear material of the weapon and this was the "contamination" that was removed from about 600 acres. The only injury, and this was minor, was to a man who was bowled over by the blast.

Although I have a rather complete file on articles written about Palomares, I find that I do not have one by Mr. Blashill or a similar name. To that end, I have taken the liberty of asking our colleagues in the Spanish Atomic Energy Commission (Junta Energia Nuclear Espana) to send me the article. Mr. Blashill's story differs significantly from the facts as I know them.

As the final part of the general decontamination of Palomares, certain areas of the surface of the farm lands were scraped up and placed in steel drums to be buried at our Savannah River site. This soil was replaced by fertile soil brought in from a former royal estate at Aranjuez. The entire area then was wetted and deep-plowed. Finally, the irrigation system originally devised by the early Moorish settlers was restored and the wells supplying the water were cleaned and revived.

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Palomares itself is a small village, situated on the bank of a dry river bed, about one kilometer from the Mediterranean. The river when the climate was wetter must have been good-sized as it drains the eastern end of the Sierra Nevada system. The annual precipitation at Palomares is about a half-inch a year, but the mountains get snow during the winter. At that time (January 1966), the people of Palomares brought their drinking water from a town called Vera, about 40 kilometers away.

The soil is very fertile and two, or even three, crops can be grown each year, if provided the fresh water from the mountains that seeps under the surface of the dry stream bed. The slow flow of fresh water moves as a layer atop the salt water of the Mediterranean that is the ground water in this sandy delta structure. The fresh water layer is thinner or thicker depending on the flow out of the mountains and it requires quite a lot of know-how to pump water for irrigation without letting the underlying salt water into the wells; even so the "fresh" water is somewhat brackish.

For the first two years after the accident in January 1966, the water flow was sufficient and the crops were excellent. Then a period of relative drought began, the fresh water layer became thin and the wells were very brack. Last year the rains and snow in the Sierra were good and the people went back to farming. The crops were excellent and things seemed to be going well. This past winter, however, there were very heavy snows in the Sierra and rains on the coast, so much so that the dry river bed not only filled but flooded most of the arable land, as well as destroying much of the irrigation system. Apparently the people have taken this pretty much in stride and are rebuilding their plots and irrigation channels as they were before.

The U. S. Atomic Energy Commission has had a continuing interest in monitoring the soil of the area and the farm produce for radiologic contamination, as well as monitoring all of the people, some 79, who may have been in any way exposed to the radioactivity released when two of the three weapons broke open. We have provided equipment and some financial assistance to the Spanish Atomic Energy Commission on a yearly basis to carry out a joint research program along the lines just mentioned. These studies are being

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conducted in cooperation with the biomedical research staff of the AEC Los Alamos Scientific Laboratory. Approximately once each year someone from Los Alamos or I visit our Spanish colleagues to observe past results and plan further development of the program.

I should note at this point that the Department of State, on June 25, 1968, made a gift to the villages of Palomares and Villaricos of a desalinization system to provide fresh water to the villagers. The system together with the supply and distribution lines cost approximately \$150,000. This was done under Treaty 6514 entitled: Gift of Facilities for Fresh Water Supply at Palomares, Villaricos and Other Communities. The last time I was in Palomares the people very proudly showed me fresh water flowing from a tap, a luxury that few had ever dreamed of.

To the best of my knowledge there were no tennis courts in Palomares. In any case, I shall inquire of Dr. Ramos whether tennis courts have been installed in Palomares since I last visited there two and a half years ago.

I shall pass along immediately the responses from Dr. Ramos or Dr. Iranzo to my questions. I am sure you will enjoy reading what they say because you will recognize the genuine friendships that have grown out of this regrettable accident.

Sincerely,

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H. D. Bruner, M.D.
Special Assistant to the
Chairman

bcc: Robert O'Neill, OCR
John Rudolph, MA
Chester Richmond, LASL
Henry McCown, State Dept.

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