

CLASSIFICATION:UNCLASSIFIED

7-2-90
ID:266000001

INCIDENT:(U)Palomares

DATE:(U)17/JAN/66 TO 15/MAR/66

LOCATION:COUNTRY/BODY OF WATER:(U)Spain

STATE/PROVINCE/REPUBLIC:(U)Almeria

GEOPOLITICAL DESCRIPTION:(U)Palomares, located approximately 245 miles south of Madrid on the Mediterranean Coast

COORDINATES:(U)

LATITUDE:N3736.0

LONGITUDE:W0059.0

TYPE: CATEGORY:(U)DOD Weapon

SYSTEM:(U)Military Aircraft/B-52

DETAIL:(U)mid air collision resulted in the release of 4 unarmed nuclear weapons

SEVERITY:(U)none indicated

OWNER/OPERATOR:(U)owned and operated by the Department of Defense (DOD)/United States Air Force (USAF), 16th Air Force, SAC

LEAD AGENCY:(U)DOD/USAF

DOE/CONTRACTOR PARTICIPATION:(U)Active Participant/Assisted in recovery and decontamination (1/17,48,63,65,68)

MEDIA:(U)DOE press release (2 MAR 66)

POPULATION:(U)Eleven aboard the B-52 & KC-135, 7 dead, 4 survived. None of 2,000 citizens of Palomares were injured during collision-there were no high levels of contamination. (1/16,18-19,205)

DAMAGES:(U)The overall cost was estimated as high as \$70 million. (1/80)

IMPACT ON DOE OPERATIONS:(U)None

ADDING TO COMMON DATA ELEMENTS

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ADDING TO WEAPON SCREEN

TYPE	NUMBER	OUTCOME
(U)unarmed hydrogen bomb	2	intact, damaged
(U)unarmed hydrogen bomb	2	HE detonation

WEAPON BEHAVIOR:(U)As expected (1/?)

PROTECTIVE ACTIONS:(U)Search and monitoring/The U.S. Air Force organized a search for the missing bombs, and conducted radiation monitoring. (2/86-88)

INCIDENT CAUSE:(U)Human Error/Mishap in refueling, the boom struck the metal spine of the B-52; caused mid air collision. (2/11)

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ADDING TO HAZARDOUS MATERIALS SCREEN

HAZARD:(U)Contamination and loss of control/radiological

MATERIALS/AMOUNT:(U)plutonium 239

LAST POINT OF CUSTODY:(U)aboard the plain prior to collision

AREA AFFECTED:(U)About 558 acres were contaminated with plutonium and uranium.

(3/10)

PATHWAYS:(U)air, soil, water

TIMEFRAME OF RELEASE(S):(U)unknown

DESCRIPTION OF RELEASE(S):(U)HE detonation of 2 bombs produced plutonium bearing clouds [one cloud traveled northeasterly past the northern edge of the village and the other traveled away from Palomares over the prime cultivated fields]. (3/9-10)

PROTECTIVE ACTIONS:(U)Extensive decontamination process. Strict protective actions were followed during decontamination. (1/56)

INCIDENT CAUSE:(U)Human Error/Mishap in refueling, the boom struck the metal spine of the B-52; caused mid air collision. (2/11)

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ADDING TO NARRATIVE SCREEN

DESCRIPTION OF EVENT:(U)On 17 JAN 66, during a SAC routine refueling mission a B-52 bomber and K-135 tanker collided 31,000 feet over Palomares, Spain. The collision resulted in an explosion, the breakup of the two planes, and the release of four unarmed hydrogen bombs. Of the eleven crew members of both planes four survived. Three of the four bombs were located within a short time of the collision. Bomb 1 landed intact outside the limits of Palomares. Bomb 2, which was located 1 mile west of the village, and Bomb 3, located on the eastern edge of Palomares, underwent HE detonations which scattered alpha radiation into the surrounding areas. Bomb 4 was not located until 15 MAR 66. It landed intact in the ocean approximately five miles off the Spanish coast. (1/13-21,94; 3/9)

DOE ROLE/RESPONSIBILITIES:(U)JNACC, which is charged with coordinating recoveries of nuclear accidents, Los Alamos, and Sandia Laboratory were immediately notified of the event and representatives sent to the site. An AEC representative was on the DOD established Search Evaluation Board which evaluated the search effort and prepared a decision of when to conclude search operations short of success. AEC conducted decontamination procedures and supplied the disposal site. (1/17, 48, 56-63, 65, 68)

ACTIONS TAKEN:(U)The United States mobilized forces to search for the fourth hydrogen bomb. The Air Force searched on land while the Navy searched in the ocean. These tasks were conducted simultaneously but independent from each other. Using information gathered from witnesses the Air Force tabulated that the bomb probably landed in the ocean. While the Navy continued to look for the bomb, the

Air Force began decontamination efforts throughout Palomares. JEN worked with the Americans to form an acceptable decontamination plan. The decontamination involved watering the soil to keep the alpha radiation from spreading, plowing certain areas, removing contaminated soil with a reading of 60,000 CPM or above, and removing vegetation with a reading greater than 400 CPM. The soil determined to be above the acceptable levels of contamination was placed in barrels. 4,879 barrels of Spanish soil and vegetation were shipped to the US and buried at the Savannah River Plant in Aiken, South Carolina. During this time the Navy continued to search for the missing hydrogen bomb, Bomb 4. A target was discovered by the submersible ALVIN on its tenth dive, and on 15 MAR the bomb was positively identified. The first two recovery attempts were aborted. On the third attempt the bomb slid down a steep slope while it was being lifted. On 7 APR, the submersible CURV was successfully used to raise the bomb on the fourth attempt. (1)

MEDIA:(U)On the afternoon of the incident the Air Force announced that two planes had collided over Spain. It was not until 20 JAN that the Air Force issued a brief statement acknowledging that there were nuclear weapons aboard one of the planes. The first official American summary was issued on 1 MAR by the Pentagon and the State Department, and the AEC issued a press release on 2 MAR. A press conference was held after bomb number 4 was retrieved from the ocean. This was the first time the United States displayed a nuclear weapon. Both the United States and Spain released minimal information regarding the event. The majority of the information was initially broadcast by other European countries. (2/68,99,213)

RESULTS:(U)The Spanish Government immediately requested that the US halt the routine mission flights over Spanish territory. The US agreed to honor this request. In March 1968 the US Embassy informed the Spanish Government that the US

would support a desalination plant in Palomares to the extent of \$150,000. The desalination plant was a gift to the people of Palomares in recognition of their assistance during the aftermath of the incident. In response to the experiences gained at Palomares the SAC rewrote their disaster manual, developed a communication kit for quick shipment to incident sites, and revised and enlarged their list of personnel required to be prepared for such incidents. Reports were written to recommend amendments to the US Foreign Claims Act for atomic accidents. An agreement between AEC and JEN which expanded collaborative safety research efforts that initiated technical and financial assistance to Spain for the conduct of radiological monitoring and an assistance program for the population of Palomares and the surrounding areas. This program was named Project Indalo. As of 19 JAN 88, the Deputy Assistant Secretary for Military Application was in charge of funding and overseeing Project Indalo. (1/211; 2/240; 3/1-2)

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ADDING TO REFERENCE SCREEN

BIBLIOGRAPHY:(U)

1. Defense Nuclear Agency, Palomares Summary Report, 15 January 1975.
2. Flora Lewis, One Of Our H-Bombs Is Missing, New York: McGraw Hill Book Company, 1967.
3. Memo to Salgado from Baynard, 18 JAN 89

RELATED PHOTOS:(U)OCTP file room, Weapons Incidents/Palomares Spain - photos of recovery operations [S]

ACRONYMS:(U)DOD - Department of Defense; HE - High Explosive; JEN - Junta Energia Nuclear (Spanish Nuclear Energy Commission); JNACC - Joint Nuclear Accident Coordinating Center; SAC - Strategic Air Command

LAST UPDATE:2 JUL 90

RESEARCHER:AD

DATA ENTRY:CAS

ID:26600001

INCIDENT:(U)UNCLASSIFIED

EDITING TO SEARCH WORDS

COMMON DATA ELEMENTS

INCIDENT:(U)Inaldo

COUNTRY/BODY OF WATER:(U)España

STATE/PROVINCE/REPUBLIC:(U)

LEAD AGENCY:(U)D.O.D./U.S.A.F.

HAZARDOUS MATERIALS

MATERIALS/AMOUNT:PU239, U

ENERGY EMERGENCY/ALERT

ENERGY SOURCE INTERRUPTED:

AREA AFFECTED: