

Cleveland Nike Bases — A Passing Phase

BY WILLIAM C. STARK

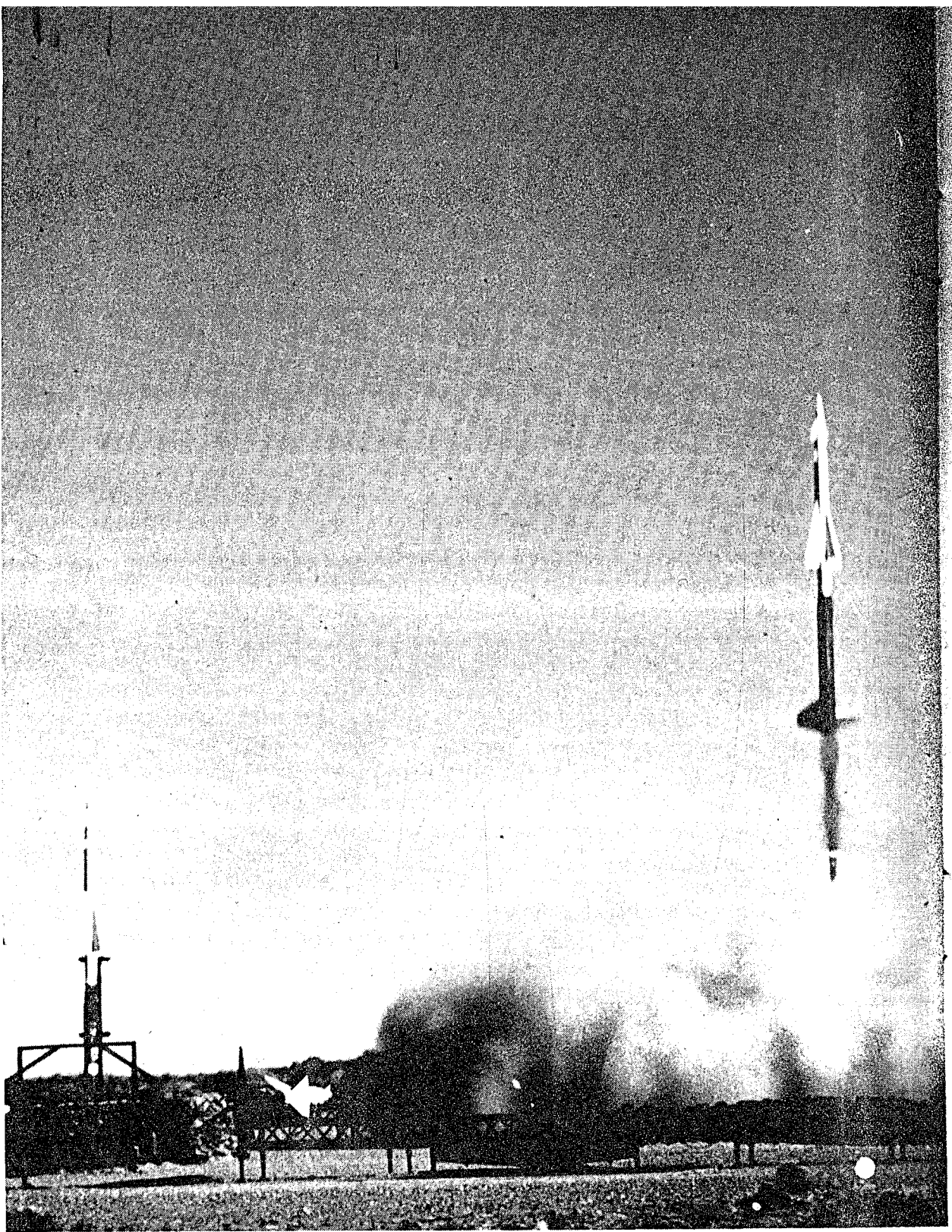
During the latter stages of World War II, United States defense analysts recognized the need for a technically advanced antiaircraft missile. The Army was therefore authorized to develop what became the Nike-Ajax surface to air missile system. Nike-Ajax batteries were positioned around major American industrial cities and Washington, D.C. beginning in 1953.¹

Public officials and residents of metropolitan Cleveland, Ohio learned that the Army would develop a master plan for the construction of a Nike-Ajax air defense ring in the greater Cleveland area during 1954.² Consequently, Clevelanders became curious about what the missiles were specifically designed to do, and what the physical appearance of the sites or bases would be. Most importantly, they wondered what military activity would take place within the boundaries of the sites.

"Nike" was the goddess of victory and "Ajax" a warrior of Greek mythology. A Nike-Ajax missile could weigh as much as 3,800 pounds. It was powered by a liquid-fuel booster unit. Each missile was radar controlled and capable of travelling 1,500 miles per hour (twice the speed of sound) to an altitude of 50,000 feet (nine and one-half miles) at a range of 25 miles. The 35½ foot-long Ajax and booster was armed with a conventional warhead which would explode upon impact with an enemy aircraft.³

In general, each Ajax base would consist of two separate facilities which operated in unison to launch missiles. On the average, each 50-acre base was divided into a 40 three-acre and a seven-acre radar control area. The launch area actually occupied only about 15 acres with the remaining 28 acres set aside as a safety buffer zone surrounded by an eight-foot barbed wire topped cyclone-style security fence patrolled by doberman pinscher canine units. Warheads were stored in an "area of exclusion" guarded by armed sentries. Anyone crossing into the "area of exclusion" without permission could be shot. Due to space needed for the storage of high-explosive material, a 500-foot area of clearance was maintained on all sides of the launch area.⁴

The launch site consisted of a missile assembly building, a generator building, an acid storage building (for fuel), a fueling area, underground missile storage areas, storage launchers, firing launchers, and barracks for enlisted men and officers. There were 12 launchers in the launch area — three sections of four launchers each. Nine missiles could be fired at one time with a storage capacity of 30 missiles. One battery of 88 enlisted men would be assigned to each launch site. During any seven-day 24 hour period one battery in a defense ring



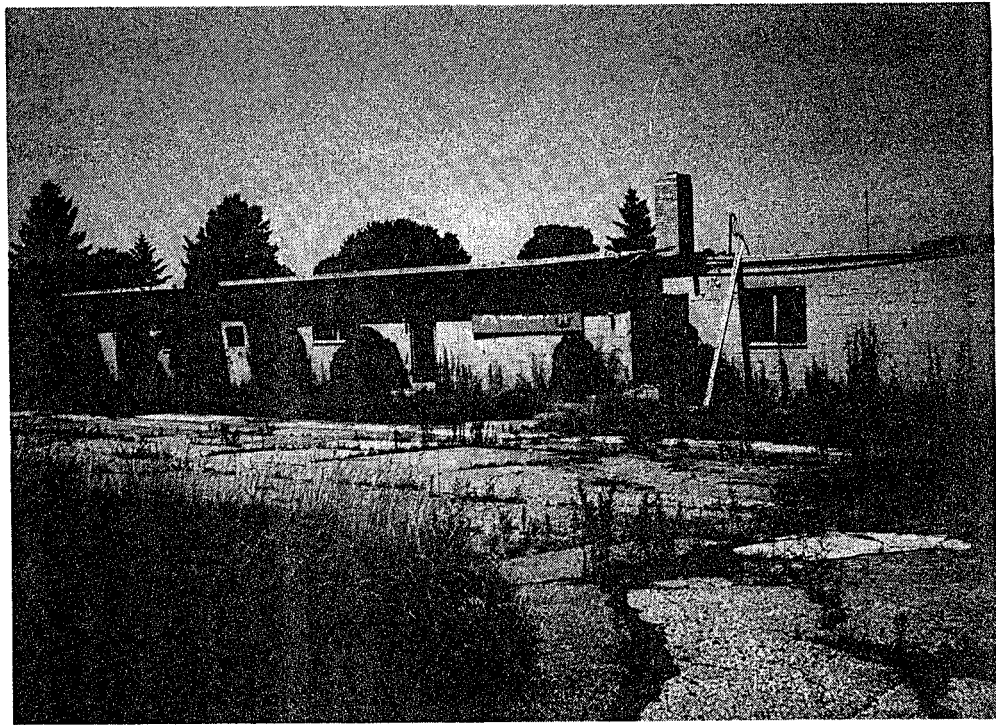
Test-firing a Nike Ajax missile of the type first deployed for Cleveland's air defense in 1956. The 35.5 foot rocket carried a conventional warhead, had a ceiling of 50,000 feet, a range of 25 miles and cost \$15,000 each to build and equip.

(including the radar control site), would be designated as a "hot battery," on standby status, ready to fire immediately at approaching enemy aircraft. A "red alert," signifying that enemy aircraft were indeed approaching, would necessitate the remaining batteries in the defense readying themselves to launch missiles within 20 minutes. It was not uncommon for an inspecting general officer to arrive in the middle of the night and call for a "red alert" drill. With the exception of the "hot battery" the remaining batteries would prepare to fire within the allotted time period allowed. Actual firing exercises were conducted during training sessions at missile ranges on military installations in New Mexico.⁵

A radar control area would be located one-half mile away from the launch area but within viewing distance. There had to be a clear view of the horizon on a 200-foot per mile slope. A control area consisted of a mess hall, administration building, officers' and enlisted men's barracks, a control van or building, and three 20-foot radar towers. The control site would also be enclosed by a security fence, patrolled by canine units. The Nike-Ajax network throughout the country was part of the North American Air Defense System (NORAD) which consisted of listening radars of the Semi-Automatic Ground Environment (SAGE) component of the Distant Early Warning Line (DEW) in northern Canada, designed to detect attacks by manned aircraft, either subsonic or supersonic, from the Soviet Union (U.S.S.R.).⁶

During the remainder of 1954 and through 1956, the Army ran into opposition from public officials on all levels of local government, and land and homeowners in and around Cleveland, who did not want Ajax bases located in their communities for a variety of reasons. First, public officials were not willing to sell or to lease public land which could be used for other purposes to the Army simply upon the Army's request that the land of their choosing be used for missile bases. In many cases, compromises had to be negotiated so that acreage at alternative locations could be offered for sale or lease. Secondly, local officials feared that construction of the bases would erode tax valuations. Who would want to live with a missile base on the next block over from one's house? Thirdly, homeowners did not want quiet suburban neighborhoods disrupted by the dirt, traffic and noise of heavy construction. In cases where private landowners refused to sell property to the federal government the U.S. Attorney cited them into federal court seeking to force a sale to be made.⁷

After all the haggling, negotiating, and compromising had been completed, the Army had acquired enough land to begin construction of eight bases. The Army's designations and locations of those bases were: 1. (CL 02) Bratenahl, launch; Cleveland, control; 2. (CL 11) Painesville, Lake County, launch and control; 3. (CL 13) Eastlake, launch; Willowick, control; 4. (CL 34) Warrensville township, launch and control; 5. (CL 48) Independence, launch; Garfield Heights, control; 6. (CL 59) Parma-Parma Heights, launch; Parma, control; 7. (CL 67) Cleveland Burke Lakefront Airport, launch and control; 8. (CL 69) Fairview Park, launch and control. Headquarters for the air defense group would be located at 6200 Riverside, near Cleveland Hopkins International



Onetime Nike-Ajax, then Hercules missile control site building quickly deteriorated once the project was abandoned in 1971.

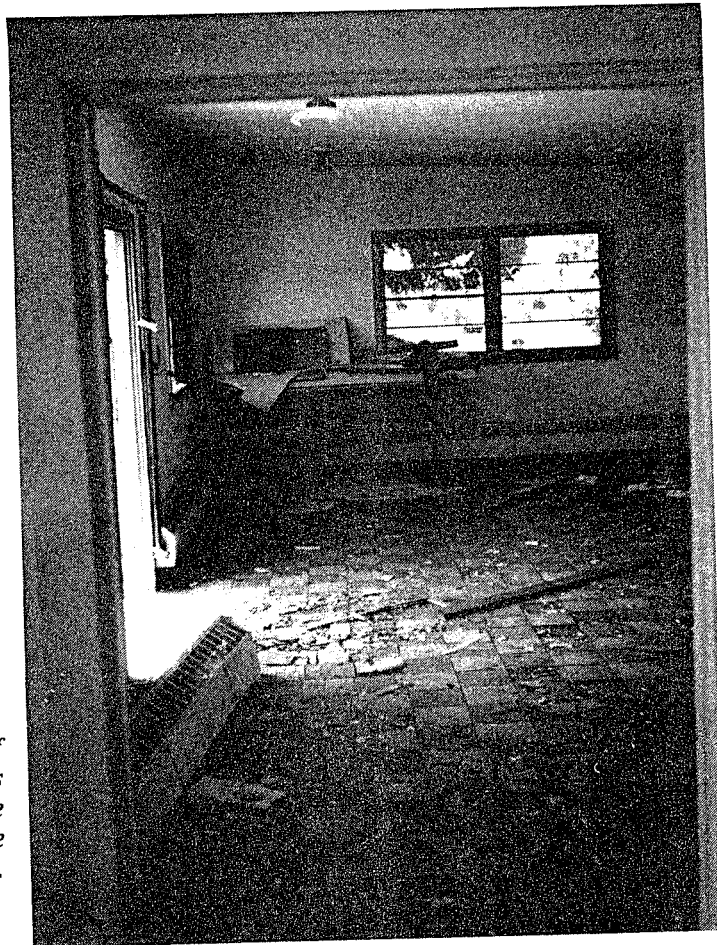
Airport at a former bomber and later tank plant. These headquarters would eventually be relocated at the Warrensville Township control site.⁸

Apparently, all of the eight Ajax bases were operational by the end of 1956. The expense of construction had been tremendous. Originally estimated to cost between \$500,000 and \$800,000 each, the lowest bids from private contractors were 33 per cent over the original government figures. Thus CL 13, CL 34, CL 48, CL 59, and CL 67 would cost a total of \$6,330,000 or an average of \$1,266,000 each to build.⁹

The bases were manned by two battalions of four batteries each. Between 1956 and 1958, the 351st and 508th Missile Battalions, U.S. Army, were assigned to the Cleveland Air Defense. The total number of officers and enlisted men in the entire defense numbered about 1,500. Security was tight, and the civilian population knew little of what went on inside each base. Local residents do recall that periodically the streets would be blocked off by troops in army vehicles while the missiles were raised out of the underground storage areas onto the above ground launchers during drills. On occasion civilians were allowed onto the bases for superficial tours of the launch areas for public relations purposes, but were not allowed in the underground areas or onto the control sites. One got the impression that Nike personnel were forbidden to disclose the operations of the sites to the civilian population for security reasons.¹⁰

In 1958, Nike-Ajax was replaced by the Nike-Hercules missile. "Hercules" was the legendary hero of ancient Greek mythology who was noted for his

*Two-year period of
vacancy gave vandals
time to wreck the
interior of control site
building.*



tremendous physical strength. The two-stage, five ton, 39 foot-long Hercules, "Herc" for short, was radio controlled and capable of travelling at three times the speed of sound to an altitude of 150,000 feet (about 28½ miles) at a range of 75 miles. The Herc was capable of intercepting tactical enemy missiles and high performance jets as well as supersonic bombers. The newer missile could be armed with a conventional or nuclear warhead which rendered the Ajax missile obsolete. With a nuclear warhead, the Herc could destroy enemy aircraft or missiles with a nuclear burst as much as two miles away.¹¹

Several lasting changes began to take shape in the Cleveland Air Defense. Fewer missile bases would be needed for the more efficient Herc than for the Ajax. Therefore, by April, 1959 the Fairfiew Park and the Bratenahl bases had been converted to launch Hercules missiles, with the Painesville base becoming operational in March, 1960. Regular Army batteries began vacating the Ajax bases and turning them over to batteries of the 1st Missile Battalion, 137th Artillery, Ohio Army National Guard (OARNG) in 1960, with headquarters of the 191st Air Group, OARNG at the Shaker Armory, located at 2500 Kemper, Shaker Heights, Ohio, an eastern suburb of Cleveland. By 1963, the OARNG's 1st Missile Battalion had vacated all of the Ajax sites during the phase-out of the Nike-Ajax system. The Battalion's Ajax battery personnel were retrained to

become Herc missilemen and went into the Hercules air defense at Cincinnati.¹²

Thus within three years the Ajax defense ring had been dismantled and completely replaced by three Nike-Hercules bases — (CL 02) Bratenahl, Battery D, 3rd Missile Battalion, 65th Artillery, Air Defense, U.S. Army; (CL 11) Painesville, Battery A, 3rd Missile Battalion, 65th Artillery, Air Defense, U.S. Army, and Fairview Park, (CL 69), Battery C, 1st Missile Battalion, 137th Artillery, OARNG — the only OARNG battery to remain in the Cleveland Air Defense. Operational control of the three Herc sites rested with Headquarters, 3rd Missile Battalion, 6th Artillery, U.S. Army at the Warrensville Township (C1 34) control site.¹³

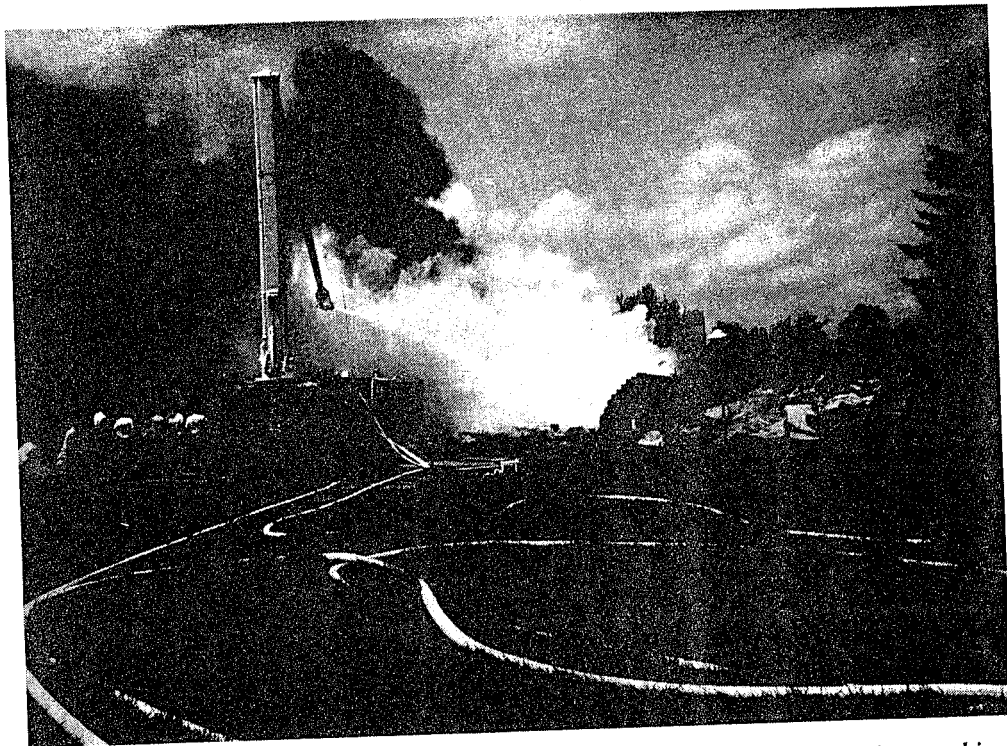
The routine at the Herc sites remained about the same as during the Ajax period. One battery remained "hot" while the rest practiced "red alert" drills when so ordered. The storage capacity of each site was eighteen missiles, which could do the job of the thirty missiles stored during Ajax days. The Army never disclosed to the public just how many nuclear warheads were kept at each base at one time.¹⁴

By the early 1960s the DEW line had become obsolete because of the installation of the Ballistic Missile Early Warning System (BMEWS). Large radar sites in Alaska, Greenland and in Scotland would warn of inter-continental ballistic missile (ICBM) attacks from the U.S.S.R., and if the occasion allowed, give the United States Air Force's Strategic Air Command enough time to launch its bombers for retaliatory attacks.¹⁵

It should be noted that the Nike-Hercules defense system was bolstered by the U.S. Air Force BOMARC missile that had a range of 400 miles which was deployed in the U.S. and Canada by supersonic jet fighter planes armed with air to air missiles, and by a force of U.S. Air National Guard jets. Thus, if enemy aircraft penetrated the BOMARC missile and fighter defense, the Hercules missile system was the third and final line of defense against a manned aircraft attack.¹⁶

The Cleveland Hercules defense was dependent on the BIRDIE system (Battery Integration and Radar Display Equipment) which gathered and disseminated information in an air attack and automatically instructed the commander to assign certain missiles to destroy certain targets. The compact system was explained by Major General John T. Honeycutt, Commander, 5th Region, Air Defense Command at the Warrensville Township base on October 13, 1961. The system consisted of three components: (1) radar scope; (2) plotting board; (3) 3,000 transistorized cards which formed the BIRDIE "brain."¹⁷

As the Hercules superseded the Ajax, the Nike-X system was designed to replace the Hercules. The Nike-X system, first experimented with in the late 1950's, consisted of two missiles — the long range anti-I.C.B.M. Nike Zeus, and the shorter range Sprint missile. By the mid-1960's the Department of Defense could not decide whether or not to deploy Nike-X because of the cost and because defense analysts believed that an all-over better system could be developed. Cleveland's three Hercules bases remained operational until March-June, 1971 when the Herc was phased out. Nike-Hercules would not be replaced

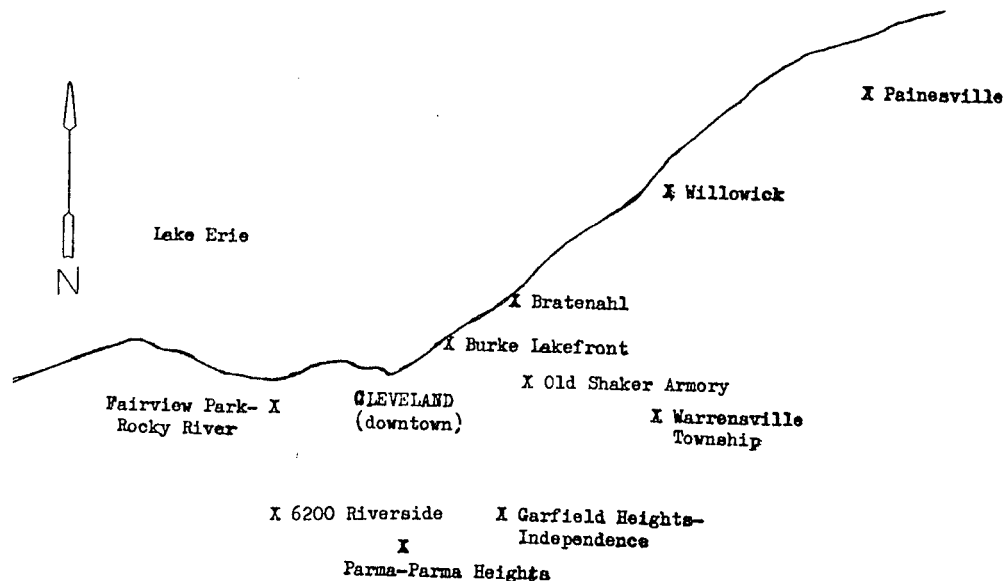


Former missile control site building was burned before final razing, making way for civilian development.

by Nike-X but by the Sentinel system under the administration of President Richard M. Nixon in 1969. Under the Sentinel system, anti-I.C.B.M. missiles were moved away from major cities and deployed near the United States' I.C.B.M. silos in Montana and North Dakota. Rather than place the country's resources into shooting down I.C.B.M.'s aimed at populated areas, the President felt it more important to protect the United States' ability to retaliate massively against the U.S.S.R., or if necessary, Red China.¹⁸

The abandoned Nike bases of the Cleveland Defense were sold by the U.S. government and are used today for a variety of civilian purposes. Only one, the Fairview Park control site, remained in the military's hands — by the 135th Military Police Company, OARNG, until it too was abandoned in about 1983. Ironically, the former launch pad at the Fairview Park launch site has been paved over and converted into tennis courts at Tri-City Park, only to have tennis enthusiasts hit balls over Hercules brand nets while wearing their Nike sneakers and athletic clothing.¹⁹

One reporter has described the Nike missiles as "uncanny supersonic gadgets of terrifying beauty." The bases were truly ever-present reminders that the greater Cleveland area was vulnerable to enemy air attack during the Cold War period of the 1950s and 60s. In just a few minutes' time the landscape could have been turned into a holocaust due to a conventional or nuclear bombing reminiscent of that suffered by an enemy power in World War II. Yet nothing in the historic vein has been done to preserve the Nike era in Cleveland. Although a



GREATER CLEVELAND NIKE AJAX AND HERCULES MISSILE DEFENSE RING 1956-1971

(Between 1959 and 1971 the Fairview Park-Rocky River, Bratenahl, and Painesville sites remained operational due to conversion from the Ajax to the Hercules Nike missile.)

number of original buildings have been renovated and converted to civilian use, none of the launch or radar control sites have been preserved by local, state or Federal historical organizations or agencies. The apathy toward the possible preservation of at least one site or part of a site by any one of the numerous local historical societies or city councils within whose boundaries a site was located occurred for perhaps two reasons: firstly, the initial opposition to the establishment of Nike bases fostered by local citizens and elected officials in 1954 resurfaced in the 1970's and again in 1985 at the closing and razing of former bases. Locals simply wished to erase the memory of having the bases established in the first place, nor did they wish to remember them in the future. And, secondly, for practical reasons, the maintenance of any one of the sites as an abandoned military post which could have been developed into an historic site or park would simply have been too costly. The land could be put to better use by development into passive parks or housing subdivisions. Buildings, in many cases, have been preserved by school systems or local governments as office or storage space.

It may be a number of years before interested individuals or a concerned local historical society will see fit to install a standard historical marker on one of the former sites, explaining briefly what type of military activity occurred there during the Cold War. Most of the former original security fences are still intact, but eventually the boundaries will become obliterated if the fences are removed or destroyed. Photographs of surviving structures might be taken, labelled, and deposited at a local library or museum. Former Nike missilemen might be

contacted and accounts of their Nike days put on cassette tape as an oral history project. The possibilities are limitless. In the final analysis, histories of the Nike bases should be preserved for they are bona fide abandoned posts of America's military past.²⁰

**Cleveland Air Defense Nike Bases, 1956-1971
and Post Nike Era Uses, 1963-1986**

Base, 1954-1971

Post Nike Era Use, 1963-1986

I. Rocky River—Fairview Park (CL 69)

a. launch

1956-'59, Ajax

1959-'71, Hercules

b. control

Tri-City Park (Westwood Avenue near Fairview Park-Westlake border, entrance north side of Westwood Ave.)

Headquarters, 135th Military Police Company, Ohio National Guard (21700 Westwood Ave., Fairview Park, Ohio, entrance on north side of Westwood Avenue). Demolished 1986 for park and housing.

II. Parma-Parma Heights (CL 59)

a. launch

1956-'62, Ajax

b. control

Nike Park, Road, located in Parma and in Parma Heights. Part of former base is also Cuyahoga Community College, Western Campus (11000 West Pleasant Valley Road)

Nathan Hale Park, Parma Heights (entrance on east side of Parma Park Boulevard)

III. Garfield Heights-Independence (CL 48)

a. launch

1956-'61, Ajax

b. control

Independence Board of Education administrative offices; "land lab" for pupils studying nature; 733 Stone Road; phone: 524-0270; located south of Rockside Road, Independence, O.

Garfield Heights Board of Education administrative offices; school children plant gardens on part of grounds; located north of Rockside Road at 5640 Briarcliff Drive, Garfield Heights, Ohio, phone: 475-8100.

IV. Warrensville Township (CL 34)

a. launch

1956-'62, Ajax

1956-'62, Ajax

b. control

1959-'71, H.Q.,
Hercules

located at Richmond and Harvard Roads, Warrensville Township — buildings are falling to ruin. (1982)

located on Richmond Road between Harvard Road and Chagrin Boulevard to the north of the launch site on the west side

of Richmond Road near the Beachwood line — buildings and radar tower are falling into ruin. (1982)

V. Bratenahl (CL 02)

a. launch

1956-'59, Ajaz

1959-'71, Hercules

Used as Bratenahl High School, later as U.S. Navy Finance Center until a new facility was constructed; many of original buildings are still standing; but vacant address is 555 East 88th Street, Bratenahl, Ohio (north of Memorial Shoreway).

b. control

This was also known as the Gordon Park-East 55th Street control site; base was completely razed by the city of Cleveland, by the mid-1970's.

VI. Burke-Lakefront (CL 67)

a. launch

1956-'60, Ajax

The base was razed and a runway was built over the site at Burke Lakefront Airport.

b. control

Former Nike buildings were used by the City of Cleveland for administrative offices of the Division of Parks at 4200 S. Marginal, and for the Traffic Engineering Division, next door at 4160 S. Marginal Dr. Radar towers were still standing in April, 1982. Entire control site was razed in August-September, 1986.

VII. Willowick (CL 13)

a. launch

1956-'61, Ajaz

Used by the Willoughby-Eastlake City School District as a school bus terminal and storage area. It is located at 33605 Curtis in Eastlake, Ohio. One of the original buildings is now the John F. Kennedy Senior Citizens Center at 33525 Curtis.

b. control

Converted into Robert Manry Park and swimming pool of same name. The city of Willowick Recreation Department is located at the same address of 30100 Arnold in Willowick, Ohio.

VIII. Painesville (CL 11)

a. launch

1956-'59, Ajax

1959-'71, Hercules

Used as County Engineer's Office at 505 Blackbrook Road, Painesville Township, Ohio.

b. control

Owned by Lubrizol Corp. and used for storage purposes, located south of Route 2, east of state route 44, on Freedom Road,

½ mile southeast of former launch site;
radar fixtures visible from Rt. 2., across
from Lubrizol at 29400 Lakeland.

FOOTNOTES

1. Werhner von Braun and Frederick I. Ordway III, *History of Rocketry and Space Travel*, New York, 1962, 144-145.
2. *Cleveland Plain Dealer*, July 23, 24, 1954.
3. Norman J. Bowman, *The Handbook of Rockets and Guided Missiles*, Newtown Square, Pennsylvania, 1963, 372-373, 849.
4. *Cleveland Press*, November 4, 1954; *Cleveland Plain Dealer*, April 23, 1955. Some incidental information in the paragraph came from former Nike missilemen who served in the Cleveland Air Defense.
5. See footnote 4.
6. Ibid. William E. Howard and James Barr, *Spacecraft and Missiles of the World*, New York, 1966, 73.
7. *Cleveland Plain Dealer*, July 22, 23, 1954, September 24, 29, 1954, October 2, 1954, November 13, 1954, April 23, 1955, September 30, 1955, October 7, 1955, December 11, 1955; January 11, 1956, May 25, 1956, August 24, 1956, October 17, 1956; *Cleveland News*, February 8, 1955, January 7, 1956; *Cleveland Press*, November 11, 1955, December 31, 1955.
8. *Cleveland Press*, October 6, 1954, November 4, 1954, May 7, 1955; *Cleveland Plain Dealer*, April 23, 1955, March 11, 1956; *Cleveland News*, March 31, 1955. The (CL) listings are available in Mary T. Cagle, *History of the Nike Hercules Weapon System*, Historical Monograph, Project Number: AMC 75M, issued by Helen Brents Joiner, Chief, Historical Division, Army Missile Command, April 19, 1973, which is still classified; however the index has been declassified. The author thanks Michael Binder of Dallas Texas, a CAMP member, for sharing the declassified (CL) index material in Cagle's study.
9. *Cleveland Press*, October 6, 1954; *Cleveland Plain Dealer*, October 7, 1955.
10. *Cleveland Press*, November 4, 1954; *Cleveland Plain Dealer*, April 23, 1955, October 7, 1956; Cagle declassified index.
11. Howard and Barr, *Spacecraft and Missiles of the World*, 73; Bowman, *The Handbook of Rockets and Guided Missiles*, 374-375, 849.
12. Cagle declassified index.
13. Personnel Guide, Battery D, 3rd Battalion, 65th Artillery, United States Army Bratenahl Nike Site, courtesy of John Jenkins, formerly of that unit.
14. Information from a former ranking OARNG officer. There was a legitimate fear by civilians that an accident involving warheads or highly volatile engine fuel, or an accident involving both, would be disastrous. These fears proved correct. In 1958 fuel at an Ajax base in New Jersey exploded and killed several missile crewmen. The public was also not informed that when launched, the booster units on both the Ajax and Herc would be jettisoned and would probably fall onto populated areas, causing death or injury to those below.
15. Howard and Barr, *Spacecraft and Missiles of the World*, 73.
16. Ibid.
17. *Cleveland Plain Dealer*, December 14, 1961.
18. Von Braun and Ordway, *History of Rocketry and Space Travel*, 145-148.
19. *Cleveland Plain Dealer*, December 16, 1960, August 8, 1961, April 14, 1963,

- December 13, 1963, October 8, 1972, August 3, 1973, July 8, 1978, November 11, 1984, April 14 and December 18, 1985; *Cleveland Press*, January 3, 1973; *Sun Herald*, January 9, 1975, May 5, 1977; *West Life*, September 11, 1985, June 25, July 2, 1986.
20. A reunion group of former missilemen of the 1st Missile Battalion, 137th Artillery, Ohio Army National Guard is active in the greater Cleveland-Akron, Ohio area as of October, 1986.

THE AUTHOR

William C. Stark has written on Ohio subjects of military interest in the PERIODICAL. He is completing work toward a master's degree in history at Cleveland State University.