

## HISTORIC CONTEXT OF THE NIKE MISSILE SITE

The NIKE Missile sites were the first nationwide U.S. air defense system designed to protect against a Soviet nuclear attack. In the 1950s, they were highly visible, powerful symbols of U.S. military power as well as the Soviet threat. The sites were the outgrowth of an increasing concern over the Soviet ability to equip jet aircraft with nuclear bombs, and continued to develop into an early defense against Inter-Continental Ballistic Missiles (ICBMs).

During World War II, the U.S. military began to experiment with missiles and rockets in response to the German rocket program. In 1943, the U.S. Army established the Rocket Branch of the Ordnance Corps, and in 1945 recruited Bell Laboratories and the Douglas Aircraft Company as part of the team (USACE 1997:5; Bright 1997:321). Although Bell Laboratories and Douglas had completed a prototype weapon by 1946, funding cutbacks after the war delayed further progress. In 1951, Western Electric, then the prime contractor of the project, had developed a 34-foot, two-stage missile guided by a system of three radars. The new missile could travel at Mach 2 (Bright 1997:321). This missile used a highly volatile liquid fuel composed of jet fuel and nitric acid, and had to be handled with full protective gear in specially constructed magazines. This was exceptionally revolutionary and complex technology for the time. The first radar would identify the target 125 miles away, the second would track the target, and a third would track the missile's course and alter it in response to the target tracking radar. All these activities were coordinated by computers (Bright 1997:322).

In the early 1950s, antiaircraft defense consisted of conventional antiaircraft guns. Due to the increasing tensions between the U.S. and the Soviet Union and as a result of the Korean War, in 1951 the Army endorsed a nationwide surface to air missile (SAM) defense system. Tensions became heightened in response to successful hydrogen bomb tests by both the Soviet Union and the United States in 1953. In that year, the Army created selection boards responsible for land acquisition and construction oversight (Bright 1997:323; USACE 1997:5-6). By the summer of 1953, Douglas and Bell were producing missiles and equipment, and training soldiers to operate the new missile system that was christened NIKE after the Greek goddess of victory. Later it was given the name NIKE-Ajax.

Land acquisition became an onerous procedure of conflict and condemnation proceedings in some areas but land acquisition at the sites in Fairfax County was not difficult. The Army was required to use government-owned land whenever possible. This probably made the decision to locate at least part of the site at the D.C. Department of Corrections in Lorton a simple one. In October 1953, the Army obtained the use of two sections totaling 30 acres of the Lorton Prison complex. Due to the size of the tract acquired by the Army, the Lorton site was made a "double site" that had six rather than the standard three magazines, and twice the normal staff (Bright 1997:329).

Work at the Lorton site began in March 1954, and was complete enough to become the national showpiece for the Army's public unveiling of the nationwide NIKE program in 1955. Due to its proximity and size, it was labeled the "National NIKE Site" by the Secretary of the Army, and was host to visits by numerous foreign dignitaries as well as national and local politicians, and even local residents (Bright 1997:329-331).

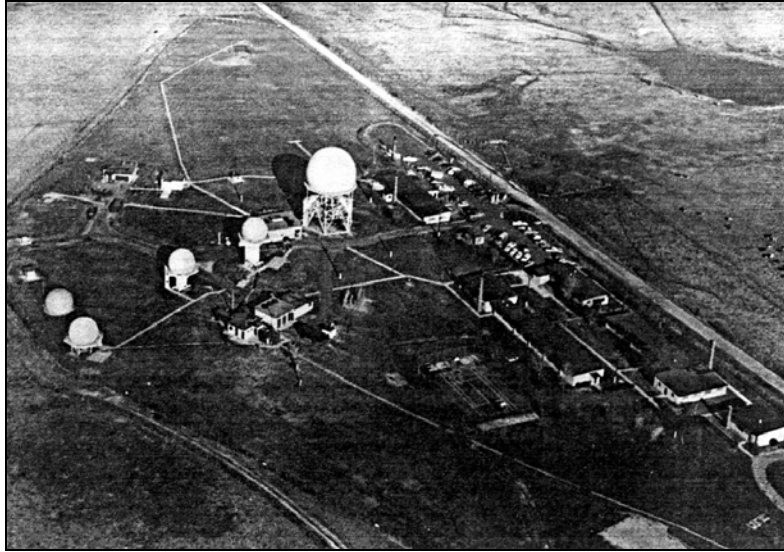
Shortly after the first NIKE sites were operational, President Dwight D. Eisenhower came to office with the promise to take a "New Look" at our foreign policy, and find ways to use America's growing technology to create more efficient, cost effective defensive systems. The outgrowth of this "New Look" policy was the decision to use nuclear warheads on anti-aircraft missiles that could destroy several attackers with one missile at lower cost. The new missiles, dubbed NIKE-Hercules, were in fact an entirely new missile that flew up to 100,000 feet (30,480 meters) and had a speed of Mach 3.5. The new missile's range was twice that of the NIKE-Ajax, and the dangerous liquid fuel was replaced with a much safer solid propellant. The development of the new NIKE-Hercules was authorized in 1953, and it was ready for service by October of 1958 (Bright 1997:339).

For cost considerations, and because the NIKE system was so extensive, with over 3,000 launchers in service at its height, the Hercules was designed to fit into this NIKE-Ajax system. Lorton became the prototype site for the conversion to NIKE-Hercules. Although the same site was used for the new missiles, some alterations had to be made to accommodate the Hercules. Gas detection systems were added to detect leaks in the tritium gas detonation system, and the elevator motors and mechanisms that lifted the missiles to the surface needed to be upgraded to handle the heavier missile. Each magazine had to be spaced farther apart to prevent a rocket blast from damaging other weapons during a launch. Only about one-third of the sites were chosen for these new weapons. Neither the Fairfax/Popes Head Road site nor the Herndon site received Hercules missiles (Bright 1997:340).

Due to the increased security required with the presence of nuclear weapons, the Army added intrusion alarms, erected fences and guard houses, and assigned four-man military police detachments with German shepherd guard dogs. These security concerns also ended the open houses at Lorton and other installations that had once been so frequent. It is not known whether Hercules missiles at the Lorton site actually contained nuclear warheads or not, since the weapons could also carry conventional warheads, but some analysts suggest that they did after the U-2 incident in 1960 (Bright 1997:341).

Due to construction and operating costs of the new Hercules facilities, the army decided to cede operation of many of the Ajax sites to the National Guard. Beginning in 1958, the Virginia National Guard began training to take over the Fairfax site and the Ajax portion of the Lorton site. The Virginia National Guard consistently set records for performance in training exercises. By 1960, the Army closed the Ajax sites due to their prohibitive operating costs. Herndon was closed in 1961, and Fairfax in 1963. On August 30, 1963, the National Guard took control of Lorton, and only a small contingent of Army personnel continued to work at the site (Bright 1997:344; USACE 1997:7).

During the 1960s, the political and defense climate changed, necessitating a change in strategic defense operations. The Soviet Union began to increase their supply of ICBMs and decrease their dependence on long range bombers. Accordingly, the United States decided to focus on the construction of strategic nuclear weapons.



*Historical Aerial View of NIKE Control Site*

*Source: Bright, 1996*

In 1973, Secretary of Defense James R. Schlesinger decided to close the Lorton site and all but four of the remaining Hercules sites in the United States. Starting in April of 1974, the battery was closed. Prior to its transfer to the General Services Administration in that year, the Department of Defense entered an agreement with GSA to remove the three radar towers and pad, and to spot weld and secure the missile launchers and storage shelters, as well as remove all "above ground obstacles" (USACE 1997:38).

As a result of the DOD remediation, most of the NIKE operations structures were razed (Bright 1997:345-346). At the time of its demise, the NIKE system was in its final phase, known as NIKE-Zeus. Although never activated, many of the systems developed for the Zeus were later used in anti-tactical ballistic missiles (ATBMs). NIKE technology was also used in ICBM projects, but none of these were ever deployed. In 1963, there were 164 active NIKE-Hercules batteries. By 1974, there were 52, and in 1975, only four remained. The last battery, at Fort Bliss, Texas was decommissioned in 1983 (USACE 1997:7-18).

*The information provided in the Historic Context of the Nike Missile Site was extracted from the Historic Structures Determination of Eligibility Report, Lorton Correctional Complex, prepared for the GSA by Greenhorne & O'Mara, Inc. as part of the requirements of the National Historic Preservation Act of 1966. Much of the information included was provided by Irma Clifton of the Lorton Heritage Society.*