CHAPTER 3

THE INTEGRATED NATO AIR DEFENSE OF THE 1960's (U)

10. (S) Background

The preceding chapter described how the concept of coordinating or integrating the air defense resources of the several NATO nations developed in the mid-1950's and how the failure to achieve such an international air defense contributed to the designation of CINCUSAFE as the U.S. theater air defense commander, pending the achievement of NATO agreements.

a. The SHAPE Barrier Concept and Non-U.S. Nike Units. In mid-1957, even before the initial deployment of the U.S. Nike battalions to Europe, SHAPE had developed a conceptual plan for air defense in the 1960's that called for a barrier of surface-to-air missile units extending from Denmark to the Adriatic Sea, with the units stationed in the forward area near the Iron Curtain to provide a uniform defense of all of NATO Europe, rather than the point defense envisioned in USAREUR's Nike deployment plan.

In July 1957 USAREUR and USEUCOM representatives discussed the proposal; USAREUR pointed out that such a barrier would require a minimum of 20 Nike battalions to be effective, that such a number would not deploy by 1960, and that to change current plans by stationing Nike units in forward locations would leave vital targets undefended on a point basis without providing adequate area defense as an alternative. The conferees agreed that USAREUR's Nike deployment plans should remain unchanged.[1]

The Army and Air Force component commands in Europe agreed on that point: USAFE considered the barrier concept unacceptable because the necessary missile units would not be available and an incomplete or substandard barrier could easily be defeated or circumvented by a determined enemy.[2]

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[1] USAREUR Anl Hist Rept, FY 1958, pp. 145-46. SECRET.

[2] USAFE Hist, 1958, pp. 196-97. SECRET.

In March 1957 USAREUR had been assigned overall responsibility for coordination, assistance, and consultative service in connection with the introduction of Nike equipment to non-U.S. NATO armed forces under the Military Assistance Program (MAP). As of June 1957 Belgium, France, Denmark, Italy, the Federal Republic of Germany, and the Netherlands were in the preliminary stages of preparing for the activation of Nike units in their armed forces -- units that could contribute to a barrier defense of the type envisioned by SHAPE.[3]

Since only the French and German Nike units were scheduled for deployment in the CENTAG/FOURATAF sector, they were the only ones of direct interest to USAREUR. By the end of 1959 France had agreed to purchase 2, and the Federal Republic of Germany 6 battalion sets of Nike equipment under MAP; each nation had received 1 set of equipment, and training of the battalions was under way.[4] Map 4 shows the proposed "block" deployment of U.S., French, and German Nike battalions. The 2 French Nike battalions were to occupy the southernmost blocks in the CENTAG/FOURATAF area, the 6 U.S. battalions the center of the area, and 1 F.R.G. battalion the northernmost block; the remaining F.R.G. battalions would occupy blocks farther to the north in the NORTHAG/TWOATAF sector.[5]

b. Introduction of Nike Hercules. By early 1959 the Army was ready to deploy an improved version of the Nike known as the Hercules. The Hercules system had an improved battery acquisition radar that could detect targets at ranges up to 228.6 kilometers (km),[6] more than double that of the Ajax radar.

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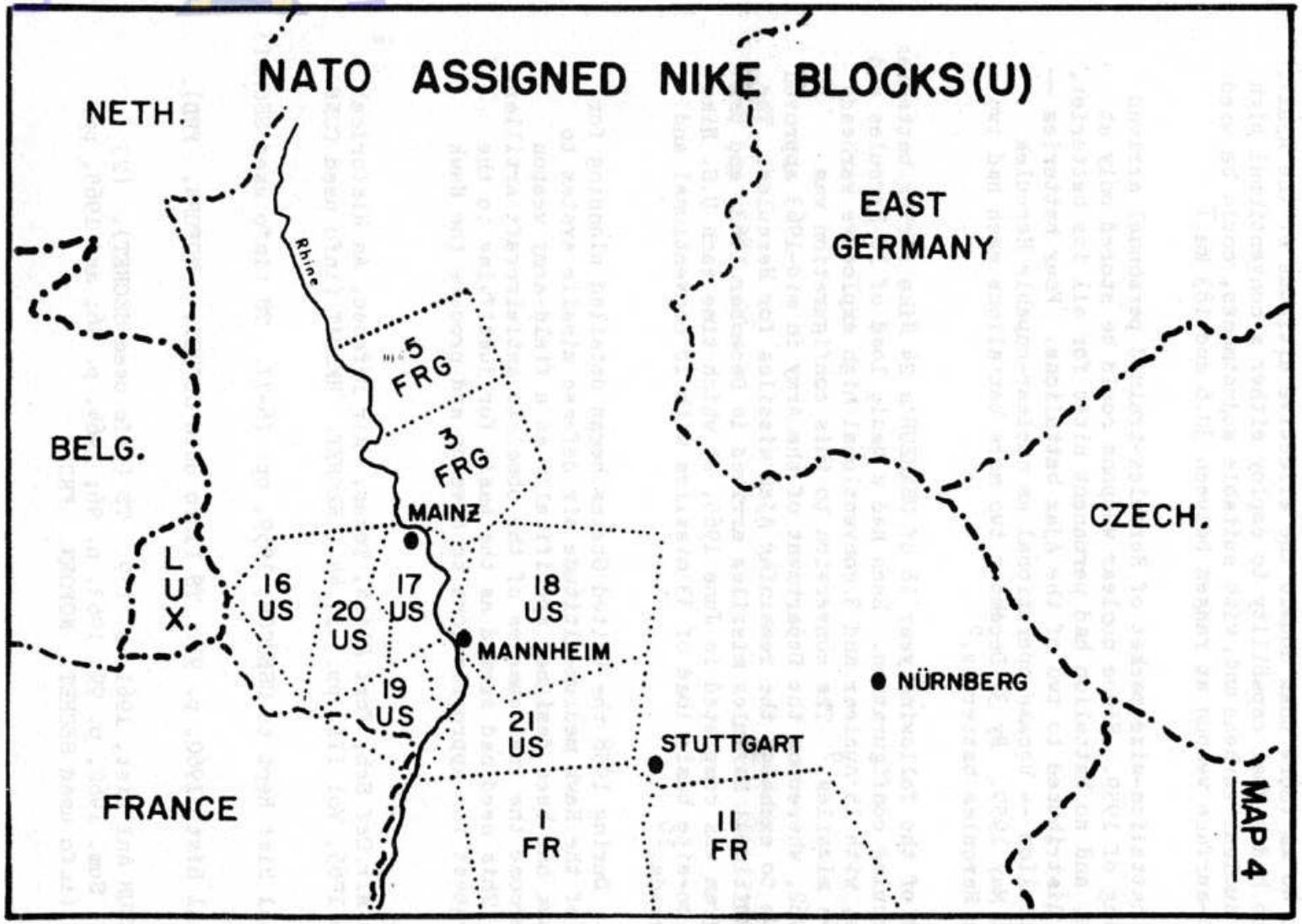
[3]USAREUR Anl Hist Rept, FY 1957, p. 200. SECRET.

[4]USAREUR Anl Hist, 1 Jul-31 Dec 59, p. 25. TS (info used SECRET).

[5](1) TAB A to DF, ODCSOPS to D/CINC and CofS, 9 Mar 67, subj: Final Deployment of SAM Forces after French Withdrawal (U). AEAGC-NAA. (2) USAREUR Study, "Army Air Defense, Europe, 1970-1975 (U)" (hereafter cited as AADEUR 70-75), Oct 69, p. F-III-4. USAREUR GC 109-51. Both SECRET. NOFORN.

[6]1 km = 0.62137 miles. UNCLAS.



SOURCE: AADEUR 70-75 (U), p. F-III-4. [redacted]

The Hercules missile had a range of 155 km (more than three times that of the Ajax) and could engage targets traveling at speeds of Mach 3 at altitudes up to 40 km (more than double the effective altitude of the Ajax). The missile also had a dual capability to employ either a conventional high explosive or a nuclear warhead and, with suitable adjustments, could be used as a surface-to-surface weapon at ranges between 30.6 and 183 km.[7]

The first battalion-size packet of Hercules-trained personnel arrived during the spring of 1959. Since nuclear weapons could be stored only at permanent sites, and no battalion had permanent sites for all its batteries, the packet was distributed to two of the Ajax battalions. Four batteries -- two in each battalion -- became operational as nuclear-capable Hercules batteries on 26 May 1959. By 31 December two more battalions each had two nuclear-capable Hercules batteries.[8]

By the end of the following year 16 of USAREUR's 24 Nike firing batteries were in the Hercules configuration. Each had a basic load of 18 Hercules and 5 Ajax missiles, with 15 nuclear and 3 conventional high explosive warheads for the Hercules missiles.[9] The conversion to this configuration was completed in 1962, whereupon the Department of the Army in mid-1963 approved a recommendation to exchange the remaining Ajax missiles for Hercules. The first of the additional Hercules missiles arrived in December 1963, and the conversion program was completed in June 1965, at which time each U.S. Nike battery had an on-site basic load of 33 missiles with 18 conventional and 15 nuclear warheads.[10]

c. Hawk. During 1958 the United States began detailed planning for the deployment of the Hawk medium-altitude air defense missile system to Europe. The Hawk had been designed specifically as a field-army weapon intended to overcome the inadequacies of the obsolete antiaircraft artillery then deployed. This need had served as the basis for justifying to the Congress the request for appropriations to develop and procure the Hawk

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[7] U.S. Army Air Def Sch, Fort Bliss, Texas, "Air Defense, An Historical Analysis," June 1965, Vol III, pp. 41, 44. SECRET. RESDAT (info used CONF).

[8] USAREUR Anl Hist Rept to USEUCOM, 1959, pp. 76-77. TS (info used SECRET).

[9] USAREUR Anl Hist, 1960, p. 91. TS (info used SECRET. NOFORN. FRD).

[10] (1) USAREUR Anl Hist, 1961, p. 139. TS (info used SECRET). (2) USAREUR Anl Hist Sum, 1962, p. 99; 1963, p. 96; 1964, p. 96; and 1965, pp. 256-57. All TS (info used SECRET. NOFORN. FRD).

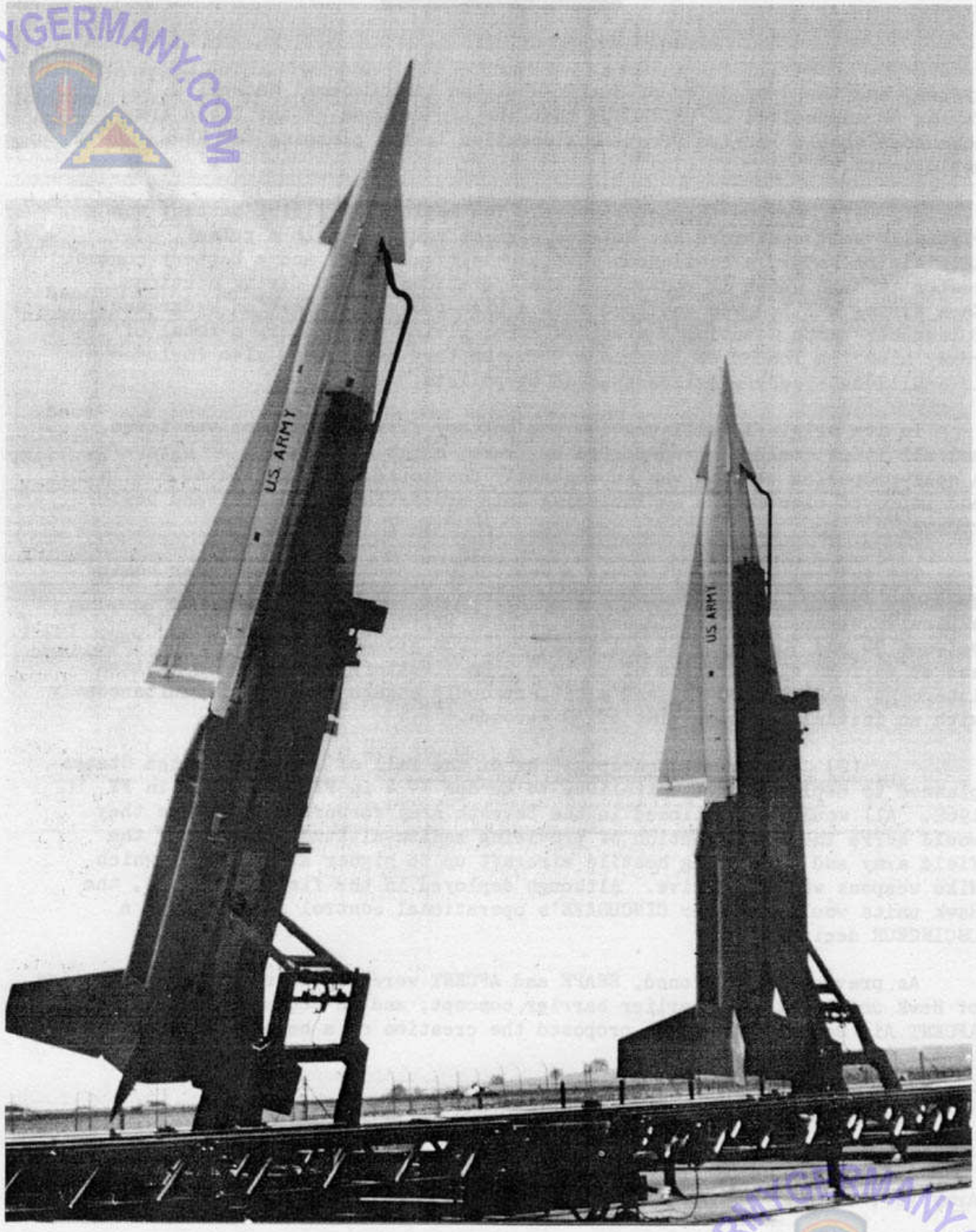

PHOTO 4: Nike Hercules Missiles

system, and the Army Chief of Staff -- at the time General Maxwell D. Taylor -- emphasized to USCINCEUR that the air defense of the field army commander should receive first consideration in the planning for Hawk deployments.[11]

(1) System Characteristics. The basic Hawk firing battery was a virtually self-contained air defense element equipped with a pulse acquisition radar, a continuous-wave acquisition radar, and a battery control center through which it controlled the operations of two firing sections. Each firing section was equipped with a high-power illumination radar and 3 launcher units mounting 3 missiles each, giving the battery a total of 18 ready missiles loaded on launchers. The battery basic load also included 18 additional ready missiles stacked on pallets.

In its original configuration the battery firing equipment was towed, and all items could be transported by truck, cargo helicopter, or aircraft. A self-propelled version was subsequently developed, adding greater mobility and improved electronics -- including data-processing capability and better radars.

The initial Hawk missile had a semiactive continuous-wave radar homing guidance system, and a proximity fuse detonated the conventional high-explosive warhead. It could engage targets traveling at radial speeds between 90 and 900 knots at all altitudes from ground level to 45,000 feet and at maximum slant ranges of up to 3.2 km. Battery radars had a maximum intercept range of 100 km, and a battery could engage 2 targets simultaneously with an initial reaction time of 30 seconds.[12]

(2) Deployment Concepts. As of the fall of 1958 the United States planned to deploy 6 Hawk battalions to Europe -- 4 in FY 1961 and 2 in FY 1962. All would be stationed in the Seventh Army forward area, where they would serve the dual function of providing medium-altitude defense of the field army and of forcing hostile aircraft up to higher altitudes at which Nike weapons were effective. Although deployed in the field-army area, the Hawk units would be under CINCUSAFE's operational control according to a USCINCEUR decision.

As previously mentioned, SHAPE and AFCENT were considering the integration of Hawk units into the earlier barrier concept, and in December 1958 the AFCENT Air Defense Committee proposed the creation of a belt of Hawk batteries

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[11] USAREUR Anl Hist, FY 1959, pp. 59-60. TS (info used SECRET).

[12] (1) Anx C to USACDC Rept, 16 Mar 63, subj: Air Defense of the Field Army (U), Vol I. (2) App I to Anx D to AADEUR 70-75. Both SECRET. NOFORN.

from the Kiel Canal to the Swiss border deployed in four rows east of the Rhine River. All six of the USAREUR battalions would be in the NATO belt system for the CENTAG area.

By the spring of 1959 the total number of Hawk battalions programed for deployment to Europe had increased to 10 -- 6 instead of 2 were to arrive in FY 1962 -- but in October the total dropped to 9.

In November 1959 the Army Chief of Staff specified that 4 of the 9 Hawk battalions would be committed to an overall NATO air defense and 5 would be earmarked for the field army on the basis of 1 per division. To insure their continuing availability to the field army commander, the latter five battalions should be assigned to Seventh Army, rather than to the 32d Artillery Brigade, and the Seventh Army commander should retain the authority to relocate the mobile Hawk units as required, even though they would be under the operational control of CINCUSAFE as air defense commander.

These views were consistent with USAREUR's deployment plans, which had already received the concurrence of Seventh Army, USAFE, FOURATAF, and AIRCENT. There was one problem, however: the agreed-upon plan called for all battalions to be assigned to the 32d Artillery Brigade. To resolve the conflict, in December 1959 USAREUR reassigned the entire 32d Brigade to Seventh Army effective 1 March 1960.[13]

(3) The NATO Hawk Belt. The NATO Hawk belt, shown on Map 5, was established under the terms of 1960 AFCENT air defense plans for low altitude surface-to-air missiles and revised in mid-1963. In the CENTAG/FOURATAF area the plan called for French battalions to occupy blocks 41 and 42, for F.R.G. battalions to occupy blocks 43-45 in the south and 54-55 in the north, and for the four NATO-committed U.S. battalions to occupy blocks 46-53 in the center. However, pending the availability of the F.R.G. and French battalions -- which would take several years -- in August 1960 the United States agreed to deploy the other 5 Hawk battalions intended for Seventh Army's divisions to cover the Allies' blocks temporarily as follows: 3 of the U.S. battalions would cover the general area of blocks 41-45; 1 or part of 1, depending on the availability of real estate, would occupy sites in the area of blocks 54 and 55 (half of which was in the NORTHAG/TWOATAF sector in any case); and 1 would strengthen the defenses in the area of blocks 46-53.[14]

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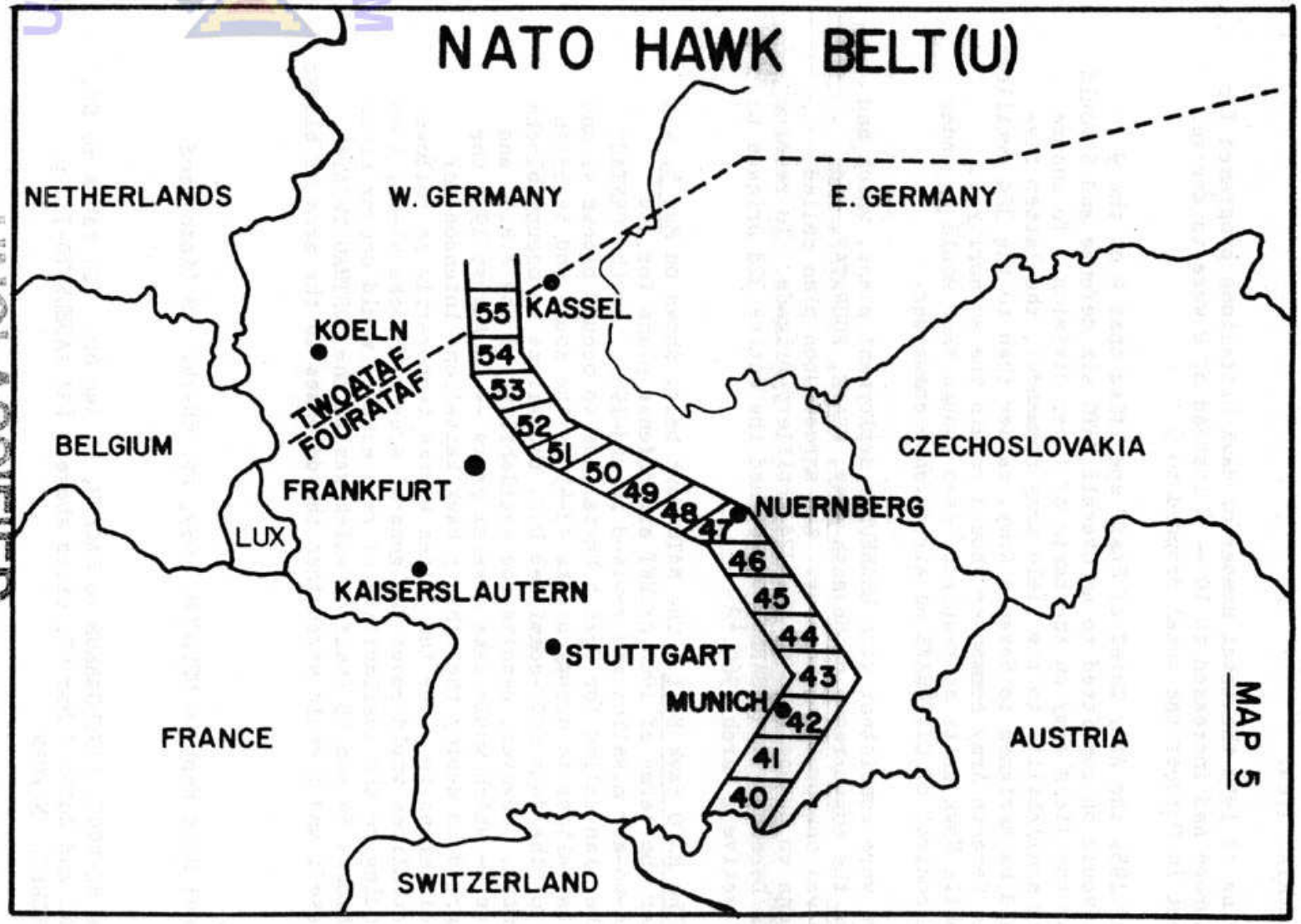
[13] USAREUR Anl Hist Rept to USEUCOM, 1959, pp. 68-74. TS (info used SECRET).

[14] (1) Cable SX-4997, CINCUSAREUR to SACEUR, 18 Aug 60. (2) Tab A to DF, ODCSOPS to D/CINC and CofS, 9 Mar 67, cited above. (3) AADEUR 70-75, p. F-III-1. All SECRET. NOFORN.

NATO HAWK BELT(U)



SOURCE: AADEUR 70-75, p. F-III-2. [redacted].

11. (S) Assumption of Air Defense Responsibility by NATO Commanders

In 1958 the efforts to integrate the various national air defense forces for the SHAPE Central Region between the North Sea and the Alps had come to a virtual halt. The decision of various NATO governments to purchase both Nike and Hawk equipment lent added emphasis to the need for integrating the several national air defense forces, all equipped with the same weapons systems, into a single force in which the cumulative effectiveness of the whole would exceed that of the sum of its parts.

Thus, as early as May 1958 the NATO Military Committee submitted a study -- MC 54/1, The Integration of Air Defense in NATO Europe -- updating the "coordination" concepts of the 1955 study, MC 54. In brief, MC 54/1 called for NATO member nations to assign their air defense forces to SACEUR's operational command in both peace- and wartime -- subject, however, to such agreed-upon reservations as might be necessary to meet national requirements.

It was such reservations that led to the long delay in implementing the recommendations of MC 54/1, which went through the stages of a decision in principle -- reached by the Military Committee on 26 November 1958, but with Danish, French, and British reservations -- and a final decision by the North Atlantic Council on 28 September 1960, which "invited" NATO nations to assign their air defense forces to SACEUR's operational command. In response to this NATO decision, in April 1961 the U.S. Secretary of Defense agreed to the assignment of U.S. air defense forces in Europe to the "operational command and control" of SACEUR in peace- and wartime, and SACEUR in turn announced in June that CINCENT would assume operational control of all assigned air defense forces in his area of responsibility effective 1 July 1961. CINCENT appointed the commanders of TWOATAF and FOURATAF as the NATO air defense commanders in their respective areas of responsibility and delegated to them responsibility for the application of SACEUR's rules of engagement. In August, however, SACEUR formally reconfirmed the existing national responsibilities for air defense in peacetime, naming CINCUSAFE as the U.S. air defense commander responsible for the application of SACEUR's rules of engagement during "Phase A" -- the period up to and including simple alert or State Orange.[15]

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[15] (1) Cable ECJCP-9-92540, USCINCEUR to CINCUSAREUR, 4 Sep 61 (and cables ECJCP-9-86459, 2 May 61, and SH-28882, 29 Jun 61, cited therein). (2) Cable CINC-45711, CINCUSAFE to USCINCEUR, et al., 2 Oct 61 (and Cable SH-29895, 25 Aug 61, cited therein). Both SECRET. (3) Tab E, MC 54/1 (Final Decision), 30 Sep 60, to ltr, USCINCEUR to CINCUSAREUR, 1 Nov 69, subj: Air Defense Responsibilities. ECJE. NATO SECRET (info used SECRET).

12. (S) Rules of Engagement

a. Operational Command and Control Channels. As prescribed by MC 54/1, SACEUR's operational command of assigned air defense forces was delegated to CINCENT for the Central Region. Under CINCENT's operational command, COMTWOATAF and COMFOURATAF exercised operational control in their areas of responsibility through air defense operations centers (ADOC's), which in turn controlled sector operations centers (SOC's). The SOC's were in the NATO chain of command, but were nationally manned. Each SOC exercised tactical control over both interceptor aircraft and SAM units in its sector and was the lowest NATO command echelon authorized to declare aircraft as hostile and to direct engagement of targets under SACEUR's rules of engagement.[16] These arrangements would become effective only with the declaration of reinforced alert or State Scarlet -- the so-called Phase B in which an attack was imminent or was actually under way. In Phase A the U.S., British, and French air force commanders would employ their SOC's to exercise operational and tactical control of their national air defense units under the terms of SACEUR's rules of engagement.[17]

The SOC's were tied into communications networks that linked them with nationally-manned aircraft control and warning elements -- the control and reporting posts (CRP) and control and reporting centers (CRC) -- with national air force interceptor squadron operations centers, and with national missile control centers (MCC) that controlled the air defense missile battalions.[18]

The COMFOURATAF operations manual for air defense issued in November 1961 spelled out these relationships in some detail. Noting that the SHAPE basic concept was to centralize control of air defense at the highest possible

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[16] The rules of engagement provided, of course, that a pilot or a commander of any unit with an air defense capability could engage any aircraft directly attacking his aircraft or unit without waiting for SOC approval. SECRET.

[17] (1) TAB E, App C to MC 54/1 (Final Decision), 30 Sep 60, to ltr, USCINCEUR to CINCUSAREUR, 1 Nov 69, cited above. (2) TAB G, North Atlantic Mil Com Rept, MC 66/1 (Rev) (Final Decision), 23 Sep 60, to same. (3) TAB J, incl to ltr, SACEUR to U.S. Sec Def, 11 Jan 61, subj: Responsibility for the Application of SACEUR's Rules of Engagement in Western Germany, to same. All NATO SECRET (info used SECRET). (4) App 3, SACEUR Air Space Use Procedures (7th Army Area), to Anx H to USACDC Rept, 31 Jul 64, subj: Control and Coordination of Air Space in the Theater of Operations (U). CONF.

[18] Incl 1 to Fact Sheet, unsgd, 7 Apr 69, subj: NATO Air Defense Command and Control Channels (U). AEAGC-NAA. GC 29-146. SECRET (info used CONF).

level -- but consistent with the availability of accurate and timely information and the maintenance of a control capability -- the manual called for the exercise of tactical control by the SOC under the operational control of the FOURATAF ADOC.

In Phase A air defense would remain a function of national air defense commanders, using any of their national air defense forces, and coordinating closely among themselves. F.R.G. elements could also be employed under the terms of SHAPE directives of September and October 1960, and the FOURATAF manual made provision for the integration of German CRC and CRP into the system, if the Allied power in question maintained its own control team at the F.R.G. installation.

The FOURATAF commander assumed responsibility for air defense only at the declaration of reinforced alert, when all national air defense forces within his area of responsibility would become available for his use. These provisions served as a basis for integrating F.R.G. air defense elements into the peacetime defense activities of the Allied powers as well as into the NATO air defense in wartime.[19] However, there was a limitation on such employment: Effective 1 April 1962 the commanders of TWOATAF, FOURATAF, USAFE, the French 1st Tactical Air Force, and the RAF, Germany, agreed on a technical arrangement outlining their respective peace- and wartime responsibilities. This arrangement provided that in peacetime each national commander might call upon his neighboring Allied commanders for assistance, but any tactical actions across sector lines would have to be approved by SOC or ADOC controllers. By contrast, within his own sector a national controller could order the aircraft or ground-based air defense units of any Allied nation to engage a hostile target, except that under national control in Phase A, the F.R.G. interceptors and SAM units could not be used to engage targets; only their warning and control elements could play an active role in peacetime air defense.[20]

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[19](1) TAB K, cable SH-28882, SHAPE to MOD France, et al., 29 Jun 61, to ltr, USCINCEUR to CINCUSAREUR, 1 Nov 69, cited above. (2) TAB M, Hq FOURATAF Man 55-1, Air Defense Operations Command, Vol I, 15 Nov 61, to same. Both NATO SECRET (info used SECRET).

[20](1) TAB F, cable SH-38889, SHAPE to CINCENT, 8 Mar 60, to ltr, USCINCEUR to CINCUSAREUR, 1 Nov 69, cited above. (2) TAB N, "Technical Arrangement for Application of SACEUR's Rules of Engagement During Phase A in TWO- and FOURATAF Areas," eff 1 Apr 62, to same. Both NATO SECRET (info used SECRET).

With appropriate modification and changes in terminology, the above provisions remained in effect until mid-1966. In peacetime and in Phase A the FOURATAF area was divided into two national sectors for which CINCUSAFE and the commander of the French 1st Tactical Air Force were responsible. Each controlled his air defense forces through an SOC, so that two SOC's would exercise tactical control under the operational control of the FOURATAF ADOC in Phase B. With the French withdrawal from NATO military commands in 1966 the USAFE SOC became the single tactical control agency directly subordinate to the ADOC in the FOURATAF/CENTAG sector.[21]

b. Communications Systems.

(1) Equipment. Two systems of weapons control equipment were ultimately deployed in Europe -- the Air Force 412-L and the Army AN/MSG-4 "Missile Monitor." The AN/MSG-4 system included a brigade- or group-level operations central,[22] which consisted of a frequency-scan radar (AN/MPS-23), a radar data processing center, and a weapons monitoring center, with appropriate communications. At the battalion level the AN/MSG-4 had a battalion operations central[23] that consisted of battalion acquisition radar (AN/GSS-1 or AN/GSS-7) with data link communications to the group-level weapons monitoring center and to the firing batteries.

The integrated system provided the means for rapid 2-way exchanges of information -- firing unit commanders reporting their units' status on the one hand, with the group and battalion operations centrals providing radar track data and firing orders on the other. Moreover, the battalions could provide track data to the group-level systems, which themselves could be interconnected for the lateral exchange of track and weapons engagement data.

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[21](1) Tab T, unsgd USAFE memo, 12 Apr 66, subj: French Air Defense Responsibilities in Sector 4, to ltr, USCINCEUR to CINCUSAREUR, 1 Nov 69, cited above. (2) Tab W, C 7, 15 Sep 68, to FOURATAF Man 55-6, to same. Both NATO SECRET (info used SECRET).

[22]Initially, the AN/MSQ-28. CONF.

[23]AN/MSQ-18 for Nike and AN/MSQ-38 for Hawk. CONF.

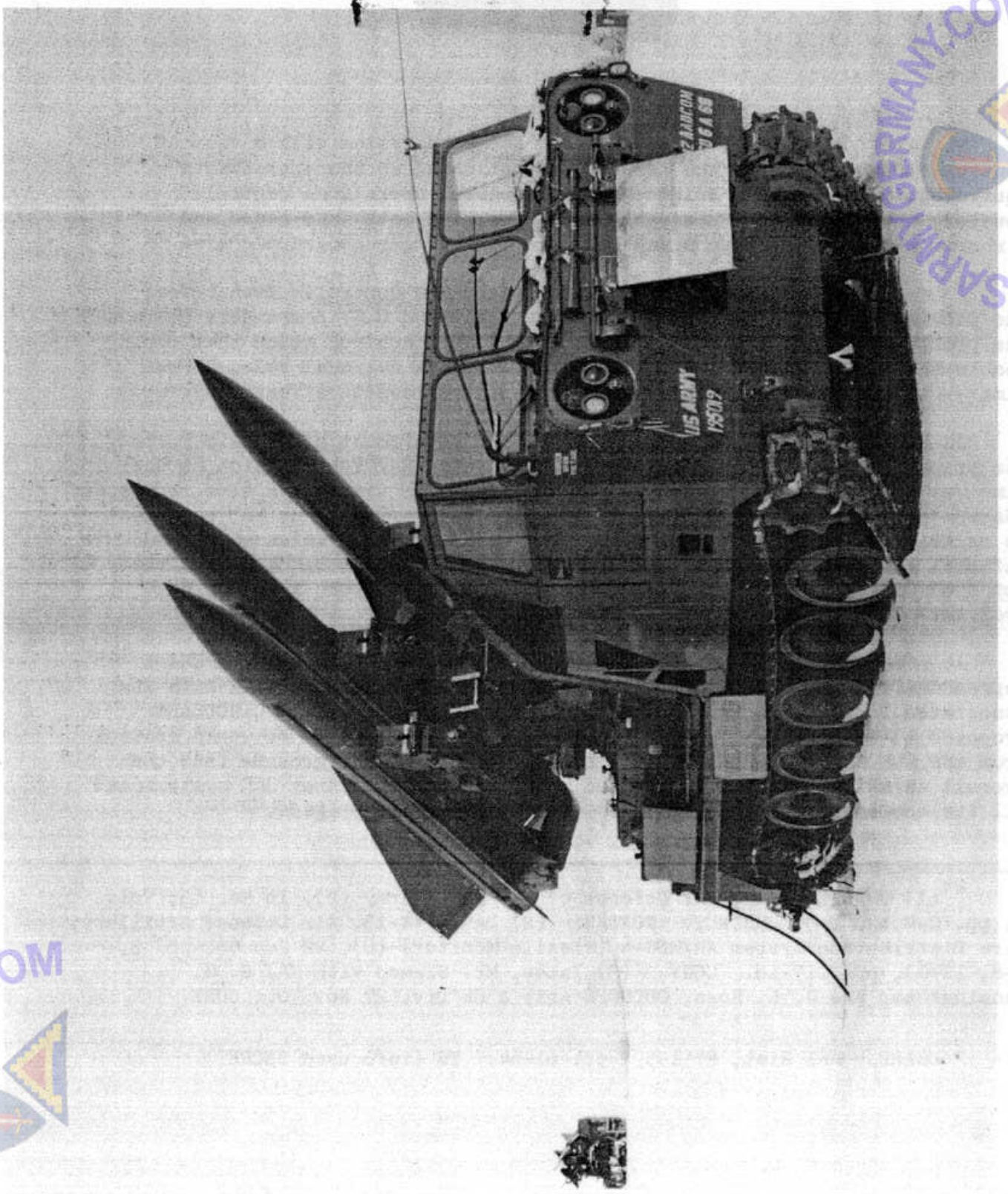

PHOTO 5: Self-propelled Hawk

The Air Force 412-L was a more sophisticated system with a weapons control element known as the AN/GPA-73 functioning as the approximate equivalent of the Army's brigade- or group-level operations central. However, the AN/GPA-73 was capable of controlling both land-based and airborne air defense weapons and could cover a larger geographic area.[24]

(2) Establishing Integrated Command and Control. Even before the integration of NATO air defense forces, in 1958 U.S. commanders addressed the problems of establishing reliable command and control means that would enable the air defense commander -- CINCUSAFE in a national role, at the time -- to employ his assigned Air Force and Army assets effectively.

In September 1958 USAFE submitted to the Department of the Air Force its proposals for the introduction and use of the AN/GPA-73, which at the time was still undergoing development. At the same time USAFE also requested USAREUR's concurrence in a proposal to offer the AN/GPA-73 as MAP equipment so as to facilitate the ultimate integration of NATO air defenses. USAREUR's informal reply noted that the AN/MSG-4 fire distribution system was already approved and there was no need for including similar items in a USAFE program.

At a conference on the USAFE proposals held on 20 September a SHAPE representative suggested that the Army brigade operations central with its associated radar be employed at the SOC, and in February 1959 CINCUSAFE proposed to emplace such equipment at his three CRC's, which he would control from the SOC. CINCUSAREUR opposed both proposals on the grounds that the overall AN/MSG-4 system was intended for the control of Army SAM systems, and all its components should remain in the 32d Artillery Brigade.[25]

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[24](1) USACDC Study, Air Defense of the Field Army (U), 16 Mar 63, Vol. I, pp. C-4 and C-5. SECRET. NOFORN. (2) DA FM 44-13, Air Defense Artillery, Fire Distribution System AN/MSG-4 (Missile Monitor) (U), 22 Jun 66, pp. 3, 6-8, 11-13, and 115-18. CONF. (3) Intvw, Mr. Siemon with MAJ G. G. Jennings and MAJ J. L. Ross, ODCSOPS Arty & SW Div, 27 Nov 70. CONF.

[25]USAREUR Anl Hist, FY 1959, pp. 61-64. TS (info used SECRET).

By the end of December 1959 USAREUR had received the necessary equipment to provide its six Nike battalions with functioning battalion operations centrals.[26] The AN/MSQ-28 to integrate the control of the six battalions arrived in the spring and became operational on 24 May 1960 at a site west of Kaiserslautern. With the AN/MSG-4 system thus complete for the control of the Nike battalions, USCINCEUR requested the immediate delivery of a second brigade-level operations central to control the Hawk battalions scheduled to deploy in FY 1962.[27]

In May 1961 a study group reported that the Army's AN/MSQ-28 and the Air Force's AN/GPA-73 systems could be interconnected. USAREUR, taking note of the necessary lead-time to achieve operational use of the compatible equipment, prepared plans for modifying its equipment and forwarded the proposal for DA approval. The Department of the Army programed funds for the project in the FY 1962 budget. Although USAFE disagreed with the plan, the Joint Chiefs of Staff favored the interconnection of the two systems on both a NATO and a unilateral basis.[28] In December 1962 USCINCEUR directed USAFE to interconnect the AN/GPA-73 and the AN/MSQ-28 on a permanent basis in order to have the air defense capability to resort to decentralized modes of operation under certain circumstances -- such as conditions of high target density or in a high electronic countermeasure environment.[29]

In July 1963 USAREUR received DA approval to interconnect the Army and Air Force systems. During the following months the Army system was modified, system turnover readiness tests began in December, and in early 1964 USAFE initiated an extensive training program.[30]

Tests in July 1964 indicated that the systems were not yet capable of performing their functions effectively. Since the necessary additional modifications and testing could not be completed by the date scheduled for the phaseout of the existing manual system in January 1965, the manual system had to be retained until the 412-L system proved reliable.[31] In February 1965 the USAFE 412-L and the Army AN/MSG-4 systems were connected. This was followed, in July, with the phaseout of the manual system.[32]

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[26]USAREUR Anl Hist, 1 Jul - 31 Dec 59, pp. 43-44. TS (info used CONF).

[27]USAREUR Anl Hist, 1960, pp. 92-93. TS (info used SECRET).

[28]USAREUR Anl Hist, 1961, pp. 141-43. TS (info used SECRET).

[29]USAREUR Anl Hist Sum, 1962, pp. 98-99. TS (info used SECRET).

[30]USAREUR Anl Hist Sum, 1963, pp. 94-95. TS (info used SECRET).

[31]USAREUR Anl Hist Sum, 1964, p. 55. TS (info used SECRET).

[32]USAREUR Anl Hist Sum, 1965, p. 264. TS (info used SECRET).

The interface occurred at the CRC level, where the Air Force AN/GPA-73 of the 412-L system was made compatible with the Army's group- and battalion-level components of the AN/MSG-4 system. In the normal mode of operations, command and control channels employed only the 412-L equipment and ran from the SOC through the CRC to the battalions, and thence to the firing batteries; USAREUR's Nike and Hawk group operations centrals received information through the data links but played no active role in command and control.

In the alternate mode -- to be employed when decentralized control was required because of high target density or a high level of electronic countermeasures -- the command and control channel would flow directly from the SOC to the group, and from there to the battalions and firing batteries using the AN/MSG-4 equipment; in that mode the CRC would receive information through the data links but would play no active role.

Since the 412-L system provided for the lateral exchange of information among CRC's as well, these arrangements effectively connected USAREUR's Nike and Hawk firing batteries and battalion operations centrals with the FOURATAF ADOC, the SOC, and through them with the entire aircraft control and warning radar network operated by the U.S. and F.R.G. armed forces in Germany.[33]

13. (S) Progress Toward Air Defense Integration

a. Status in Mid-1961. When the NATO air defenses were integrated on 1 July 1961, the only SAM assets available for assignment to NATO operational control in the CENTAG/FOURATAF area were USAREUR's six Nike and two Hawk battalions. These latter had been activated in November 1960 after redesignation and reorganization of USAREUR's last two Skysweeper battalions. Personnel and equipment packages arrived in December 1960 and January 1961, and the first Hawk battalion became operational at Kitzingen on 29 March 1961.[34]

b. Further Deployments. By the end of 1963 all nine U.S. Hawk battalions were operational at either permanent or temporary sites. At approximately the same time, in September 1963 an F.R.G. Nike battalion occupied battery sites in block 3 at the northern extremity of the CENTAG area in the general vicinity of Frankfurt, Wiesbaden, and Giessen, thus complementing the six U.S. battalions and providing a network of Nike defenses extending from Stuttgart to the CENTAG-NORTHAG boundary.

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[33](1) Anx C and D to USACDC Study, 16 Mar 63, Vol. I, cited above. (2) Intvw, Mr. Siemon with MAJ Jennings, 2 Dec 70. Both SECRET. NOFORN.

[34]USAREUR Anl Hist, 1960, pp. 89-90; 1961, pp. 137-38. TS (info used SECRET).

The Hawk belt in the CENTAG area remained solely a U.S. responsibility at this point, but in June 1964 CINCUSAFE began to develop plans for the redeployment of two U.S. battalions in anticipation of the activation of non-U.S. Hawk units in the NATO belt. USAREUR rejected the Air Force proposal because it called for relocating the Hawk battalions to the rear area to protect airbases, instead of returning them to the field army defense role for which they originally had been intended.[35]

In October 1964, however, the Army Chief of Staff forwarded a program for the interim air defense of Seventh Army that called for the redeployment of three U.S. Hawk battalions from the forward area to the airbase and logistic complex in the rear; the withdrawal would be offset by the deployment of five composite gun/missile battalions for the organic defense of Seventh Army and the conversion to a self-propelled configuration of two Seventh Army Hawk battalions to be retained in the forward area.

USAREUR objected also to these proposals, noting that the United States was permanently responsible for 10 blocks in the Hawk belt -- which were currently covered by 7 of USAREUR's Hawk battalions -- and had also assumed temporary responsibility for 5 other blocks that were covered by its 2 remaining battalions. When the French and F.R.G. armed forces assumed responsibility for those 5 blocks, USAREUR planned to redeploy the 2 Hawk battalions to augment coverage of the 10 blocks that were a permanent U.S. responsibility. If 3 battalions were redeployed to protect the airbase and logistic complex in the rear, only 6 battalions would remain to cover the 10 blocks -- a weakening of the existing defense.

The Joint Chiefs of Staff clarified the issue in late 1964, when they decided that only two -- not three -- U.S. Hawk battalions would be redeployed to the rear area.[36]

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[35](1) USAREUR Anl Hist Sum, 1964, pp. 51-53. TS (info used SECRET). (2) Data on F.R.G. Nike activation from files of 5th (GE) Air Force Div provided by LTC (GE AF) M. Richter, F.R.G. Ln Ofc to Hq USAREUR. CONF.

[36]USAREUR Anl Hist Sum, 1964, p. 55. TS (info used SECRET).

[redacted]

As the United States was making long-range plans for the air defense of Western Europe, the French and F.R.G. forces continued their efforts to assume their particular NATO air defense missions.

In January 1965 the first French Nike Hercules batteries became operational in blocks 1 and 11 south and west of Stuttgart, thus completing the planned Nike deployments for the entire CENTAG area of responsibility.

In July two French Hawk battalions occupied blocks 41 and 42 of the NATO belt in the areas south of and surrounding Munich, respectively, whereupon USAREUR redeployed one U.S. Hawk battalion from the southern area to the vicinity of Darmstadt to strengthen coverage in the north. Since the French battalions did not become operational immediately upon moving into their areas, USAREUR left the second U.S. Hawk battalion in place to cover blocks 43 and 44 (assigned to the Germans) and to assist the French in covering blocks 41 and 42.[37]

The first F.R.G. Hawk firing battery became operational at Freising in block 43 during February 1966. Shortly afterward the French Government announced the withdrawal of its armed forces from NATO command. Effective 1 July 1966 the French withdrew two Nike battalions from blocks 1 and 11 and two Hawk battalions from blocks 41 and 42, so that USAREUR once again had to retain its Hawk battalion in the southern area despite the gradual deployments of F.R.G. units.[38]

Accordingly, at the high point from February to June 1966 the integrated NATO surface-to-air missile defense in the CENTAG/FOURATAF area consisted of 9 Nike Hercules battalions -- 6 USAREUR, 2 French, and 1 F.R.G. -- plus 11 full Hawk battalions -- 9 USAREUR and 2 French -- and 1 F.R.G. Hawk battery. After the French withdrawal the total dropped to 7 Nike Hercules and 9 Hawk battalions plus the single F.R.G. Hawk battery. This situation remained unchanged until April 1968, when another F.R.G. Hawk battery became operational in block 44, followed by a second battery in block 43 in July. In April 1969 a second battery became available in block 44, and by 1 October a complete F.R.G. Hawk battalion was operational in each of the two blocks. Block 55 -- straddling the CENTAG-NORTHAG boundary -- was never occupied by an F.R.G. unit, and its coverage remained a U.S. responsibility.[39]

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[37](1) USAREUR Anl Hist Sum, 1965, pp. 258-59, 267-69. TS (info used SECRET). (2) Cable AETL-GC-PO-6159-28, 32d AADCOM to CINCUSAREUR, 8 Jun 66. SECRET. (3) Tab A to DF, ODCSOPS to D/CINC and CofS, 9 Mar 67, cited above. SECRET. NOFORN.

[38]USAREUR Anl Hist Sum, 1966, p. 290. TS (info used SECRET. NOFORN).

[39]Info from 5th (GE) Air Force Div files, cited above. CONF.

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14. (S) Nuclear Weapons Support

The Nike equipment supplied to the NATO allies under MAP was of the nuclear-capable Hercules type. Since U.S. law required that nuclear weapons remain in U.S. custody, in June 1958 USCINCEUR assigned to CINCUSAREUR theater responsibility for the support and custody of nuclear warheads earmarked for non-U.S. NATO weapons systems. The government-level agreement for the stockpiling of nuclear weapons on F.R.G. territory was negotiated by the Department of State and signed in 1959.[40] In April 1960 the necessary technical arrangements for the support of Bundeswehr firing units were signed between USAREUR and the F.R.G. Ministry of Defense.

In September 1960 the French Government signed a stockpile agreement with the United States covering those nuclear-capable French units that were to be stationed on F.R.G. territory; USAREUR and French military representatives signed the corresponding technical arrangement in February 1961.[41]

To carry out its responsibilities, on 15 April 1960 USAREUR established the Special Ammunition Support Command (SASCOM). SASCOM, which was directly subordinate to USAREUR headquarters, included artillery groups, which in turn commanded subordinate ordnance general support companies (for the weapons systems) and artillery custodial detachments (for the warheads).[42] The first custodial detachment deployed in 1963 in support of an F.R.G. Nike Hercules battalion.[43]

15. (S) Missile Firing Ranges

After the introduction of the Nike units in late 1957, USAREUR had to secure adequate range facilities for the annual service practice (ASP) firing of missiles. This problem became even more acute when other NATO nations activated missile units that required similar training facilities.

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[40] USAREUR Anl Hist Rept to USEUCOM, 1959, pp. 38-39, 49. TS (info used SECRET).

[41] (1) USAREUR Anl Hist, 1960, p. 207. (2) USAREUR Anl Hist, 1961, pp. 228-29. Both TS (info used SECRET. NOFORN).

[42] USAREUR Anl Hist, 1960, pp. 200-201. TS (info used SECRET).

[43] USAREUR Anl Hist Sums, 1962, pp. 220-21; and 1963, p. 238. TS (info used SECRET).

The Todendorf range, where the last antiaircraft gun firings took place in May 1960, could not be modified for missile firings and was therefore returned to F.R.G. control.[44] From 1958 on, USAREUR's Nike units -- as well as surface-to-surface missile units -- had to return to the United States to fire their ASP rounds. One proposal was to use a firing range near the Wheelus Air Force Base in Libya, but an examination of the facilities in 1961 revealed that such a program would not be feasible.[45]

In the meantime, in 1960 the NATO allies had begun to study a proposal to establish a common-funded missile firing range at Souda Bay on Crete. The installation, which came to be known as the NATO Missile Firing Installation (NAMFI), was formally approved in late 1962 with a prospective opening date in early 1964, which would have permitted USAREUR's Hawk and Nike units to conduct their 1964 ASP firings in Europe.[46]

The first test firings could not be held until February 1968, largely because of difficulties associated with the radar equipment at the NAMFI site, but thereafter USAREUR and other NATO nations conducted their Hawk and Nike ASP firings at the range on Crete.[47]

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[44] USAREUR Anl Hist, 1960, pp. 105-06. TS (info used SECRET).

[45] USAREUR Anl Hist, 1961, pp. 150-51. TS (info used CONF).

[46] (1) USAREUR Anl Hist, 1960, p. 108. (2) USAREUR Anl Hist Sum, 1963, p. 114. Both TS (info used CONF).

[47] USAREUR Anl Hist Sum, 1968, pp. 98-99. TS (info used CONF).