

PMM BLOG ARCHIVE

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Allentown Native Flies Chrome Dome Missions

(J. Gleim, Museum Curator, Pennsylvania Military Museum)



Photo of Flight Suit, MM2020.3.

These flying coveralls belonged to Master Sergeant Robert Rosser Edwards (1931-2020) of Allentown. Edwards enlisted in the Navy in the early 1950s and transferred to the Air Force in the mid-1950s. When he entered the Air Force, he initially flew as a gunner, first in RB-66 reconnaissance aircraft and later in B-52 Stratofortress aircraft. Highlights of Edwards' 26-year career include flying through Super Typhoon Vera in 1959, conducting a goodwill tour of Australia, and receiving clearance to fly over Mt. Fuji and photograph the peak.

Most significantly, during the 1960s Edwards flew on B-52s operating on nuclear alert as part of Operation Chrome Dome. The brainchild of Strategic Air Command Commander Thomas S. Power, and in effect from 1960 to 1968, Operation Chrome Dome was a mission in which B-52 aircraft flew on continuous airborne alert to points along the Soviet border.

The B-52s followed two different routes: one east over the Atlantic & Mediterranean, and another north to Baffin Bay in Greenland, and over Alaska. Armed with thermonuclear weapons and strict procedures for releasing the weapons, the aircraft would loiter near the border to provide rapid first strike capability or retaliation in the event of nuclear war. The program bolstered the nuclear strategy of the Kennedy administration. Secretary of Defense Robert McNamara had declared that both the US and the Soviet Union should “have the capability of surviving a first strike and retaliating selectively”, thus creating a “more stable balance of terror”.

Chrome Dome missions were complex, challenging, and exhausting for flight crews. Each mission was 24 hours long, required multiple re-fueling stops, and necessitated special air navigation techniques for polar areas where magnetic compasses and the convergence of meridians rendered typical navigation impossible.

During its years in effect, Operation Chrome Dome recorded five incidents in which aircraft armed with nuclear weapons crashed. The final accident, in January 1968, occurred near Thule Air Base in Greenland and ended Operation Chrome Dome immediately. Home to a special radar system crucial to the Ballistic Missile Early Warning System, Thule was a target many officials believed to be near the top of the Soviet Union's potential target list. The accident, which spilled thirteen pounds of plutonium across the frozen sea ice. Over the next eight months, the US worked to clean up the crash site and conducted extensive ecological surveys to measure any damage created by the accident.

The end of Operation Chrome Dome signaled the end of 24-hour airborne nuclear alert. Bomb crews remained an important part of the nation's nuclear defense, but crews stood alert from the ground.