Introduction

Until the early 1960s, deterrence of the Soviet Union depended mainly on heavy bombers flown by the U.S. Air Force’s Strategic Air Command (SAC). By the mid-1960s, however, the role of heavy bombers had been eclipsed by long-range land-based and sea-based missiles—intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs)—which from then on formed the core of the U.S strategic nuclear deterrent. SAC’s bombers suffered a major setback when constant airborne alert flights were canceled in 1968 after the crash of a B-52 carrying four thermonuclear bombs near Thule Air Force Base (AFB) in Greenland. The airborne alert program had been the pinnacle of SAC’s efforts since 1950—with Thule AFB in a pivotal role—to develop an operational polar strategy based on the fact that the shortest air routes between the United States and the Soviet Union crossed over Greenland and the Arctic Ocean.¹

Instead of a polar strategy, the original U.S. response to the need for a credible operational strategy against the Soviet Union was the so-called perimeter strategy, which included a retaliatory attack against the Soviet Union that would take off from bases on the perimeter of the Soviet Empire. These bases were located in the British Isles, North Africa, the Middle East, and the Pacific Ocean, and the strategy was shaped by the limited range of the early

¹ The main work on Greenland’s strategic role in the Cold War is Grønland i den kolde krig: Dansk og amerikansk sikkerheds- politik 1945–1968 [Greenland during the Cold War: Danish and American security policy 1945–68] (Copenhagen: Dansk Udenrigspolitisk Institut, 1997), hereinafter referred to as DUPI Report 1997. This report was commissioned by the Danish government in 1995 and published in 1997 by the Danish Institute of International Affairs (DUPI) in two volumes, a 604-page analysis plus a 472-page collection of documents. I wrote the bulk of the chapters that are pertinent to this article, but my focus here is different, and I have made use of materials not available in the mid-1990s. Other researchers on the DUPI Report were Svend Aage Christensen, Frede P. Jensen, and Thorsten Borring Olesen.
postwar bombers with piston engines (the B-29 and B-50 Superfortress), as well as by the actual availability of forward bases from which bombers could strike important Soviet targets. Starting in 1951, the polar strategy gradually became dominant. The technical precondition for this was the introduction of heavy bombers, namely the B-36, which possessed near-intercontinental range, and the B-52 Stratofortress, which possessed true intercontinental reach. Air-refueling techniques were also perfected that enabled the B-47 Stratojet medium bomber to perform intercontinental missions. The polar strategy reduced but did not eliminate dependence on perimeter bases. In fact, until the B-52 was introduced in sufficient numbers to bear the brunt of deterrence, the polar strategy hinged on forward staging and refueling facilities for B-36s and B-47s at a single base: the Thule AFB on the Danish island of Greenland. The construction of the Thule base in 1951–1952 signaled the beginning of the polar strategy. Activities taking place there in the 1950s and 1960s are important indicators of the actual implementation of the strategy and its role in the overall U.S. deterrent posture. Hence, this article focuses not on strategic planning at headquarters or at the departmental level, but on what was going on “below.” The analysis here of day-to-day operational practices is facilitated by the availability of documents that highlight activities, operations, exercises, and deployments at Thule and of the U.S. Air Force (USAF) units there.\(^2\)

**The Beginnings of the Polar Strategy**

The U.S. decision to build the Thule base in northwest Greenland was hastily made in December 1950. Secretary of the Air Force Thomas Finletter had been concerned that SAC’s war plan did not provide sufficient alternative staging bases to the British and North African airfields on which the perimeter strategy then hinged. Finletter worried that these airfields might not be available in wartime. After the first Soviet nuclear bomb test in August 1949 and the outbreak of the Korean War ten months later, the perimeter became even more vulnerable to both Soviet attack and host-country misgivings.

\(^2\) Major sources are the monthly reports from the Danish Liaison Office at Thule Air Force Base (FOTAB) to the Danish Greenland Command, which are deposited as the FOTAB File in the Danish Rigsarkiv (RA), Copenhagen; and the unit histories of USAF units down to squadron level that were produced at varying intervals. These histories and other SAC material are deposited at the U.S. Air Force Historical Research Agency (AFHRA) at Maxwell AFB in Montgomery, Alabama. The Bernt Balchen Collection, also deposited in AFHRA, contains central documents pertaining to Arctic aviation and the early history of Thule Air Force Base. Finally, relevant Joint Chiefs of Staff and State Department documents stored at the U.S. National Archives have been used as well as the files of the Danish Foreign Office in the Rigsarkiv, Copenhagen.
The series of war plans developed by the U.S. Joint Chiefs of Staff (JCS) in the late 1940s, culminating in Offtackle in December 1949, were all predicated on the perimeter concept, even though U.S. planners were increasingly aware of the vulnerability of the perimeter to conventional and possibly nuclear attack. All of the plans emphasized the need for access to bases in Greenland. In June 1946, Greenland was on the JCS’s short list of six “essential” bases, three of which (Greenland, Iceland, and the Azores) were declared to be of “outstanding importance.” Similarly, the acting JCS chairman, General Dwight Eisenhower, in his instructions to staffers working on Offtackle, set up certain “musts”: The plan must provide for the security of the United States, Greenland, and Iceland and for the communication lines to Britain, the Gibraltar area, Alaska, South America, Okinawa, and Japan. The Greenland bases in question were Narssarsuaq in south Greenland and Sondrestrom in mid-Greenland, both built during World War II but still serving as important stepping-stones to the transatlantic air route and key underpinnings of the perimeter strategy. The dominance of this strategy is indicated by a JCS estimate of February 1950 that roughly 86 percent of a retaliatory attack against the Soviet Union would be caused by B-50 and B-29 bombers operating from Britain and only 14 percent would be caused by the new B-36 based at U.S. airfields.

Planners had recognized the strategic potential of the Arctic north of the Polar Circle early on. In 1946 the Joint War Plans Committee concluded that the Arctic was of only secondary importance for the time being, but that the strategic importance of Greenland would increase progressively within the next decade. If various difficulties could be solved, “the northern part of Greenland could provide a base area for the projection of strategic air operations.” But four years later, in October 1950, the JCS joint strategic plans committee was still uncertain about the strategic importance of the Arctic, at least in the short run. The committee noted that if the United States were denied the use of bases on the Soviet perimeter, SAC would need either new types of heavy (and long-range) bombers or air bases on the ice-covered Arctic Ocean or in northern Siberia, from which medium-range bombers could op-

6. “Strategic Importance of the Arctic and Sub-Arctic Regions,” Joint War Plans Committee (JWPC) 484/1, 6 November 1946, in Sec. 1–2, CCS 381 Arctic Area (10-1-46), in Record Group (RG) 218 (JCS), U.S. National Archives (NARA).
erate. At the end of October 1950, Thule, the future emblem of the polar strategy, was not on a list of required base areas presented to the JCS by the USAF. However, at that time, a major reevaluation was under way.

On 2 October 1950, Secretary Finletter voiced his concern about the security of the perimeter bases to the acting chief of staff, requesting a thorough feasibility study of Resolute Bay and Eureka in the Canadian Arctic, along with Thule, as possible locations for new bomber staging bases. The “basic policy involved [is] of course to have bases considerably nearer Russia than we now have in the Western Hemisphere, and to have these bases located in places where we can be sure of no effective opposition to our use of them.”9 The latter comment reveals an important motive for mitigating reliance on perimeter bases, namely the risk of host-country interference. Canada and Denmark were apparently deemed less likely than Britain to obstruct the wartime use of bases.

Colonel George E. Glover led the requested study. He called in Colonel Bernt Balchen, the Norwegian-American pioneer of Arctic and Antarctic aviation and leading USAF specialist on the Arctic, from a modest assignment as squadron leader in Alaska to assist in the study. On 20 December 1950 Balchen wrote a study concluding that Thule was the only feasible location for an Arctic base and that it offered the “most favorable” site for a runway for heavy bombers. Balchen stressed the need for an “advanced early warning, radio navigational aid station or weather reporting station” at the northeastern tip of Greenland, on the opposite end of Thule.10 The Glover committee’s final report strongly recommended the construction of a base at Thule, emphasizing that at that location a B-36 could reach 85 percent of all Soviet targets and a B-47 could reach 50 percent with one in-flight refueling.11 Consequently, on 22 December 1950 a base at Thule was included in a new version of the JCS list of required military assets in North Atlantic Treaty Organization (NATO) countries, JCS 570/142.12

Late in the process (after 15 December 1950) the SAC commander,

7. “Strategic Guidance on the Arctic,” JCS 2145/1, 10 October 1950, in Sec. 2, CCS 381 Arctic Area (10-14-6), RG 218 (JCS), NARA.
8. “Memorandum by the Chief of Staff, US Air Force,” JCS 570/139, 28 October 1950, in Sec. 43, CCS 360 (12-9-42), RG 218 (JCS), NARA.
12. Bernt Balchen Diary, 21 December 1950, in Folder 258, Bernt Balchen Collection, AFHRA.
eral Curtis LeMay, was asked about operational needs with regard to Thule. He indicated that he saw it as a staging base for a wing of heavy bombers and eventually an operational base for a wing of medium bombers. But he did not give Thule any priority, stating that it should be built only if it did not interfere with the construction of bases in Iceland, the Azores, Canada, and Saudi Arabia, all of which were tied to the perimeter strategy. This is perhaps why Finletter found it necessary to confirm his oral instructions “that the early establishment of a staging base at Thule, Greenland, for bombers is a matter of the highest priority” to Chief of Staff General Hoyt Vandenberg in mid-January 1951. Finletter crossed the usual boundary between political and military issues by taking such a strong stance on this operational matter. But SAC’s doubts remained and were reiterated by the Corps of Engineers and the U.S. Navy, which were given the task of building the base. On the other hand, the Thule project was supported by Acting Secretary of Defense Robert Lovett, who obtained partial funding from Congress in January 1951. On 25 March, two days before negotiations with Denmark over a new Greenland defense agreement began, construction of Thule AFB finally gained priority.

The United States and Greenland: The Political Background

U.S. interest in the Danish colony of Greenland manifested in 1867, when Secretary of State William Seward urged the inclusion of Greenland as part of the Alaska Purchase. Fifty years later, in 1917, the United States recognized Danish sovereignty over the entire island in connection with its purchase of the Virgin Islands—Denmark’s other colonial possession in the Western Hemisphere. But the recognition included the proviso, inspired by the Monroe Doctrine, that Denmark would not sell or cede the island to any third power.

Although Greenland had no geostrategic significance before the outbreak

13. Ibid.; and Bernt Balchen, “Memorandum for Chief of Staff, USAF,” 16 March 1951, in Bernt Balchen Collection, AFHRA.
15. Robert Lovett to Carl Vinson, Committee of the Armed Forces, H. of Rep., 13 January 1951, Entry 199, in Sec. 238, Sec. 0922 (Greenland) 1951, RG 330 (DoD), NARA.
16. DUPI Report 1997, Vol. 1, p. 50. The United States did not entirely abandon its interest in buying Greenland. A memorandum handed by Secretary of State James F. Byrnes to startled Danish Foreign Minister Gustav Rasmussen in December 1946 listed three possible solutions to the defense of Greenland: (1) long-term (99 years or more) U.S. base rights; (2) a defense treaty with base rights; (3) a U.S. purchase of Greenland. See Niels Amstrup, “Grønland i det amerikansk-danske forhold
of World War II, the United States in 1940 developed a lively strategic interest in the island, strongly encouraged by Canada and Britain. A possible German foothold on the island was considered an unacceptable security threat, and the mounting U.S. involvement in the defense of the Atlantic and in material support of the British war effort highlighted Greenland’s importance in the defense of the transatlantic lines of communication and in the transfer of aircraft to Britain.

By March 1941 the State Department concluded that nothing less than full U.S. military control of Greenland would serve U.S. interests. Accordingly, the department approached Henrik Kauffmann, the Danish minister to Washington. Kauffmann was receptive to the idea for a mixture of political and personal reasons. Following the German occupation of Denmark on 9 April 1940, he had declared his independence from the captive government in Copenhagen and proclaimed himself leader of the “Free Danes.” The U.S. approach offered him a chance to consolidate his own position and to put a mark on Denmark’s postwar foreign policy. After hurried negotiations, an Agreement Relating to the Defense of Greenland was signed by Kauffmann and Secretary of State Cordell Hull on 9 April 1941—the first anniversary of the German occupation of Denmark. The Danish government was not consulted and reacted by attempting to remove Kauffmann, albeit without success. The agreement gave the United States the opportunity to use Greenland for war purposes, and at the end of the war the United States commanded a total of seventeen defense installations on the island.

The Danish Folketing ratified the agreement as its first foreign policy act after the liberation from German rule in May 1945, expecting that the arrangement would soon be terminated and that Denmark could take over the defense of Greenland. In the end, however, the U.S. position in Greenland remained intact. The United States stuck to the notorious Article X of the agreement, which said that the U.S. presence should continue “until it is agreed that the present dangers to the peace and security of the American Continent have passed.” In the spring of 1948, the Danish government began its own search for security guarantees and put the termination of the agreement on the back burner. When the coveted Scandinavian Defense Union with Sweden and Norway proved unattainable, the Danish government hesi-

19. As a further gesture to the Allies, Kauffmann became a member of the so-called Liberation Government, which governed Denmark from May to October 1945.
tantly signed the North Atlantic Treaty as a founding member. Among the incentives was the expectation that a multilateral alliance solution to the defense of Greenland would replace the existing bilateral arrangement. For the United States, Greenland was an excuse for inviting weak and almost defenseless Denmark to join the treaty.

The initial allied defense planning for Greenland took place in the Atlantic Ocean and Canada-U.S. Regional Planning Groups set up in 1949 and completed in January 1951. Subsequently, the NATO Council invited Denmark and the United States to conclude a bilateral agreement based on the planning deliberations. Thus, Denmark failed to gain multilateral arrangements for the defense of Greenland.

Denmark had been represented in the alliance’s Ocean Planning Group (OPG), where it had gained the impression that the defense of Greenland under the North Atlantic Treaty would be manageable with Denmark providing local defense and the United States being responsible for reconnaissance and reinforcements in an emergency. The U.S. base requirements also appeared moderate, focusing mainly on Narssarsuaq. These expectations gained legitimacy after the United States deactivated Sondrestrom as a base in 1950 and handed it over to Danish command.

On 16 January 1951, however, the United States presented drastically upgraded base requirements in Greenland to the OPG. For the first time, the United States insisted that U.S. and Canadian reinforcements must be flown to the most favorable place for the defense of Greenland—which for North Greenland was Thule. This argument, which placed Thule in a defensive and local context, was subsequently adopted by Foreign Minister Ole Bjørn Kraft in the parliamentary foreign policy committee. He omitted any reference to the geostrategic importance of Thule and to U.S. plans to make Thule a forward staging base. Danish politicians and diplomats were confused about U.S. aims and tactics when negotiations on a new agreement on Greenland commenced on 27 March 1951.

20. Danish Foreign Office notice, 6 February 1951, in UM (Foreign Office Files) 105.D.1.a, RA.
21. Danish Foreign Office notice (Cosmic), 4 February 1951, in UM 105.F.1, RA.
22. “Memorandum for the File,” 28 July 1950, in Department of State Decimal File, 711.56359A/7-2850, NARA.
23. Rear Admiral Ramla-Hansen to Danish Ministry of Defense, Telegram (Cosmic Top Secret) received 19 January 1951 and airmail (Cosmic) received 27 January 1951, in File No. 981.230-41 HEM, 1-50, Ministry of Defense Archive, Copenhagen; and Foreign Office notice (Cosmic), 4 February 1951, in UM 105.E.1, RA.
24. Udenrigspolitisk Nævn (Parliamentary Foreign Policy Committee) meeting, 12 April 1951, in UM 3.E.92, RA.
25. One further example was the unceremonious, unprecedented operative takeover of Sondrestrom by the USAF at the beginning of the negotiations. The Danish negotiators complained to their U.S.
The negotiations were driven by the U.S. requirement for additional basing rights in Greenland that would enable the United States to build a base at Thule. The new defense agreement, signed on 27 April 1951, secured these rights by designating three U.S.-operated “defense areas” in Greenland—at Thule, Sondrestrom, and Narssarsuaq—within which the United States was given near-total freedom of action. Furthermore, the United States was granted unrestricted overflight and landing rights in all locations in Greenland. Typically, a Danish liaison officer was attached to each U.S.-operated defense area, and the base commander was advised to consult him on “all important local matters affecting Danish interests.” This clearly indicated that military activities in the defense areas were outside the purview of the liaison officer and, by implication, the Danish government. As for the peacetime function of Thule, the Danish negotiators were told only that the base was essential as “a staging intermediate base for bomber aircraft with fighter support,” for either a B-36 or a B-47 wing.

Wartime use of the Greenland defense areas was never discussed during the negotiations, and it therefore remained unclear whether they could be used for offensive operations without Danish consent. The Danish negotiators did not raise the question, and in January 1952 the Danish Foreign Office failed to follow up on a statement by Counselor Charles E. Bohlen that the United States would not use bases in Greenland for nuclear missions without consulting the Danish government. The possible deployment of nuclear weapons to the defense areas was not mentioned in the negotiations. Again, the Danish negotiators never asked, and their U.S. counterparts were not authorized to negotiate this question. To be sure, the original version of the general directive (JCS 570/142) for base negotiations with Denmark, Portugal (regarding the Azores), and Iceland requested negotiators to secure “(t)he right for storage and stockpiling of supplies and material including ammunition and atomic explosives.” However, the reference to nuclear munitions was deleted at the behest of the U.S. Atomic Energy Commission, which argued...
that the Special Committee on Atomic Energy of the National Security Council (NSC) should conduct such negotiations.\(^{30}\) As a consequence, Article II, 3b(ii) of the Greenland agreement was vague and open to interpretation because it simply allowed the United States “to store supplies” at the bases. The circumstances of the 1951 agreement did not imply that nuclear weapons could be deployed to Greenland without Danish consent. Nor did the agreement give the United States permission for nuclear missions in time of war. But neither party was interested in seeking clarity. The “gray area” left by the agreement was paradoxically in the interest of both the United States and Denmark. As a candid (or cynical) Foreign Office official later remarked, a regular hearing procedure entailed the risk of Denmark becoming “fully co-responsible” for a nuclear attack on Moscow by a U.S. bomber from Thule.\(^{31}\) The Danish government was not ready to shoulder such responsibility.

**A Forward Base in Northeast Greenland?**

Construction at Thule commenced on a massive scale in the summer of 1951 when Balchen was serving as a “special assistant,” and the base became operational on 1 November 1952. Balchen’s presence at Thule allowed him to follow up on his interest in setting up facilities in desolate northeast Greenland. In a memorandum for General Nathan Twining on 28 June 1951, he advocated the establishment of a facility that would serve six possible functions: an emergency landing strip, a weather station, a navigational aids station, an advanced radar station, a search and rescue station, and a base for sledge patrol units.\(^{32}\) One year later, the idea matured. A JCS paper of 7 October 1952 expressed interest in establishing an “outlying base” in northeast Greenland,\(^{33}\) and on 28 October 1952 the Department of the Air Force, acting on a new report from Balchen to Finletter, requested that the State Department initiate discussions with Denmark on building an emergency landing strip in the northeast, presumably as a new U.S.-operated defense area.\(^{34}\)

At that time, Station Nord, a small Danish radio and weather station

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30. “Note by the Secretaries to the Joint Chiefs of Staff on US Requirements for Military Rights in NATO Countries,” JCS 570/147, 15 January 1951, in Sec. 43, Box 148, CCS 360 (12-9-42), RG 218 (JCS) 1948–50, NARA.
32. Bernt Balchen, Memorandum for General Nathan Twining, 28 June 1951, in Folder 65, Bernt Balchen Collection, AFHRA.
33. JCS 2070/8, 7 October 1952, in Sec. 3, CCS 381 Arctic Area (1 October 1946), RG 218 (JCS), NARA.
34. Bernt Balchen, “Report to Mr. Finletter, Secretary of the Air Force,” 22 October 1952, in Folder 60, Bernt Balchen Collection, AFHRA; and E. V. Higgins, Assistant Secretary of the Air Force, to Sec-
with a provisional U.S.-built landing strip, had been set up through cooperation between Denmark and the U.S. Weather Bureau at the northeastern tip of Greenland. In subsequent negotiations, the Danish government proved unwilling to accept another U.S.-operated defense area in Greenland and offered instead a moderate expansion of Station Nord. The United States then gave up the option of building a separate defense facility in the region, and in a memorandum of understanding on 5 May 1953 concerning Station Nord the two sides agreed that Denmark should continue to operate the station, but that the United States might use the upgraded landing strip in emergencies caused by economic and technical factors, but not operational ones.35 The United States had settled for a minimum solution. As it turned out, only two emergency landings on Station Nord were recorded in the following years.36 Thule remained the remotest outpost of the new polar strategy.

**From 1952 to 1955: Testing the Polar Strategy**

Thule’s strategic role in the 1950s came to be inextricably linked to the first generation of U.S. jet bombers, the B-36 and B-47. By the end of 1950, when Thule was decided on, SAC’s fleet was still dominated by aircraft with piston engines; for example, the B/RB-29 Superfortress (in service from 1944 through 1954) and the B-50 (in service from 1948 through 1954), numbering 335 and 196 respectively, in comparison to only 58 B/RB-36s (in service from 1948 through 1959). Two years later, when Thule AFB opened, SAC still had 435 B/RB-29s, many of which were assigned to conventional missions in Korea, and 263 B/RB-50s. But the number of heavy B/RB-36 bombers had grown to 248, and the B-36 became the mainstay of SAC’s bomber fleet until approximately 1956.37 The B-36 had a near-intercontinental operational range (3,990 miles) and could carry nuclear as well as thermonuclear bombs. Increasingly, the medium B-47 Stratojet (in service in 1951) took over as the backbone of the bomber fleet until it was eclipsed by the heavy B-52 Stratofortress toward the end of the decade. The B-47 was a highly dependable aircraft and was produced in large numbers. At its peak in

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1958, SAC had 28 B-47 bomber wings (1,357 aircraft) and four RB-47 reconnaissance wings (176 aircraft). The B-47 was extraordinarily fast, capable of reaching 1,000 kilometers an hour, and its limited operational range of 2,014 miles was compensated for by the development of air refueling. In the 1950s, the B-47 was strategically coupled with the KC-97 tanker and could carry nuclear as well as lighter thermonuclear bombs.\(^{38}\)

Until the mid-1950s, the main mission of Thule was to meet the requirement of the SAC war plan for the use of a wing of 21 B-36s. This mission entailed more than simply stationing the planes at Thule. In addition, the base was to be used as a “landing or takeoff area with minimum servicing and shelter provided for the temporary occupancy of military aircraft during the course of movement from one location to another.”\(^{39}\) The staging unit was to be based in the United States, but Thule was to be used as an intermediate takeoff base on missions against the Soviet Union and as a recovery base for returning aircraft. This meant that all aspects of the staging process had to be practiced in major exercises. The first time such an exercise took place was in November 1952, immediately after the base was declared operational, when five B-36s were stationed for two days at Thule before taking off on simulated strike missions according to their operational plans.\(^{40}\) The exercise led to changes in the standard operating procedures of the base but was still considered a great success. Exercises involving up to ten bombers at a time continued throughout 1953 and were relatively successful, though this could be attributed to the limited number of bombers engaged in the exercises. As the year ended, Balchen celebrated the New Year with Air Force Secretary Harold E. Talbott and SAC Commander Curtis LeMay after they arrived at Thule to judge the ability of the base to fulfill SAC’s Emergency War Plan (EWP). LeMay identified numerous deficiencies, such as the lack of heating equipment to prevent aircraft engines from freezing. Nonetheless, he seemed fairly satisfied with what he saw.\(^{41}\) The Danish liaison officer reported home that LeMay had assured Secretary Talbott that SAC was now able to station a bomber wing at Thule “at any time.”\(^{42}\)

In mid-1954, Thule was declared fully operational, and its base unit was

\(^{38}\) Ibid, pp. 154, 160ff.


\(^{40}\) Second Semi-annual History, 6612th Air Base Group, 1 July–31 December 1952, in AFHRA. The 6612th Air Base Group was the unit operating Thule AFB. On 1 July 1954, when Thule was declared fully operational, it was upgraded to the 6607th Air Base Wing.

\(^{41}\) History of the 6612th Air Base Group, 1 July–31 December 1953, p. 32–34, in AFHRA.

upgraded to wing status. By now Thule had a 10,000-foot by 200-foot runway, 29 hardstands for heavy bombers, and six hangars for heavy bombers. In addition, a special program called Sea Weed, which was created for the pre-positioning of supplies and the scheduled staging of 21 B-36s in wartime, was completed.43 Another sign of the increased status of Thule was the setting up of a SAC Task Force Headquarters and a “Special Storage Area” for nuclear munitions, namely the Mk-6 and Mk-18 nuclear bombs.44 There is no evidence, though, that nuclear weapons were actually stored at Thule until 1958.45 Finally, as a signal of future tasks, SAC authorized the pre-positioning of support sets for B-47s and KC-97s at the base in May 1954.

From the winter of 1954 through 1955, two full-scale tests of Thule’s ability to stage the B-36 were conducted. In October 1954 the Sixth Bombardment Wing from Walker AFB in New Mexico dispatched an entire wing of 21 B-36s to Thule in Operation Pre-Strike. The exercise involved three stages. First, a nuclear weapons exercise was held at the home base to test the loading of each aircraft with three Mk-6 bombs. However, these weapons were unloaded before the second stage: deployment to Thule and preparations for attack. The third stage involved a simulated attack mission out of Thule. The exercise disclosed weaknesses of the communications and maintenance facilities at Thule.46

Operation Pre-Strike turned up some shortcomings, but the results of the next test (Exercise Ballet Dancer) in February 1955 were even more problematic. Ballet Dancer replicated Pre-Strike to a large degree, though the initial nuclear weapons phase of Ballet Dancer was held at Ellsworth AFB, where the loading and unloading of nuclear bombs were tested. Another new feature was to bring a dummy bomb to Thule in order to test the nuclear storage site there. The operation also simulated the time frame of the war plan. Four hours were set aside for the nuclear exercise at Ellsworth, and six hours were set for preparations at Thule before takeoff for the final simulated war mission on the way home to Walker AFB. The simulated attack was to occur in two waves taking off from Thule at 24-hour intervals.

The exercise revealed significant deficiencies at Thule, including the harsh winter weather, which delayed the departure of the second attack wave
by 24 hours. As the wing history concluded, “only 35 per-cent reliability could be expected when operating out of Thule Air Base under the conditions and timing schedules planned for this kind of mission.” The final exercise report revealed other problems, including an inadequate number of tractors to handle the aircraft, a problem-ridden tanker system, a lack of heaters, and so forth. The conclusion was that Thule could not, under the present circumstances, meet the requirements of the war plan.47

The main problem at Thule was the difficulty in providing sufficient staging facilities for the heavy and vulnerable B-36s, which made their final appearance in Exercise Ballet Dancer. The future belonged to the B-47s and KC-97s.

The Polar Strategy 1955–1959

The eventual function of Thule as an operating base for the B-47 had been envisaged since 1950, and in the summer of 1954 the pre-positioning of support sets for B-47s and KC-97s began. Although Thule never became an operational or staging base for the B-47 force as originally envisaged, it did function as an important operational base for air refueling until the late 1950s. In July 1954 a small detachment of KC-97s were deployed to Thule for air refueling of B-47s over the base. In November 1954 the first major exercise took place with fourteen B-47s and fourteen KC-97s trained for pre-strike missions from Thule, though not with great success as far as the KC-97s were concerned.48 In March 1955 another exercise was more successful in showing the potential of Thule as an operating base for KC-97s in wintertime. A month later, the first group of KC-97s rotated to Thule on a 45-day assignment. From then until mid-1959, roughly twenty KC-97s from different units were continuously operating out of Thule on a rotational basis.49 Their main mission was to train so that they could scramble on the shortest possible notice and undertake aerial refueling of B-47s in exercises with a maximum of 40 B-47s. In connection with the exercises, the reconnaissance versions of B-47s and RB-47s often landed at Thule but not on the same regular and extended rotation pattern as the KC-97s. The KC-97s also had operative tasks


in connection with reconnaissance flights. Up to ten of the tankers were engaged when an RB-47 went on mission in the vicinity of the Soviet Arctic region.

At certain times, deployments of KC-97s to Thule increased, doubling in the fall of 1956 during the crises over Suez and Hungary. In December 1956, 42 KC-97s from Thule took part in Operation Power House together with two detachments of RB-47s. According to the base history, “the requirements imposed on the personnel and facilities of Thule Air Base at one time nearly equaled the scheduled utilization of the base under EWP [Emergency War Plan] conditions.” The Danish liaison officer reported to Copenhagen that Operation Power House implied aerial refueling from Thule of three wings of B-47s, numbering 126 bombers in total. These exercises were part of an extensive pattern of airborne alert flights involving all of SAC’s bombers and spanning all of North America. According to General LeMay, a total of 21 B-47 wings and 18 tanker units flew simulated missions over the North Pole in December of that year. The exercise involved nonstop flights with aerial refueling around North America on a route from California to Newfoundland and then to the North Pole and back via Alaska to California. In LeMay’s words, the exercise demonstrated SAC’s ability to “fly hard and long with combat loads,” indicating that at least some flights were fully armed with nuclear weapons. Thule’s role in this connection was probably to refuel aircraft on the leg from Newfoundland to the North Pole, which may have been the first time that Greenland was overflown by nuclear-armed bombers. In the 1960s such flights became routine.

Operation Power House may be seen as the decisive consolidation of the polar strategy. By this point, Thule was fully integrated in SAC’s peacetime exercises and operations and presumably in the EWP as well. This was proved when SAC took over the base command in April 1957 from North East Air Command (NEAC), which had operated it since 1952. Thule’s full integration was also evident when it became “a prime strategic operating base of the 8th Air Force instead of simply a mission support base for deployed SAC units.” Another change was noted by the Danish liaison officer in the summer of 1956; namely, the strengthening and broadening of the runways, presumably in order to accommodate the B-52 heavy bomber, which was being introduced in ever larger numbers. At this time, the USAF considered using Thule as a staging base for B-52s based on the assumption that the first ver-

50. History of Thule Air Base, 1 July–31 December 1955, in AFHRA; and FOTAB report for December 1956, in FOTAB File, RA.
52. History of the 4083rd Strategic Wing (SAC), April, May, June 1957, in AFHRA.
sions of the aircraft would be lighter and have a shorter range than later versions. In the end, the B-52s were not deployed there, but starting in January 1957 air refueling of B-52s on Arctic patrol became common.

Another novelty was the increasing frequency of alert exercises—so-called SAC alerts—which focused on training planes to become airborne on short notice. In September and December 1957, two large-scale alert exercises, Blue Light and Iron Bar, involved Thule. Blue Light was a simulated B-52 combat mission, which engaged the 42nd Bombardment Wing at Loring AFB in Maine. According to the exercise plan, “weapons will be carried” during Blue Light, and Thule, and other air refueling bases will perform “a complete walk through all EWP procedures to include the execution of strike missions.” The plan stipulated that the B-52s begin taking off from the home base after 24 hours’ notice in seven waves over a 40-hour span. Part of the force, a total of 22 B-52s, flew the so-called Alpha Route and were refueled in the air near Thule to be followed by simulated “radar camera bomb runs” on Midwestern targets before returning to Loring.

Iron Bar in December 1957 was a comprehensive aerial refueling exercise involving 20 KC-97s at Thule, 25 B-47 bombers, and 18 RB-47 reconnaissance aircraft, of which eight RB-47s were deployed to Thule during the exercise. This was the last major B-47 exercise at Thule.

**Nuclear Weapons in Greenland**

On 13 November 1957, U.S. Ambassador to Denmark Val Peterson handed a note to Danish Prime Minister and Foreign Minister H. C. Hansen asking whether Denmark wanted to be given prior notice if the United States were to place nuclear weapons in Greenland. A few days later, the prime minister replied that he had no comments, thereby giving a green light. Subsequently, in February 1958, four nuclear bombs plus fifteen non-nuclear bomb components were placed at Thule, though they were removed as of October 1958. Denmark was never told when the Nike Hercules battery and Delta Dagger

53. Department of the Air Force Program Status Committee Meeting, 24 August 1956, in RG 341 (USAF), Entry 356, Box 2, NARA; and History of 6607th Air Base Wing, Thule Greenland, 1 January–31 March 1957, in AFHRA.


55. History of the 4083rd Air Base Wing (SAC), January–February 1958, in AFHRA.
squadron, which made up the air defense of Thule, became nuclear. In fact, the deployment and its antecedents remained a secret until 1995.56

Several aspects of this chain of events are puzzling. First, why did the United States approach the Danish prime minister in the manner it did? The 1951 agreement could not be interpreted as giving permission to deploy nuclear weapons in Greenland. Nonetheless, when the U.S. Department of Defense informed the State Department in June 1957 that SAC wanted to introduce and store “SAC and air defense weapons” at Thule, the assumption was that the agreement was broad enough to allow for this. The State Department chose to consult Ambassador Peterson, who came up with the idea of asking Hansen informally whether Denmark wanted to be informed prior to deployment.57 This suggestion was deemed too risky but was approved after renewed consultation with Copenhagen and the delicate question put to Hansen.58 U.S. officials did not intend or feel the need to consult or seek permission from Denmark, nor did the prime minister’s bland response challenge the U.S. view that deployment was covered by the 1951 agreement.

The second question is why SAC wanted to deploy nuclear weapons to Thule at that particular time. One possible explanation is of a bureaucratic nature; namely, that SAC, after taking over Thule in April 1957, felt that making the base nuclear was the natural thing to do. Another plausible explanation is that the deployment to Thule was part of a general dispersal plan adopted in response to the increasing vulnerability of SAC’s bases in the continental United States. In March 1957, President Eisenhower authorized SAC to spread nuclear weapons, including high-yield ones, to foreign bases under full U.S. control (as Thule was), as well as to bases in Britain and Morocco.59 The limited deployment to Thule and its short duration suggests, however, that the Strategic Air Command had no clear vision of the weapons’ eventual use there. At the time, no bomber units were operating or staging from Thule, but it is possible that rotation to Thule of B-47s was still held as an option. The base history from April 1957 through June 1957 does mention the possi-

56. The U.S. initiative was handled in deep secrecy by Prime Minister (and Foreign Minister) H. C. Hansen and by Permanent Secretary of the Foreign Office Nils Svenningsen. The government and parliament were not informed. The arrangement was not disclosed until 1995, when it triggered the investigation resulting in the DUPI Report. See DUPI Report 1997, Vol. 1, pp. 277–302; and Petersen, “The H. C. Hansen Letter.”


59. JCS Report, March 1957, in Sec. 68, CCS 381 U.S. (1-31-50), RG 218 (JCS), NARA.
bility of rotation stationing of B/RB-47s at Thule. At the same time, the Thule Operation Plan was distributed to all of SAC’s B-47 units, no doubt in order to familiarize them with local conditions.60

A third question is why Prime Minister Hansen chose to handle the situation with the permanent secretary of the Foreign Office without informing his government or involving the Foreign Office bureaucracy. This was very questionable because at the time, Hansen’s government was preparing an official declaration—eventually made at the December 1957 ministerial meeting of the NATO Council—that Denmark, of which Greenland had been a constitutional part since 1953, would remain nuclear-free.61 Why, then, was a green light given to nuclear deployment in Greenland? First, Hansen’s government coalition—comprising his own Social Democratic Party and two minor parties, one with a pacifist and the other with a neutralist past—would almost certainly have foundered if the decision had been shared. Second, although Greenland was constitutionally part of Denmark, it was mentally in a different category. Finally, any response other than Hansen’s “non-reply” might have triggered a crisis in Danish-American relations over an issue on which the United States was believed to be in the right.

**Strategic Reconnaissance from Thule**

Among the highly classified missions out of Thule in the 1950s was strategic reconnaissance against the Soviet Arctic. SAC’s strategic reconnaissance units were the only ones to carry out “live” operations against the USSR during the Cold War, especially in penetration flights over Soviet territory. Strategic reconnaissance was closely linked to SAC’s prime mission of strategic deterrence and bombardment, and was performed, before the satellite age, by long-range aircraft such as the RB-36, RB-50, and RB-47. In 1956, the specially built high-altitude U-2 aircraft joined the reconnaissance fleet.

The airborne reconnaissance missions from Thule served three main functions: photoreconnaissance aimed at detecting and pinpointing ground targets for the bomber fleet (e.g., military installations, cities, and economic targets); electronic reconnaissance aimed at identifying enemy radar and communications systems; and weather reconnaissance designed to provide reliable meteorological information for the bomber fleet. Such information was espe-

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60. History of the 4083rd Strategic Wing (SAC), April, May, June 1957, in AFHRA.
61. In the 1953 revision of the Danish Constitution, Greenland became an integrated part of Denmark with a status like that of the rest of the country.

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cially important for transpolar flights because of the rapidly shifting weather conditions and the few land-based weather stations in the region.

The hermetically closed nature of the Soviet Union was a considerable problem for SAC in the 1950s and made targeting a highly uncertain proposition. At the same time, the lack of information on Soviet early warning and air defense systems complicated the planning of flight routes and penetration points. Some information could be obtained by electronic eavesdropping from land- and sea-based listening posts on the Soviet periphery—such as those on the Danish island of Bornholm in the Baltic Sea. But this could not replace visual reconnaissance or electronic surveillance from the air along and across Soviet borders. Until the fateful U-2 mission in May 1960, the United States carried out wide-ranging aerial reconnaissance missions, especially over the Baltic and Barents Seas. Most of the flights were carried out by RB-47s operating from bases in the United Kingdom and, to a lesser degree, from West Germany and Thule. Similar flights were flown from Alaska and Japan over the Pacific Ocean and the adjoining Soviet Far East. In Europe, the Kola Peninsula was a primary target because of its important air and naval bases.62

The first reconnaissance flight from Thule—and probably the first planned and officially sanctioned overflight of Soviet territory ever—reflected SAC’s scant knowledge of the Soviet Arctic. In the spring of 1952, speculation surfaced about the possible construction of a Soviet air base in the desolate Franz Josef Land Archipelago as a parallel and counter to Thule. The archipelago lies north of Novaya Zemlya, some 600–700 nautical miles closer to North American targets than those in the Kola Peninsula. To find out what was going on, President Harry Truman authorized a flight over the archipelago in August 1952 together with similar flights over Wrangel Island and the Chukchi Peninsula in northeast Siberia. The overflight of Franz Josef to detect the existence of a Soviet airfield as well as possible radar installations on the islands was performed by an RB-50E, which took off from Thule on 17 September 1952, a month before the official opening of the base. In the end, no airbase or military (or other) activity on the islands was detected.63

No reconnaissance missions were recorded from Thule over the next three years. However, one can assume that such missions were flown at least occasionally and that by 1956 the base was deemed capable of handling such

62. Tamnes, The United States and the Cold War in the High North, p. 232.
missions. In the spring of 1956, a large SAC reconnaissance operation, code-named Operation Home Run and officially described as a “cold weather exercise with RB-47 aircraft testing photo and ECM [electronic countermeasures] equipment,” was flown out of Thule.64 This exercise, authorized by the president, was SAC’s largest and most sustained penetration operation against the Soviet Union during the Cold War. For seven weeks, from 20 March 1956 through 10 May 1956, a special “Home Run Task Force” consisting of sixteen RB-47E’s from the 26th Strategic Reconnaissance Wing (SRW), four RB-47Hs from the 55th SRW, and 28 KC-97 tanker aircraft (together with six additional RB-47Es taking part in the final flight of the series), flew a total of 156 sorties—all in radio-silence—mapping the northern littoral of the USSR from the Kola Peninsula to the Bering Strait photographically and electronically.65 The target area was divided into three sectors, one from the Kola Peninsula to Dikson on the Kara Sea, another from Dikson to Tiksi on the Laptev Sea, and a third from Tiksi to the Bering Strait. Each sector was assigned to a group of nine aircraft. The mission culminated with a squadron of RB-47s flying in attack formation in broad daylight several hundred miles into Soviet territory. The Soviet Union would have had no way of knowing that the aircraft were unarmed and that an attack was not imminent. But Soviet officials probably never discerned the full scope of the operation, and only three or four unsuccessful attempts at interception were recorded. President Eisenhower, claiming that “navigational difficulties” had caused the aircraft to go off course, rejected a subsequent protest note to Washington.66

According to the Danish liaison officer at Thule, the 26th SRW returned to Thule with a total of seventeen B-47s (presumably RB-47s) on 30 September 1956 for a six-week stint, most likely to continue the Home Run operations. However, the squadron left Thule again after a week.67 Two aircraft from the 55th SRW were rotated to Thule in October 1956 in order to conclude “extensive cold weather exercises under Arctic conditions.” At the same time, RB-47s from Thule acted as weather scouts in connection with the intensive training and alert flights that took place in the north at the time of the

64. History of the 6607th Air Base Wing, 1 January–30 June 1956, in AFHRA.


67. FOTAB Reports for September and October 1956, in FOTAB File, RA. The liaison officer presumably adhered to the standard order to identify RB-47s only as B-47s in unclassified or low-classified documents. This did not help Danish authorities to keep track of activities at Thule.
Hungarian and Suez crises.\textsuperscript{68} These operations are not well documented, but the heightened level of activity is noted. From mid-November to mid-December 1956, two KC-97 tanker squadrons were rotated to Thule instead of one.\textsuperscript{69}

As of December 1956, the Danish liaison officer at Thule, in monthly reports to the Danish Greenland Command, began to list the rotation of a limited number of B-47s (i.e., RB-47s) to Thule. The rotation normally comprised two to four aircraft at a time and continued on a regular basis until June 1959, when SAC drastically reduced its presence at Thule. The activities of this detachment can be followed more closely in the “History of the 55th SRW.” The 55th was SAC’s primary electronic intelligence unit, based at Forbes AFB in Kansas. In the summer of 1956, the wing started a regular rotation of detachments to Japan (Yokota Air Base), Britain (Mildenhall Air Base), Alaska (Eielson Air Base), and Thule, normally for three months at a time. Later on, a fifth detachment was rotated to Incirlik, Turkey. According to an operational order of 1 April 1957, two RB-47H aircraft were to be on indeterminate assignment at Thule with 67 personnel.\textsuperscript{70}

Routine activities at Thule were codenamed Sundog and consisted of refueling exercises with the KC-97 units rotated to the base. The importance of the reconnaissance missions was such that 206 out of the total 660 flight hours of the tanker unit that was rotated to Thule in August 1957, the 307th Air Refueling Squadron, were dedicated to “support of higher headquarters directed mission SUNDOG.” Sundog remained the primary mission of the rotated tanker units at Thule, as the chief of the 8th Air Force reminded Thule.\textsuperscript{71} In addition, numerous classified flights took place. The “History of the 55th SRW” from January 1958 refers to a “SAC directed special mission” from Thule as “very successful”—so successful that the participating crews were recommended for the Distinguished Flying Cross.\textsuperscript{72} The mission as such is not detailed, but its circumstances strongly suggest that it involved difficult and dangerous flights close to or, likely, into Soviet territory. According to a crew member who flew RB-47 missions out of Thule from January through April 1959, these missions covered the northern borders of the Soviet Union, including areas around Murmansk and Anderma. He notes that Soviet radar

\textsuperscript{68} History of the 6607th Air Base Wing, 1 July–31 December 1956, in AFHRA.
\textsuperscript{70} Deployments to Mildenhall, Yokota, and Eielson consisted of two, three, and two RB-47H respectively. See History of the 55th Strategic Reconnaissance Wing (M) Jet, April 1957 and April 1958, in AFHRA.
\textsuperscript{71} History of the 4083rd Strategic Wing, 1–30 October 1958, in AFHRA.
\textsuperscript{72} History of the 55th Strategic Reconnaissance Wing, January–February 1958, p. 16, in AFHRA.
installations were occasionally spotted on the ice several hundred kilometers from the coast. At least eight KC-97 tankers from Thule took part in such long-range missions.\(^73\)

The activity level of reconnaissance missions from Thule fluctuated considerably in the late 1950s and generally on a declining scale. From mid-April to October 1958 no missions were flown, and from mid-November 1958 through early 1959 no reconnaissance aircraft were even rotated to Thule.\(^74\)

By January 1959 “the tanker rotational concept” was abandoned as far as Thule was concerned, and SAC’s operations there were reduced to elint operations.\(^75\) Under Operation Texas Star, the 55th SRW, whose RB-47s had regularly rotated to Thule since 1956, deployed two RB-47s and six KC-97s to Thule. Texas Star proved, however, to be short-lived. SAC informed the base commander on 1 June 1959 that there was no longer any need to support RB-47s on a rotational basis and that Thule was no longer a necessary location for Texas Star operations. The 55th SRW abandoned Thule as well as the regular reconnaissance flights. Thule’s active involvement in SAC’s offensive strategy posture was over, but the base acquired an even more important defensive role as the hub of the new Ballistic Missile Early Warning System (BMEWS).

By this time, the more sensitive reconnaissance operations had been taken over by the U-2 high altitude aircraft. There is no indication that the U-2 ever operated from or landed at Thule. On the other hand, Thule seems to have been involved in the initial planning of the fateful last U-2 flight over the Soviet Union. According to Rolf Tamnes, who cites unidentified “U.S. sources,” three alternative flight routes had been discussed, one of which, codenamed Project Time Step, was to have started from Thule on an eastward route to Novaya Zemlya, from which the flight path would have taken the plane over the Plesetsk missile base, landing in Bodø, Norway. This idea was supposedly abandoned because of navigational problems with west-east flights at high altitudes, combined with heavy clouding in the area. Instead the Pakistani city of Peshawar was chosen as the point of departure.\(^76\)

There is ample evidence that strategic reconnaissance flights from Thule were concentrated in the period from early 1956 to mid-1959, but occasional flights were probably made before that. The importance of the information gained can only be guessed. The polar strategy depended heavily on information about Soviet targets and Soviet defense measures in the far North, and

73. Bruce Bailey to DUPI, e-mail message, November 1996.
74. History of the 55th Strategic Reconnaissance Wing, September, October, and November–December 1958, in AFHRA.
75. Commander 8th Air Force to Base Commander Thule, 5 January 1959, in History of the 4083rd Strategic Wing, 1–31 January 1959, in AFHRA.
76. Tamnes, The United States and the Cold War in the High North, p. 133.
the information gained in massive intrusive flights like Home Run was clearly of eminent importance for the planning of missions against the Soviet Union and hence for the polar strategy.

**SAC’s Polar Strategy in the 1960s**

Concurrently with the introduction of the B-52 and the attainment of a truly transpolar capability, SAC started to worry about the vulnerability of the bomber force. In the mid-1950s, the Soviet Union was thought to have an initial capability to launch one-way airborne attacks on the United States, and the launch of *Sputnik* in October 1957 indicated a more serious threat from Soviet ICBMs. The United States reacted both by strengthening its early warning systems and by increasing the readiness of the Air Force. In March 1958 the Danish government gave its approval to the extension of the Canadian Distant Early Warning Line (DEW) against bomber attacks across southern Greenland, but the mighty BMEWS radar built at Thule in 1960 and in operation by 1961 was far more important. BMEWS consisted of three radars—based in Alaska, Britain, and Thule—and gave a precious fifteen-minute warning of a missile attack. But a very high alert status was required to exploit this respite to scramble the B-52s at their bases. One such procedure was Ground Alert, introduced in October 1957, which demanded that one-third of the force stood combat-ready (armed with nuclear weapons) on the runways, ready to take off at fifteen minutes’ notice. The Ground Alert concept was also applied to SAC units on foreign airfields under the so-called Reflex Program from 1958, which sent fewer aircraft abroad and with shortened assignments but on Ground Alert status. One-third of Ground Alert was achieved for the entire force in May 1960, and the 50 percent target set by the Kennedy administration was reached a year later.

Ground Alert was supplemented in December 1958 by an Airborne Alert. Under this procedure, a small portion of the bomber force, normally twelve aircraft but considerably more during crises, was airborne and combat-ready around the clock. B-52’s under the program (codenamed Chrome Dome Indoctrination) normally flew three routes. The northern route started from bases in the Great Lakes area, crossed Hudson Bay and Baffin Island to enter the Greenland airspace at Disko Bay on the west coast, and proceeded from there across the icecap to the Greenland east coast and then back across

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77. The DEW Line was built outside the defense areas designated in the 1951 agreement and therefore required the permission of the Danish government, whereas the BMEWS radar was built at an existing U.S.-operated defense area and did not need Copenhagen’s consent. On the DEW Line and BMEWS, see DUPI Report 1997, Vol. 1, pp. 346–352 and 336–338, respectively.
the icecap and Labrador to land in New England. The southern route took off from the Atlantic seaboard, crossed the Atlantic and northern Spain to make a turn in the western Mediterranean, and then returned through the Strait of Gibraltar back to the United States.78 These flights were “pure” alert flights, but there was also a third category of alert flights—the so-called Thule Monitor flights—that performed additional tasks. From 1962 through 1963, three to six daily sorties were flown on the northern route, four to seven on the southern route, and two sorties on the Thule Monitor missions.79

Besides being part of the Airborne Alert program, the Thule Monitor missions had another purpose—namely to secure the continuous airborne surveillance of the new BMEWS radar at Thule. The Thule radar was vital to early warning but was vulnerable to being taken out by a Soviet ICBM or SLBM strike and was further weakened by tenuous communications links with the North American Air Defense (NORAD) command. The greatest weak point was a long undersea cable from Greenland to Newfoundland. Early warning signals from the BMEWS could be interrupted by enemy action, mechanical interference, or technical failure. The Thule Monitor missions were therefore designed to keep surveillance over Thule and to provide an extra communication link between the radar and NORAD. The mission, instituted in August 1961 with permission from Defense Secretary Robert McNamara, proved its worth as early as November 1961, when all communications with Thule suddenly stopped. The SAC command immediately placed all SAC bases under emergency alarm. The alarm was terminated a few minutes later when a Thule Monitor aircraft reported that all was well at Thule.80

USAF personnel on Airborne Alert were ordered to ensure that “safe operating procedures are adhered to in all aspects of this operation.”81 Special precautions were needed for Chrome Dome missions flown with full weaponry, including four thermonuclear bombs, over the territory of Canada, Greenland, and Spain. Despite precautions, two serious accidents occurred in the Chrome Dome program. The first was in January 1966 when a B-52 and a KC-135 tanker collided during refueling over Palomares, Spain, causing four thermonuclear bombs to fall to the ground. The accident strengthened

81. Instructions for Operation Hard Head, 20 July 1962, Annex “A” to 4042nd Strategic Wing, 1–31 August 1962, in K-WG-4-042-HI, AFHRA.
McNamara’s belief that Chrome Dome was too expensive and risky and was of less strategic importance after completion of the ICBM procurement program. The southern route was cancelled, and sorties on the northern route were reduced to four a day, including one or two Thule Monitor flights, which had grown in importance under the reduced Giant Wheel program. The next accident occurred during a Thule Monitor mission on 21 January 1968 when a B-52 crashed on the ice outside Thule after an aborted emergency landing. The incident created a minor crisis in the Danish-American relationship until May 1968, when the United States recognized that Greenland—including its airspace—was nuclear-free like the rest of Denmark. Despite protests by SAC, McNamara stopped the Airborne Alert program in July 1968. With a ban on flights carrying nuclear weapons in peacetime, SAC’s polar strategy had received a decisive blow.

Conclusions

The polar strategy was not conceived in SAC or by the JCS but was promoted by Secretary of the Air Force Finletter and Colonel Balchen, the USAF’s foremost specialist on Arctic aviation. They were instrumental in the decision to build an Arctic base in northwest Greenland in 1951–1952 and subsequently promoted the idea of an advanced base in northeast Greenland, nearly 1,000 kilometers closer to the Soviet Union. The latter idea was never realized for economic, technical, and political reasons, and the United States settled instead for an emergency airstrip at Station Nord, the Danish weather and radio station.

Until the mid-1950s, the main thrust of the polar strategy was to develop Thule as a staging base for a wing of B-36s, but extensive tests from 1954 through 1955 showed that the B-36 could not cope with the exigencies of Arctic conditions and that the polar strategy was not yet viable. The original alternative role of Thule as an operating base for B-47s was not realized, either. Instead, Thule became a rotation base for KC-97 tankers and for a small detachment of RB-47 reconnaissance aircraft. The polar strategy finally worked, and SAC took over Thule in the spring of 1957, using it over the next few years as a support base, mainly for B-47s and RB-47s but also for B-52s. However, Thule’s capacity to service the B-47 fleet was limited, and the bulk of forward-based B-47s still operated from bases in Britain and Mo-

rocco. The polar strategy had its final breakthrough with the B-52, which could fly intercontinental missions across the Arctic without staging or refueling from Thule. Ironically, at the very moment that the polar strategy gained sway, Thule was rendered superfluous by the B-52. By 1960, deployments and rotations to Thule AFB ceased, and the role of the base shifted from offensive to defensive with the building of the huge BMEWS radar. However, Greenland retained an indirect strategic offensive role, with its airspace used on a daily basis by B-52s on Airborne Alert. The nuclear accident at Thule in January 1968 gave McNamara an opportunity to cancel the program, which he saw as dangerous and unnecessary. This proved to be a decisive setback to SAC’s bomber fleet and the polar strategy.

The “bottom-up” perspective of this article has highlighted the chronology of the polar strategy, its practical implementation, and its opportunities and difficulties. The emphasis here has been on the extent to which the plans conformed to reality. The polar strategy operated under difficult constraints but gradually became more feasible. Several enabling and limiting conditions were associated with Thule. An enabling factor was the perceived need to have alternatives to the vulnerable perimeter strategy, which relied on air bases within reach of Soviet tactical and strategic bombers and depended on host-country consent. Arctic bases were less vulnerable and offered attack routes over less defensible sectors of the Soviet perimeter. An operational strategy based on flight routes along the transpolar great circles had many advantages, but it depended on technical factors such as aircraft range. The polar strategy did not come to full fruition before it was taken over by the B-52, which could fly Arctic missions without base support outside the United States. But the strategy also worked well with the B-47s and KC-97s thanks to the perfection of air refueling.

The limits of the polar strategy with regard to the use of Arctic bases stemmed primarily from the difficult meteorological conditions in the High Arctic: extremely low winter temperatures, adverse wind conditions, and winter darkness. Such conditions affected the operational reliability of staging aircraft, and the clumsy B-36 bomber did not pass the test. The USAF bore greater expense building and maintaining bases in the Arctic than elsewhere—Thule was the only site outside Alaska at which the construction of a major Arctic airbase was deemed feasible. This meant that only a minor part of SAC’s B-47 force could be serviced by Thule. In the late 1950s, when Thule AFB was at its maximum performance and its personnel peaked at roughly 7,000, the base in peacetime was servicing one B-47 wing. In wartime, this number could probably have been increased to three wings—out of 28 B-47 wings in the entire force—as in Operation Power House in 1956.

In the 1950s, Thule allowed the USAF to gain familiarity with Arctic
conditions and Arctic aviation, providing an alternative to perimeter bases. Strategic reconnaissance flights afforded specific information on Soviet targets, defense installations, and penetration points—information crucial for the U.S. bomber force before ICBMs came on line. By 1960, Thule’s role shifted to strategic defense, a role that was reaffirmed in 2004, when Denmark and the Greenland Home Rule government accepted the modernization of the Thule radar as part of the new U.S. missile-defense program.