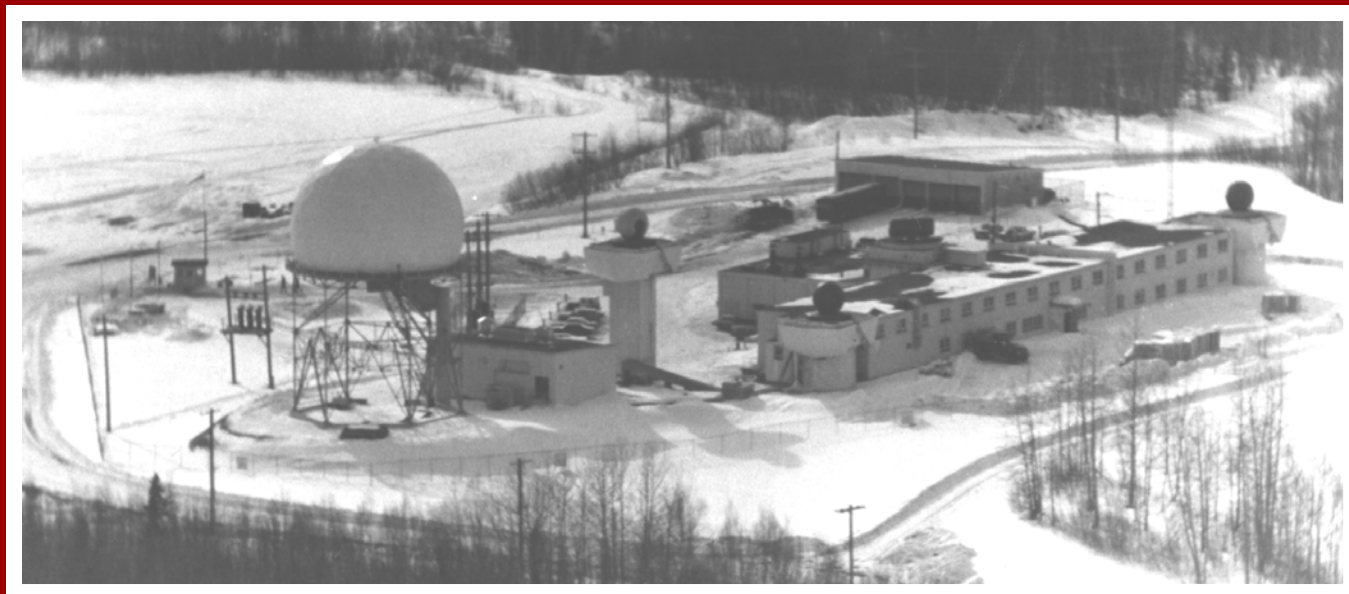


Nike Hercules Operations in Alaska: 1959 - 1979



July 2004

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For the
Conservation Branch
Directorate of Public Works
U.S. Army Garrison Alaska



July 2004

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Chapter 1 Introduction

For over forty years, from 1946 to 1991, international relations were defined by a conflict known as the Cold War. Though direct physical confrontation between the superpowers (U.S. and Soviet Union) was markedly absent, proxy wars raged in the developing world. The underlying, ever present threat of violence consumed the U.S. and Soviet Union, driving weapons research and development to a new apex. In the early Cold War years U.S. strategic doctrine focused on defense and deterrence as a means of preventing open confrontation with the Soviet Union.

The U.S. Army's Nike Hercules program was one means of defense which the country deployed in large numbers and at great expense. This ground-based anti-aircraft missile system protected vital U.S. cities, industrial centers and military bases from aerial attack. Multiple Nike sites were built in rings around areas in need of defense, and would have deployed missiles armed with high yield explosives or nuclear weapons to destroy attacking aircraft formations. Dedicated Army soldiers under the Army Air Defense Command operated Nike Hercules batteries around the clock. Though the system never had to be used in the United States, it was considered an important part of the country's defensive framework throughout the 1960's and early 1970's. At peak deployment there were 145 Nike Hercules batteries in the United States.

Alaska had eight Nike sites, with three batteries in Anchorage and five in Fairbanks.¹ The Alaskan Nike Hercules story is exceptional in terms of time, design and service. Here sites operated longer, under isolated conditions, and at a heightened state of alert. Alaska's proximity to the Soviet Union meant the state was a front line of warning and defense during the Cold War. Nike missile sites were a crucial link in the defensive system protecting the state and the country. Alaska's Nike batteries practiced live missile firings, making this one of just two states in the country where active sites had such an opportunity. Also, several design alterations were used to adapt the standard Nike site to the Alaskan climate. While Nike sites in the Lower 48 were largely decommissioned by 1974, the three Anchorage Nike batteries continued operating until 1979.

Purpose and Scope of Project

In 2002, the U.S. Army Garrison, Alaska's (USAG-AK) Cultural Resources Program began an oral history project to record the personal experiences of Nike Hercules missilemen in Alaska. As one of the Army's central Cold War missions in the state, Nike operations were identified as an important historic context that merited further development. While there is extensive information on the history of Nike missile sites in general, there is limited information about Alaska's Nike sites. A report published by the U.S. Army Corps of Engineers in 1988 provides the sole overview of the state's system. The publication, by Colt Denfeld, was submitted with exhibit quality architectural drawings of Alaskan Nike sites to the Historic American Engineering Record (HAER). HAER documentation was occurring in conjunction with Defense Environmental Restoration Program (DERP) cleanup on several of the abandoned Nike sites in Anchorage and Fairbanks. Copies of the Corps study, *Nike Hercules in Alaska*, are available in Alaskan libraries.

¹ Anchorage had three Nike sites with a total of four batteries. Site Point, near the Anchorage airport, was a double site with two complete batteries. One battery at the site was deactivated in 1970.



Since the publication of Colt Denfeld's study in 1988, additional information about Alaska's Nike batteries has come to light. This study was initiated to capture undocumented aspects of the story, and to detail the personal side of Nike operations through oral history. Fourteen oral history interviews were conducted with former Nike personnel still residing in Alaska, and fifteen interviews were conducted at a battery reunion in Washington, West Virginia. Personal communications with several individuals living outside the state rounded out the oral history interview data. Nike veterans were identified through private contacts and Nike websites containing contact lists or guest books. Two particularly useful web sites were 'Jeral Sexton's Site Summit Alaska' at <http://home.mchsi.com/~jerals/wsb/html/view.cgi-home.html-.html> and 'Ed's Nike Missile Web Site at, <http://ed-thelen.org/>. An attempt was made to contact a diverse range of personnel so that every aspect of Nike operations were documented - from launcher maintenance to site security. Interviews were tape recorded and transcribed. Cultural Resources staff plan to deposit the tapes in the oral history collection in the Rasmuson Library, University of Alaska Fairbanks.

This report is not intended to be a typical cultural resources study. Nor is it a comprehensive technical description and overview of the Nike system. For a complete developmental and operational history of the U.S. missile program see John Lonnquest and David Winkler's *To Defend and Deter: The Legacy of the United States Cold War Missile Program*. For additional operational and site information see Mark A. Berhow and Mark L. Morgan's *Rings of Supersonic Steel: Air Defense of the United States Army 1950 – 1979*. For more details on Alaska's Nike sites see Colt Denfeld's *Nike Hercules in Alaska*. The objective of this report is to provide a personal history, documenting what it was like for young servicemen to live and work at Alaska's Nike batteries where the weather, isolation, and pressures of being on the front lines of the Cold War culminated in a unique and unforgettable experience. Limited archival information was available in the state, and further research may add more to the Alaskan Nike Hercules story.

Acknowledgements

Many Nike veterans generously shared their time, stories, expertise, and photographs for this publication. Special thanks go to Billy Badger, George Bristow, Dan Caputo, Donald Dukes, Gregory Durocher, Daniel Gilman, Jim McCann, Bill Momsen, Jackson Murray, Don Neal, Ralph New, Bobby Pace, Ira Rion, Norman Schlittler, Billy Sparks, S.E. Thomas, George Wallot, and the creator of the Site Point website at http://home.att.net/~jsstars/1_43/AADCP.html. Also, special thanks go out to the men of C Battery, Fairbanks, 562nd Missile Battalion, who attended the July 2003 battery reunion in West Virginia. Joe Leone, the reunion organizer, graciously allowed researchers to attend the event and collect oral history interviews. The opportunity to talk to so many Alaskan Nike veterans at once was an invaluable source of information for this study. The West Virginia reunion oral participants included; Glenn Bechtel, Robert Eaglesham, Ronald Gaunt, Larry Goldsberry, Edward Hogan, William Howard, Thomas Kontes, Jerome LeDonne, Joe Leone, Gary Lipnik Charles and Anne McCauley, Frank McGee, Jarrett Nay, Robert Rose, Jim Rutledge, and Basil Woodfork. Finally, sincere thanks to Kathy Price for reviewing and editing this project throughout its development.



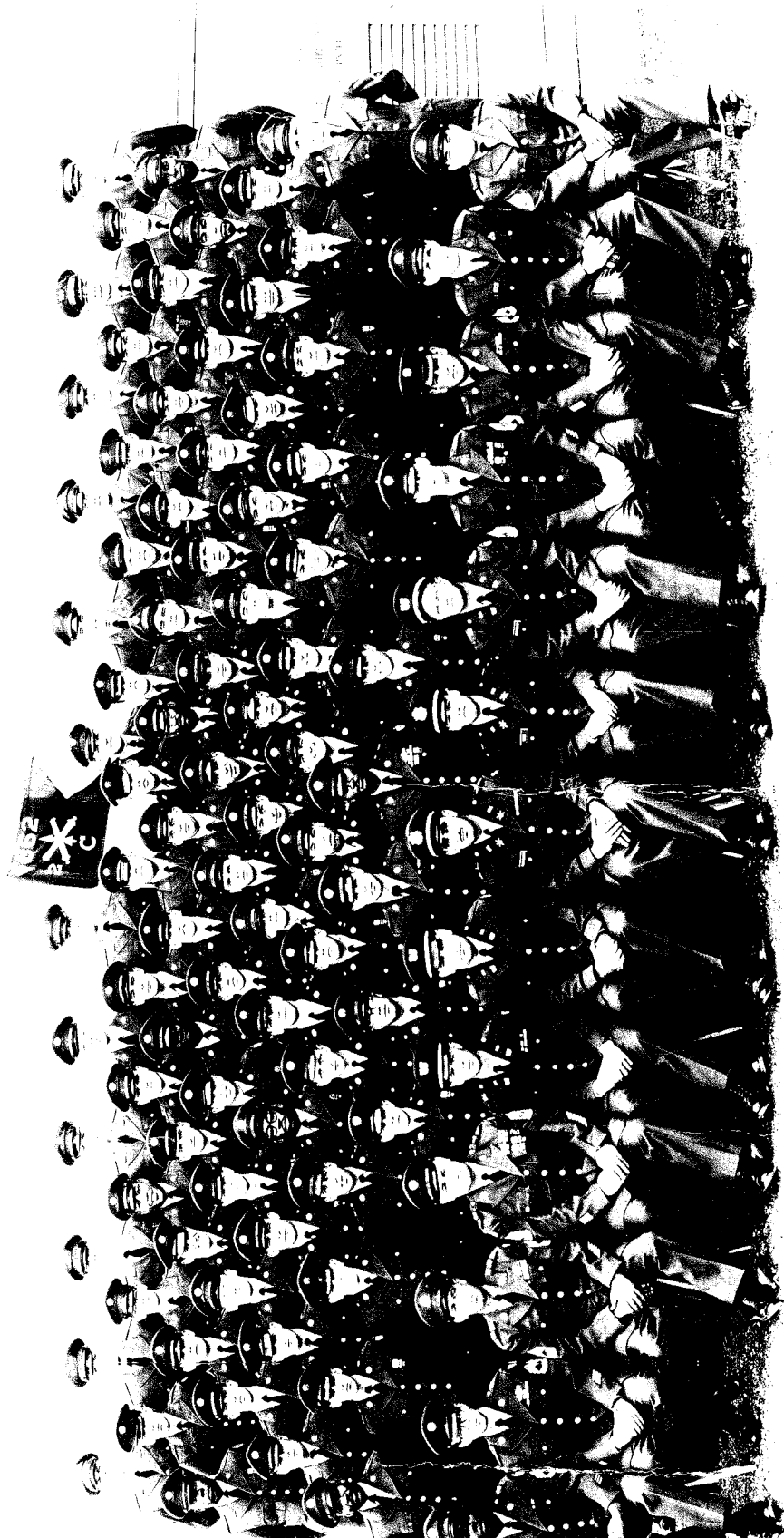


Figure 1: C Battery, 2nd Missile Battalion, 562nd Artillery, Fairbanks, ca. 1960. Courtesy of Ralph New.



Chapter 2 The Cold War and Air Defense

The Cold War, 1948 to 1991, was largely an international political conflict characterized by the absence of direct confrontation between the superpowers. The threat of war, however, contributed to a general sense of anxiety and at times the possibility of open conflict appeared imminent. In response to the apparent danger, the United States adopted a national military strategy of defense and deterrence. To prevent war, the country would acquire overwhelming weapons superiority to deter attackers. In the event that deterrence failed, continental defense measures would be in place to intercept an attack on the United States, thereby vastly limiting or eliminating the effectiveness of an offensive strike.

The stakes of a nascent Cold War were raised dramatically in 1949 when the Soviet Union detonated a nuclear device. A cornerstone of U.S. military strategy, that of a monopoly on nuclear weapons, came to an abrupt and startling end. This event, coupled with the start of the Korean War in 1950, accelerated development of the military's national defense program. It was during these early years of the Cold War that the strategic value of Alaska once again became obvious. The United States recognized a growing vulnerability on the polar air route, the shortest and most likely avenue of attack from Russia. With their fleet of intercontinental bombers the Soviets were capable of flying into the United States to release nuclear weapons. The U.S. military embarked on an ambitious and costly program devoted solely to protecting the country against an aerial attack. Due to its proximity to the Soviet Union, Alaska would play a key role in the nation's defense strategy by serving as an early warning sentinel and the first line of defense.

The need to protect an area against aerial attack was certainly nothing new; since the use of airplanes in combat, strategists have grappled with defending against the damage aircraft can inflict from the relative safety of the skies. The threat was originally countered with anti-aircraft artillery (AAA) batteries, where soldiers attempted to shoot down highflying planes with long-range guns. The importance of anti-aircraft artillery was highlighted after the Japanese attack on Pearl Harbor, and thereafter became a defensive focus for the United States. For the duration of WWII, batteries were assembled and manned across the country to protect cities, military bases and potential industrial targets from aerial attacks.

After World War II ended, use of anti-aircraft artillery temporarily waned until the Korean War started and the threat of aerial attack emerged once again. Lessons gleaned from World War II had prompted creation of the Air Force as a separate branch within the newly formed Department of Defense in 1947. Control of ground-based air defenses was a point of contention between the Army and Air Force from the start. The Army won command of point defense AAA, while ultimate control over target engagement was given to the Air Force. A new Army command, the Army Anti-aircraft Command (ARAACOM), was formed in July of 1950 to manage the defense. ARAACOM was renamed the U.S. Army Air Defense Command (USARADCOM) in 1957 and the Army Air Defense Command (ARADCOM) in 1961. Throughout organizational changes and technological advancements, the agency maintained control over the country's ground-based air defense weapons.



Figure 2: U.S. Army Air Defense Command insignia.

In Alaska twenty AAA batteries protected the military complexes in Fairbanks and Anchorage from 1950 to 1958. Generally the AAA



batteries consisted of 12 Quonset huts, radars, an ordnance shop, ammunition magazines, a fuse storage shelter, and the 90mm or 120mm guns. Quonset huts were used for administration and soldier housing.² Batteries were manned around the clock, much as Nike missile sites would operate in the future. The conditions facing AAA soldiers, however, were harsher than those encountered at the Nike batteries; life in a Quonset hut can be uncomfortable. When the Anchorage AAA batteries were initially activated in 1950, the 96th Gun Battalion arrived to find their quarters were old, drafty Jamesway huts. The men lived in these for several months until unassembled Quonset huts were delivered for the battalion to construct. The soldiers built their own barracks through the middle of a cold winter, finishing the job in February of 1951. Meanwhile contractors installed latrines, maintenance shops, and mess halls.³

The poor living conditions air defense soldiers faced were not exclusive to Alaska; AAA units across the country were largely deployed with few amenities and little preplanning, for the Korean War had contributed to a grave sense of urgency.⁴ The meagerness of AAA facilities resulted in morale and personnel retention issues that likely contributed to the construction of more comfortable Nike sites, with permanent barracks, mess halls and recreational amenities.

Even as AAA batteries were being widely deployed in the early 1950's their effectiveness was being questioned in the face of advancing aircraft technology. As described by one soldier, "nobody had much fear of a 75 millimeter gun...when they're in an airplane they fly one and a half mach, we finally figured out we could only get about three [rounds] off at it as it passed over. The gun was fast but it didn't have the range, so it had limited capabilities."⁵ The defense technology had to keep pace with progressing aircraft capabilities.

The military realized as early as 1945 that superior air defense weapons were needed: research and development for the Army's first guided missile system began that year. Known as Nike I, or Nike Ajax, the program was accelerated when the Soviets detonated a nuclear device and when the Korean War started. The system was ready for deployment in 1954 and at peak operations there were 200 Nike Ajax sites in the United States.⁶ Concurrent with the deployment of Nike Ajax, limitations in the system's range and kill capabilities were identified. This led to creation of Nike Hercules, the second generation Nike weapon. Unlike its predecessor, Nike Hercules could be armed with nuclear weapons *or* high yield explosives, and its firing range was increased from twenty-five miles to over seventy-five miles. Nike Hercules began replacing Ajax sites across the country in 1958. Fewer Hercules sites were needed since the missile range was significantly increased.

| Nike Hercules MISSILE | |
|-----------------------|----------------------|
| Range | Over 75 miles |
| Speed | 2,700 mph / 3.5 mach |
| Weight | 5,250 lbs |
| Length | 27 feet |
| Nike Hercules BOOSTER | |
| Length | 14 feet |
| Weight | 5,300 lbs |
| Body Diameter | 34 inches |
| Burn Time | 3.4 seconds |

² Colt Denfeld, *The Cold War in Alaska: A Management Plan for Cultural Resources*, U.S. Army Corps of Engineers, Alaska District, 1994. 66,67.

³ 'A History of the 4th Missile Battalion (Here) 43D Artillery' Obtained from Norman Schlittler.

⁴ Colonel Moeller, Stephen P. 'Vigilant and Invincible'. p. 5, 6. Available online at, www.redstone.army.mil/history/vigilant/sus_intro.html.

⁵ Interview, Billy Badger, Anchorage, AK, 4 March 2003.

⁶ Colt Denfeld, *Nike Hercules in Alaska*. Historic American Engineering Record: The Nike System in Alaska. US Army Corps of Engineers, Alaska District, 1988. 2.



As the Army was developing Nike, the Air Force was working on its own surface-to-air missile program, known as BOMARC. The two departments engaged in a fierce competition for funding priority, and at times both programs were threatened with cancellation. In the end, the Army Nike program was developed and deployed first and therefore received priority over the Air Force system. BOMARC was deployed at only eight sites in the United States, all of which were deactivated by 1972.⁷

Though the Nike system was an extremely important element of national security, it was but a single component within an integrated aerial defense program protecting the country during the Cold War. U.S. air defense strategy depended first and foremost on early warning of an attack. This tactic permitted the military to deploy intercepting aircraft to foil aggressors far in advance of their reaching intended U.S. targets. An unparalleled series of radars was built across Canada, Greenland, and Alaska to provide advance warning of territorial breaches. The first Cold War radar system built was the Aircraft Control and Warning (AC&W) system. AC&W was funded in 1949, and by 1954 ten radar sites and two ground controlled interception bases were completed. AC&W was expanded with an additional six radar sites in 1958. The second Alaskan radar network built was the Distant Early Warning (DEW) Line, which extended across the northern border of Alaska and Canada. The DEW Line was completed in 1957, and additional radar sites were added along the Aleutians in 1959.



Figure 3: Nike Hercules Rollout to Firing, February 1968, Site Summit, Anchorage. U.S. Army Photo.

The DEW Line and AC&W would have been useless without communications capabilities for relaying information to military control centers around the state and to the North American Regional Air Defense (NORAD) headquarters. Communication in the north was complicated by severe weather and auroral disturbances, so a reliable system that could overcome these adverse conditions was essential. The military's solution, dubbed the White Alice Communications System, used tropospheric scatter technology to bounce radio signals off the lower atmosphere. The system became operational in 1956, and was later expanded as radar sites were added to the DEW Line, and again with construction of the Ballistic Missile Early Warning System.⁸

⁷ John Lonnquest and David Winkler. *To Defend and Deter: The Legacy of the United States Cold War Missile Program*, USACERL Special Report 97/01, November 1996.

⁸ Georgeanne L. Reynolds, *Historical Overview and Inventory: White Alice Communications System*, Anchorage, U.S. Army Corps of Engineers, 1988.



With reliable aircraft location and directional information, planes could be deployed from forward operating bases at King Salmon and Galena within a moment's notice. Airmen and planes were standing by around the clock for possible interception and/or counterattack missions. If Soviet aircraft made it through this extensive initial network of warning and interception, the Nike Hercules missile system was in place as a last line of defense to protect areas against attacking aircraft formations. Orders and instructions would be disseminated through the North American Air Defense command center (NORAD), which would notify the appropriate Army Air Defense Command Post (AADCP). The AADCPs acted as a communication link between the Air Force, NORAD, and the Nike sites, and controlled the individual firing batteries during an engagement. There were two AADCPs in Alaska, one for the Fairbanks battalion, located at Murphy Dome, and one for the Anchorage battalion, originally located at Fire Island and later transferred to A Battery, Site Point. The Nike sites then would have acquired and tracked targets with their on-site radars, and launched missiles to destroy aircraft, even those taking evasive maneuvers.



Figure 4: Air Force Jet flying over Site Summit. Courtesy Billy Sparks.



Chapter 3 Alaska Nike Defenses



Figure 5: Construction workers pouring concrete ---Site Summit. National Archives and Records Administration. RG 77.

When Alaska was scheduled for Nike Hercules defenses in 1955, the Army originally planned to station three Nike battalions in Alaska, with eight sites in Fairbanks and three in Anchorage. The areas identified for protection were Eielson AFB and Ladd AFB in Fairbanks, and Elmendorf AFB in Anchorage. Four batteries were to surround each Fairbanks Air Force base.⁹ Due to required manpower reductions in the Alaskan theater the Army was forced to cut one battalion from the proposed defenses. The Army chose to delete the Ladd AFB battalion, as Eielson AFB was assigned a higher protection priority. It was requested that one battery from the cancelled battalion, Site Love, be constructed regardless, since protection of both Air Force bases had been planned as an integrated defense. Site Love was needed to ensure that these defenses were not affected by the battalion reduction. The Army agreed, and Site Love was built to complement the firepower of the four batteries surrounding Eielson AFB.¹⁰ The battery was quite a distance from the other four sites, and it was the only site situated north of the Chena River.¹¹

Of the 145 Nike Hercules batteries ultimately deployed in the United States, only thirty-five sites were designed specifically for the Hercules system, and this included the eight Alaskan batteries. All the other sites were converted Ajax batteries.¹² At first the decision that Alaska was to receive Nike Hercules defenses was shrouded in mystery. Though plans were reported in local

⁹ Ladd Air Force Base was transferred to the Army in 1961 and renamed Fort Wainwright.

¹⁰ Alaskan Command Annual JCS History. 1 January – 31 December 1959. Prepared by the Office of Chief Information, Alaskan Command. 41-44. Elmendorf AFB History Office, ALCOM Histories.

¹¹ As Alaska's Hercules defenses were being reduced, so too were anticipated Air Force Thor missile sites. In the early 1950's the Air Force had planned to deploy five intermediate range ballistic missile sites around Anchorage. Real estate planning and design was all but completed for batteries at Pioneer Peak, Eklutna, Eagle River, Bird Creek, and Girdwood when the program was abruptly cancelled.

¹² Lonquest, and Winkler, *To Defend and Deter*, 177.



| | | |
|--|----------------|-------------|
| Anchorage 4 th Missile* Battalion, 43d Artillery | Battery | Name |
| | A (Dual Site) | Point |
| | B | Summit |
| | C | Bay |
| Fairbanks 2 nd Missile Battalion, 562d Artillery | A | Tare |
| | B | Peter |
| | C | Mike |
| | D | Jig |
| | E | Love |

*4th Missile Battalion redesignated 1st Missile Battalion in 1972



Figure 6: Battery control building under construction, Site Summit. National Archives & Records Administration. RG 77, U.S. Army Corps of Engineers.

newspapers, site locations and the number of batteries to be built were kept secret.¹³ As time passed, however, this covert approach diminished.

The Nike Hercules system was a ground-based anti-aircraft defense that used guided missiles to destroy planes. A series of radars and computers identified and tracked targets, and guided the missiles to the point of detonation. Batteries were composed of two areas including a launch site where missiles were actually fired, and the Integrated Fire Control area, where radars and control operations were located. Alaska's Nike sites were designed to protect the Air Force bases, and there were several reasons for having multiple batteries guarding a single location.¹⁴ First, the best way to strategically defend an area is through a ringed defense. Second, each Nike battery had a dead zone; a four-mile radius around the launch facilities where its missiles could not reach. Third, multiple batteries allowed sites to regularly stand down for deep maintenance while others carried the burden of being on high alert.¹⁵

Sites were built as small self-contained communities with power systems, housing, and water and fuel supplies. Construction of

Alaska's Nike sites required careful planning and design to ensure weather and terrain conditions did not slow the process. The U.S. Army Corps of Engineers headed the construction effort and awarded a \$9,495,744.00 contract to Patti McDonald Co. and M-B Contracting Co. for construction of the Anchorage Nike sites in 1957. Peter Kiewit Son Co. acquired the \$12,771,000.00 contract to construct four of the Fairbanks Nike sites, also in 1957. Then in 1958 B-E-C-K Constructors received a \$3,033,000.00 contract to build Site Love.

¹³ "Missiles to Give Added Local Defense" *Anchorage Daily News*, 11 Aug. 1955, and "Guided Missile Stations will Be Erected Around Fairbanks: Land Now Being Taken Over for Sites; Rockets Will Be Launched from Secret Bases; No Word on Location or Number" *Fairbanks Daily News Miner*, 11 Aug. 1955.

¹⁴ It is often stated that the Alaskan Nike sites were built to protect the cities of Anchorage and Fairbanks. However, early Alaskan Command documents discussed the relative strategic values of Elmendorf, Eielson and Ladd AFB to determine which area would receive deployment priority. There are no references concerning which city was deserving of a higher protection value. Also, a quick study of the Nike battery locations shows them to be triangulated around Elmendorf AFB and Eielson AFB. The system would have offered some default protection of Anchorage and Fairbanks, but urban protection in Alaska was likely an ancillary, indirect function.

¹⁵ Christina M. Carlson and Christine Whitacre, *Last Line of Defense: Nike Missile Sites in Illinois*, Denver, Colorado, National Park Service, 1996. 40.





Figure 7: Site Summit launch building before installation of rails and launcher. Courtesy Bill Momsen.



Figure 8: Site Summit, installation of launcher and rails. Note crewman with broom - an essential tool, according to Billy Momsen. Courtesy Bill Momsen.

After contractors built the battery buildings, Army personnel installed the technical equipment and turned the sites into functioning batteries. Bill Momsen, with the 194th Ordnance Detachment, helped set up the launch area on Site Summit in 1958 and 1959. He remembered the crew's first task was to plow snow off the launch pads, and heat the concrete to drill holes for the launch frame's lag bolts. Heating the concrete was accomplished with gasoline heaters and tarps, which had an inconvenient tendency to catch fire.¹⁶ All the batteries became operational in 1959 except for Site Love, which was not ready until 1960.¹⁷

The eight Alaskan Nike sites were basically the same except for Site Point (A Battery), in Anchorage. Site Point was a double site with four launch buildings, and two composite battery control buildings with all the associated radars. The site operated as two separate batteries under two units. At Site Point a Major commanded the batteries, in contrast to the typical Alaskan Nike site, which was controlled by a Captain. Site Point operated as a double battery until 1970 when budget cuts forced one battery to decommission. The extra space was then used to house the southern Army Air Defense Command Post, which was being relocated from the AC&W and NORAD control center at Fire Island.¹⁸

The Fire Island facilities were also decommissioned for budgetary reasons.

Though the layout and facilities of each battery were fundamentally similar, the building and working conditions at each site were not. Site Summit, at the top of the Chugach Range 4,000-feet above sea level, was the most difficult Alaskan battery to construct. Sixty vertical feet were blasted off the mountaintop to raze a platform for the battery control building and radars. Blast holes were located at 5-foot intervals with a depth ranging from 16 inches to 24 feet. The holes were loaded with 1½ cartridges of Atlas dynamite. Over 25,000 cubic yards of rock were removed from the site. Usable material blasted from the peak was recycled for road and area fill.

¹⁶ Bill Momsen, correspondence with Kristy Hollinger, June 2004.

¹⁷ Denfeld, *Nike Hercules in Alaska*, 5.

¹⁸ Historical Report, 1 January 1968 – 30 June 1968. 626th Aircraft Control and Warning Squadron Fire Island Air Force Station, Alaskan Air Command. Elmendorf AFB History Office, Fire Island.



Excess rubble was bulldozed off the mountainside. The mountaintop weather hindered construction crews somewhat. Visibility was often so poor that, “driving to the day’s work through a sunny summer day, they would be engulfed in fog layers so thick ‘you could put out your hand and move it.’”¹⁹ The battery’s unique location added approximately twenty percent to the average battery construction costs.

Site Summit was subject to very extreme weather conditions due to its location at the top of the Chugach Mountains. Snow, fog, and high winds frequently socked in the site. The Integrated Fire Control (IFC) building was anchored to the ground by six feet square four feet thick concrete pads with encased steel rods.²⁰ Even so, as Billy Badger recalled, “that site took a beating. I sat there one day during lunch next to the window and if you noticed it had these huge beams that went down into the rock I guess to anchor the buildings up there so they wouldn’t be blown away. And I could just feel that building shaking and see these girders out there just trembling from the high wind we were having.”



Figure 9: Site Summit, Nike missiles on launchers. Courtesy Bill Momsen.

¹⁹ E.L. Atkinson, ‘Alaska Contractors Build Difficult Nike Sites’ *Excavating Engineer*. March 1959. 14-16.

²⁰ E.L. Atkinson, ‘Nike Site Carved from Alaskan Mountain’ *Pacific Building & Engineer*, December 1957.



Site Summit Christmas Star



Figure 10: Soldier replaces light bulbs on Christmas star. U.S. Army photo.

Through the years the Christmas Star has served as a highly visible reminder of Site Summit. The star, which shines through the winter months, was the idea of the first Battery Commander, Captain Douglas Evert. He directed battery personnel to build a 15-foot star on the gatehouse as a holiday symbol, and reminder of the site's presence. The star was too small to be viewed in detail from Anchorage, however, and in 1960 a larger star was built.²¹ Over the years it was expanded until the existing 300-foot star with 350 60-watt bulbs was built in 1989.

Warrant Officer Joseph Holland remembered performing frequent maintenance on the popular Anchorage landmark. "The star was the launcher area's responsibility," he stated, "So I have walked around that star many times counting the bulbs to make sure that they were burning... And we would always make sure we would light it up and make sure all the bulbs were burning before the big event to light it up, you know, with the rest of Anchorage." Mr. Holland also remembered that the star served as guidepost: "all you had to do was aim for the star and it will bring you back to Fort Rich."

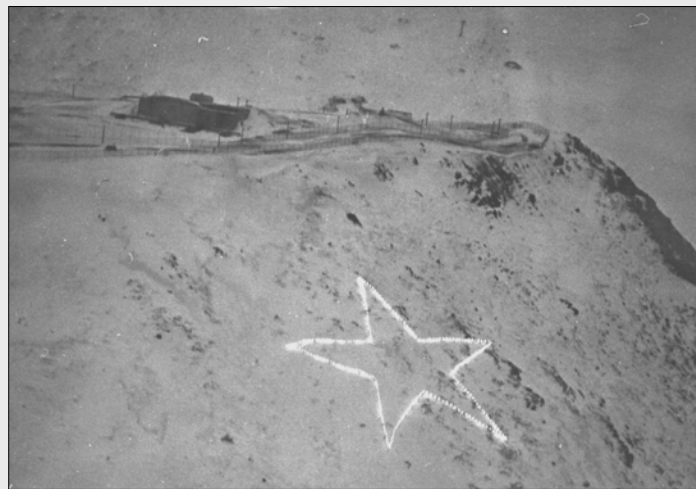
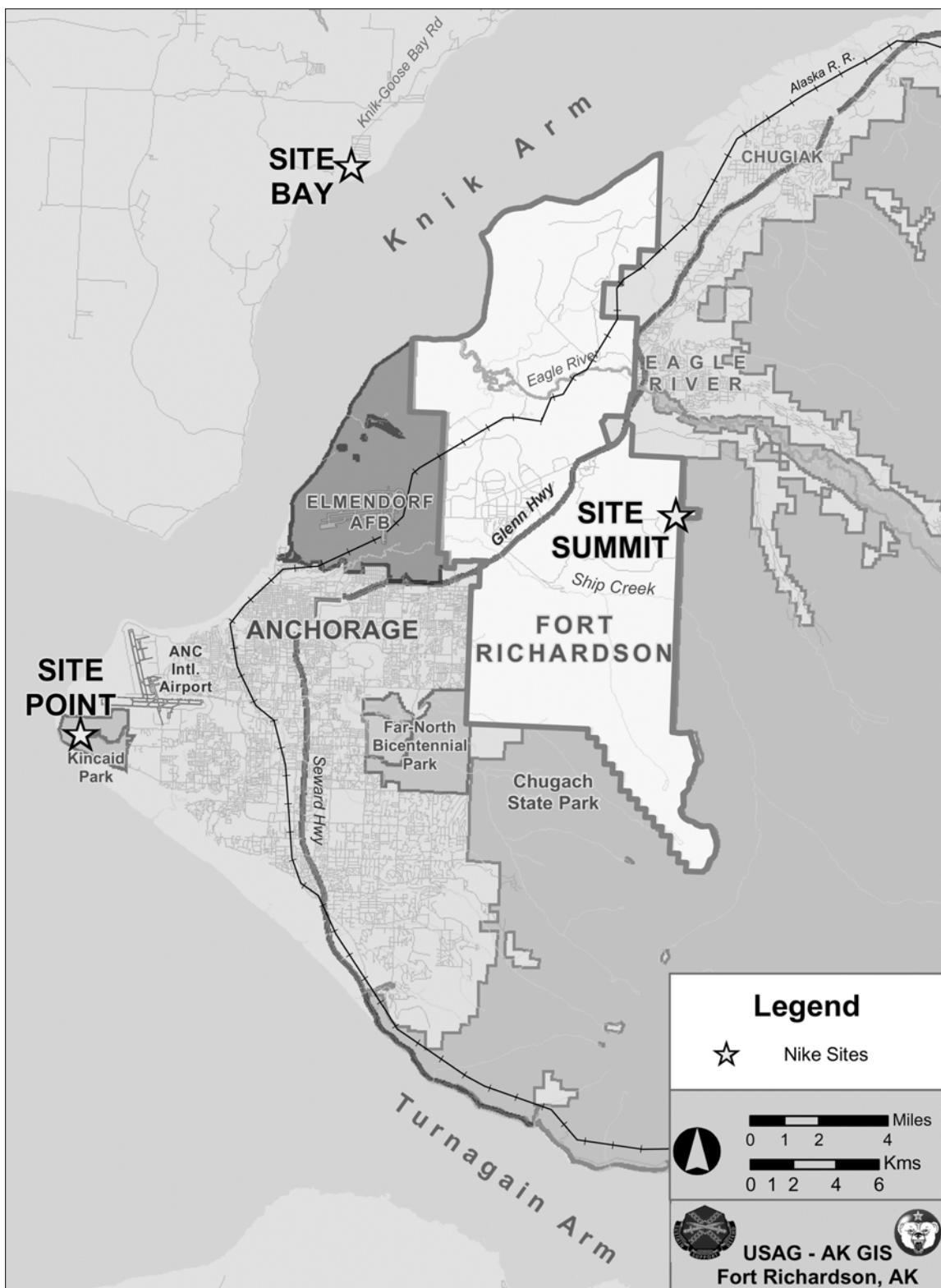


Figure 11: Christmas Star below the launch area, Site Summit. Photo by Lyman Woodman, U.S. Army.

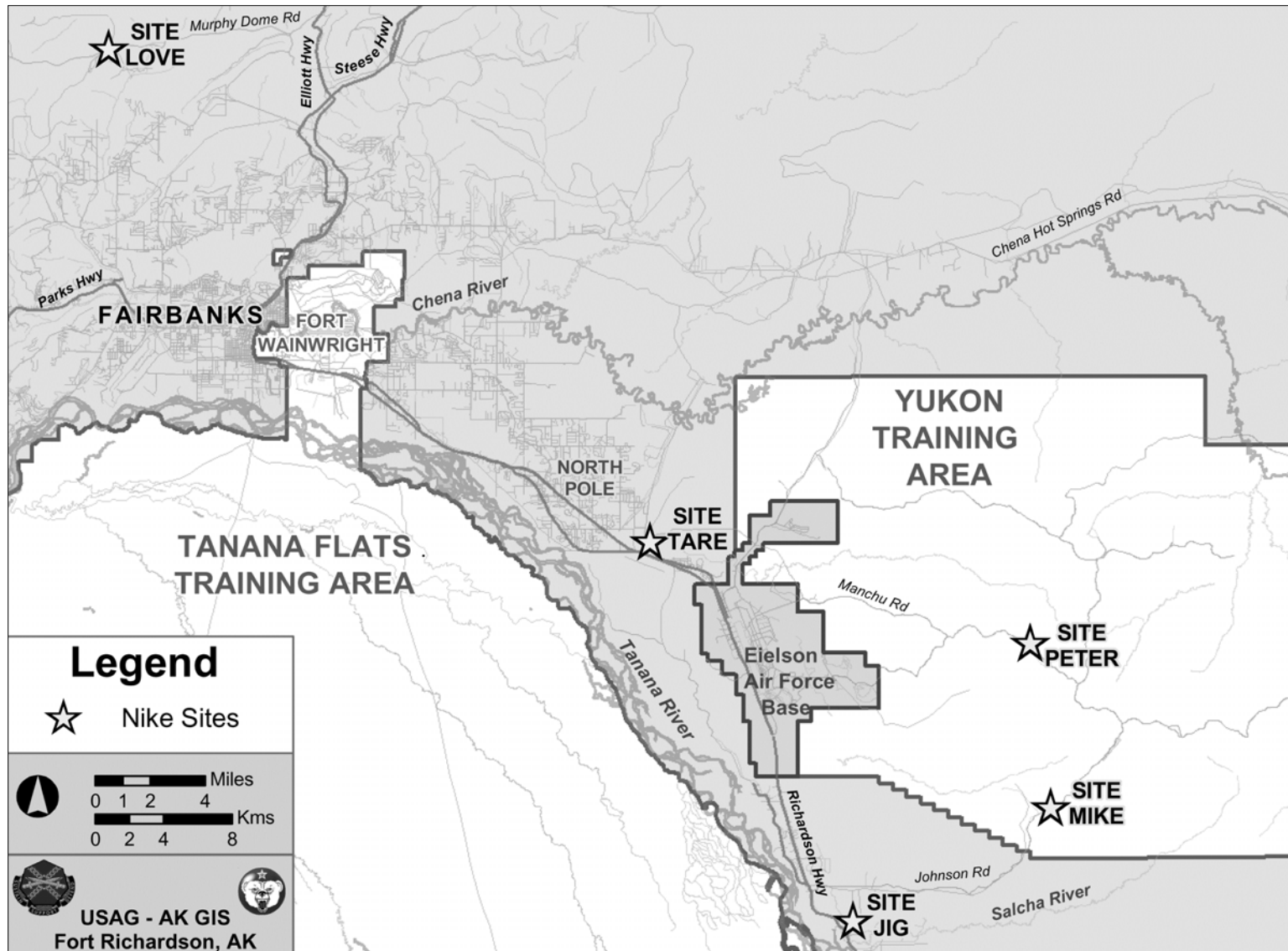
²¹ Denfeld, *Nike Hercules in Alaska*, 20.





Anchorage Area Nike Sites





Fairbanks Area Nike Sites





Figure 12: B Battery IFC area, 1970, Fairbanks. Courtesy Jim O'Connor.



Figure 13: Personnel posing in front of guard shack. C Battery, Fairbanks. Courtesy Edward Hogan.



Chapter 4 Operations

At the heart of the Cold War missile program were the missiles themselves....One must remember, however, that the missiles themselves were only a small part of the operational weapon system; something akin to a bullet in a gun. To become effective instruments of combat power, the missiles had to be banded in secure launch facilities, directed to their targets by complex guidance systems, and maintained by dedicated crews and supported by an extensive logistic network.

~ To Defend & Deter, The Legacy of the United States Cold War Missile Program. 163 ~

Alaska's two Nike battalions and their direct support ordnance companies fell under the command of the U.S. Army Alaska (USARAL) Artillery Group, headquartered at Fort Richardson. The Group was directly responsible to the USARAL Commanding General for Army participation in the active air defense of Alaska, which involved Nike Hercules batteries, fighter interceptors, and the associated early warning radars and communications systems.²² The Nike system was part of a closely coordinated air defense effort managed by the North American Air Defense (NORAD) / Continental Air Defense (CONAD) Region Combat Center at Elmendorf Air Force Base. (See Chart 1, p. 18)

Filtering down to the battery level, running the missile battalions required a streamlined command and control system as well as completely reliable communications with the NORAD command units and the Air Force. The missile battalions were organized with a headquarters battery and the requisite number of missile (firing) batteries. Headquarters personnel were charged with command, administration, operations, training, maintenance, supply, and communications management. The Army Air Defense Command Posts (AADCP) also fell under the headquarters battery. Each individual missile site then was composed of two platoons; the battery control platoon and the launcher platoon.

Army Air Defense Command Post (AADCP)

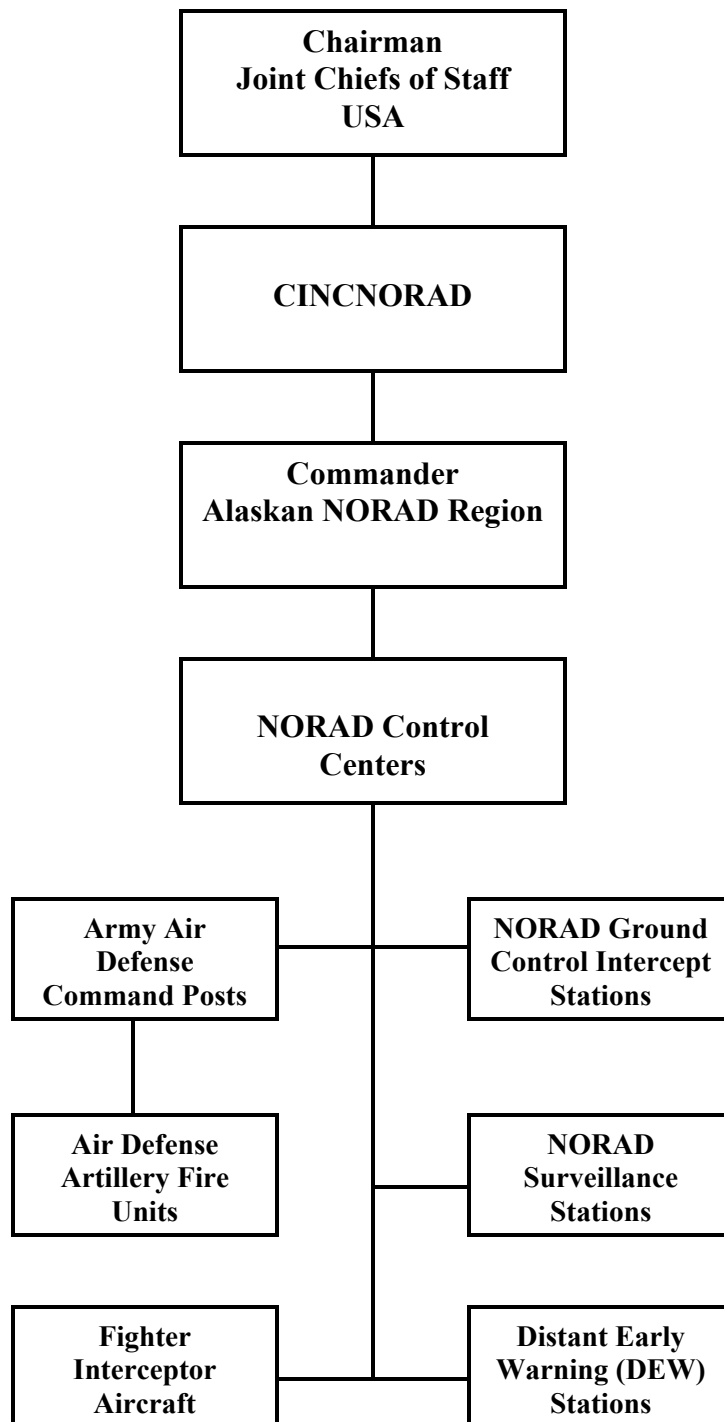
The Army Air Defense Command Post (AADCP) was part of Headquarters and Headquarters Battery. The AADCP was a crucial communication link connecting the Nike sites to each other, to the Air Force, and to the NORAD control centers. AADCPs monitored the skies to determine whether aircraft were friend or foe, and would have controlled the Nike batteries during an authentic target engagement. In addition to controlling the batteries during a fight, the AADCPs also designated battery alert statuses, choosing which sites were on fifteen minute, one hour or three hour alerts.

There were two AADCPs in Alaska, located at NORAD command posts on Murphy Dome and Fire Island. The Murphy Dome AADCP controlled the Fairbanks Nike batteries while Fire Island controlled Anchorage. In 1969 the Fire Island NORAD control center was closed, and the associated AADCP relocated to Site Point, A Battery, in Anchorage. Battery A was a double

²² 'A Century of Partnership, USARAL,' USARAL Pamphlet 360-11. 4 November 1967.



CHART 1: NORAD CHAIN OF OPERATIONAL CONTROL ²³



²³ From ANR/ACRR 23-, HQ Alaska NORAD/CONAD Region. May 1969. Additional info on Canadian aspect of the system can also be found at the same reference.



firing unit with twice the facilities of the typical Alaskan Nike site. One firing unit was deactivated in 1969/1970 and the AADCP operations occupied the extra facilities.

The AADCPs were manned by approximately four officers and seventeen enlisted men.²⁴ S.E. Thomas was a tactical director at the Anchorage AADCP when it was located at A Battery, Site Point. “Most of our time...all we [did was] train, train, train, train,” he remembered. Typical duty involved studying air corridors, and watching the scopes for unidentified aircraft. AADCP duty was similar to Nike duty in that personnel were working at isolated sites that required round-the-clock staffing. The AADCP had to be one hundred percent accurate when identifying enemy aircraft so friendly planes were not inadvertently shot down. Men spent countless hours studying the rules of engagement. Training exercises were conducted very seriously – ‘real world.’ AADCP Crew Chief Dan Gillman said the high stakes could make for stressful working conditions: he remembered a soldier succumbing to the pressure and fainting during an exercise.

An interesting and important component to AADCP operations was the plotting board where personnel kept track of aircraft on a transparent Plexiglas map board. Though everything was electronically managed, the plotting board provided commanders a useful visual aid, and it served as an information backup in the event of a power failure. The man plotting stood in back of the board so everyone in the room had an unobstructed view. Therefore, the plotter had to write backwards for the people viewing it from the opposite side: S.E. Thomas stated, “I tried it and it was hard for me...it was almost like writing Chinese.” Another remembered, “Sometimes after a long exercise in that position you would find yourself writing backwards on things by accident or forgetting which direction certain characters normally faced. I specifically remember having to re-teach myself which direction the number “5” is supposed to face once.”²⁵

Integrated Fire Control Area

Nike batteries were divided into two areas: a launch complex and an Integrated Fire Control (IFC) area. The sections were separated by at least one to two miles, with the IFC occupying the higher ground for radar purposes. The sites were divided because the Missile Tracking Radar (MTR) needed to be distanced from the launch pad in order to track fired missiles.

The IFC area was mainly one large composite building containing the barracks, mess hall, PX, offices, and the radar and control systems to operate the missile launchings. The radars for tracking incoming targets and guiding missiles in flight were located in close proximity to the building. There were four radars including the Target Tracking Radar (TTR), Target Ranging Radar (TRR), Missile Tracking Radar (MTR), and High-Powered Acquisition Radar (HIPAR). The MTR, TTR and TRR were



Figure 14: HIPAR, Site Summit. Courtesy Gregory Durocher.

²⁴ Historical Report 1 January 1968 – 30 June 1968. 626th Aircraft Control and Warning Squadron, Fire Island Air Force Station, Alaskan Air Command. Elmendorf AFB History Office, Fire Island.

²⁵ Site Point, Alaska: The Last North American AADCP of the Last Operational Nike Hercules Missile Battalion, http://home.att.net/~jsstars/1_43/AADCP.html.



designed with special retractable clamshell covers for sheltered maintenance and periodic de-icing during the winter months.

The TTR and TRR, similar in designation and function, tracked incoming targets communicating aircraft range, direction, elevation, and speed information to the computer. The TRR was instrumental in preventing enemy radar jamming, a potentially serious threat to the execution of a missile launch.²⁶

The MTR, as the name suggested, followed the path of fired missiles, relaying direction, elevation and speed data to the computer, and communicating the missile detonation command. The MTR also communicated guidance commands to the missile in flight to allow it to follow aircraft taking evasive maneuvers. After a missile was detonated the MTR locked onto the next missile readying for fire on the launch pad: the MTR could only direct one missile at a time.



Figure 15: Fire Control Van, Site Summit.
Courtesy Billy Sparks.

The HIPAR, sometimes referred to as the ‘golf ball’ for its similar appearance, was a prominent feature of the Nike sites. This radar, the largest on-site, swept the skies seeking targets at a much greater range than the TTR and TRR. HIPARs were added to Alaskan Nike Hercules sites in 1962 after live fire exercises revealed some problems with the target acquisition. Installation of the new radar took about sixty days at each site.²⁷ The HIPAR was an important tactical addition to the system, giving the batteries more preparation and warning time, and allowing missile detonations to be executed at a greater distance from the sites. The farther away missiles were destroyed the better, for as Billy Badger recalled, “we finally figured out that if we were to fire one at an aircraft when it first came on our screens, by the time it got there at the speed that they travel and we burst a good one right up in front we were probably going to get burned but nobody ever talked about that.”

The radar and fire control operating equipment were housed in two mobile vans installed in the IFC building. Originally the Nike Hercules system was designed as a mobile unit. When land limitations forced the Army to build permanent Nike emplacements, it was easier to adapt the mobile structures into a permanent building rather than redesign the entire system. The vans were installed side-by-side so the battery commander could easily walk between the two areas.

²⁶ Nike Radars and Computers. April 1971. U.S. Army, Missile and Munitions Center and School. Redstone Arsenal, Alabama. MMS Subcourse 150. Available from <http://ed-thelen.org/MMS-150.html>.

²⁷ Fact Sheet ‘HIPAR Radar at Alaskan Nike-Hercules Sites’ On file in Public Affairs Office, Fort Richardson, Nike files.



There were two vans: one for fire or battery control, and the other for radar control. The battery commander would have spent the majority of his time in the battery control van, where the firing



Figure 16: Soldiers perform maintenance on radar, Site Summit. Note closed clamshell covers. U.S. Army photo.

button was located. This van contained communications equipment linking the commander to the Army Air Defense Command Post (AADCP). AADCP controlled target engagement and relayed information and orders from NORAD control centers. A great deal of equipment was packed into the battery control van including the battery control console assembly, the acquisition radar cabinet assembly, the computer assembly, plotting board, an event recorder and a switchboard cabinet assembly. Including the battery commander, or duty officer, there would have been about four people in the 40' x 8' van.

The radar control van, also known as the tracking trailer, contained all the radar operating equipment such as the target radar console, missile tracking radar console,

radar power cabinet assembly, the radar range and receiver cabinet assembly and additional TTR and MTR equipment. The men working in the IFC area were sometimes called 'scope dopes', while the launcher crewmen were known as 'pit rats'.

Maintaining the radar equipment and computers was an endless job. Flawless operations were essential since a minor mistake could trigger a misfire. Equipment was put through a battery of daily, weekly and monthly checks. Computers of the age were large, loud machines that needed constant fine-tuning as Bobby Pace remembered:

"We had electron tubes. We didn't have the good solid state stuff that you have now....The fire control equipment used to be in a 16-foot by 8-foot van. And that same equipment now could probably be put into a brief case.... Some electron tubes would be five inches high and two inches wide...They changed their outputs real rapidly or easily....The reliability of the equipment then was not very stable. It changed frequently. That's why every two hours we had to check the alignment of it. And we used to use the phrase touch it up, peak it up, tune it. Where nowadays the equipment would stay probably for months cause they use solid-state devices now. But back in those days it was just old electron tubes."





Figure 17: Missilemen walking to Control Area of a Fairbanks Nike site, 1962. Note open clamshell cover on radar, right. U.S. Army Photo.

Launch Area

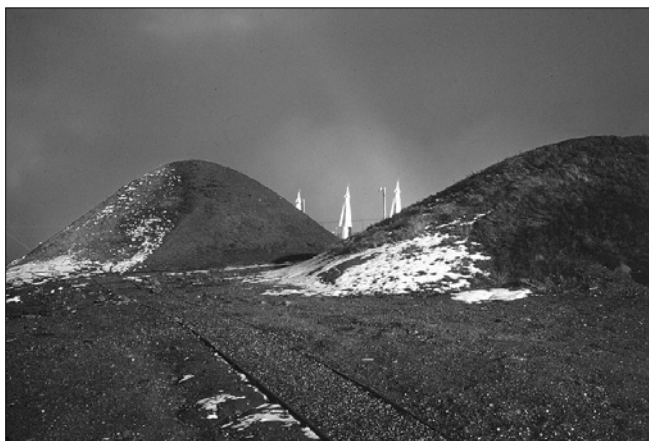


Figure 18: Launch area, C Battery, Fairbanks. Missiles peaking behind earthen barricades. Courtesy Edward Hogan.

Missiles were stored, assembled and launched from the launching area. This part of the site contained the missile launch and storage buildings with their associated launch pads, the launch control building, facilities for guided missile maintenance and the dog kennels.

Operations within the launch area consisted of several primary duties; assembling and maintaining the missiles, maintaining the launch area, and preparing missiles for a firing, be it an exercise or a real alert.

Launcher crewmen spent more time outdoors than their counterparts working in the fire control area, as Joe Leone of C Battery in Fairbanks remembered. “We had to do all the maintenance, painting, make sure all the unit was operating properly. And keeping the outside of the launchers free of ice, [and] snow, which took a lot of time. Even though the concrete was heated on the colder days we had to get out there and chisel the ice and snow off. And we were there for the record cold....I remember seventy below.” Besides keeping the launch pad clear, the crew also had to work outside when preparing missiles for a live fire exercise or during an Operational Readiness Evaluation. Officer Don Neal describes the process:



During the annual live firing exercise in the Fairbanks defense area, I had to evaluate the downrange preparation of the missiles and boosters. The booster cluster had four igniters that had to be electrically checked out and screwed into the individual booster bodies. On launch, these igniters fire and light off the booster propellant. And the igniters were full of black powder, sensitive to handle – you don't want to drop one. It's got to be done outside, so you're out there, the wind's blowing and it's 35 below. You've got all your heavy clothes on, but to test and then to get the igniters started into position, you've got to use your bare hands. I'd stand there observing, gloved hands in my pockets, wishing I was someplace warm, watching those crewmen working without any gloves. It was tough duty!²⁸

Dan Caputo remembered the impact a Nike site's weaponry could impart as he entered a storage bunker at C Battery in Anchorage as a young soldier. "I tell you it was an awesome sight ...you just look around at the power that was there. And...you were an 18 year old kid, you were in the middle of nowhere, and you walk into this giant, big old looking thing and its got these missile parts and missile noses and you just stand there in awe and say what the hell am I doing here?"

Launcher crewmen also expended a lot of time inspecting the missiles and checking the guidance system. Warrant Officer Ernie Collins explained:

We had a great deal of test equipment. Our normal...job was to maintain the missiles and test equipment. Missiles got monthly, quarterly and annual checks. They had a daily inspection...which was a visual inspection. And on the periodic inspection, that included checking the guidance system of the missile itself and associated electronic equipment.

Alaskan missile sites were notable for their above-ground launch structures. In the Lower 48 land constraints often forced the launch building to be constructed underground, with the launch pad on top of the building. The missiles were raised to the launch pad on missile elevators. This reduced the amount of land needed for the batteries; land was costly in urban areas, and often had to be withdrawn from private ownership in the name of national security. In Alaska, however, land was abundantly available so the buildings could be built above ground.

Ira Rion, who worked at Nike sites across the country, remembers Alaska's above-ground launch buildings afforded a more pleasant working environment than the underground structures where the men labored in the subterranean dark, day and night. "Here it was different it was all above ground....I think it was nicer, for morale to the men. You know, if you're working in closed buildings all the time it's not too good for morale."

In the early years of Nike operations, launch crews often had to walk the one or two miles down to the launch complex from the battery control building where they had meals and permanent housing. Later, personnel vehicles became available and frequent 'pass runs' were driven between the two areas. When a battery was on 'hot' status crewmen spent the night in the launch complex. There was a bunk and recreation room in the back of the assembly building where men could catch a few hours sleep or play cards and pool.

²⁸ Don Neal, correspondence with Kristy Hollinger, June 2004.



Support

Nike Hercules was a highly complex system composed of over 1.5 million individual parts. In addition to those manning the batteries, there were a number of people working hard behind the scenes to ensure sites remained operational. The U.S. Army Ordnance Corps, the military branch responsible for supporting the development, production, acquisition and sustainment of weapons systems, played an important role in maintaining the Nike system.²⁹ There were two companies supporting the Alaskan batteries; the 524th for Fort Richardson and the 166th for Fort Wainwright. The Corps supported the Nike mission by assisting the batteries with their prolific maintenance requirements. Ordnance companies performed repairs on virtually every component of the missile sites - from the radars to the missiles themselves.

Each company consisted of approximately one hundred men.³⁰ As batteries experienced equipment troubles that were beyond their capabilities, Ordnance was called out to do the repairs. George Wallot describes ordnance duty at Fort Richardson: "Our work consisted of two basic types. Fixing and calibrating modules in the shop, and on-site repair and calibration of the missile batteries themselves. Every fourth weekend, we were on call in case of emergency. One weekend when I was on call, I was rushed to the military airport with my tool box and a big Chinook helicopter with me as the only passenger...whisked off to Goose Bay at C battery." Mr. Wallot remembered that most of the maintenance problems he dealt with were related to replacing and recalibrating the numerous vacuum tubes in the Integrated Fire Control (IFC) computers, which were notoriously temperamental.

Besides the Ordnance Corps, there were also a small number of Department of the Army civilian employees supporting the command, most of whom were assigned out of Redstone Arsenal, Alabama. These highly skilled personnel were on call 24 hours at a time to address problems which needed to be solved quickly. Don Neal remembered the men were very dedicated, "I recall several instances when one was sent to the Fairbanks defense on no notice in the dead of winter, staying on site for days or weeks hunting down a particularly tricky glitch in the system...it made the young soldiers feel better to see civilians right there in the middle of things, trying to get the system back in action."³¹

Site Security

Nike duty was considered extremely sensitive due to the weaponry stored at the sites, and ideally all personnel needed a Secret Clearance. At times soldiers were sent to a battery before their clearance paperwork processed. Subsequent background investigations occasionally revealed an individual to be a security risk unsuitable for the high level of clearance necessary to work at the site. Bob Eaglesham of C Battery in Fairbanks remembered these men had a hard time:

²⁹ U.S. Army Ordnance Corps Online. <http://www.goordnance.apg.army.mil/OrdnanceMission.htm>

³⁰ The Fort Wainwright Ordnance Corps company was located in Building 3475 on the south side of the cantonment. The building was constructed in 1958. After the deactivation of the Fairbanks Nike defenses in 1971 it served as a general maintenance facility. The Fort Richardson Ordnance company was located in Building 789. The missile repair facilities were located in a series of buildings off the Glenn Highway, which are now occupied by Range Control.

³¹ Don Neal, communication with Kristy Hollinger, June 2004.



Those poor fellows some of them would stay on the missile site and just do menial work because they weren't allowed to do any of the mission work because...they couldn't get into the launcher area where all the missiles were. So they were pretty much confined to the unclassified areas and they stayed on KP and it was a shame. Or worked in the motor pool, did other things that were not essential because they couldn't get a security clearance.

Nike personnel operated under a strict two-man rule. No one was supposed to go anywhere without at least one other person. Accordingly, if one man had dubious intentions, another would be present to stop him. With the exception of certain staff that required access everywhere, soldiers were not supposed to enter areas they themselves did not work. As explained by Edward Hogan "you had to have clearance, you know you had to have a reason to be in there. You know just because you had a secret clearance didn't mean you could go everywhere...I had a secret clearance but I didn't go into the modules inside the locked room where they fired the missiles from because I had no need to know."

Each Nike battery had a contingent of Military Police generally consisting of twelve to fifteen men. MPs guarded the Nike sites against sabotage and unauthorized access twenty-four hours a day, seven days a week. They spent most of their time in the launch complex. Two fences surrounded the area; the outer fence was known as the limited area, and the inner fence was the exclusion area. The fence tops were strung with barbed wire. MPs checked every man going in and out of the site at a guard post on the outer fence. The area inside the limited fence was the most secure part of the Nike site. As MP Greg Durocher said, "we often joked about the outer fence, it was halt, halt, bang. The inner fence it was bang, halt, halt." Every site had approximately five guard dogs to patrol the area between the two fences.

In addition to preventing genuine unauthorized access incidents, MPs also had to be on the alert for test infiltrations of the site from their own headquarters or from the counterintelligence corps. Jackson Murray was the S-2 in charge of site security for all the batteries. He remembers a fortuitous coincidence that helped him foil a counterintelligence infiltration:

I went up on the site one day and the first sergeant said to me, thanks for the new man. And I said what new man? He said, the corporal just reported in. I said let me see his orders. And he dug out a piece of paper

Launcher crewman Joe Leone relates a dog encounter at C Battery, Fairbanks.

We had to call the MP's in the guard panels at the guard shack if we wanted to go out to the assembly building and use the bathroom. Which was fun sometimes, because the dog handlers were a pretty wild bunch of guys. They'd let us out the gate knowing that the dog was running around, and we'd get out of the gate and all of the sudden this German Shepherd is tearing up the hill at you, and you know we'd make a beeline for the gate. It was only ten feet away but it scared you.



Figure 19: Dog and handler inside fence. U.S. Army photo.



and...I recognized the signature of the Adjutant General in Washington...because he's the one who signed my commissions. And I said where is this guy? He said, oh he's in the mess hall. I said go get him. And actually it was a counterintelligence penetration attempt. And this guy had showed up with a corporal's uniform on and a set of orders. We never got orders [like that], it was all typed, all mimeographed orders. And here was a big set of orders. And if I hadn't have been there they probably would never have noticed it.

Murray also practiced infiltrations of his own to ensure the batteries were securely guarded:

I managed to break into quite a few of the sites. It was my job to see if I could penetrate, and I did....Well one time it's like thirty below zero and it's cold out there...but we were wearing parkas with big fur hoods on them and everything. So when the mess truck pulled up with hot food they had a cook and somebody's helper there and another guard and I just fell in behind the group and just kind of snuck right in and they didn't notice I was in until I was already there. And I told them, you've been penetrated. And he says actual or a test? And I said actual, I'm here. And the stripes flew.

Counterintelligence did not always circumvent security so easily, as Dan Caputo of Site Summit explained:

The job of the infiltrators was to try and con their way into the missile site. They weren't supposed to climb the fences or cut the wire. But I guess for pride and everything else they used to try and climb the fences. And that's when the canine dogs had a field day. I remember a couple of [these guys] being caught up on the barbed wire, hanging, one leg over each side of the wire and the dog pulling at him.

MPs worked long hours guarding the Nike sites twenty-four hours a day, seven days a week, with just twelve to fifteen personnel. The presence of guard dogs aided security considerably, since they could be released between the fences, protecting a large area from infiltration. As Jackson Murray said, "They could pick up a person a lot better than a man could as far as seeing them, hear[ing] them." However, the dogs could not eliminate the inherent tedium and loneliness of guard duty, as Ira Rion remembered. "They actually controlled the fence at night with the dogs. Well they used to say most guys talked to their dogs at night but [when] one of them thinks his dog's talking back to him it's time to pull him. Because it could get a little bit hairy out there at night. Especially in the winter."

The guard dogs were trained to be vicious, but a few were particularly bad tempered. Dog handler Edward Hogan of C battery in Fairbanks stated: "I had a very vicious dog. The most vicious dog there and he'd bite anybody that he could reach including myself occasionally."



Figure 20: Guard shack, Gate 2. Site Summit. Courtesy Gregory Durocher.



The Nike sites were well guarded and security breaches were rare. Site Summit, however, was uniquely situated near a popular hiking and recreational area, on the border of Chugach State Park. Joe Holland, Launcher Chief at Site Summit, recalled that blueberry season brought many people to the area, and some walked a bit too close to the site. “We would tell them, look, just go on back down the hill and everything will be fine,” said Joe Holland, “Once in a while we would have somebody who was really obstinate. So...we’d call post and they would send MPs up there and take them away.” Greg Durocher also remembered, “we did interdict tourists basically, you know wandering around and telling them to head back down and confiscate cameras if necessary. And the base would develop the film and if there was any pictures of the missile site then they would be confiscated.” Billy Sparks relates another Site Summit security incident that occurred in the mid 1970’s during a period of tension with the Middle East. A group of hikers were spotted walking towards the site. “And they were just tourists or something. And they came up through the ski bowl and just started hiking up through here. And so we sent a platoon down and we captured them. And the CIA or something came and picked them up and took them down there. And they determined they weren’t involved in anything.”

Site Summit was not the only battery to experience security issues. MP Thomas Kontes describes an incident that arose at C Battery, in Fairbanks:

The only security breach we had up there was a bear, and we let him in on purpose. We actually enticed him in through the gates, in the lower area. This wasn’t up at the high security, this was down below. But still....And the bear went up to the dumpster and we left the trap door up in the dumpster and the bear crawled in. I sneak up with a broom handle and flip the door shut. And the bear kicked around in there for a while but it was dark in there so he laid down quietly. And the Mess Sergeant we had at the time...we knew his habit was to come out and throw the garbage away in the morning. So we sit down there waiting and all of the sudden he came out. I wish I had a video camera. But he grabbed [the door and] threw that open and was going to throw the bag in. And as soon as that bear saw daylight it just leaped out!... And the bear had enough sense to know hey, I can run through this gate.



Figure 21: Defensive sandbag bunker, Site Summit, IFC area. Courtesy Billy Sparks.



Figure 22: Billy Sparks in front of bunker, Site Summit. Courtesy Billy Sparks.



Well we hit the electric button and had the gate open[ed] and the bear went and then we closed it. And we got called into the Captain's office about two hours later. He wanted to know how a bear could get into a security area without us knowing it.

In the mid 1970's political tension in the Middle East prompted the Site Summit Battery Commander to bolster site security measures by fortifying bunker positions with sandbags and digging defensive foxholes around the battery. In addition to these measures the MPs were ordered to clear all rocks larger than six-inches off the mountaintop. The purported rationale was to remove potential cover in the event of an attack on the missile site. The MPs unenthusiastically started piling up rocks and dumping them off the mountainside. But as Greg Durocher remembers, they dumped more than rocks over the side:

In the course of rock-picking, we came across what appeared to be some kind of fence post – a round pipe about 5 feet long with a big cylinder of concrete molded around one end. Since the end was much more than 6 inches across, we consigned it to the [rock] pile as well. It took a couple of us to hurl it over the fence, and we all watched in fascination as the accelerating mass caused the opposite end of the pipe to whop the tundra like a giant flail. It got moving fast enough to disappear over the lip leading to the steep hillside below. Our visual treat was just beginning, however, as its path took it through the giant Christmas star that we see from Anchorage, and we witnessed numerous 60-watt light bulbs come flying into view, along with assorted strands of wire and support posts. We could follow the path of our unseen juggernaut by the brief appearances of the stellar remnants being hurled into the air. Now you almost had to be there, but to a bunch of grumpy 20-something's this was the most hilarious thing we'd seen in ages. We were laughing so hard I don't know if any of us could stand up. We howled for several minutes, and nothing got done for quite a bit longer.



Chapter 5 Training, Testing and Readiness

Nike Hercules was a complex defensive weapon system requiring a cadre of highly trained personnel working together for successful operations. As one commander commented, “A Nike battery typifies to me real teamwork, more than anything I can think of at this time. Not only the men on the instruments, the radars, and the missiles, but the cook and the mess sergeant...if they don’t keep the missilemen happy, they’re not going to shoot right. It has to be a coordinated, working team.”³²

From 1959 to 1973 a significant portion of the young servicemen operating Nike sites across the country were draftees. The draft ended in 1973 when the military reverted to an all-volunteer service. Draftees and volunteers were distinguishable by the first two letters on their dog tags. Enlistees’ ID tags were prefixed with ‘RA’ for ‘Regular Army,’ draftee dog tags started with ‘US’, Commissioned Officers had an “O” and Warrant Officers a “W”.³³

Though many were drafted, many more volunteered, and individuals had varying reasons for signing up. Many volunteered simply to serve their country. Others joined in order to avoid being drafted at a later age. Edward Hogan of Site Mike signed up when he was eighteen. “I didn’t want to be drafted when I was 22 or 23. So I thought well, I’ll get my military service over,” he explained. There were also those who volunteered for the educational and career opportunities afforded by the military. In the 1950’s and 1960’s the Nike missile system represented cutting edge technology, employing sophisticated computers, electronics and radars. Many joined the service for the opportunity to work with this new technology, and many translated the experience gained in the Nike field into lifelong careers outside the military. As Bobby Pace said, “the electronics field was new and it was a good opportunity for promotions. So I went into the [service]...to get some education and electronics background. Which turned out to be good for me over the years. Because after I left the missile systems I stayed in electronics for twelve years with the FAA and electronics doing basically the same thing.”

Nike soldiers trained at the Army Air Defense School at Fort Bliss, Texas. Instruction lasted from eight weeks to a year, depending on the technicality of the MOS (Military Occupational Specialty). Phillip Parks, Site Point’s acquisition radar technician spent an intensive year learning the requisite skills and remembered, “it was pretty much equivalent to an Associates Degree in electronic engineering. It was quite an education for a young fellow.”³⁴ In rare instances men were sent to the Nike sites without advance schooling to learn their skills on the job. MPs and others in non-technical positions could receive basic training or MP schooling at various Army bases around the country.

Electronics technician Bobby Pace remembered that career air defense soldiers developed a cohesiveness through their common training in Texas: “all of the missile people were trained in Fort Bliss, Texas, and at one time or another we would all meet there. So no matter what part of the world we were in, if you were [a] Hercules technician you would usually know several of the other people. Because you all went to school in the same place, and we would meet as we would rotate around.”

³² USARAL Commanding General, Major General Ned D. Moore, 1963. Press Release on file at Public Affairs Office, Fort Richardson, Nike files.

³³ This numbering system was phased out in 1969 by the use of social security numbers for personal identification.



Cold Weather Indoctrination

In addition to rigorous operational training, soldiers in Alaska also were required complete a course in cold weather indoctrination. Because staff resources were limited, the exercise basically consisted of camping in tents for two nights and continuing with regular Nike duties during the day. The missile men of C Battery in Fairbanks vividly remembered participating in this exercise. Frank McGee said, “They set a tent up and locked the barracks door so you couldn’t get back in. You couldn’t sneak in.” Company Clerk Jim Rutledge remembered, “It had to be over thirty degrees below zero. And it would be like three nights that you would do this. But our clerks, as I recall, they could only allow us to be out there for one night and that was ok with us.” The training served as a demonstration for cold weather gear and equipment, which many soldiers from the Lower 48 were unfamiliar with. Rutledge said,

Before going out there and doing this they told us it’s going to be sub zero weather, and you’ve got your sleeping bag and everything [and] you are supposed to just go ahead and get ready for bed like you would be in your room and sleeping in your bunk. Take off your clothes and wear any night wear that you wanted to like that and get in your sleeping bag. Well, a lot of us didn’t think that that was going to work out quite like that you know. Because we could just see ourselves freezing to death out there. And so most of us went into the sleeping bag fully clothed [with] maybe even a field jacket on or something like that. And before long you’re just perspiring like all get up. And gosh you’re crawling out of there and started pulling off clothes you know. And then they would show you also films about cold weather and how to survive and everything and especially taking care of yourself and warding off frost bite. And...some of the films like that weren’t too pleasing to look at you know, because they would show you real life things that had happened to them.



Figure 23: Soldier standing next to tents during cold weather training, ca. 1959-1962. Courtesy Larry Goldsberry.



Operational Readiness Inspections

One Nike battery per battalion (at minimum) was always ready to fire a missile within fifteen minutes; this site was referred to as the ‘hot battery’. Remaining batteries were split between a thirty-minute alert status and a training and heavy maintenance mode. The Army Air Defense Command Posts (AADCPs) designated the alert status of Nike batteries within their battalions, and ideally the status rotated on a weekly basis. Maintenance problems could, however, force one battery onto hot status for extended periods. “We might pull two, three, four weeks at a time. And I remember about 60 days without ever leaving down up here,” stated Billy Sparks of Site Summit. An AADCP officer describes how disruptive and disappointing an unexpected turn on hot battery status could be for the site personnel:

Rotating this status between batteries was a normal Monday morning routine, though at times this routine was interrupted by equipment problems at a battery. This could (and did) occur at any moment, day or night. The “hot” battery would have a problem of some kind so the medium battery would go hot. This would require that the “cold” battery go to medium so that there would be a viable backup to the new hot battery. This usually came as very unwanted news to the battery that was in cold status, since calls would have to be made and personnel recalled and people awakened in the middle of their night that weren’t expecting to have to go on a long cold trip out to the bay or up the mountain in the middle of an Alaskan winter night. I hated having to call the cold battery up at times like that. You could always hear the pain in the voice at the other end of the line, because he was the guy that had to call his people. But that’s what defense is all about.³⁵

A battery on hot status was often subject to a visit from the Operational Readiness Evaluation (ORE) team. These were no-notice inspections that tested a site’s ability to ready for a missile firing within the fifteen-minute timeline. ORE inspections could and did happen at any time, day or night. A hot battery was triggered into preparing the site for a live missile firing by the sound

of sirens and the call to ‘blazing skies’. Blazing skies was the code for a practice exercise, while the call to ‘battle stations’ signified a real situation. At the first blast of the siren, everyone ran to their stations and hurriedly started the checks and steps necessary to engage a target and fire missiles. The siren stayed on until everyone got to their duty stations, which usually only took about fifteen seconds. “If the people were sleeping and weren’t on duty they might not have to go down but they had to listen to that siren until the last man was there,” remembered Bobby Pace.



Figure 24: Personnel in front of 250 kW generator control panels. Courtesy Ralph New.

Once a battery switched to hot status, the on-site power supply was activated in place of commercial power. Each

³⁵ The Last North American Nike-Hercules AADCP, Site Point, Alaska.
http://home.att.net/~jsstars/1_43/AADCP.html



battery had three 250 kw generators for this purpose. This prevented interruption of the mission in the event of a commercial power failure, or sabotage.

ORE teams generally consisted of the Team Commander, as well as a Commissioned Officer, a Launcher Warrant and a Fire Control Warrant. Fire Control Warrant Officer Billy Badger remembered observing the IFC crews during the evaluations:

We watched them through each of their checks and adjustments. They had certain checks that they had to perform to ensure that the equipment was sensitive enough and oriented correctly and all those things, you know, so that the radars would point the right way. Our computer would check out [whether] we could guide the missile to a predicted intercept point when it's fired. So we watched each of those steps. We were very, very critical of the way they did them. We were, it was a matter of training, not just evaluation but training at the same time, so we ensured that we observed them closely enough that they did it exactly as the book said. And above all we were always consistent. That is, when we went onto a site and we observed these checks this time, the next time it would be exactly the same. We would not give somebody a break because he's a buddy or because well that was just insignificant. Everything we did was significant."

Warrant Officer Don Neal recalled that springing surprise ORE inspections could be a difficult task:

Of course the object was to hit a unit when they were on hot status when they were supposed to be on ready status, with no notice whatsoever. And of course the units wanted very much to know when we were coming to get a little bit of a head start on things and get their best crewmen. Which I don't blame them for, I mean they weren't cheating, this is just what we do, we play the game. So sometimes one of us that's on the ORE team would live close to some of the people that were at one of the batteries. And they'd keep a pretty good eye on us. You know if they saw one of us going out in uniform at ten o'clock at night they'd call all the three batteries and say hey you might have an ORE coming.

And the other thing of course is most of the batteries, to get to one area you had to go through the guards. So going up on the mountain there you had to stop at the launching area where there was a gate guard. And, the launch area guard being a loyal member of the battery out there, as soon as he thought there might be an ORE team he would try to get on the telephone and call up and alert the other people so they could get out of the bunk and pull their socks on and their boots and get ready to go. And since we wanted to make it as much of a surprise as possible sometimes they would let me out down the road and I would walk up to the guard and I would stand there and then when the vehicle came up the road and he went for the telephone I said, whoops. Nope Shorty, not this time, just hold it. Of course he recognized us, [but] of course you don't really want to walk up on a guard in the dark. That's sort of hazardous too.

But trying to surprise them wasn't all that easy. Because...when they were on hot status and they had not had an ORE for a while they knew they were due. So they'd keep a pretty good eye open. They'd look down for lights coming up the mountain... Sometimes I think they had their radar trained on my car so when I left the parking lot they'd know when I moved it. Because very seldom we actually got them one hundred percent surprised. And for the long trips of course a lot of times we took a helicopter over to the



Knik Battery, the Charley battery, and they could hear us coming a long way off. So again we didn't catch them by surprise on that.

Donald Dukes, who worked at Site Bay (Anchorage), describes a battery's perspective:

The guys assigned to the other sites could never figure out how we constantly maxed out the ORE inspections. Didn't matter what was the subject of the inspection. Particularly the "surprise" inspections. We always maxed. There were several little secrets at work. 1) We knew that immediately prior to opening of hunting or fishing season we would have a major inspection. Upon conclusion of the inspection, the hunting or fishing trip got underway. 2) There were only two ways an inspection team could travel to Site Bay – either by air or by land. Of course, it cost us a little bit of booty (e.g., some smoked salmon), but we got good information from Flight Operations at Ft. Richardson or the only restaurant within the final hour's drive from Palmer and Wasilla. We always had sufficient time to "dispatch" all the vehicles from the motor pool or to make final corrections to a missile component.

Batteries on hot status operated under intense conditions. Personnel generally worked twenty-four hour shifts, with every other day off. But as Glenn Bechtel of C Battery in Fairbanks remembered, "days ran into nights, we didn't sleep too much...you catch a couple hours of sleep when you could."

ORE inspections were important evaluation and training tools taken very seriously by the command. Failed ORE inspections had serious consequences, particularly for the battery commanders who were ultimately responsible for site readiness. Too many problems could result in disciplinary action or even dismissal. The Nike sites were useless if they did not operate within the ascribed time limits. As Billy Badger explained: "If you go hunting for birds, you know, you carry your shotgun in a way that you can get it to your shoulder quickly and fire... So you don't take the thing and put it in a box to keep it from getting scratched...it had to be ready all the time. And that's what we taught everybody."

Consistency in the way an inspector performed any inspection was important to a battery. They needed to know what to expect. One day while visiting Site Summit I noticed there were no tracks in the snow leading to the Radar Frequency Test Site (RFTS). The RFTS required daily maintenance and was located 800 to 1,000 feet from the IFC. I pointed it out to the maintenance chief and he called one of his maintenance people and asked if he had checked the RFTS. "No Chief I have been too busy but I am on my way now," was the reply. After lunch the tracks were there and never again did I find "no tracks" going to the RFTS on an inspection day. Word gets around.

- Billy Badger -



Annual Service Practice

'To actually see the first one fired made a believer out of me' - Thomas Kontes

The USARAL FY 64 Nike-Hercules Annual Service Practice [was] conducted 18 November – 10 December 1963 and 6 – 21 January 1964. Emphasis was placed on the ability of a fire unit to assemble war reserve missiles, demonstrate proficiency in all phases of system operation, and to engage and destroy targets at extreme intercept ranges from tactical sites.

A total of eighteen rounds were fired; fourteen were scored successful, and four were scored unsuccessful. The maximum intercept range was 164,000 yards. The minimum intercept range was 113,000 yards, with an average intercept range of 151,600 yards.

- CINCAL Historical Report, 1963. Alaskan Command. 5 April 1964.



Figure 25: Nike Hercules Missile Launch: C or B Battery, Fairbanks. February 10, 1970

ORE inspections provided soldiers with all the training necessary to execute their mission up to the point of actually firing and detonating a missile. Firing was an extremely important training objective that could only be tested once a year due to the cost of missiles, range use restrictions, and lengthy preparation procedures. Alaska and Hawaii were the only states in the country where active Nike batteries practiced live missile firings. Personnel at all the other sites traveled to the White Sands Missile Range in New Mexico. Isolated site locations and limited urban development made live missile firings possible in Alaska. The exercise was not feasible from every site though. Just three of the batteries were optimally located for range use: B and C Batteries in Fairbanks, and B Battery (Site Summit) in Anchorage.³⁶

B Battery in Fairbanks conducted the first live missile firing in December 1959. Site Summit hosted the Anchorage area annual service practice from 1960 to January of 1964. After that, the growing Anchorage population forced the Army to cease the live fire exercises at Site Summit, and from 1964 to 1971 Anchorage batteries traveled to Fairbanks for their practice. After 1971, when the Fairbanks batteries closed, Anchorage servicemen traveled to the White Sands Missile Range in New Mexico for the annual exercise.

The live fire exercises were an exciting time for the batteries, when everyone finally put their ceaseless training to the test and witnessed the system in action. Larry Goldsberry of C Battery in Fairbanks remembered, “we were lucky we got to fire from our own site both years and then the other batteries came up there and fired also. At least while I was there. And so it was very exciting. Beautiful sight. And give you the shivers to see it take off you know”.

³⁶ It has also been suggested that live fire exercises were conducted at A Battery, Site Point, in Anchorage. No records were located to support this assertion.



The exercises were carefully observed by headquarters personnel and evaluated with a point system. The practice was divided into three phases: phase one tested the proper missile assembly procedures, phase two tested the pre-firing drills, and phase three was the missile firing itself. The battery scoring the most points in the three-part exercise won the coveted U.S. Army Alaska Commanding General's Trophy.³⁷

Thomas Kontes, an MP at C Battery in Fairbanks, recalled the lasting impression the live fire exercise imparted: "It was ironic to me, we'd guarded those things, we used to refer to them as tin cans...you know we really didn't have any respect for them. We never saw them fired, we weren't missilemen. And to actually see the first one fired made a believer out of me. I mean that thing just took off. It looked like slow at first until it really got going, and all of the sudden, man it's gone, and the booster separation, it's out of sight in no time. Yeah so, it was something."

The Nike-Hercules system had the additional, little known capability of firing missiles for a surface-to-surface, as well as surface-to-air mission. The sites were thus considered a backup defensive system for a ground invasion. In Alaska this capability acquired an added importance, as the state was considered the only location in the country likely to ever use the surface-to-surface capabilities of the Nike system.³⁸ Headquarters Operations Officer George Bristow remembers practicing a surface-to-surface firing exercise in Fairbanks:

What we did was took a lot of surplus tents way downrange [30 to 40 miles] towards [the] Yukon River, put them up, erected them on a mountaintop. And computed a gunnery problem and fired a missile. And we actually hit the sites and shredded the tents. It was covered by the PAO [Public Affairs Office] folks at the time. It was quite a big deal. We made a lot of people happy by doing that. And we were pretty happy we hit our target obviously.

The Army used the live exercises to showcase the system's capabilities and promote good relations with the community. Top Army and Air Force personnel, mayors, the Governor and assorted VIP's often attended the exercises.

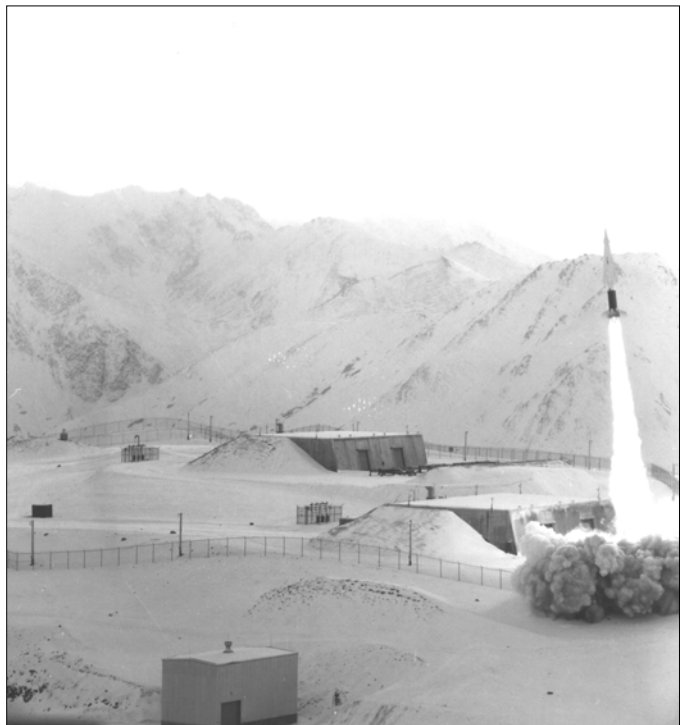


Figure 26: Site Summit Missile Firing. U.S. Army Photo.

³⁷ Press Release, Headquarters, Yukon Command. Fort Wainwright, Alaska. 'Yukon Command Missilemen Score 100 Per Cent in Annual Practice'. February 5, 1963. On file in Public Affairs Office, Fort Richardson, Nike files.

³⁸ ALCOM Command History, 1970. Prepared by the Historian, Office of the Secretary, Joint Staff. p. 12. Elmendorf AFB History Office, ALCOM Histories.



The exercises were also eagerly observed by the general public. Site Summit's prominent location meant that the firings could be easily viewed from many vantage points in Anchorage. As the *Anchorage Daily Times* reported, "People formed in groups on the streets and fixed their gaze on the launching site, 4,000 feet up in the Chugach Mountains. School children of the area witnessed the launching. Some gathered outside their schools while many gathered in classrooms having a view of the mountains."³⁹

The live fire exercises generally occurred in winter to test the system's cold weather capabilities, and to ensure that fewer people would inadvertently be in the firing fans. Even so, some outlying homesteaders in the Anchorage area were potentially in harm's way. The Army invited homestead families to be guests of the military as a safety precaution. Citizens were bussed to Fort Richardson and provided Army housing on days when the missiles were fired. The inconvenience was offset by the opportunity to witness the live fire exercises with the VIP's on post.

The live Nike missile firings did leave some physical impacts upon the landscape. S.E. Thomas, an Anchorage AADCP officer, said missile debris from a live fire exercise in the 1960's broke through the roof on his parents' home in Eagle River. Also in 1981, many years after the live fire exercises at Site Summit had ceased, a cluster of rocket boosters from a missile launch was discovered near Hiland Drive in Eagle River. Thirteen-year old Doug Liebold located the boosters through a spotting scope on Fort Richardson. The Army sent ordnance disposal experts to investigate the debris and determined that the boosters were inert and presented no danger.⁴⁰



Figure 27: Spectators prepare to watch a live missile firing ca. 1960-1964. Site Summit.

³⁹ *Anchorage Daily Times*. 22 Nov. 1960.

⁴⁰ Frank Gerjevic, "Missile Remains 'Dangerous as a Tree,'" *Anchorage Daily News*, 18 August 1981. A1.



Figure 28: Personnel of C Battery, 2nd Missile Battalion, 562d Artillery with the USARAL Commanding General's Trophy.





Chapter 6 The Nike Life

“We’re the Nike boys, we play with tinker toys, we raise our missiles up and down but they never leave the ground.”

Nike soldiers were dedicated to defending the country at a moment’s notice. Men passed countless hours training and maintaining equipment to accomplish a mission that, fortunately, never had to be executed. The saying cited above circulated amongst the Nike crews, articulating one interpretation of the mission. Warrant Officer Don Neal of Battalion Headquarters explained how the daily routine could be simultaneously demanding and tedious for the typical soldier:

It was sort of like having a Cadillac limousine sitting out here in the driveway and everyday you have to wash it, you have to grease it, you have to take it apart, you have to check the air pressure. Sometimes you’ve got to change the brake lining, whether you need it or not. But you’re never allowed to start it and drive away with it. And you can see that after four or five years of that it gets real boring in that way...They’d go out and the launchers would start to rust, so they’d scrape all the launchers off and then they’d paint the launchers and they’d paint the racks and a guy like me would come along and gig him for painting over the grease fittings and painting over the gauges. So take all that off and get it right and six months later they were rusting and they’d have to do it all again. And a guy that spent two years on a Nike site up here has probably torn apart twenty missiles and put them together, probably painted his launcher twenty times...He’s got a whole lot of guys like me that are trying to catch him doing something wrong. I mean not that we wanted to find something wrong, but our job was to find out about it if there were. So in the mean time, after painting launchers all day, he’s getting rocked out of bed in the middle of the night [for Operational Readiness Inspections].

Nike duty was similar to combat duty in that a constant state of readiness was required. “It was as close to a combat situation as you could get except nobody was shooting at you...I imagine it tired them out. They were under constant pressure,” remembered Jackson Murray. Yet there were some marked differences from combat duty. The following statement was made in reference to anti-aircraft artillery operations, but it is an equally applicable description of the Nike service:

Soldiers at such stations are not faced with frequent crises. Rather, their existence is marked by monotony and seeming purposelessness. Like other soldiers, they are there to meet crisis when it comes. The difference is that crisis does not come to them in peacetime and their lot is to wait and to watch...Passive defense, with its vigilance tasks and its monotony, certainly offers different stresses and different rewards from those offered to the soldier in the field.⁴¹

Nike batteries on fifteen-minute alert status had to be up and ready to operate around the clock. There were only around 110 men per battery to carry out the mission. Shifts were generally 24-hours on, 24-hours off. Even batteries on the lower alert statuses had an incredible amount of maintenance work to keep up with. “They spent an awful lot more time actually involved in the

⁴¹ *Military Small Group Performance Under Isolation and Stress. Critical Review III. Environmental Stress and Behavior Ecology.* Technical Documentary Report AAL-TDR-62-33. Arctic Aeromedical Laboratory, Aerospace Medical Division, Air Force Systems Command, Fort Wainwright, Alaska. June 1962. 13.



conduct of their mission, probably more than any of the other combat arms would as far as I can tell,” remembered George Bristow.

In addition to the rigors of maintaining mission readiness, service at an Alaskan battery could be a strain because of site isolation. While Nike service was certainly not the most remote, isolated military duty one could be assigned in Alaska, especially compared to the isolation faced at DEW Line and AC&W radar sites, it was definitely a greater hardship than regular service on an Army post or Air Force base. Nike batteries were isolated, distinct units. Though soldiers were free to leave the battery in their off time, elevated battery status, lack of transportation, and extra duty often meant people were stuck on-site for days or weeks at a time. “I didn’t get off the hill that much, sometimes it would be three or four months,” remembered Ronald Gaunt of C Battery in Fairbanks.

Though the Nike system was never used for combat in the United States, most soldiers still had a sense that they were involved in an extremely important effort. As one explained the Cold War threat, “we had to do what we were doing because they [the Soviets] were doing what they were doing. So it was a stalemate. Yeah, we figured it would never get used, but that’s a good thing. But it had to be there so it wouldn’t get used, because they would use theirs.”⁴² Billy Badger said, “For a while it was about the only thing we had, I guess, that really made it look like we meant business...I think that it played a big part really in the Cold War. That was there day and night. And they knew [it].”



Figure 29: Nike Hercules missiles, Site Summit. Ca. 1976. U.S. Army photo.

⁴² Gregory Durocher, interview with Kristy Hollinger, Anchorage, AK, 22 August 2003.



Cold War Pressures

"The threat of catastrophic attack on our homeland is total and immediate. We must not forget that a single aircraft, carrying a single bomb, can spell total destruction for our largest city"

- Excerpt from 'Nike—Surface to Air Guided Missile,' 1962.

The Nike Hercules system was developed for defense purposes. Accordingly, political tensions could directly affect the status of the missile batteries. The early 1960's were marked by several serious episodes with the Gary Powers incident, construction of the Berlin Wall, and the Cuban Missile Crisis. At times the conflict rumbled dangerously close to open violence.

Often such Cold War tensions produced a ripple effect at the Nike batteries in the form of high alert statuses or elevated site security measures. The 1962 Cuban Missile Crisis was a particularly tense period when many Nike soldiers thought the defensive missile system might actually be put to use. Photos of Soviet missile bases under construction were revealed, and the United States threatened to invade Cuba if the bases were not dismantled. The United States warned that an attack from Cuba would be considered an act of Soviet aggression, prompting full U.S. retaliation. Nike batteries were put on high alert and along with the rest of the country, anxiously waited for events to unfold. Billy Badger of C Battery, Fairbanks, stated:

I went to work one morning and here we were and the battery commander told us when you guys have time today you might want to contact your wives and tell them you're not coming home tonight. And tell them if you want you can have her pack some clothes and we'll have a bus to come in tomorrow to pick them up. And that was it. So we were stuck up there I think about four days is all. But it looked pretty imminent then."

MP Thomas Kontes of C Battery remembered how Cold War pressures could affect battery personnel even during their personal time. The battery was given permission to attend a party on base in 1960. It transpired around the time that Nikita Krushchev made his infamous speech to the United Nations, beating his shoe on the podium stating, 'we will bury you'. The men celebrating in Fairbanks were called back to the battery, which was elevated to hot status along with the rest of the Fairbanks sites. Kontes remembered receiving the order to get the battery personnel back on-site:

I said do you realize the condition those people are in? So after I got through down to base, people were hanging up on me when I was calling, they thought I was joking. Finally I got a hold of the Captain. He sent two buses down, to bring the guys back. We had black coffee out, and we were ready. It was a three-ring circus.

George Bristow recalled that the Soviet Union's proximity to Alaska could contribute to a consistent, underlying feeling of threat. "At that time the Russian bombers were constantly probing the defenses, the radar defenses of Alaska. Testing us to see how quickly we would respond. So...it [Nike service] involved a lot of tension, a lot of stress on our people maintaining these alert statuses...It was a very intense job...The troops spent a lot of time on the site, away from their families, doing exercises, things of that type." Radar technician Phillip Parks recalled an example of a conventional probing incident detected at Site Point in Anchorage:



There were times when the Russians would sit out here in a trawler and jam us just to see what we were doing and how quick we were to react to it. I was watching the scope one time when I was tuning the system, and...I normally didn't watch the scope you know, because the operator did that. But I was adjusting it one day and happened to watch it and they sent us what was called a spoofer. It was a false target and it was traveling so fast that it couldn't be a regular target. Because within three revolutions of that radar scope it went from 350 miles to us in like three revolutions...So we knew that they were out there spoofing us. And of course we called it in and they flew over and found a trawler out there.

A personally demoralizing effect of the Cold War occurred in August of 1961, three days before the border between East and West Berlin was closed, when President Kennedy issued Executive Order 10957. The decree authorized the Secretary of Defense to extend enlistments, appointments, and periods of active duty that expired before July 1, 1962, for up to twelve months. At Alaskan Nike sites the order resulted in a six-month service extension for many soldiers. To men eagerly anticipating their return home the additional duty was a crushing disappointment. As Dan Caputo put it, "I [saw] grown men cry." The extension was a testament to the pressures the United States was operating under. Kennedy authorized another service extension on October 23, 1962, during the Cuban Missile Crisis. Once again many Nike soldiers had their discharge dates pushed back.⁴³ Soldiers stationed at C Battery in Fairbanks during this period recalled that the Army sent a psychiatrist to the site to study the effects of isolation on the men. Ostensibly, there was concern that the extended duty could negatively impact the men's mental condition.⁴⁴

Natural Disasters

In addition to the occasional excitement caused by political pressures, natural disasters such as floods and earthquakes could also punctuate the typical routine. The 1967 Chena River flood in Fairbanks, for instance, knocked A Battery (Site Tare) out of commission for ten days. Electronics technician Bobby Pace remembered no one could get on or off the site:

I was pulling duty one night for a fellow that had a new baby, and he had to be home for his baby that night...Anyway, I stayed out for him and I got stuck out there for about ten days because a flood came and nobody could come or go. ...Our launching control area was down at the flood. The fire control area, we were up on a hill probably three or four hundred feet. But nobody could get to us or away from us so we were stuck there for quite a while...All the other batteries, like I say, they were up on hills mostly. But the launching area for A Battery was down very low, it was, well the floodwaters got it. That was an interesting time too. We made do with the equipment we had on-site, the food we had...and everything worked out fine.

While Fairbanks had the Chena River flood, Anchorage had the Good Friday earthquake. On March 27, 1964, one of the biggest earthquakes in recorded history hit south-central Alaska. Measured at 9.2 on the Richter scale, the quake rattled for a solid three to seven minutes,

⁴³ The second service extension, Executive Order 11058, had a provision exempting personnel still on duty due to the previous year's mandatory extension.

⁴⁴ An attempt was made to locate the results of this visit, but nothing was identified in records available in Alaska.



destroying buildings, triggering tsunamis and resulting in 131 deaths. Aftershocks continued for days, plaguing recovery efforts and fraying nerves. Property damage in Anchorage was substantial, particularly in the Turnagain area where a massive landslide occurred.

The earthquake seriously impacted the Nike batteries at Site Point and Site Summit. At Site Summit the TTR Radar was shifted off its pedestal. Ordnance Corpsman George Wallot stated, "The parts that were broke were impossible to find (never had broken before) and the system was down for several months." Wallot also remembered that the ordnance shop on Fort Richardson was heavily damaged; every light bulb in the building shattered and the contents of every drawer and shelf spilled onto the floor.

Site Point suffered the worst effects from the earthquake. Damage to the launch area was particularly severe. The quake knocked missiles off their racks: cracking exteriors, damaging fins and exposing highly combustible rocket propellant. The exposed solid fuel propellant could have easily ignited and set off the explosive warhead shells. The men at Site Point worked virtually nonstop for three days trying to stabilize a very volatile situation. The battery was awarded the Meritorious Unit Commendation for their efforts to bring the site back into operation and for their work to deactivate live munitions. Though the site was fully operational within two weeks of the quake, repair work continued throughout the year.

Meritorious Unit Commendation

By direction of the Secretary of the Army, under the provisions of paragraph 203, AR 672-5-1, the Meritorious Unit Commendation is awarded to the following unit of the United States Army for exceptionally meritorious achievement in the performance of outstanding service during the period indicated: The citation follows:

Battery A, 4th Missile Battalion (Nike Hercules) 43d Artillery, distinguished itself by exceptionally meritorious conduct in the performance of an extremely difficult and hazardous mission in Alaska from 27 March 1964 to 3 April 1964. Immediately after Alaska was devastated by a severe earthquake on 27 March 1964, the members of this Battery promptly displayed fortitude, dedicated devotion to duty, and perseverance in conducting hazardous recovery operations. Despite the frequent aftershocks which continued throughout the period and the impending danger of ammunition explosions, the personnel of Battery A completely disregarded their own personal safety, and unhesitatingly started operations to eliminate the unsafe conditions. Through their determination, efficient utilization of all resources, and willingness to work on an around-the-clock basis, major items of equipment were successfully repaired and tested, enabling the unit to resume its operational status on 3 April 1964. The loyalty, esprit de corps, and spontaneous response of Battery A to this major disaster reflect great credit upon themselves, and the military service.

Donald Dukes describes the sight that met him after the earthquake at Site Point:

We went inside the first launcher section of the fire unit on "hot status" after prying open the blast doors. It was a big mess. No complete missile round was intact on the tracked launchers or handling rails. All the yoke structures had been sheared. The skins were gouged open; fins bent in all directions. Solid propellants cracked and the rocket motor covers were off. Strong stench from the exposed rocket propellant. Arming lanyards were pulled, energizing the on-board battery-operated electrical power systems, and gyros were spinning. Large components strung across the handling rails and launchers and on the floor, in all directions. Each missile representing upwards of five tons of high



explosive just waiting for the initial spark to set off the entire lot... We were looking around in the launcher section by light of spark proof flashlight, only... The loneliest and scariest 72 hours of my life was just getting underway – even more so than some of my later times in Vietnam.

Personnel worked under extremely stressful and dangerous conditions to render the battery safe. As explained by one munitions expert, “Since no fire and subsequent explosions ensued, it can be assumed that they did their tasks expertly and with more than a modicum of safety principles correctly employed.”⁴⁵

⁴⁵ Lee Griffin, DPW Environmental Resources, communication with Kristy Hollinger, April 2004.

