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AIR DEFENSE ON THE DELAWARE: THE PEDRICKTOWN MISSILE MASTER SITE, 1960-1966

Donald E. Bender

Coastal fortifications including Salem County's Fort Mott were designed to defend against a naval attack on the port cities of Philadelphia and Camden. Forts of this type and their mid 20th century descendants remained a significant part of the defenses of the region through the end of the Second World War. By that time, however, the advent of long range aircraft capable of carrying the newly-developed atomic bomb across oceans and continents had rendered them obsolete.

Within a few years, the construction of new Cold War era "fortifications" designed to defend against this new and growing threat was well underway. These new fixed, defensive installations included radar sites, command and control facilities, bases for interceptor aircraft, and surface-to-air guided missile installations. One of the most important air defense installations defending the cities of Philadelphia and Camden, and the surrounding region was destined to be located within Salem County.

Over four decades ago, the United States Army began deployment of its new Nike missiles at sites all across the nation. It was a time of increasing tensions between the United States and the Soviet Union, an era in which fears of a nuclear war were rampant, backyard bomb shelters were in vogue and air raid drills were as common as fire drills in many schools. Named for the mythical Greek goddess of victory, the Nikes were designed to shoot down Russian bombers, providing a vital last line of defense against a nuclear attack for American cities and metropolitan regions.

Over two hundred Nike missile installations were constructed within the continental United States. The Philadelphia Defense Area, encompassing Philadelphia, Camden and southwestern New Jersey, received exactly one dozen Nike sites. The missile sites were located roughly 25 miles outside of the city, forming a large defensive perimeter with overlapping fields of fire. Seven sites were located within Pennsylvania, the other five within the Garden State.

Initially, the coordination of the region's Nike batteries was accomplished manually from a central command post, using telephone and radio. Although this system worked, its effectiveness in an age of supersonic aircraft and hydrogen bombs was far from ideal. A better system was needed. In fact, the Army had already created a feasibility study for an electronic coordination system for anti-aircraft defenses as early as 1946. A prototype system produced by the U.S. Army Signal Corps during 1950 eventually led to the deployment of the experimental Antiaircraft Defense System (AN/GSG-2) at Fort George G. Meade, Maryland, during 1955.

The new experimental air defense coordination system proved to be a success. By effectively integrating radar, computers and digital communications, it was capable of rapidly identifying hostile aircraft and coordinating the firing of defensive missile batteries to destroy them. Two systems were developed from this first experimental system: the most complex, costly and capable system was designated "AN/FSG-1" and more commonly known as "Missile Master".

First deployed at Fort George G. Meade during 1957, the nine million dollar Missile Master system was eventually installed at over a dozen locations within the Continental United States. It was capable of simultaneously tracking almost 50 targets while coordinating the firing of up to two dozen missile batteries. The Philadelphia Defense Area's Missile Master facility, located within the Army's Pedricktown Sub Depot, became operational during 1960.

Designated as site "PH-64DC" it was also known as the Philadelphia Air Defense Site or "PADS".

Designed to resist the force of a nearby nuclear explosion, the imposing, windowless Missile Master building featured massive reinforced concrete construction. A portion of the two-level building was located below grade. Each of its entrances featured special shielding to protect against blast effects. Inhabitants were further protected against radioactive fallout by special air-tight seals on doorways and by air filtration systems.

The heart of the Missile Master was the Blue Room so named because of its subdued blue lighting which permitted optimal viewing of the radar screens and plotting boards located there. Within this room, the tracks of incoming hostile aircraft were received from the site's own surveillance radar and from remote radar sites including Gibbsboro Air Force Station, located 15 miles to the north. The tactical situation was rapidly assessed and specific Nike batteries were assigned to individual aircraft targets. A "Friendly Protector" made certain that known U.S. aircraft operating within the region were not accidentally fired upon.

Frequent air defense exercises were held to test the readiness of Pedricktown's control center and its associated Nike missile batteries in New Jersey and Pennsylvania. During the Cuban Missile Crisis of 1962, the base and the missile batteries it controlled were placed on a heightened state of alert, remaining in this condition for several weeks. The Pedricktown Missile Master facility continued in operation through the fall of 1966 when the adjacent Philadelphia and New York Defense Areas were merged. Coordination of the Nike batteries within this consolidated region was subsequently performed by the New York region's Army Air Defense Command Post located at Highlands, New Jersey.

Four decades after it was constructed, the Missile Master installation remains generally intact within its fenced compound in Pedricktown. Today, we have come to appreciate Fort Mott and the other historic seacoast fortifications which defended the region and the nation in earlier times. During the Cold War, air defense sites such as the Pedricktown Missile Master performed a similar function and should not be forgotten.

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About the Author ...

Donald E. Bender is the founder of the New Jersey Nike Missile Site Survey, a self-sponsored historical project designed to document the history and present condition of former Nike missile sites located in the New York, New Jersey and Philadelphia areas. He has assisted governmental, military, academic and historical organizations with research related to former Nike missile sites and other Cold War era military installations across the nation and internationally. He is presently completing a book about New Jersey during the Cold War. He can be reached via e-mail at cwresearch2@yahoo.com

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