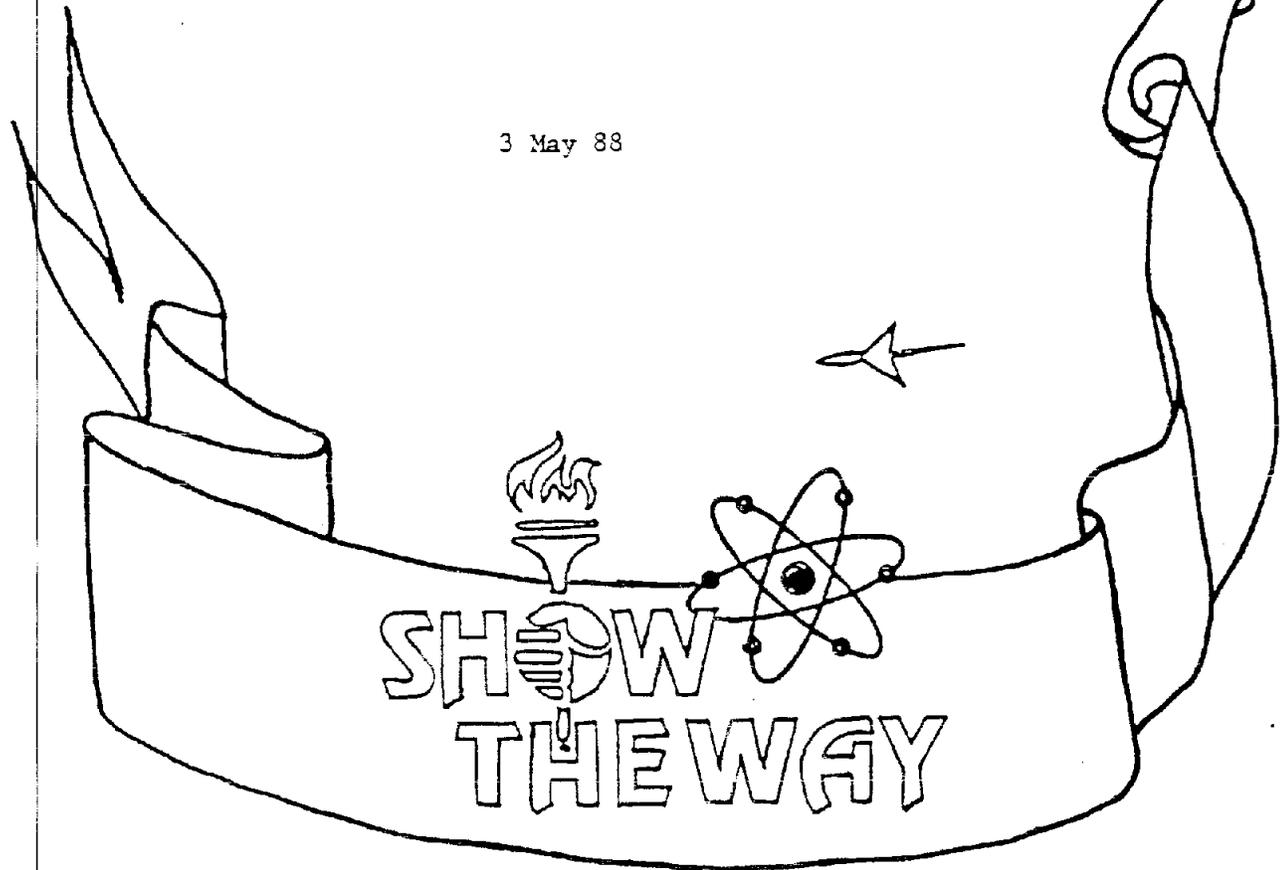


air training command  
INTERSERVICE NUCLEAR  
WEAPONS SCHOOL

DEPARTMENT OF DEFENSE  
NARRATIVE SUMMARIES OF ACCIDENTS INVOLVING  
NUCLEAR WEAPONS  
1950-1980

3 May 88



DEPARTMENT OF DEFENSE

NARRATIVE SUMMARIES OF ACCIDENTS  
INVOLVING U.S. NUCLEAR WEAPONS  
1950-1980

Attached are unclassified summaries describing the circumstances surrounding 32 accidents involving nuclear weapons. Also attached is the Department of Defense (DOD)/Department of Energy (DOE) definition of "accident" used in researching this project.

Twenty-six of these summaries were first released by the Air Force in 1977; another was prepared following the Titan II explosion in Arkansas in September 1980. These previously released summaries are marked with a figure "1"; in some cases they include new material made available as a result of more search.\*

There never has been even a partial, inadvertent U.S. nuclear detonation despite the very severe stresses imposed upon the weapons involved in these accidents. All "detonations" reported in the summaries involved conventional high explosives (HE) only. Only two accidents, those at Palomares and Thule, resulted in a widespread dispersal of nuclear materials.

Nuclear weapons are never carried on training flights. Most of the aircraft accidents represented here occurred during logistic/ferry missions or airborne alert flights by Strategic Air Command (SAC) aircraft. Airborne alert was terminated in 1968 because of:

--Accidents, particularly those at Palomares and Thule

--The rising cost of maintaining a portion of the SAC bomber force constantly on airborne alert, and,

--The advent of a responsive and survivable intercontinental ballistic missile force which relieved the manned bomber force of a part of its more time-sensitive responsibilities. (A portion of the SAC force remains on nuclear ground alert).

Although normal DOD policy is to neither confirm nor deny the presence of nuclear weapons or components, recently revised DOD Directive 5230.16 governing public affairs guidance allows for confirmation when required to protect public safety or as a means of reducing widespread public alarm. Therefore, in some of the events summarized here, confirmation of presence is not published. Except for Palomares and Thule, it is not possible to specify the location of the accidents that occurred overseas.

Most of the weapons systems involved in these accidents are no longer in the active inventory. Those include the B-29, B-36, B-47, B-50, B-58, C-124, F-100, and P-5M aircraft, and the Minuteman I missile.

DOD NARRATIVE SUMMARIES

February 5, 1958 / B-47 / Savannah River, Georgia

The B-47 was on a simulated combat mission that originated at Homestead AFB, Florida. While near Savannah, Georgia, the B-47 had a mid-air collision with a F-86 aircraft at 3:30 a.m. Following the collision, the B-47 made three attempts to land at Hunter AFB, Georgia, with a weapon aboard. Because of the condition of the aircraft, its airspeed could not be reduced enough to insure a safe landing. Therefore, the decision was made to jettison the weapon rather than expose Hunter AFB to the possibility of a high explosive detonation. A nuclear detonation was not possible since the nuclear capsule was not aboard the aircraft. The weapon was jettisoned into the water several miles from the mouth of the Savannah River (Georgia) in Wassaw Sound off Tybee Beach. The precise weapon impact point is unknown. The weapon was dropped from an altitude of approximately 7,200 feet at an aircraft speed of 180-190 knots. No detonation occurred. After jettison the B-47 landed safely. A three square mile area was searched using a ship with divers and underwater demolition team technicians using Galvanic drag and handheld sonar devices. The weapon was not found. The search was terminated April 16, 1958. The weapon was considered to be irretrievably lost.

\* 1  
\*\* 2

March 11, 1958 / B-47 / Florence, South Carolina

On March 11, 1958 at 3:58 p.m. EST, a B-47E departed Hunter AFB, Georgia, as number three aircraft in a flight of four enroute to an overseas base. After leveling off at 15,000 feet, the aircraft accidentally jettisoned an unarmed nuclear weapon which impacted in a sparsely populated area 6½ miles east of Florence, South Carolina. The bomb's high explosive material exploded on impact. The detonation caused property damage and several injuries on the ground. The aircraft returned to base without further incident. No capsule of nuclear materials was aboard the B-47 or installed in the weapon.

\* 1  
\*\* 2

November 4, 1958 / B-47 / Dyess AFB, Texas

A B-47 caught fire on takeoff. Three crew members successfully ejected; one was killed when the aircraft crashed from an altitude of 1,500 feet. One nuclear weapon was aboard when the aircraft crashed. The resultant detonation of the high explosive made a crater 35 feet in diameter and six feet deep. Nuclear materials were recovered near the crash site.

\* 1  
\*\* 2

DOD NARRATIVE SUMMARIES

October 15, 1959 / B-52 / KC-135 / Hardinsberg, Kentucky

The B-52 departed Columbus Air Force Base, Mississippi at 2:30 p.m. CST, October 15, 1959. This aircraft assumed the #2 position in a flight of two. The KC-135 departed Columbus Air Force Base at 5:33 p.m. CST as the #2 tanker aircraft in a flight of two scheduled to refuel the B-52s. Rendezvous for refueling was accomplished in the vicinity of Hardinsberg, Kentucky, at 32,000 feet. It was night, weather was clear, and there was no turbulence. Shortly after the B-52 began refueling from the KC-135, the two aircraft collided. The instructor pilot and pilot of the B-52 ejected, followed by the electronic warfare officer and the radar navigator. The co-pilot, navigator, instructor navigator, and tail gunner failed to leave the B-52. All four crewmembers in the KC-135 were fatally injured. The B-52's two unarmed nuclear weapons were recovered intact. One had been partially burned but this did not result in the dispersion of any nuclear material or other contamination.

\* 1  
\*\* 2

June 7, 1960 / BOMARC / McGuire AFB, New Jersey

A BOMARC air defense missile in ready storage condition (permitting launch in two minutes) was destroyed by explosion and fire after a high-pressure helium tank exploded and ruptured the missile's fuel tanks. The warhead was also destroyed by the fire although the high explosive did not detonate. Nuclear safety devices acted as designed. Contamination was restricted to an area immediately beneath the weapon and an adjacent elongated area approximately 100 feet long, caused by drainoff of firefighting water.

\* 1  
\*\* 2

January 24, 1961 / B-52 / Goldsboro, North Carolina

During a B-52 airborne alert mission structural failure of the right wing resulted in two weapons separating from the aircraft during aircraft breakup at 2,000 - 10,000 feet altitude. One bomb parachute deployed and the weapon received little impact damage. The other bomb fell free and broke apart upon impact. No explosion occurred. Five of the eight crew members survived. A portion of one weapon, containing uranium, could not be recovered despite excavation in the water-logged farmland to a depth of 50 feet. The Air Force subsequently purchased an easement requiring permission for anyone to dig there. There is no detectable radiation and no hazard in the area.

\* 1  
\*\* 2