

POTU

by LTC Donald R. Lyman



The familiar gate at Rhein-Main greets the "tapped" battery as the first stop en route to Complex 16 at the Cape.

STAND BY FOR TRAFFIC — BLACK JACK — BLACK JACK, SOUND THE KLAXON — POWER-UP — RED HATS AT THE EXCLUSION GATE — POWER STATION ON! These sounds accompany the visit of the Pershing Operational Test Unit (POTU) for a field alert status verification (FASV) at one of the 56th FA Brigade's (Pershing) quick reaction alert (QRA) sites in southern Germany.

What Is POTU?

The Pershing Operational Test Unit is assigned to United States Army, Europe and Seventh Army, located in Heidelberg, Germany. POTU has one lieutenant colonel, two majors, one captain, two warrant officers, and four NCOs. The "Red Hats" (so named for the red baseball caps they wear during FASVs and other field evaluations) conduct the Pershing Operational Test Program (OTP) under direction of the Joint Chiefs of Staff (JCS). POTU also provides the US Commander in Chief, Europe, with appropriate information on which to base his Pershing evaluation report to JCS. POTU plans, schedules, and executes the necessary tests, evaluations, and firings for

US European Pershing units in support of the OTP. The firings are conducted in CONUS at either White Sands Missile Range, NM, or the Air Force Eastern Test Range at Cape Canaveral, FL. Evaluations (FASVs) in Europe are conducted at random times, the missiles are counted to T-2 minutes (two minutes prior to launch), and liftoff is simulated. During FASVs, POTU observes nuclear release authentication procedures, missile crew procedures, and Pershing maintenance.

Each year POTU normally selects three units from the 56th Brigade to participate in Follow-on Operational Tests (FOT), using an unannounced FASV at the QRA site. Missiles, equipment, and personnel are designated and, after approximately three weeks, are positioned at Cape Canaveral — ready for firing.

Major Events In Europe

At the conclusion of the FASV, POTU informs the battery commander that he has been selected to participate in an FOT. He is told to inform his battalion headquarters of the selection and to begin preparation for the move to CONUS. A thorough briefing is given to the battery personnel

by the POTU and work begins. Two platoons, each with three missiles, are normally returned on an FOT. Serial numbers and exact locations of major items of equipment are recorded so they may be placed in the same configuration at the launch site. Disassembly of the missiles is accomplished under the direct supervision of the POTU. Technical ordnance inspectors assist in the physical inspection of the propulsion and guidance sections before these are placed in containers for transportation to Florida. The missiles are delivered to Ramstein Air Base where they are placed on C-141 aircraft and flown directly to the launch site.

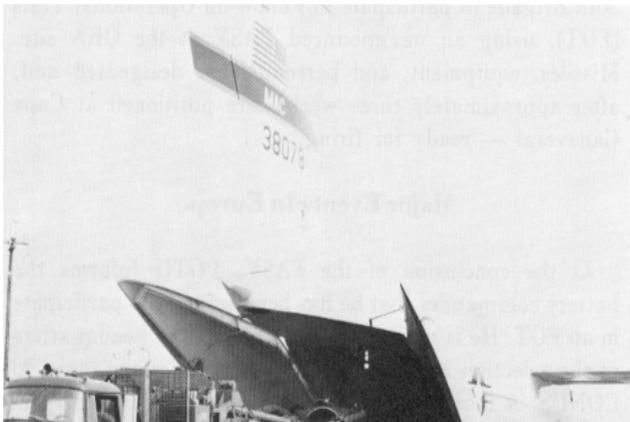
Personnel, launchers, power stations, programmer test stations, and other support equipment are returned to their home station and prepared for movement to Cape Canaveral. Approximately two weeks later, the unit's equipment is convoyed to Rhein Main Air Base near Frankfurt and personnel follow by bus. Four C-141 aircraft are used to transport the unit directly to Cape Canaveral. POTU sends a seven-man team to conduct the CONUS phase of the test.

Events In CONUS

When the missiles arrive at the Cape, POTU personnel install instruments to record various missile functions during flight and add range safety components in case a missile must be destroyed during flight. Picatinny Arsenal representatives provide instrumented warheads at the Cape when the unit is ready to assemble the missile. Personnel and ground support equipment arrive at Cape Canaveral and are met by members of the support battery, 3d Battalion, 9th Field Artillery, from Fort Sill. The support battery provides billeting, mess, additional equipment, and vehicles for the tested unit.

For Florida firings, the tested unit's personnel are billeted at Patrick Air Force Base and transported daily to the launch complex at Cape Canaveral. The tested unit

An Air Force crew loads an erector-launcher into a C-141 for the flight to Florida.



Pre-launch activity at Complex 16 as troops from the 56th Brigade and technicians assemble and check out these Pershings.

prepares its equipment and missiles for its QRA role just as it would in Europe. Generally this takes three to four *long* days.

POTU personnel insure that the unit assembles its missiles and positions its equipment in the identical configuration used during the FASV in Europe. Eight remote controlled TV cameras monitor the unit's procedures, and members of the Applied Physics Laboratory of John Hopkins University gather data for the final evaluation report.

Firing Day

Once the tested unit has its missiles ready and the range support personnel give the "OK," a release message, similar to that given in Europe, is sent to the battery control central. The missiles are sequenced through prelaunch checks, and the command to fire is given.

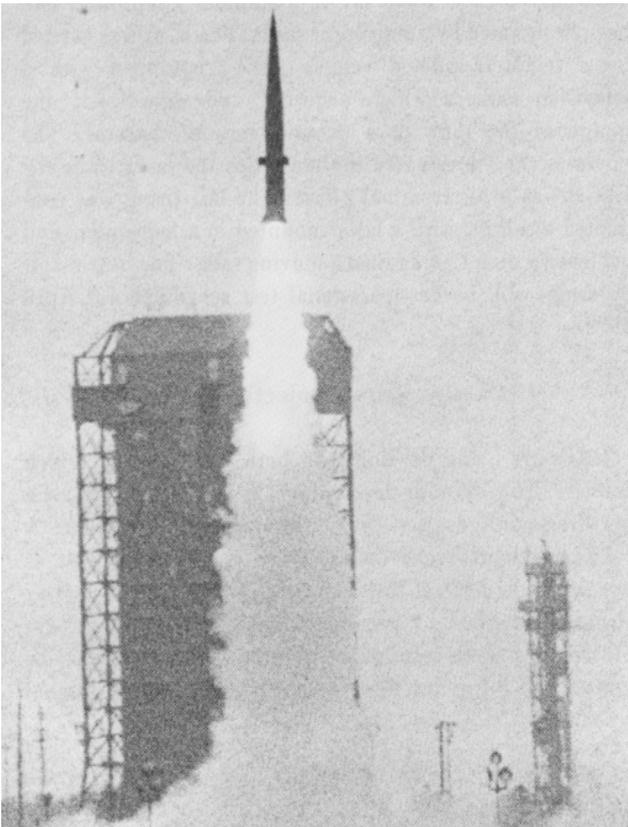
Normally two missiles per platoon are fired. The third missile is programmed through the launch sequence; but, instead of ignition, fuzes are connected to the electrical circuits and these indicate a positive launch sequence. This provides valuable reliability data at a reduced cost since the third missile is not fired. At the conclusion of the firing exercise, the unit prepares its equipment for return to Europe.



All bedded down in protective revetments, these Pershings and their crews await the firing command from Launch Control.

Those personnel desiring leave prior to their return to Europe need only provide their own transportation to a port of debarkation after leave. Port calls are provided to those personnel on leave, and the other members of the tested unit return to Europe with their equipment. During previous operations, tested units have found time to go to

Launch gantries from the American space program dwarf this Pershing as it heads for an Atlantic target "somewhere down range."



Disney World, the Space Center, and the beach, which is only a block from their billets at Patrick Air Force Base.

Results Of Firing

Once firing is completed, radar data, bushels of printouts, and other evaluations must be examined in order to prepare a complete report. The objective of this report is to provide the JCS with the current quantitative performance estimates of the operational capabilities of the Pershing weapon system in its peacetime QRA role. Data from the FASVs, live-fire operations, and a math model of the reentry vehicle or warhead are used to develop performance estimates. Initial results are furnished to the firing unit before it returns to Europe. The unit is told how the flights looked and whether the missiles hit near the target. Final comprehensive data are presented to the firing unit at a later date. The JCS evaluation report is a technical report, used for planning the use of Pershing.

Even though POTU is responsible for CONUS firings, many European and CONUS organizations are needed to support this major effort. The Pershing Operational Test Program was established in 1965 and should continue well into the future. POTU performs a very valuable service in insuring that Pershing is always ready.

NCOs, warrant officers, and officers find the POTU assignment challenging, and technically qualified personnel are encouraged to apply for interviews. ☒

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