David Hart, AEC/ALOO, a LASL representative, and other Air Force representatives were flown immediately to Torrejon Air Force Base, Madrid, in an Air Force C-135 aircraft. The team was transported from Torrejon to San Javier on the Mediterranean coast and thence by bus or helicopter to Palomares about 85 miles away. This Nuclear Safety Team aided the 16th Air Force, under the command of Major Gen. D. Wilson, in conducting a ground search for the missing weapon, aircraft debris and aiding in contamination studies.

On Saturday afternoon, January 22 (five days after the accident), a former Sandia employee, Honorable W. J. (Jack) Howard, who is currently Assistant Secretary of Defense for Atomic Energy, called Alan Pope (9300) giving him some limited information about the accident and asking for ballistic support of the Sandia aerodynamic people to locate the missing ~~no. 4~~ weapon. Mr. Pope was asked to form a study group to complete ballistic studies for establishing the impact area of the missing weapon. He was asked to coordinate these activities with the Directorate of Nuclear Safety at KAFB. The first study group consisted of Randy Maydew, 9320, Floyd Forsythe, 9323, Sam McAlees, 9325 (now 9314), and Bill Pepper, 9324. All the messages that had been received by KAFB concerning this incident were brought to Sandia for aid in the study. Wind information from sea level to the flight altitude of 30,500 feet was requested from the 16th AF meteorologists at Torrejon Air Force Base, Spain. These high

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of trajectory computations were made by back-tracking from the impact points of the three recovered weapons to locate the collision point in the sky. Then trajectory calculations were made, assuming various parachute drag configurations, to predict the sea impact point of the missing weapon. The results of these studies were continually plotted on charts made by Lou Feltz, 9323. This was accomplished during the nights of January 22 and 23 so that Sam McAlees could brief the Hon. W. J. Howard, the Navy, and the Air Force representatives at the Pentagon on Monday, January 24 on the results of the trajectory calculations. These calculations served as the basis for the initial planning of the Navy sea search. On January 24 further ballistics studies were started by W. R. Barton, 9324, and I. T. Holt, 9324, using new information as it arrived.

On January 27 Major Gen. Wilson requested that A. Y. Pope or R. C. Maydew proceed post haste to Palomares to aid in the ballistic studies in the field. Bill Hoagland, 1544, who was aiding in the nuclear safety aspects of the accident, had recommended to Gen. Wilson that ballisticians and aircraft structure engineers from Sandia Corporation, Wright-Patterson Air Force Base and Eglin Air Force Base be assembled at Palomares to make a systems study. Randy Maydew, 9320, and the Air Force representatives arrived in Palomares on January 29 and 30 and began a study of the aircraft collision point and subsequent break-up of the aircraft, conditions and time of release of the four weapons and possible solutions for the location of ~~no. 4~~ THE MISSING WEAPON and/or parts thereof. The

Systems Analysis Team (SAT) obtained a briefing on the accident, reviewed the Aircraft Accident Board testimony, conducted interviews with special witnesses and forwarded data gathered on the scene to Sandia Corporation and Eglin Field for machine computation of trajectories. This data was significant in that the trajectory studies now showed the aircraft collision point was over land which changed the earlier recommended sea search area for the missing weapon. The study also indicated that the strong winds blowing out to sea were very controlling. Dense aircraft PARTS impacted over two miles inland from the shore, whereas, one of the surviving crew members, who opened his chute at approximately 29,000 feet, was picked up eight miles out at sea. The B-52 crew members who survived and many witnesses, both on shore and at sea, reported seeing many parachutes in the air. The most important testimony was from a Ship's Master, Senor Francisco Simo Orts who indicated that he had observed six parachutes, four orange and white, one white and one darker. Senor Simo was about five miles out to sea when he observed the collision. The orange and white chutes were the parachutes of the surviving crew members. Senor Simo indicated that he saw what appeared to be a half-body supported by a dark chute which impacted about 25 meters away from his boat towards the shore. He also stated that three or four minutes later a large white parachute supporting a stout man landed in the water about 70 meters out to sea from his boat. Intensive interrogation of Senor Simo convinced the Systems Analysis Team that the stout man with the large white chute was the missing weapon and/or parts thereof. The "half-man" was the parachute

Gen. Wilson requested continuing ballistics support from Sandia Corporation and W. R. Barton, 9324, arrived in Palomares, Spain on February 16 as a replacement for R. C. Maydew. Bill Barton worked with Sam Moore and Paul Schneider, AEC/ALOO, on additional systems studies for the 16th AF. In addition they participated in an intensive ground search. Many additional trajectory calculations were made by Floyd Forsythe, 9323, with the cooperation of the 9400 organization, and forwarded to Barton to aid him in continued ballistic analysis. Additional confirmation of Senor Simo's sea impact sighting was obtained by Bill Barton through interrogation of a pharmacist in Garrucha and the pharmacist's assistant (who was on the beach a mile and a half away from Garrucha), who had sighted a large parachute descending into the sea. These sightings corroborated the α-1 sea search area. Results of intensive ground search, re-examination of the alpha contamination pattern, and the additional trajectory analysis strongly indicated that the weapon was intact and in the sea. Information furnished by the Navy on the underwater currents enabled the study team to estimate the underwater drift of the missing weapon. It was estimated the weapon drifted 2500 feet from the splash point. Messrs. Barton, Moore and Schneider briefed Gen. Wilson and Adm. Guest and their staffs on the results of their studies and reaffirmed the prime sea search area α-1. E. W. Griffith, AEC/ALOO replaced P. H. Schneider as the AEC representative for the Broken Arrow Operation.

Messrs. Barton, Moore and Schneider then proceeded to Washington, D.C. where they briefed Hon. W. J. Howard and representatives from USAF, USN, State Department, AEC officials and others on March 8. The briefing was

given again later in the day to Gen. W. H. Blanchard, Vice Chief of the Air Force.

On the following day, Messrs. Barton, Moore and Schneider proceeded to SAC Headquarters, Omaha, and briefed Gen. J. D. Ryan, Commander in Chief, and his staff on the status of the Broken Arrow Operation. A Search Evaluation Board for the Broken Arrow Operation was convened by the Hon. C. Vance, Deputy Secretary of Defense, on March 16. Members of the Board consisted of the Hon. W. J. Howard, OSD, representatives from AEC, LASL, DASA, JCS, CSAF, USN, State Department and CIA. R. C. Maydew, 9320, briefed the Search Evaluation Board on the Broken Arrow Operation and also served as an alternate member representing the AEC.

The submersible, Alvin, located the missing no. 4 weapon at a depth of 2550 feet in the southeastern part of α-1 search area. This was approximately 3600 feet from the final coordinates provided to the Navy by Sandia Corporation representatives. S. V. Asselin, 1544, returned to Palomares on March 22 to aid Gen. Wilson and Adm. Guest in the final recovery operation of the missing bomb. The bottom of the Mediterranean Sea where the missing weapon was found is very mountainous with many steep ravines that are hundreds of feet deep, which has complicated the rpaid recovery of the missing bomb.

The Albuquerque people are pleased to have a part in helping to bring this unfortunate accident to a satisfactory close.

This is an exact copy: 06/03/97: 7447: cmg.
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M0659A Elva Barfield, FOIA Officer/OPA; DOE/AL

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