ALERT OPERATIONS

and the

STRATEGIC AIR COMMAND

1957-1991

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STRAGTEGIC AIR COMMAND

OFFUTT AIR FORCE BASE, NE

Peace...is our Profession

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ALERT OPERATIONS

AND

THE STRATEGIC AIR COMMAND, 1957 - 1991

7 December 1991

OFFICE OF THE HISTORIAN

HEADQUARTERS STRATEGIC AIR COMMAND

OFFUTT AIR FORCE BASE, NEBRASKA

FOREWORD

As CINCSAC, it was my privilege to oversee the most momentous SAC operation since the Cuban Missile Crisis. On 28 September 1991, I assembled my staff in the SAC Command Center where we supervised the stand down of SAC bombers, tankers, and Minuteman IIs from day-to-day alert. This event heralded the successful conclusion of the Cold War and over forty-five years of dedication and hard work by the command. It represented victory in the finest sense, peace and freedom through readiness rather than by the destruction of people and nations. Strategic Air Command entered the battle in March 1946 and had relied on the alert force as its primary tactic since October 1957. Through the mere projection of military power, SAC and the ballistic missile submarine force have deterred conflict between the major powers and prevented the employment of nuclear weapons. The events of 28 September represent a tremendous victory for this command and an achievement with which every citizen of the United States and the free world can be proud.

A curious irony of victory is that it eliminates the need for the people and organizations that forged it. Strategic Air Command was established to deter communist aggression, prevent nuclear warfare, and wage the Cold War. The successful conclusion of that campaign and changing concepts in the employment of air power have eliminated the requirement for a command exclusively dedicated to strategic air power. SAC has accomplished its mission and will be retired. The weapon systems it operated will transfer to several new Air Force commands. Future strategic operations, to include bombers, ICBMs, and SLBMs, will come under the purview of a newly established U.S. Strategic Command. Those who have witnessed the events of the last forty-five years may be assured that the legacy embodied in the words "Strategic Air Command" will not be lost. The new commands will carry forth the fine tradition and warmaking ability of our legendary command and the standards for dedication, readiness, and sacrifice that are synonymous with SAC will remain goals for all future organizations to achieve and maintain.

GEORGE L. BUTLER
General, USAF
Commander in Chief

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COMMANDER IN CHIEF, STRATEGIC AIR COMMAND
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During its first ten years, Strategic Air Command conducted operations from sanctuaries, most of them located within the United States. The Soviet Union's acquisition of thermonuclear weapons combined with a systematic build up of its long-range bomber force and development of intercontinental ballistic missiles in the mid-1950s profoundly altered this situation. Defense planners interpreted these actions as a conscious effort to project Soviet military power worldwide and to place the United States under the direct threat of nuclear attack. Given the inferiority of Soviet forces, SAC planners thought it reasonable that in time of war the Soviets would resort to the most basic military principle to quickly gain superiority — *surprise.*

Growing Soviet military power and the possibility of a surprise attack demanded attention. General Curtis E. LeMay, Commander in Chief of Strategic Air Command (CINCSAC), and his staff at Headquarters SAC understood the need for a quick retaliatory response to Soviet aggression. They also knew that to respond effectively, they had to protect their strategic forces from being destroyed on the ground. Under General LeMay's guidance, the SAC staff generated several studies that sought to neutralize the threat of surprise attack, assure a meaningful SAC response, and make the Soviets uncertain of success.

The alert force concept that emerged safeguarded the nuclear arsenal and maintained deterrence as a viable strategy. It placed SAC's bombers and tankers on ground alert with weapons loaded and crews ready for immediate takeoff. The goal was to keep one-third of the command's aircraft on ground alert at all times. SAC planners arrived at the one-third figure after evaluating training, manpower, and logistic requirements.

Strategic Air Command's next step was to conduct three tests to determine the feasibility of the alert concept. The first test, Operation Try Out, was supervised by

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│         THE  SAC  MISSION                      │
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│         DURING  THE  PERIOD                    │
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COVER SLIDE FROM SAC ALERT CONCEPT BRIEFING
MARCH 1956

the 38th Air Division at Hunter AFB, Georgia. From November 1956 to March 1957, the 2d and 308th Bombardment Wings kept one-third of their B-47 and KC-97s on continuous 24-hour alert. Operation Try Out proved that ground alert was feasible. Two additional tests worked out problems identified in Operation Try Out and perfected the alert concept. The second test, Operation Watch Tower, was carried out by the 825th Air Division at Little Rock AFB, Arkansas. Between April and November 1957, the 70th Strategic Reconnaissance Wing, 384th Medium Bomb Wing, 825th Combat Support Group, and 70th Air Refueling Squadron validated an organizational structure that would accommodate alert operations without degrading other training requirements. Operation Fresh Approach, the last test, fell to the 9th Bombardment Wing at Mountain Home AFB, Idaho, in September 1957. The final test refined the organization evaluated by the 825th Air Division.

When General LeMay departed SAC in June 1957, General Thomas S. Power became the new CINCSAC and the driving force behind the alert program. Successful test results convinced General Power that alert would work. Even though testing had not been completed and many organizational and administrative details remained unresolved, General Power directed the start of ground alert operations on 1 October 1957 at several bases in the continental United States and overseas.

Preparation for overseas alert had begun in July, 1957 when four Second Air Force B-47 wings each sent five bombers to Sidi Slimane Air Base, Morocco. Overseas alert operations, more commonly known as Reflex Action, commenced on 1 October. Under Reflex, SAC units rotated crews and aircraft (B-47s and tankers) to bases overseas where they stood on alert. Reflex allowed SAC to further disperse

its forces, thereby complicating Soviet targeting, while simultaneously positioning its strike force closer to the Soviet Union. A typical tour of duty for a standby alert crew in Alaska, for instance, lasted 72 hours. Ground crews worked eight-hour shifts. After 10-14 days, aircrews returned to their home bases. Reflex tours to SAC bases in the United Kingdom, Spain, and Morocco averaged 90 days.
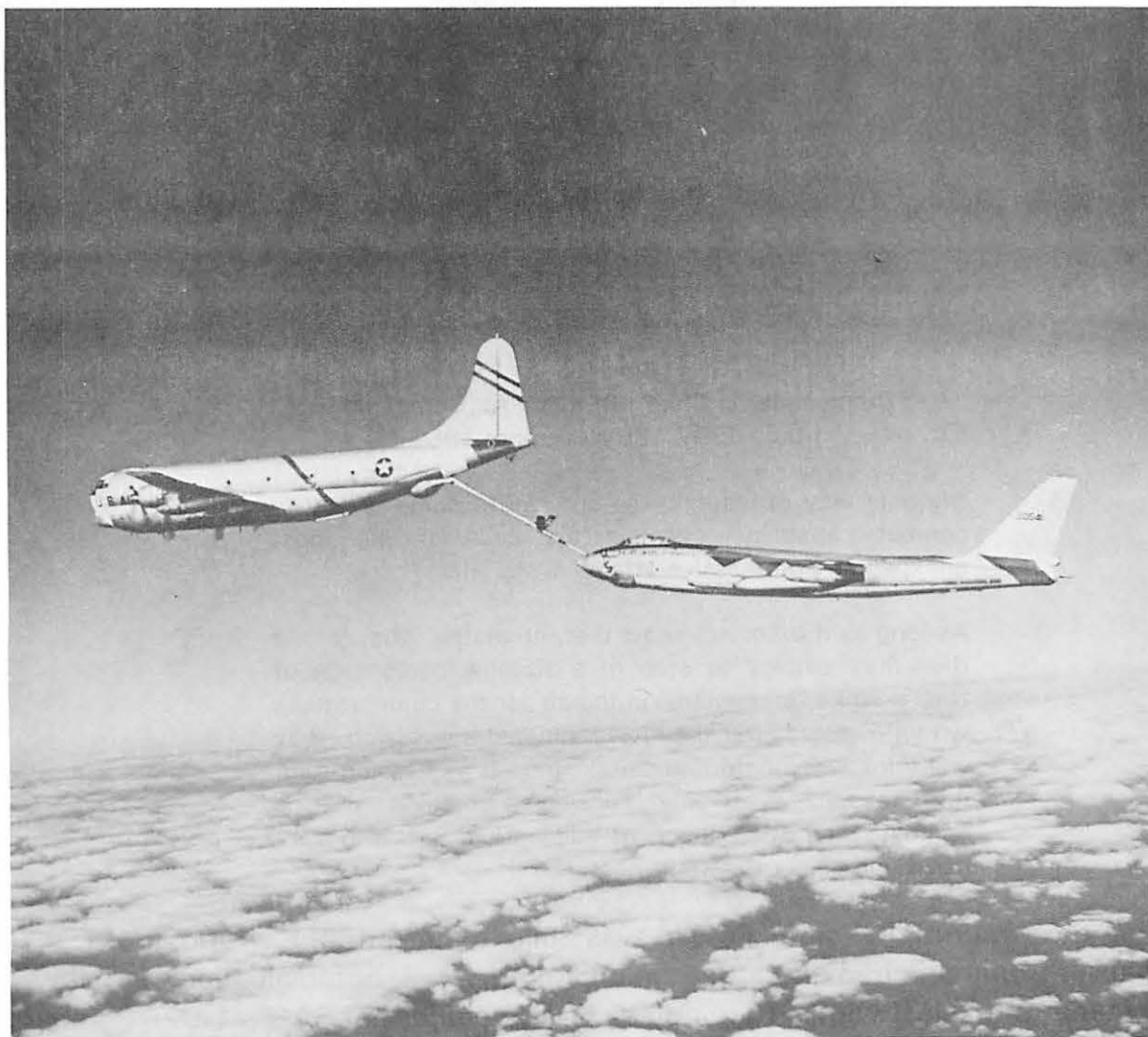
A KC-97 PERFORMS A MID-AIR REFUELING OF A B-47E

As SAC units prepared to initiate alert operations, General Power wrote a memorandum addressed to each member of the SAC alert force explaining the purpose and importance of their new duty. "As a member of SAC's Alert Force," he advised them, "you are contributing to an operation which is of the utmost importance to the security and welfare of this nation and its allies in the free world." The CINCSAC then noted that:

GENERAL THOMAS S. POWER
Commander in Chief, Strategic Air Command
1 July 1957 - 30 November 1964

the only way of insuring the survival of some of SAC's combat capability, even in the case of the most unexpected and massive attack, is our Alert Force.

As long as the Soviets know that, no matter what means they may employ to stop it, a sizeable percentage of SAC's strike force will be in the air for the counterattack within minutes after they have initiated aggression, they will think twice before undertaking such aggression. For this reason, it is my considered opinion that a combat-ready Alert Force of adequate size is the very backbone of our deterrent posture.

The next month, General Power was able to inform the world press that Strategic Air Command had aircraft at the end of runways, bombs loaded, and crews nearby ready to take off within 15 minutes. Eleven percent of SAC's 1,528 bombers and 766 tankers were placed on alert that year, a percentage that would grow to 12 percent in 1958 and 20 percent in 1959. The command's goal of one-third was finally achieved in 1960.

SAC devised another tactic — dispersal — that it used in the late 1950s and early 1960s to complicate enemy planning. Dispersal divided large B-52 wings of 45 aircraft into smaller wings of 15 aircraft each and relocated them to other bases where they were placed on alert. Dispersal tactics increased the number of targets

confronting Soviet planners and reduced the time required to get the alert force off the ground. These two factors strengthened the probability of a viable retaliatory attack and added credibility to SAC's deterrent strategy.

While SAC was bringing the alert force on line, significant achievements in ballistic missile technology were already altering the future structure of alert operations. On 31 October 1959, the 576th Strategic Missile Squadron at Vandenberg AFB, California, mated a nuclear warhead to the nation's first intercontinental ballistic missile, an Atlas D, thereby enabling General Power to declare it on alert. The Atlas D and E (the latter placed on alert in October 1961) were liquid-fueled missiles deployed in above-ground launchers. Together, they brought to fruition a program begun in 1946 that profoundly changed the scope and management of strategic operations. A second milestone occurred on 18 March 1960 when the 702d Strategic Missile Wing at Presque Isle AFB, Maine, succeeded in placing the first Snark intermediate range cruise missile on alert. These events foreshadowed a trend that continues to this day. Missiles would become the backbone of the alert force and the major component in the strategic deterrence equation.

FIFTEENTH AIR FORCE RECEIVES ITS FIRST ICBM, AN ATLAS D,
F.E. WARREN AFB, WYOMING, 2 OCTOBER 1959

Daily alert operations complicated maintenance and other routine unit activities. Strategic Air Command solved these problems in late 1958 by reorganizing its tactical wings and air base groups. The command centralized maintenance operations by establishing organizational maintenance squadrons to handle all wing maintenance

AN ATLAS MISSILE STANDS
ERECT AT COMPLEX 576-B,
VANDENBERG AFB,
CALIFORNIA
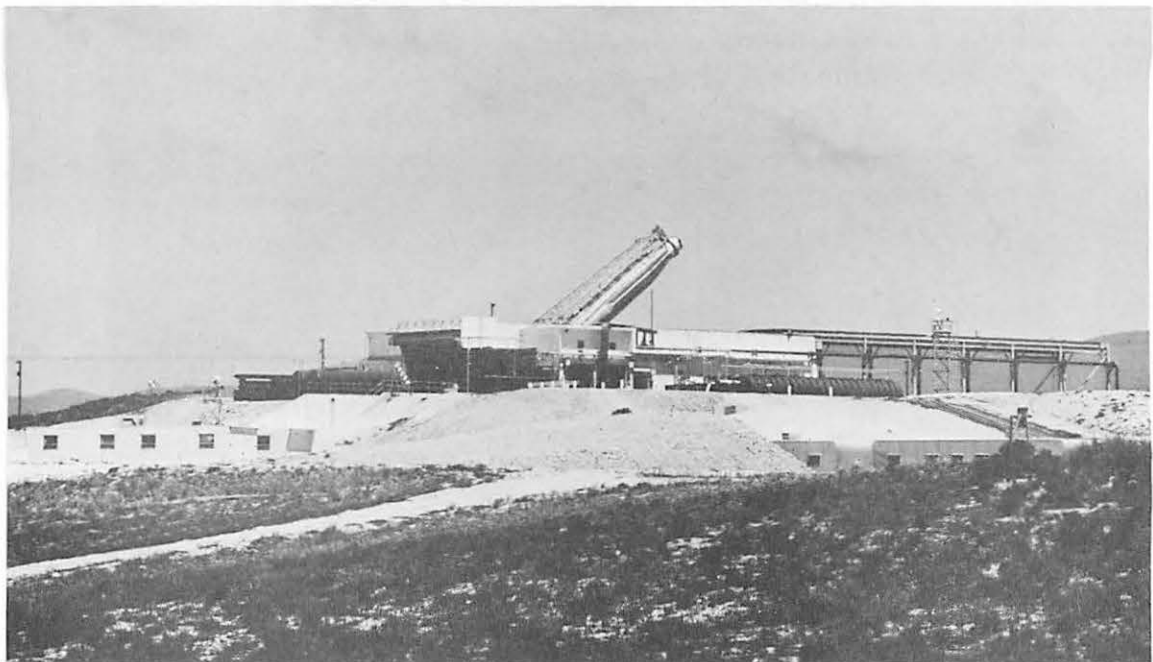
"ON MY MARK IT WILL BE T-15 MINUTES . . . MARK"
THE SHELTER TOP ROLLS BACK AND AN ATLAS RISES TO LAUNCH POSITION
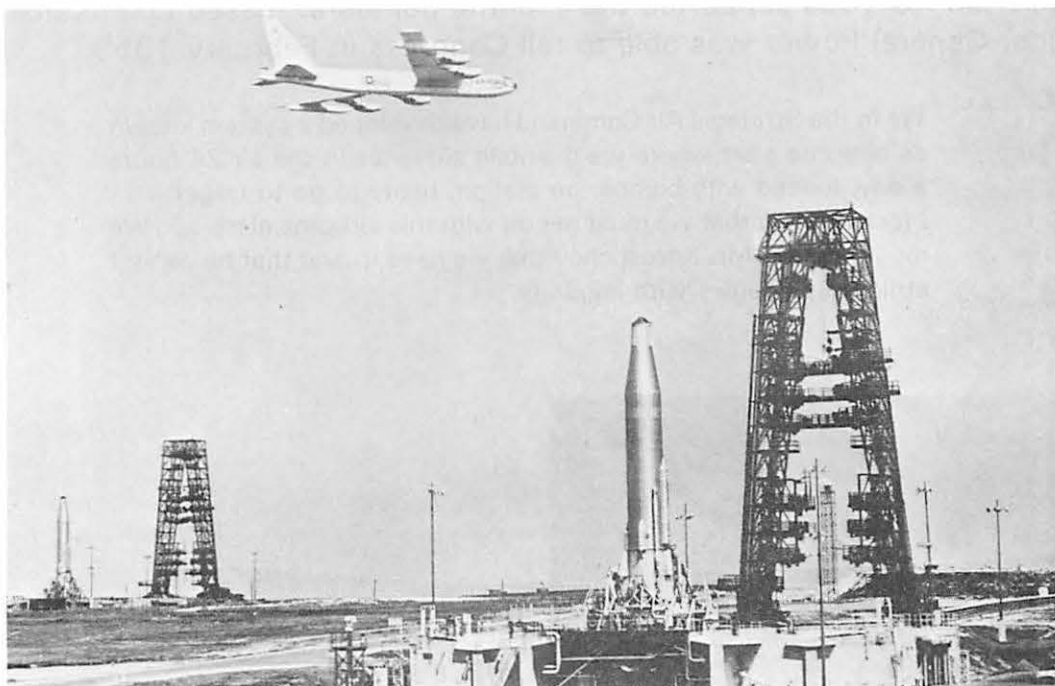
"POWER FOR PEACE" IS EMPHASIZED AS A B-52 FLIES OVER AN ATLAS COMPLEX AT VANDENBERG AFB, CALIFORNIA

functions.   Each wing was assigned a deputy commander for maintenance and a deputy commander for operations. Finally, air base groups were redesignated combat support groups. These changes emphasized combat-ready aircraft and combat-ready aircrews — the components SAC considered essential for successful alert operations.

When General Power announced to the world in November 1957 that his command had armed aircraft on alert, he also tantalized them with another cryptic comment. "Day and night," he stated, "I have a certain percentage of my command in the air." Political considerations in Washington prevented him from fully stating what this meant. The CINCSAC found such restrictions irritating because he believed that the best way to deter Soviet aggression was to convey in precise and deadly terms the military readiness of his command. Washington may have restrained him, but it did not prevent him from getting the message across. "These planes," he informed an inquiring press, "are bombed up and they don't carry bows and arrows."

In developing a plan to protect its strategic forces and maintain a credible deterrent, Strategic Air Command had not confined itself to ground alert. Command planners also produced a plan for airborne alert. As General Power had suggested, combat-ready bombers were airborne at all times. SAC had begun testing a B-52 airborne alert concept and by 1961 had amassed more than 6,000 alert sorties. The 92d Bombardment Wing participated in one test, Head Start II (2 March - 30 June 1959), which kept five B-52 bombers airborne at all times. Each crew flew a 24-hour

sortie while ten KC-135s supported the airborne bombers. Based upon satisfactory test results, General Power was able to tell Congress in February 1959:

> We in the Strategic Air Command have developed a system known as airborne alert where we maintain airplanes in the air 24 hours a day, loaded with bombs, on station, ready to go to target. . . . I feel strongly that we must get on with this airborne alert. . . . We must impress Mr. Khrushchev that we have it, and that he cannot strike this country with impunity.

A B-52 PILOT MANEUVERS HIS AIRCRAFT DURING A HEAD START II TEST

On 18 January 1961, SAC finally obtained permission to publicly announce that B-52 bombers were conducting airborne operations, but the activity had to be characterized as airborne indoctrination training.

Aircrews responded favorably to airborne alert training. "I don't mind ground alert because I know it's necessary," one crew member noted. "But I like our air alert so much better," he added. "Instead of sitting around and waiting for something to happen, I do what I know and like best - flying." Another crew member during Head Start II mused that it would be interesting "if General Power could invite that guy Khrushchev to fly a Head Start mission with the 92d." The experience, he concluded, "would keep him peaceful for a while!" The same individual then suddenly exclaimed,

"Gee, and just think of the money we could save because we could do away with the Army, the Navy and the rest of the Air Force!"

General Power once observed that:

> Communications are the 'nervous system' of the entire SAC organization, and their protection is, therefore, of the greatest importance. I like to say that, without communications, all I command is my desk, and that is not a very lethal weapon!

Strategic Air Command took a major step toward ensuring a survivable command and communications network in January 1957 when it moved into the new SAC Command Center at Offutt AFB, Nebraska. Two attached structures, buildings 500 and 501, formed the Center. Building 500 housed Headquarters SAC's administrative functions in three above-ground floors and a basement. The heart of the complex resided in building 501, better known as the SAC Command Post. This three-story underground structure adjacent to the new headquarters building was specially designed to withstand anything except a direct hit by a high yield nuclear weapon. Its reinforced concrete walls were 24-inches thick. The complex had more than three acres of floor space and was self-contained with its own power supply, rations and artesian well for extended operations. The state-of-the-art facility housed the SAC Command Post, a communications center, computers and the war planning staff. Giant maps and panels depicted the disposition and operational status of the entire force. From here, the CINCSAC monitored his forces 24-hours each day and maintained instantaneous contact with them throughout the world.
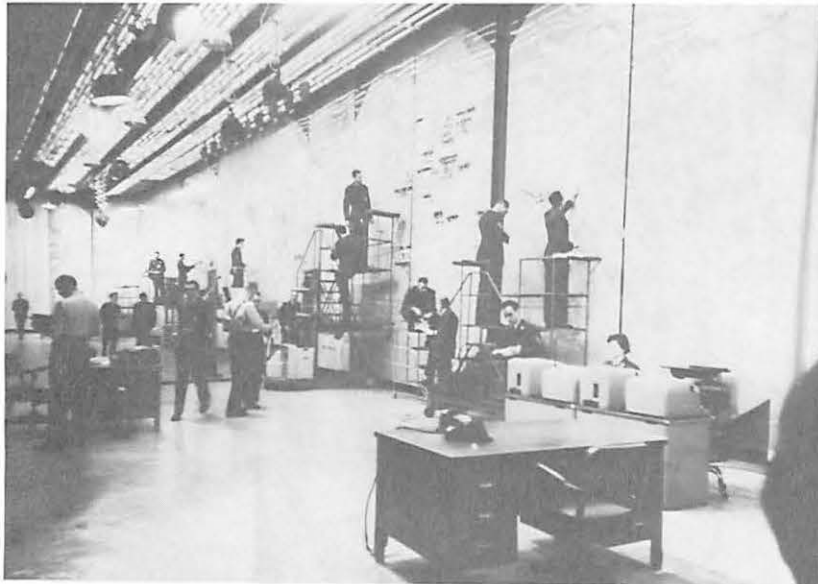
THE SAC COMMAND POST
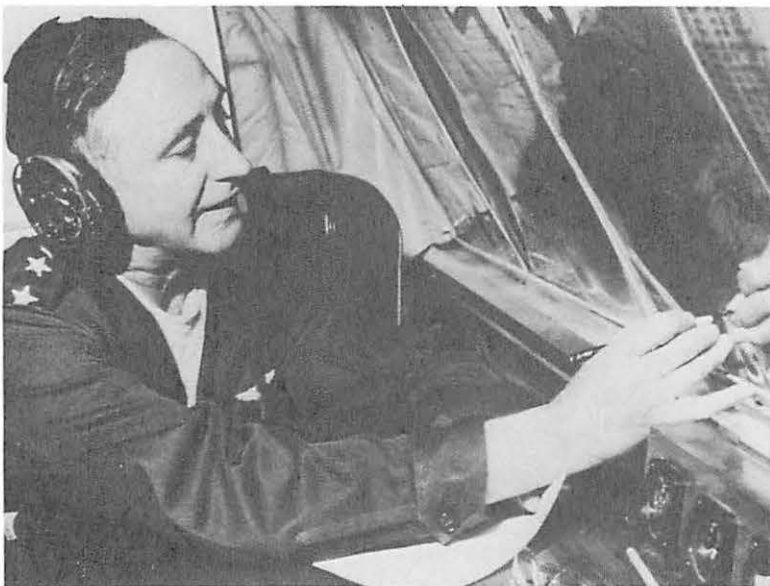
LT GEN JOHN P. McCONNELL ABOARD "LOOKING GLASS," 3 FEBRUARY 1961
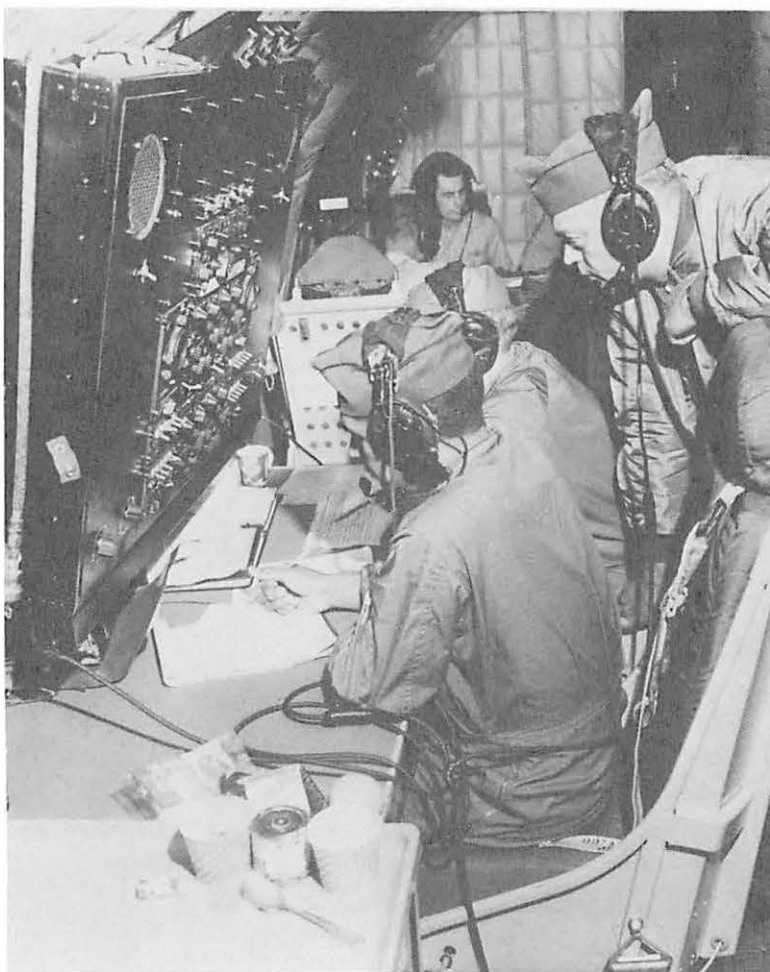
CONTROLLERS AT WORK ONBOARD AN EARLY AIRBORNE COMMAND POST

After examining several alternatives, including a deep underground and a railmobile command post, SAC selected another means of ensuring its ability to command, control, and communicate with its worldwide forces. On 1 July 1960 the command began testing the airborne command post at Offutt AFB, Nebraska. Throughout the rest of the year, one of five specially configured KC-135 aircraft assigned to the 34th Air Refueling Squadron was placed on ground alert and periodically tested to determine its ability to take off within 15 minutes. Once airborne, the KC-135's primary mission was to serve as an alternate command post, one that could assume control over the SAC combat force in the event an enemy attack destroyed the underground command facility at Offutt and other command posts collocated with SAC's numbered air force headquarters. A SAC general officer and a team of controllers and communications experts manned each flight. The test proved successful and continuous airborne command post operations began on 3 February 1961 with Lieutenant General John P. McConnell, Commander of Second Air Force, serving as the first SAC Airborne Emergency Action Officer. Because these airborne operations mirrored the activities in SAC's underground command post, the airborne command post was nicknamed the "Looking Glass."

**A SAC AIRBORNE COMMAND POST TEAM ABOARD A "BAREBONES"
KC-135 AIRBORNE COMMAND POST IN THE EARLY 1960s**

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President John F. Kennedy visits Vandenberg AFB, March 23, 1962.
1) Receiving honors, 2) departing flight line, 3) viewing Atlas
134D launch, 4) Atlas 134D, 5) viewing missile/space exhibits,
6) at Minuteman site, 7) receiving missile badge.

**PRESIDENT JOHN F. KENNEDY VISITS VANDENBERG AFB, CALIFORNIA
23 MARCH 1962**

Shortly after becoming President, John F. Kennedy announced a new defense posture. His purpose was to strengthen the nation's military position in light of Soviet technological advances and worldwide political initiatives. The new posture directly affected Strategic Air Command because it increased ground alert to one-half of the command's bombers and tankers. SAC attained 50 percent alert in July 1961. An aircrew to aircraft ratio of 1.8 to 1 was established to help man the increased alert requirement.

The introduction of several new weapon systems reinforced the deterrent strength achieved by the new alert rate. The Titan missile joined the alert force on 20 April 1962 when the 724th Strategic Missile Squadron, Lowry AFB, Colorado, put the first Titan I on alert. In August, the Atlas F began alert duty with the 577th Strategic Missile Squadron, Altus AFB, Oklahoma. These two missiles were the first to stand alert upright in silos, although they were raised to surface level for launching. An inertial guidance system in the Titan I allowed the missile to operate without ground control during flight. On 1 September, the 305th Bombardment Wing at Bunker Hill AFB, Indiana, began alert operations with the B-58 Hustler.
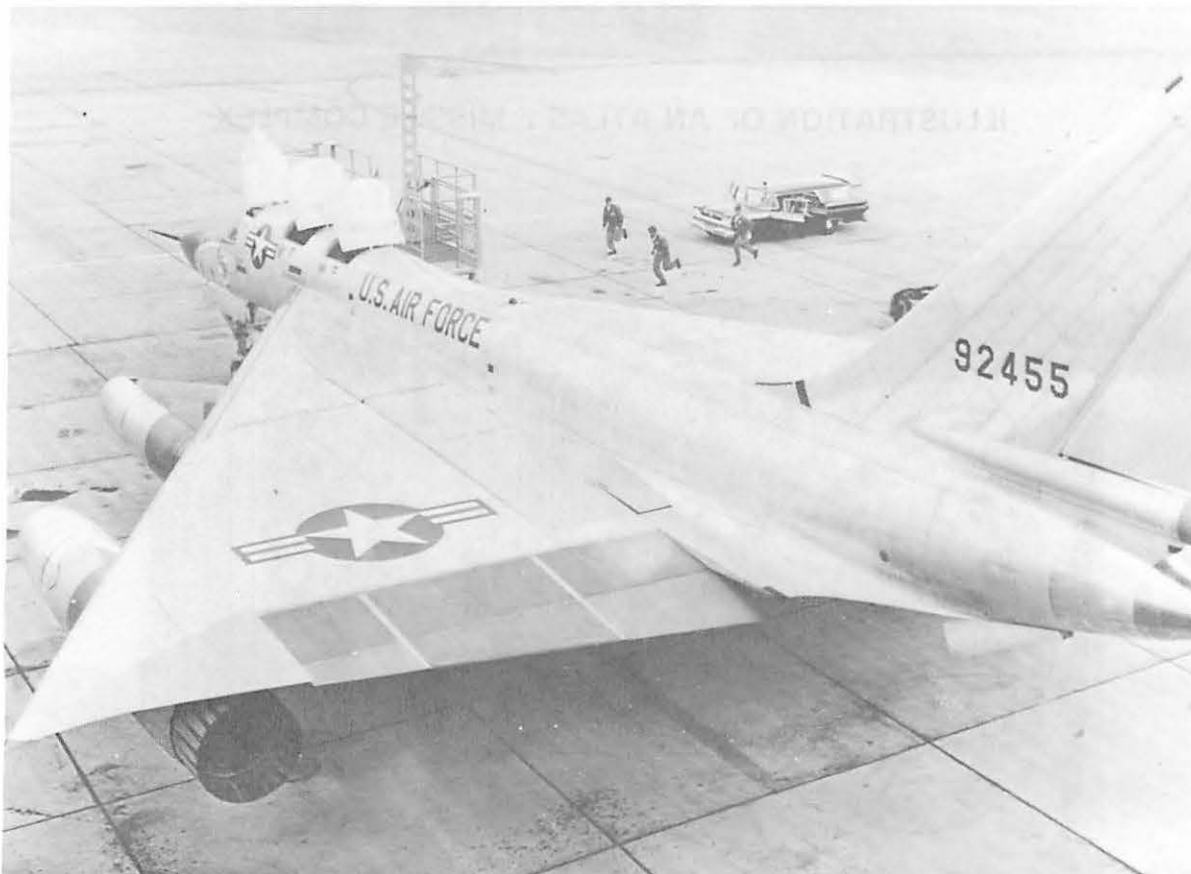
THE CREW OF A B-58 "HUSTLER" RACES TO ITS AIRCRAFT
DURING A PRACTICE ALERT

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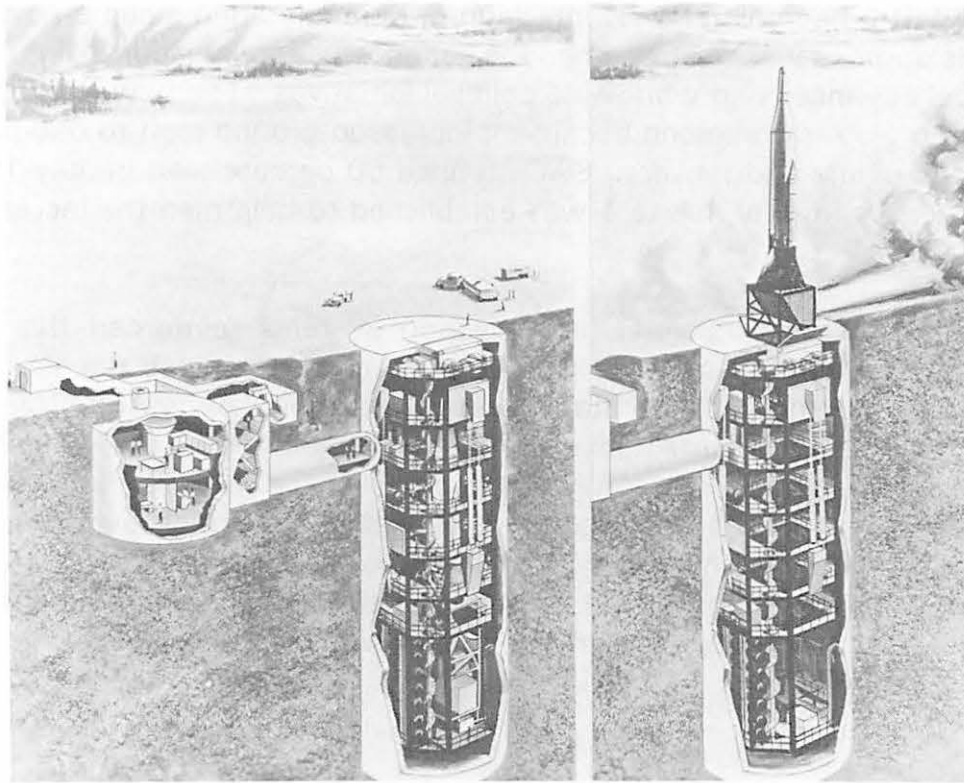
ILLUSTRATION OF AN ATLAS F MISSILE COMPLEX
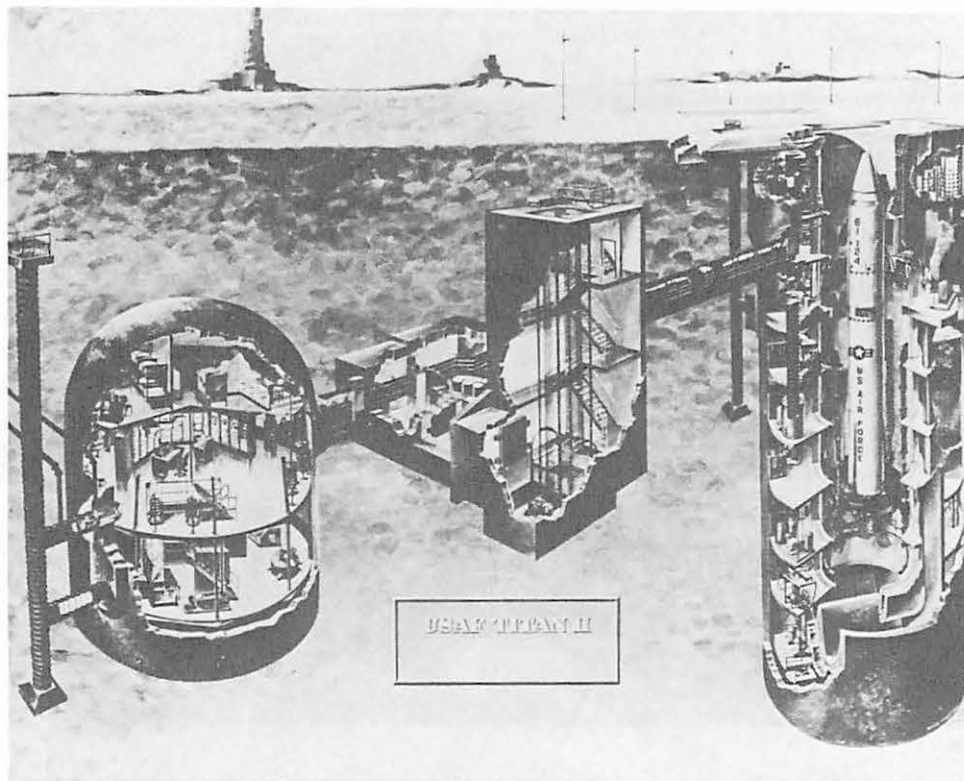
ILLUSTRATION OF A TITAN II MISSILE COMPLEX

Strategic Air Command also expanded its airborne command post operations. In April 1962, the Post Attack Command Control System or PACCS was augmented with three auxiliary airborne command posts. The new aircraft were established at Barksdale AFB, Louisiana; Westover AFB, Massachusetts; and March AFB, California. SAC then organized four support squadrons on 20 July at Mountain Home AFB, Idaho; Lincoln AFB, Nebraska; Lockbourne AFB, Ohio; and Plattsburgh AFB, New York. The command equipped the squadrons with EB-47L aircraft (B-47s modified with communications equipment) and redesignated them Post Attack Command Control Squadrons.
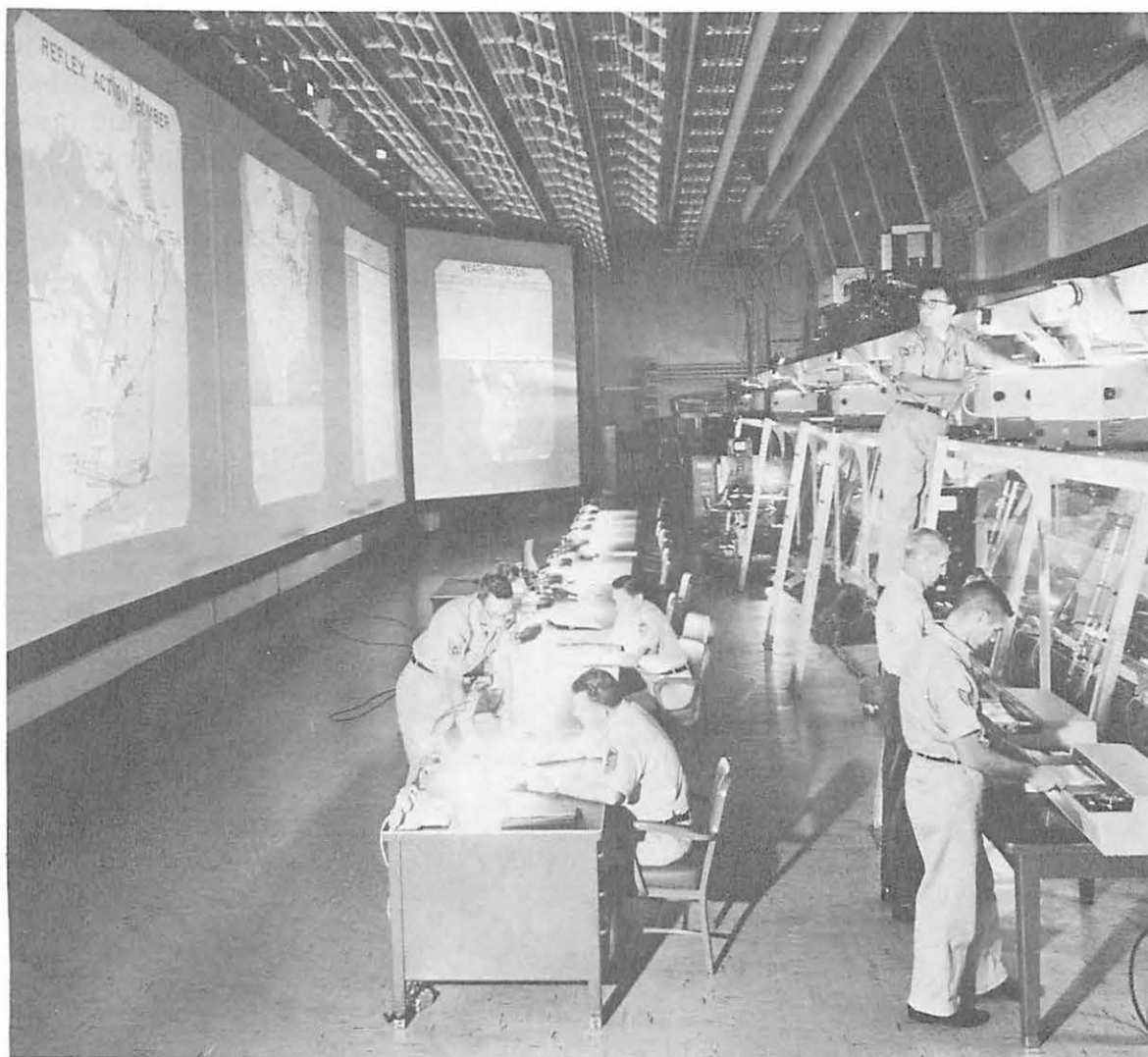
SAC COMMAND POST IN 1962

The organizational adjustments and deployments of new weapon systems proved timely. President Kennedy addressed the nation on 22 October 1962 and announced the presence of Soviet intermediate range ballistic missiles in Cuba. He placed an arms quarantine against shipments bound for Cuba and demanded the removal of the missiles already delivered. Before his speech, SAC had begun to intensify its readiness posture. Battle staffs started 24-hour operations, leaves were canceled, and personnel were recalled to duty. The command dispersed its B-47 bombers, generated aircraft to full alert, and armed all of its bombers with nuclear weapons in accordance with the emergency war plan. B-52 airborne indoctrination training expanded into an actual airborne alert. The ICBM force, numbering around 200 operational missiles, was brought into alert configuration. Included in this figure was the first Minuteman missile, a feat accomplished by the 341st Strategic Missile Wing at Malmstrom AFB, Montana, on 27 October. When generation was completed, Strategic Air Command stood ready to defend national policy with the most lethal array of military firepower in human history. Fortunately, the Soviet Union agreed to withdraw the missiles from Cuba and on 20 November SAC was able to return to its normal alert posture. President Kennedy visited Headquarters SAC on 7 December where he thanked the command and presented General Power with a plaque citing the command's perfect record in flight safety during airborne alert in the Cuban emergency.

BRIG GEN W.W. WISMAN COMMANDING AN AIRBORNE COMMAND POST SORTIE DURING THE CUBAN MISSILE CRISIS

A MAINTENANCE CREW GENERATES AN AIRBORNE ALERT SORTIE

B-47 BOMBERS DISPERSED TO HURLBURT, FLORIDA
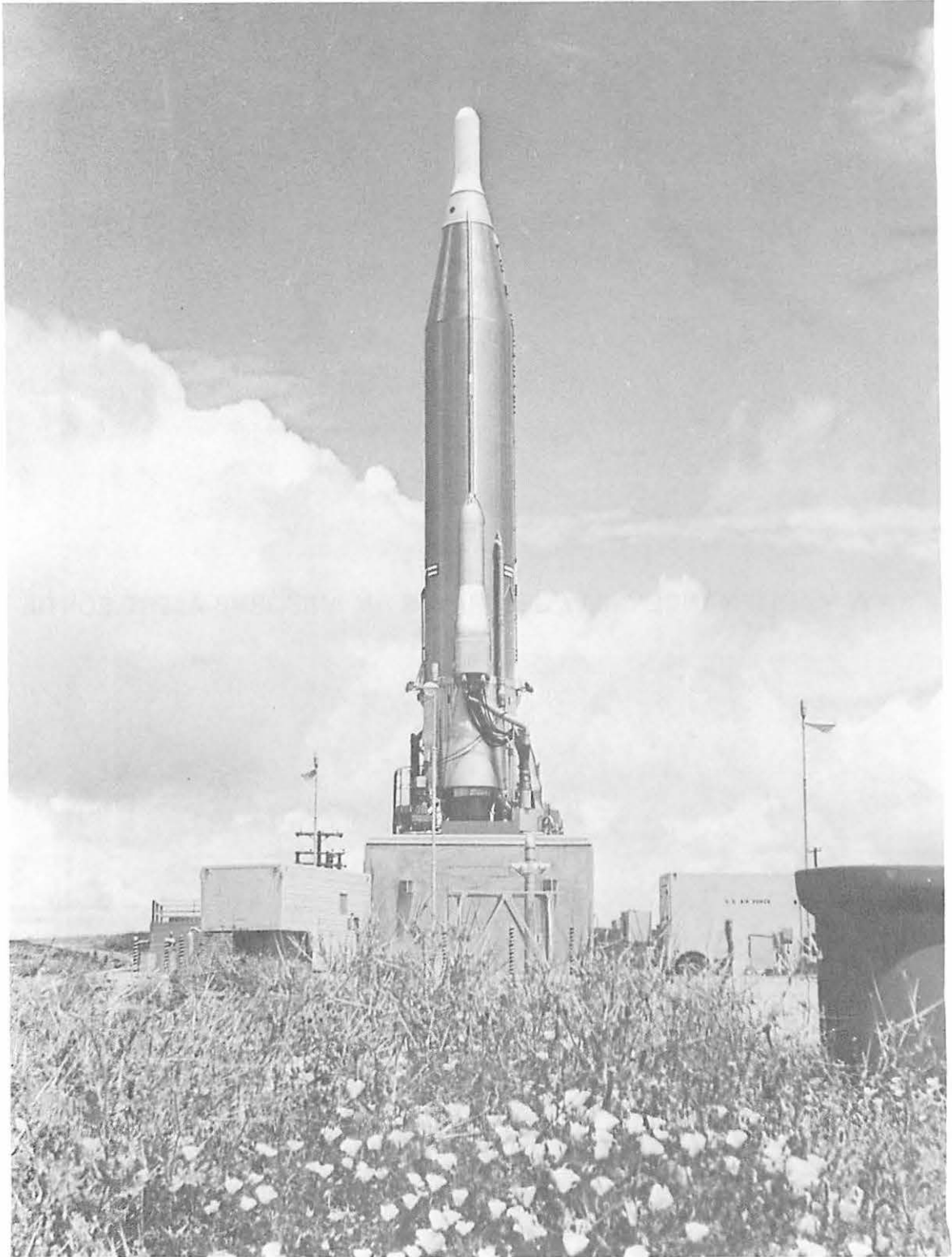
AN ATLAS F ELEVATED FROM ITS SILO INTO LAUNCH POSITION
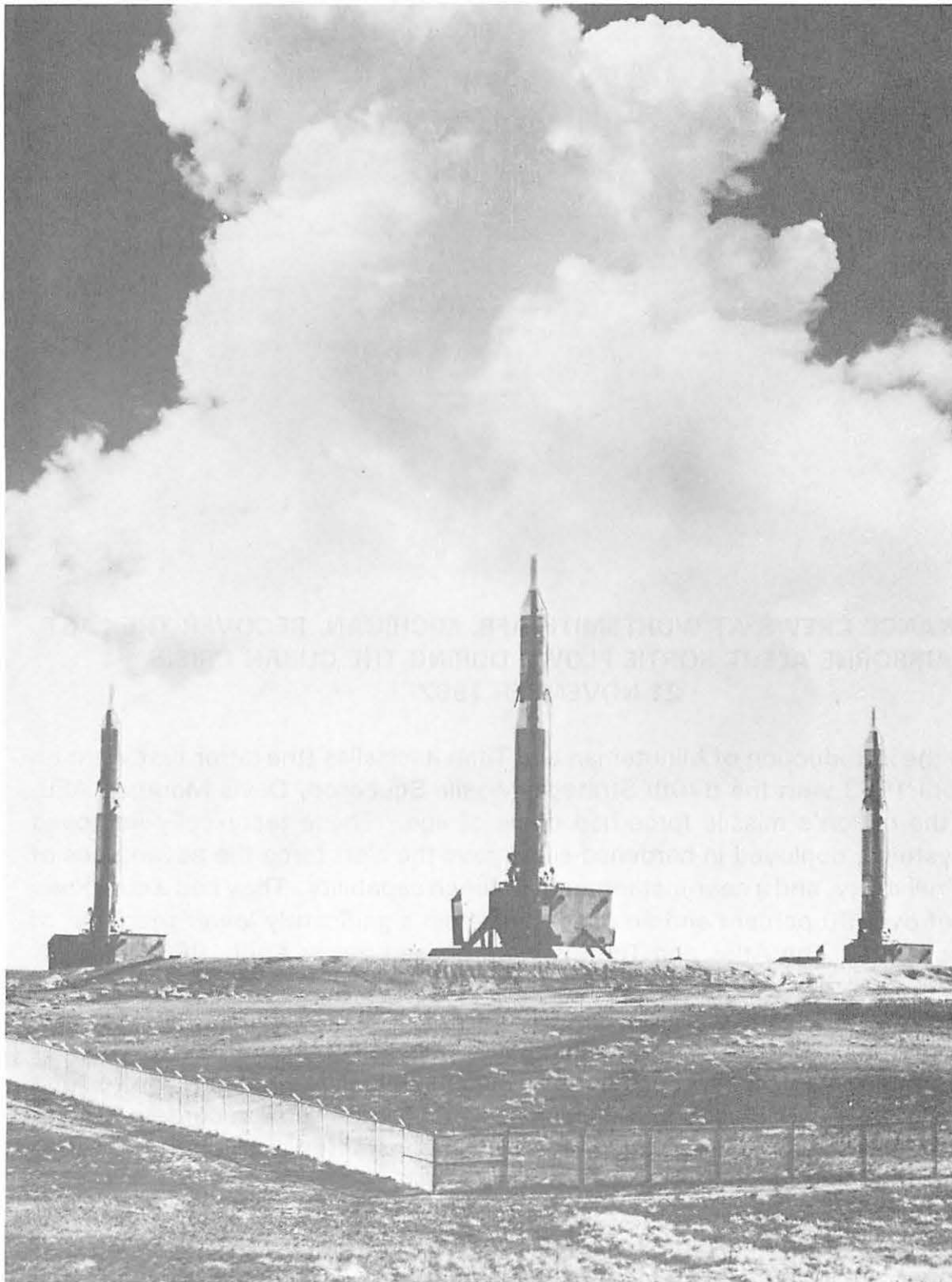
TITAN I ICBMS RAISED TO LAUNCH POSITION

MAINTENANCE CREWS AT WURTSMITH AFB, MICHIGAN, RECOVER THE LAST AIRBORNE ALERT SORTIE FLOWN DURING THE CUBAN CRISIS 21 NOVEMBER 1962

With the introduction of Minuteman and Titan II missiles (the latter first went on alert in April 1963 with the 570th Strategic Missile Squadron, Davis-Monthan AFB, Arizona), the nation's missile force had come of age. These technically improved weapon systems, deployed in hardened silos, gave the alert force the advantages of accuracy, reliability, and a near-instantaneous launch capability. They had a combined alert rate of over 90 percent and an operational cost significantly lower than that of manned bombers. The Atlas and Titan Is were phased out in April 1965.

In less dramatic fashion, SAC accepted and declared operational the three Blue Scout Junior launch sites at Wisner, West Point, and Tekamah, Nebraska. This 11 July 1963 event gave SAC another means of ensuring reliable command, control, and communications. The Blue Scout Junior rockets carried UHF recorders with a prerecorded force execution message that could be transmitted to all units within line of sight of the rocket's apogee flight.

The gradual phase out of the B-47 and KC-97 coupled with a serious balance of payments problem brought an end to Reflex operations. The reduction began in 1963 and Reflex ended on 31 March 1965. Ground alert for the KC-97 terminated on 10 November 1965 and for the B-47 on 11 February 1966. The rapid acquisition of
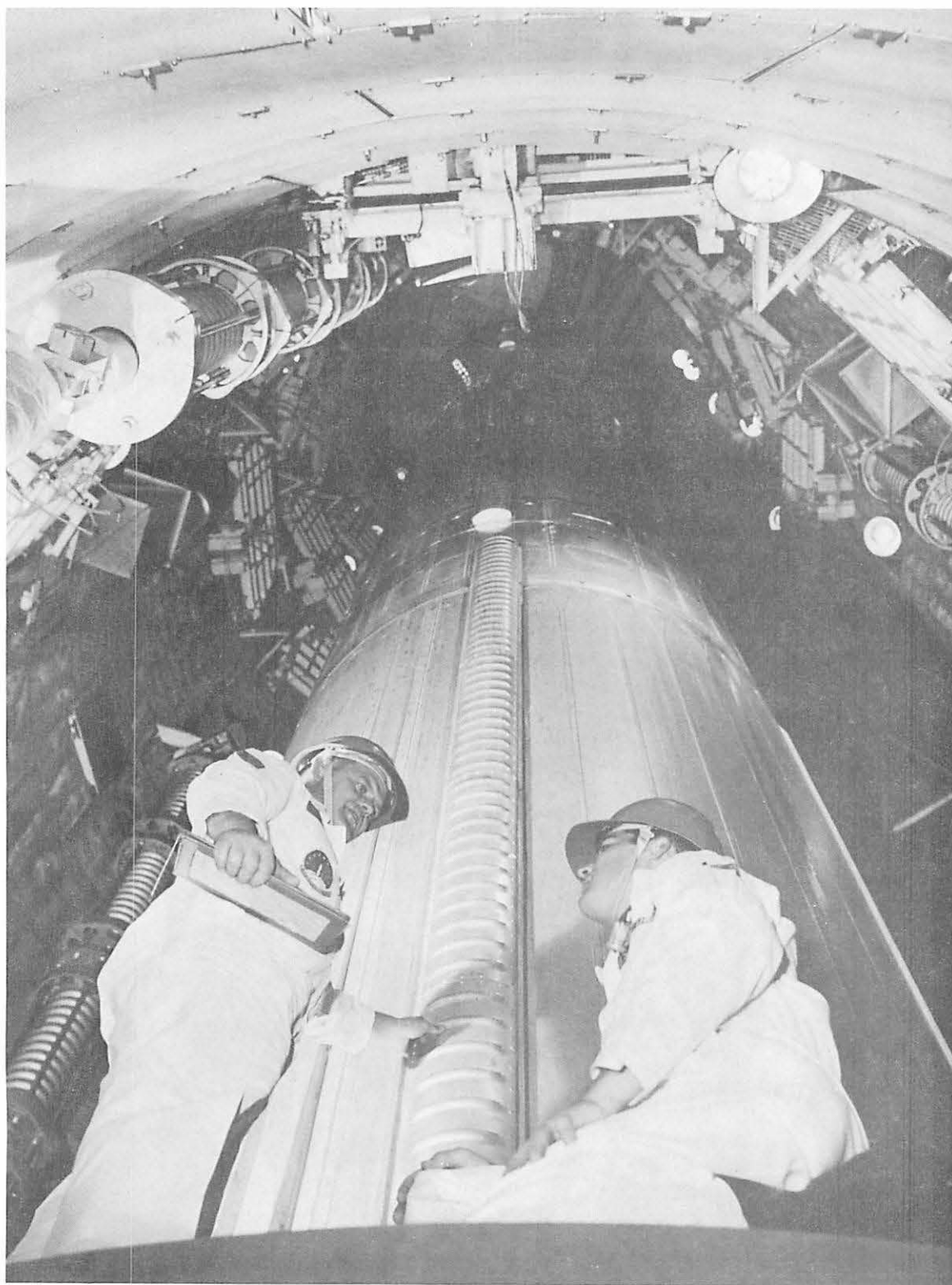
A MAINTENANCE CREW WORKS ON A TITAN II IN ITS SILO
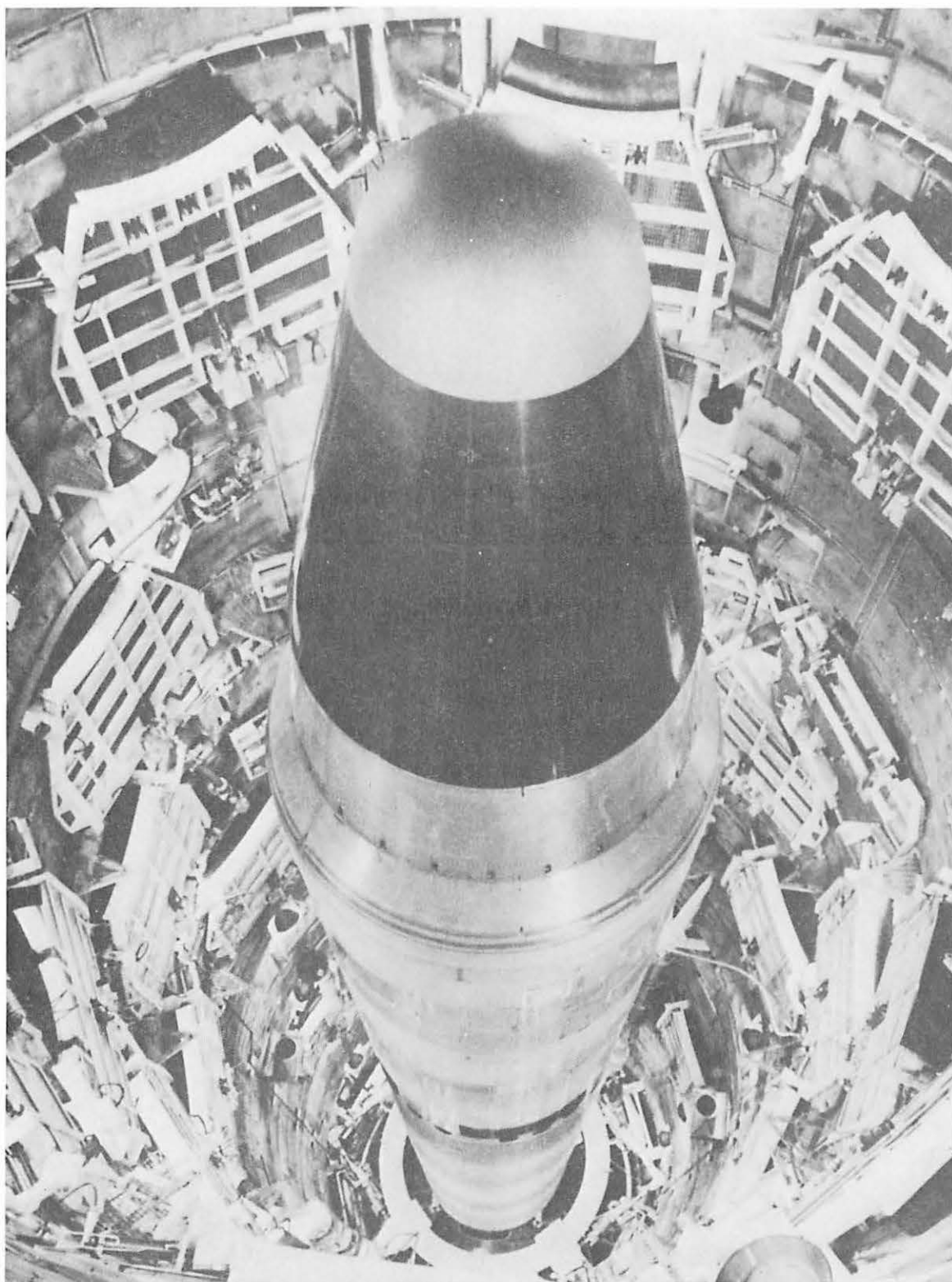
A TITAN II ICBM IN ITS SILO

Minuteman missiles accompanying the B-47 phase out continued to alter the command's weapons mixture. On 21 April 1964, the number of ICBMs on alert finally equaled the number of bombers on ground alert. From that day forward, the ICBM alert force gradually outdistanced the bomber alert force.

Another reorganization of the Post Attack Command Control System took place on 25 March 1965. The arrival of EC-135s, KC-135 tankers specially configured with sophisticated communications equipment for the PACCS mission, prompted the phase out of the EB-47Ls. The newly assigned EC-135s assumed both the Looking Glass and auxiliary airborne command post missions.

AN EC-135 AIRBORNE COMMAND POST

SAC's alert operations were conducted without incident until 17 January 1966 when a B-52 on a training mission collided with a KC-135 tanker during refueling operations near the coast of Spain. Both aircraft crashed near the Spanish town of Palomares. Seven crew members died and four survived. All four weapons were recovered, the last after an exhaustive land and sea search, but some radioactive material was released when two of the bomber's four weapons underwent non-nuclear TNT-type explosions upon impact. A cleanup operation removed 1,400 tons of slightly contaminated soil and vegetation and transported them to the United States for disposal.

COMMUNICATIONS EXPERTS WORKING ABOARD THE AIRBORNE COMMAND POST

A second accident occurred on 22 January 1968. A B-52G crashed and burned on the ice of North Star Bay after attempting an emergency landing at Thule AB, Greenland. A recovery team from the United States in cooperation with the Danish government removed the bomber's four weapons and all possible traces of radioactive material.

Airborne indoctrination training was discontinued shortly after the Thule crash. Although the Palomares and Thule accidents contributed to the program's demise, they alone were insufficient to end it. The operating costs for airborne alert had risen to an unacceptable rate and the advent of a responsive and survivable ICBM force had freed the bombers for more immediate duties.

The most significant demand facing Strategic Air Command's bombers and tankers in 1968 was the conventional operation in Southeast Asia. The first Arc Light bombing mission took place on 18 June 1965. As SAC's participation in the hostilities grew, so too did the demand for aircraft, aircrews, and support personnel. SAC's primary mission remained strategic deterrence and by 1968 the command was required to keep about 40 percent of its bombers and nearly 100 percent of its missiles on alert. But as SAC assets were sent into combat, aircraft units became hard pressed to maintain alert lines. On 12 November 1969, for instance, 75 bombers (38 percent of the regular bomber alert force) were degraded and 53 tankers

(27 percent of the required tanker alert force) were not on alert. The generated force also suffered. Thirteen percent of the generated bomber force (66 vehicles) and eight percent (42 tankers) of the generated tanker force could not be placed on alert because crews were not available. Some units remained below a one-to-one aircraft-to-aircrew ratio, a factor that impeded their ability to generate alert sorties. SAC crew members frequently found themselves rotating between combat tours in Southeast Asia and tours in the United States that were filled with alert duty. The war also placed a premium on maintenance and logistics personnel. Such circumstances evoked extraordinary effort and immense personal sacrifice from the members of Strategic Air Command, both in the theater of combat and on the alert line.
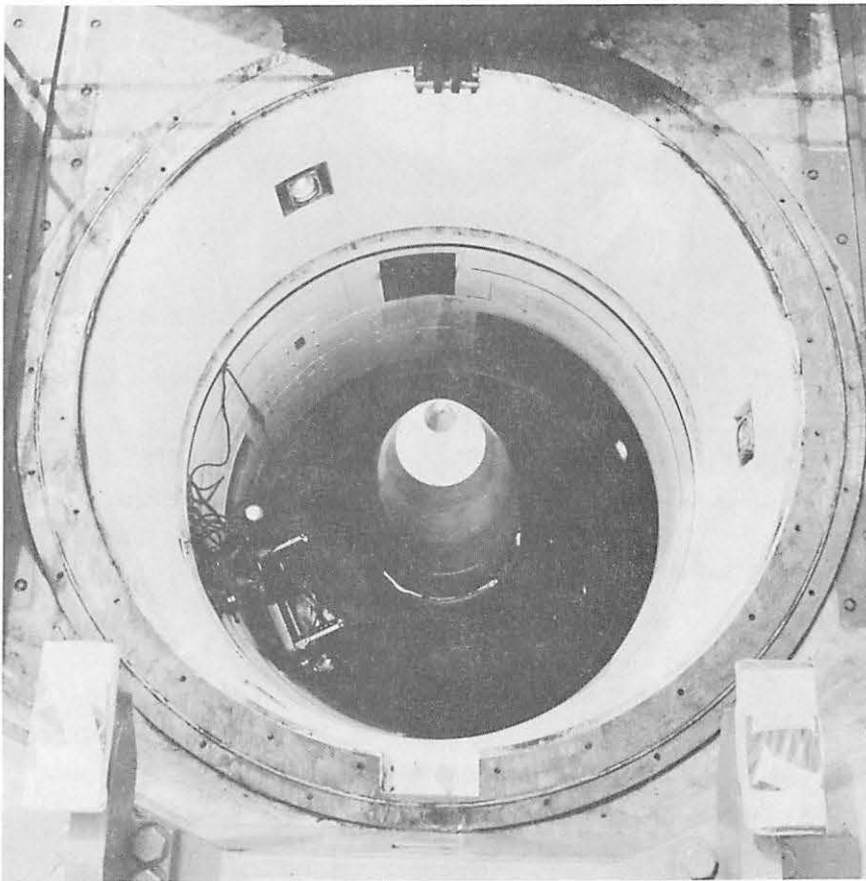
SAC'S FIRST MULTIPLE WARHEAD MINUTEMAN III IN LAUNCH FACILITY H-2 WITH THE 741ST SMS, MINOT AFB, NORTH DAKOTA

Amid such trying circumstances, Strategic Air Command still accomplished its primary mission. The continued growth of the missile force aided this effort. In January 1966, the first Minuteman II went on alert with the 447th Strategic Missile Squadron, 321st Strategic Missile Wing, at Grand Forks AFB, North Dakota. Similarly, the 741st Strategic Missile Squadron, 91st Strategic Missile Wing, at Minot
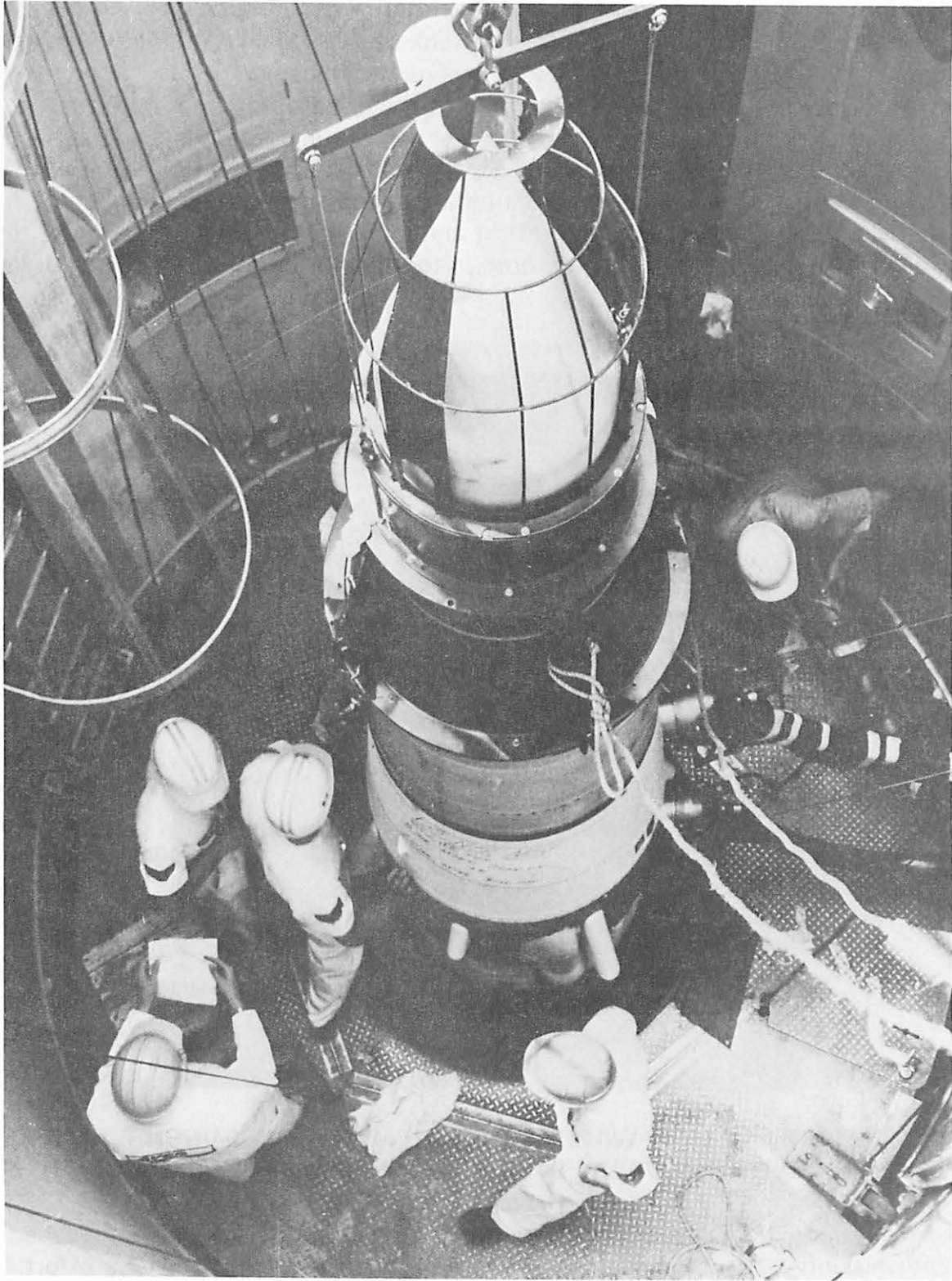
**MISSILE MAINTENANCE TECHNICIANS PREPARE A MINUTEMAN II FOR A
TEST LAUNCH AT VANDENBERG AFB, CALIFORNIA**

AFB, North Dakota, placed the first Minuteman III on alert on 19 August 1970. The Minuteman III represented a most significant addition to the alert force because each missile carried up to three Multiple Independently Retargetable Reentry Vehicles (MIRVs).

There were other positive developments as well. The Airborne Launch Control System, developed to provide SAC with the ability to launch land-based Minuteman missiles from the airborne command post, became a reality. SAC tested the system on 17 April 1967 by launching a Minuteman II from Vandenberg AFB, California. The successful result enabled the Airborne Launch Control System (ALCS) to attain initial operational capability on 31 May.

AIRBORNE LAUNCH CONTROL OFFICERS ON THE "LOOKING GLASS" PREPARE TO INITIATE AN ICBM TEST LAUNCH USING THE ALCS

The first Emergency Rocket Communications System (ERCS) became operational on 10 October 1967 when technicians installed the system on a Minuteman II missile at Whiteman AFB, Missouri. ERCS vastly improved SAC's ability to transmit command control messages to its forces. The new system also made the Blue Scout

Junior rocket system obsolete and on 1 December 1967 SAC inactivated the three Blue Scout sites in Nebraska.

In 1968, SAC revived the B-47 dispersal program it had used successfully during the Cuban missile emergency and applied it to the command's B-52s and KC-135s. This program scattered SAC aircraft over a large number of bases (both military installations and civilian airfields) during periods of increased tension or international emergency. Dispersal complicated an enemy's targeting problem and allowed more aircraft to become airborne within a given time period.

The deployment of Soviet submarine launched ballistic missiles forced SAC to develop a satellite basing program similar to the B-52 dispersal tactics it used ten years earlier. SAC began testing a satellite basing plan on 20 February 1969. The test relocated B-52s and KC-135s assigned to the 72d Bombardment Wing, Ramey AFB, Puerto Rico, to Homestead AFB, Florida, where the aircraft were placed on ground alert. Testing ended successfully on 20 May and SAC added several additional bases to the plan in July. Satellite basing, like dispersal, increased the number of targets and reduced the alert force launch time.

AN FB-111A WITH AN EXTERNAL LOAD OF SHORT RANGE ATTACK MISSILES

SAC's bomber force gained strength with the deployment of the FB-111 bomber in 1969 despite the retirement of the B-58 the next year. The FB-111 began alert

duty on 1 July 1971 with the 509th Bombardment Wing at Pease AFB, New Hampshire. SAC's Short Range Attack Missile (SRAM) reinforced the bomber's lethal punch when it went on alert 15 September 1972 with the 42d Bombardment Wing at Loring AFB, Maine.

Strategic Air Command also consolidated and reorganized the Post Attack Command Control System on 1 April 1970. The EC-135s moved out of Westover, Barksdale, and March Air Force Bases. All were assigned to the 2d, 3d, and 4th Airborne Command and Control Squadrons which were activated at Offutt, Grissom, and Ellsworth Air Force Bases. The reorganization met administrative needs and did not alter the basic PACCS function.

AN EC-135 AIRBORNE COMMAND POST
HEADING OUT ON A LOOKING GLASS MISSION

Shortly after the Southeast Asian War concluded, Strategic Air Command was pressed into action again on behalf of national policy as tensions in the Middle East erupted into open conflict. Egyptian forces successfully crossed the Suez canal in October 1973 and attacked Israeli forces in the Sinai desert. An Israeli airborne counterattack into Egypt saved the day for Israel, but soon raised the specter of a

serious escalation in the conflict. The United States, which was assisting Israel with logistical support, wanted to avoid escalation and prevent a superpower confrontation. Upon direction of the Joint Chiefs of Staff, SAC generated its forces to a higher readiness posture in support of U.S. interests. The command stood ready from 24 to 25 October 1973 whereupon it was able to stand down, having once again fulfilled its mission without combat.

A new responsibility came to Strategic Air Command on 1 November 1975 when Headquarters USAF transferred the 1st Airborne Command and Control Squadron from Headquarters Command to SAC. The 1st ACCS moved from Andrews AFB, Maryland, to Offutt AFB, bringing with it the unit's four E-4 aircraft. Three of these modified Boeing 747s were outfitted with EC-135 type communications equipment and served as the President's National Emergency Airborne Command Posts. The fourth aircraft, an E-4B model, was at the Boeing plant in Seattle, Washington, being

AN E-4B NATIONAL EMERGENCY AIRBORNE COMMAND POST

E-4B COMPARTMENTS

FLIGHT DECK AND UPPER DECK REST AREA

The flight deck contains the pilot's, copilot's, navigator's and flight engineer's stations. A lounge area and sleeping quarters for flight crews and other personnel is located aft of the flight deck.

CONFERENCE ROOM AND PROJECTION ROOM

The conference room provides a secure area for conferences and briefings. It contains a nine-position executive conference table with executive chairs. A projection room serving the conference room and the briefing room is located aft of the conference room. It has the capability of projecting either overhead transparancies or 35mm slides to either the conference room or the briefing room either singularly or simultaneously.

OPERATIONS TEAM AREA

The operations team area contains seats and console work areas for 31 staff members. The consoles are configured to provide access to/from the following types of circuits or systems: automated data processing, automatic switchboard, direct access telephone and radio circuits, direct ("hot") lines, monitor panel for switchboard lines, staff and operator interphone and audio recorder.

TECHNICAL CONTROL AND REST AREA

The aft end of the main deck is divided into a technical control area and a rest area. The enclosed technical control area, which occupies the left forward part of the compartment contains a technical control console, communications processor, multiplexer, SHF SATCOM console, and patch and test assembly. The rest area, which occupies the remaining portion of the aft main deck, provides a rest and sleeping area for aircrewmen.

FORWARD ENTRY AREA

The forward entry area contains the main galley unit and stairways to the flight deck and to the forward lower equipment area. Refrigerators, freezers, a convection oven and a microwave oven give stewards the capability to provide more than 100 hot meals during prolonged missions. Additionally, four seats are located on the left side of the forward entry area for the security guards and the stewards.

COMMUNICATIONS CONTROL AREA

The communication control area is divided into a voice area and a data area. The voice area, located on the right side of the compartment, contains the radio operator's console, the semi-automatic switchboard console and the communication officer's console. The data area, located on the left side of the area, contains the ADP equipment, record communications console, record data supervisor's console, high speed data/AUTODIN/AFSAT console and LF/VLF control leads.

NCA AREA

The NCA area is designed and furnished as an executive compartment. It contains an office, a lounge/sleeping area and a dressing area. Telephone instruments in this area provide the NCA with secure or clear, worldwide communications.

BRIEFING ROOM

The briefing room contains a briefing table with three executive seats, eighteen seats, a lectern, a computer terminal and two rear projection screens.

FORWARD LOWER EQUIPMENT AREA

The forward lower equipment area contains the potable water supply tanks, 1200 KVA electrical power panels, stepdown transformers, VLF transmitter and SHF SATCOM equipment. Electrically operated retractable stairs, located in the forward right side of the forward lower equipment area, are installed for airplane entry and exit.

FLIGHT AVIONICS AREA

The flight avionics area contains aircraft systems power panels, flight avionics equipment, liquid oxygen converters and stowage for baggage and spare parts.

AFT LOWER EQUIPMENT AREA

The aft lower equipment area contains the maintenance console and various mission equipment.

LOWER TRAILING WIRE ANTENNA AREA

The lower trailing wire antenna area contains the lower trailing wire antenna reel, the antenna operator's station and the antenna reel controls and indicators.

INTERIOR DIAGRAM OF AN EMERGENCY AIRBORNE COMMAND POST

outfitted with advanced communications equipment. The three E-4A models continued to perform alert duty at Andrews AFB and on 22 May 1980 the E-4B served its first alert tour. All E-4As were eventually modified to the E-4B configuration, the last aircraft being completed on 30 January 1985.

In an unrelated action, SAC again reorganized the Post Attack Command Control System to consolidate resources. On 31 December 1975 the 3d Airborne Command and Control Squadron at Grissom AFB, Indiana, was inactivated. The 70th Air Refueling Squadron and the 2d Airborne Command and Control Squadron at Offutt AFB assumed the unit's functions.
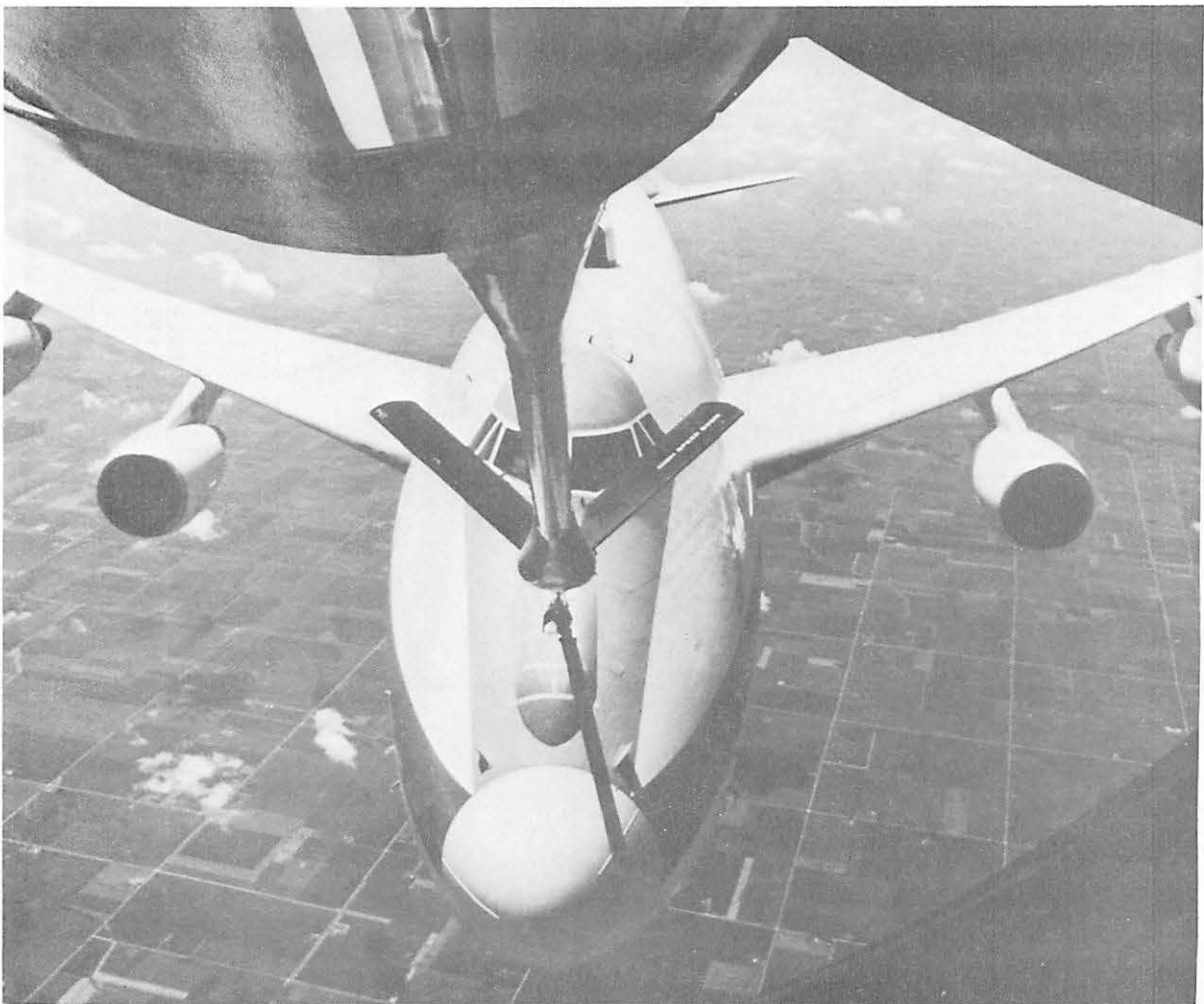
A KC-135 REFUELS A 1ST ACCS E-4B

MAJ GEN EARL G. PECK SERVED AS THE AEAO
ON THE FIRST OPERATIONAL E-4B MISSION, 4 MARCH 1980

A KC-135 REFUELS AN E-4A

From 8 to 16 July 1979, Strategic Air Command conducted Global Shield 79, one of the most comprehensive nuclear war plan exercises ever conducted in SAC history. For the first time, the command exercised every phase of its role in the Single Integrated Operational Plan short of nuclear warfare. Command units generated hundreds of bombers, tankers, and missiles to alert status. Aircraft and ground support teams dispersed to preselected bases and flew sorties over radar bomb-scoring sites. General Richard H. Ellis, the CINCSAC, called the exercise "an extremely valuable training experience for the aircrews, missile crews, and support personnel who participated in it." Global Shield became a regular command exercise which grew in scope and intensity throughout the 1980s.

A SAC SECURITY POLICEMAN GUARDS A PACCS AIRCRAFT DISPERSED TO MALMSTROM AFB, MONTANA DURING GLOBAL SHIELD 83
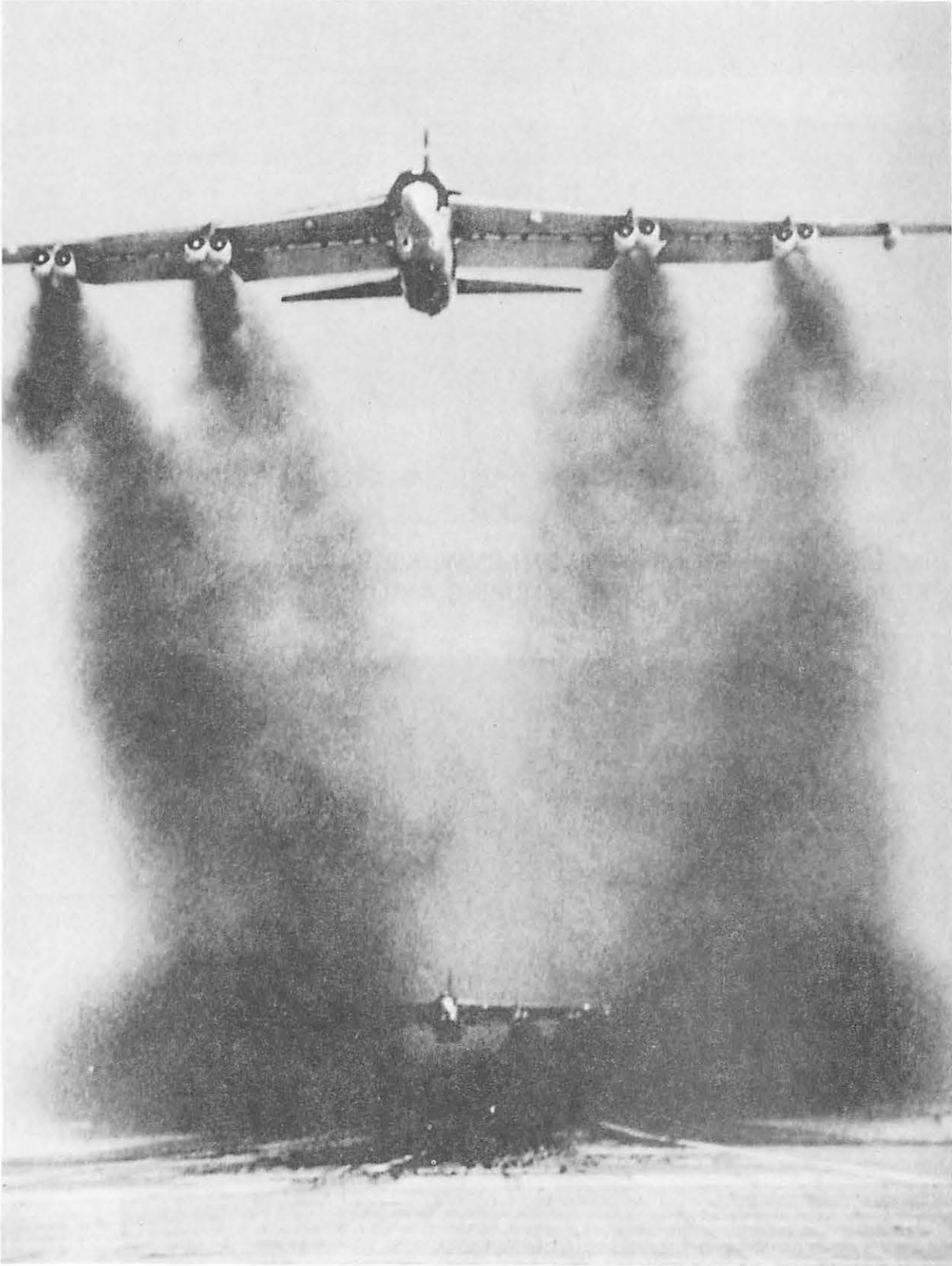
B-52 CREWS CONDUCT A MINIMUM INTERVAL TAKEOFF (MITO)
AT FAIRCHILD AFB, WASHINGTON DURING A GLOBAL SHIELD EXERCISE

36
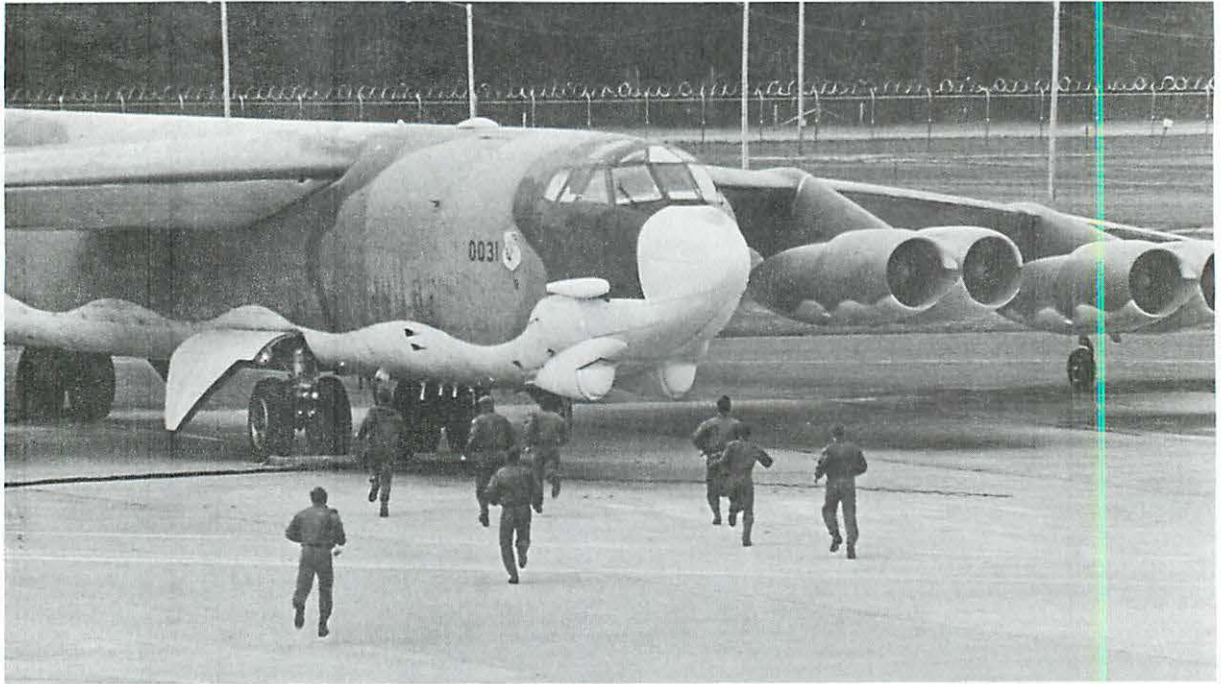
A B-52 CREW FROM THE 410TH BMW, K.I. SAWYER AFB, MICHIGAN SCRAMBLE TO THEIR BOMBER DURING A GLOBAL SHIELD 83 EXERCISE
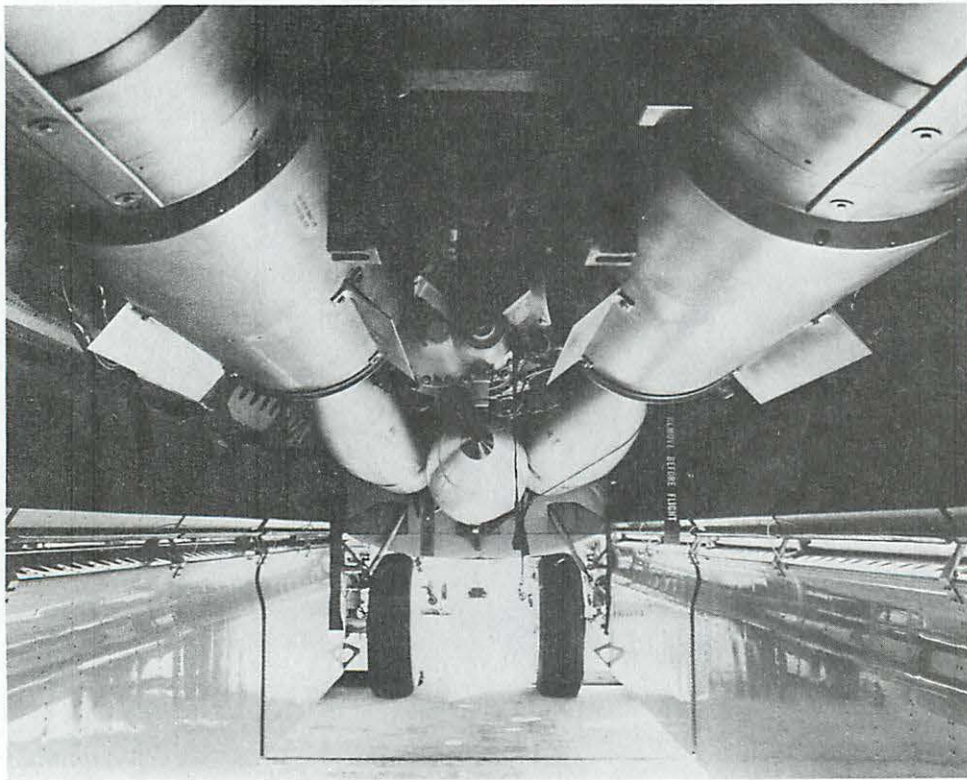
A B-52H WITH AN INTERNAL LOAD OF SRAM MISSILES

The Strategic Modernization Program introduced in the 1980s significantly improved SAC's war-fighting abilities. Among the improvements were the Air Launched Cruise Missile, which entered service on 16 December 1982 when the 416th Bombardment Wing at Griffiss AFB, New York, placed the first ALCM on alert. The landmark year for the Strategic Modernization Program came in 1986. On 1 October of that year, the 96th Bombardment Wing at Dyess AFB, Texas, hosted the first B-1B alert line. Nine days later, the 90th Strategic Missile Wing placed the first of SAC's ten-warhead Peacekeeper missiles on alert at F.E. Warren AFB, Wyoming. The B-1B represented SAC's first new bomber in seventeen years. Similarly, the Peacekeeper was the command's first new ICBM since the deployment of the Minuteman III in 1970.

**A SAC MISSILE CREW PREPARES FOR MISSILE FLIGHT TEST 12
AT PEACEKEEPER LAUNCH CONTROL FACILITY 01E,
VANDENBERG AFB, CALIFORNIA**

38
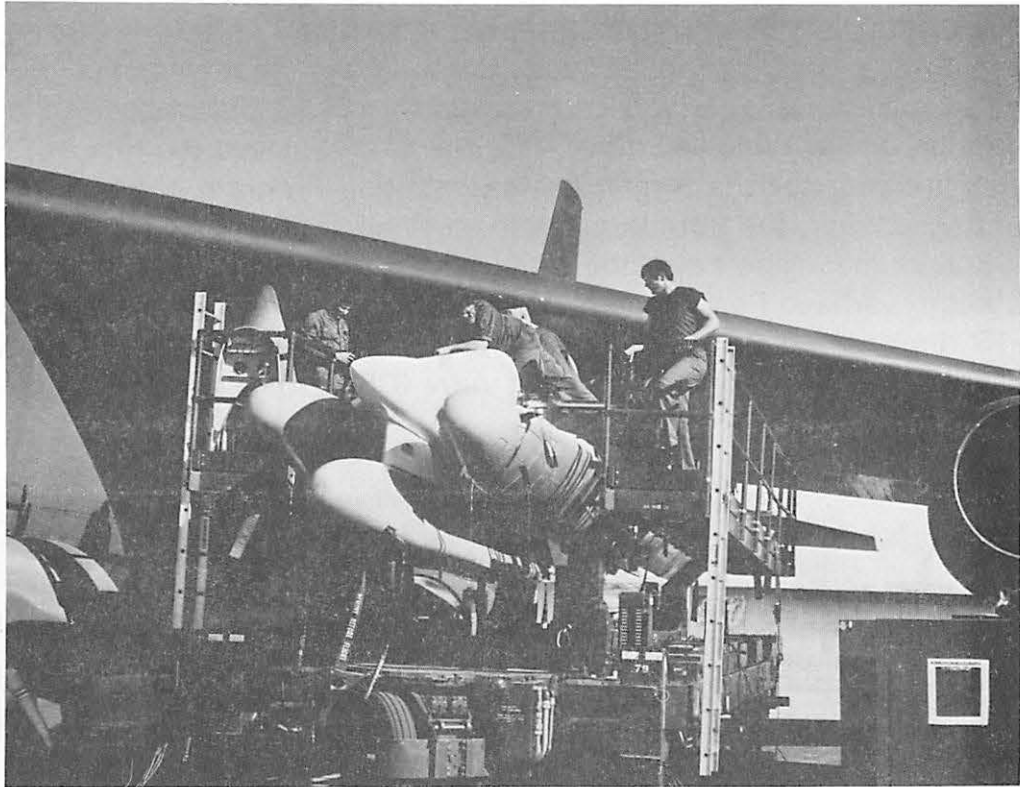
A 7TH MMS MUNITIONS TEAM LOADS ALCM MISSILES ON A B-52H,
AT CARSWELL AFB, TEXAS, 10 DECEMBER 1986

AERIAL VIEW OF PEACEKEEPER LAUNCH FACILITY 08,
VANDENBERG AFB, CALIFORNIA
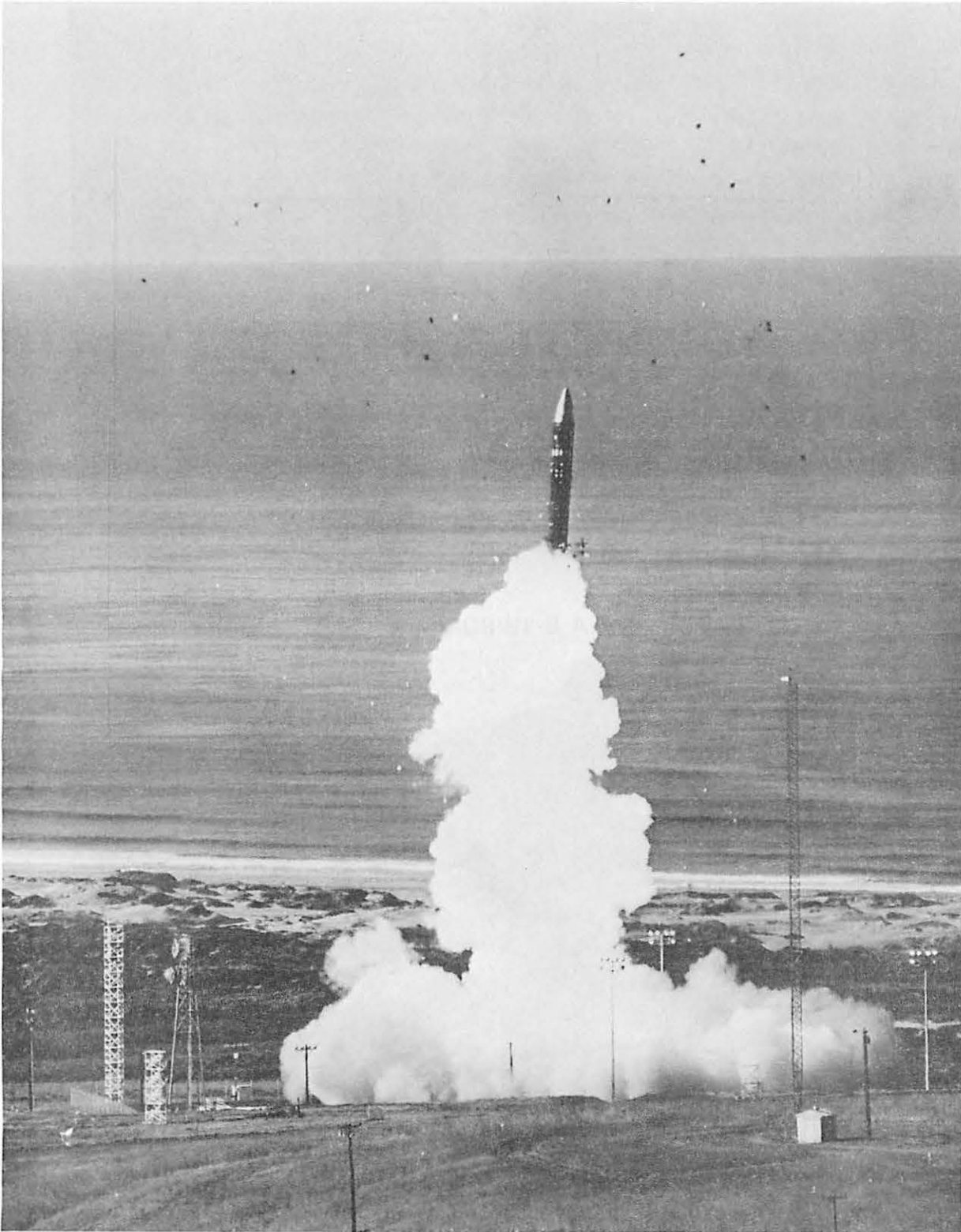
PEACEKEEPER FLIGHT TEST 10, VANDENBERG AFB, CALIFORNIA
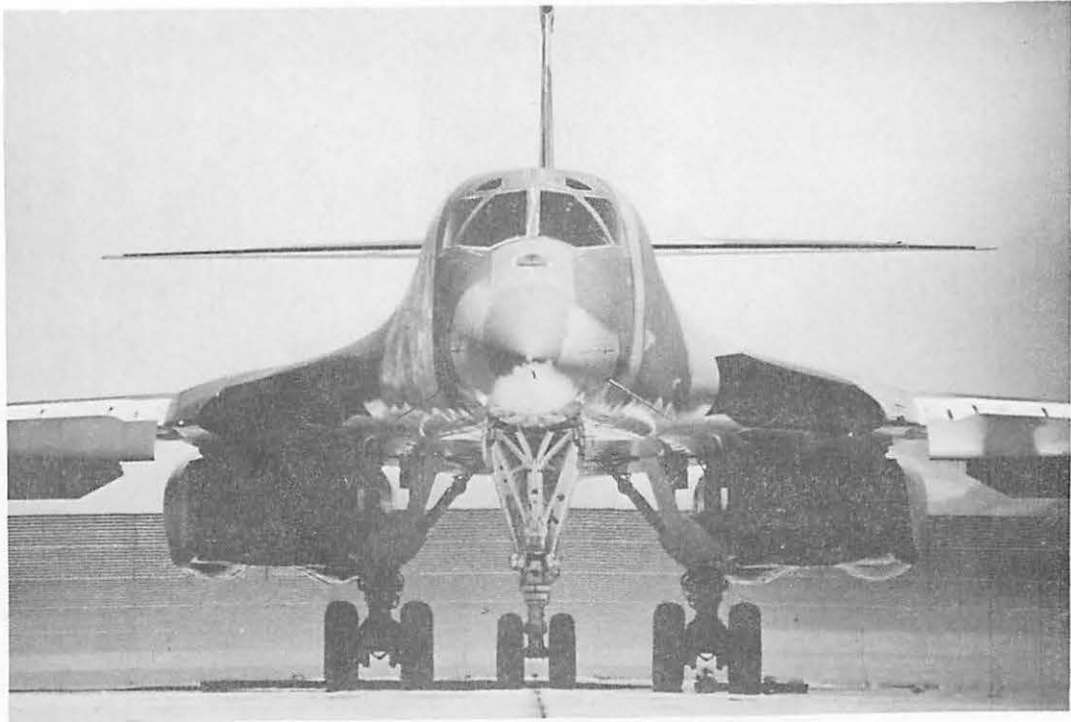
A B-1B BOMBER

MUNITIONS SPECIALIST LOADING TRAINING MUNITIONS ON A B-1B
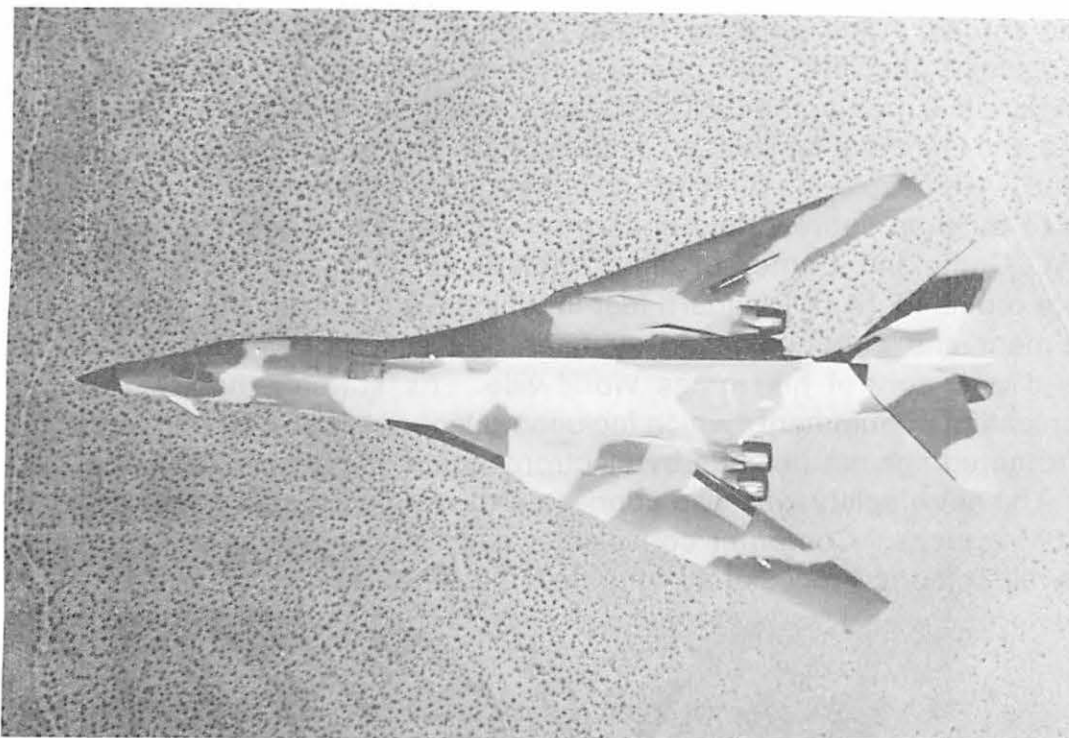
A B-1B WITH WINGS SWEPT BACK IN FLIGHT

A B-1B WITH WINGS FORWARD IN FLIGHT

Construction of a new command post complemented the modernization of SAC's strategic forces. The existing facility, opened in 1957, had become crowded, technologically obsolete, and poorly suited to manage modern weapon systems. General Bennie L. Davis, the CINCSAC, approved a plan in August 1982 to completely renovate the existing facility, an endeavor he characterized as his legacy to the command. After exploring funding and construction alternatives, General Davis opted instead to build an entirely new underground complex adjacent to the existing one. The SAC Command Center became operational in March 1989. The two-level structure provided 14,000 square feet in which SAC housed the critical information management and communication systems that assured the CINCSAC's ability to command and control his forces worldwide. Its state-of-the-art computers and communications equipment, which included telephone, satellite and radio networks, were protected against damage by electromagnetic pulse from high altitude nuclear bursts. The new facility was also connected to warning systems that detected ICBM and SLBM attacks. Computer consoles at each staff position and eight computer-driven wall screens immediately informed the battle staff of any changes in force status.

SAC COMMAND CENTER UNDER CONSTRUCTION, 1988

THE SAC COMMAND CENTER, 1989

GENERAL JOHN T. CHAIN HOSTS PRESIDENT GEORGE BUSH
IN THE SAC COMMAND CENTER, 8 FEBRUARY 1990

Although Strategic Air Command had experienced remarkable improvements in weapons and technology through the years, the backbone of deterrence remained the SAC alert force — aircrews, missile crews, logistics specialists, security police, and the support staff who made the operation work. Their dedication and vigilance contributed fundamentally to the preservation of freedom for the American people and the Western alliance. The crews that pulled daily alert, whether on the ground, in the air, or in buried missile launch control centers, as well as those who supported them, formed the cornerstone of America's deterrent strength. The importance, prestige, and commitment of the SAC alert force were among the reasons which led General John T. Chain, Jr., the SAC Commander in Chief, to declare 1988 "The Year of the SAC Alert Force."
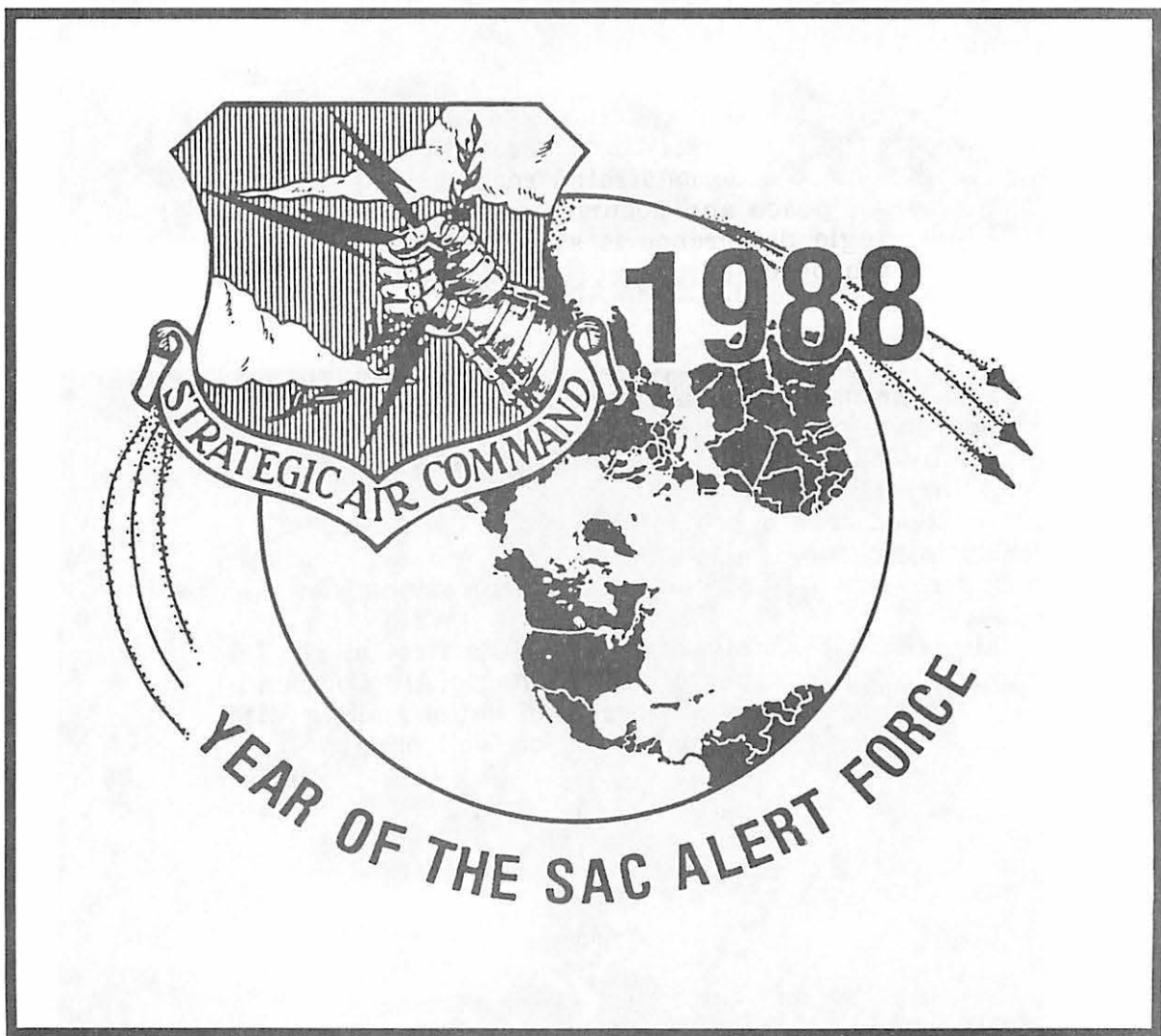
THE YEAR OF THE ALERT FORCE EMBLEM

THE WHITE HOUSE

WASHINGTON
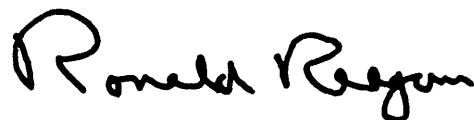
October 9, 1987

To the Men and Women of the Strategic Air Command:

In October 1957, aircrews of the Strategic Air Command
went on alert for the first time. From that historic
day forward, SAC's demonstrated readiness has been a
cornerstone of peace and security for the free world.
Today, strategic deterrence is still the foundation on
which rest the peace of the world and the protection of
freedom.

We look with pride on SAC's 30-year alert history. The
men and women of SAC mastered the growing challenge
of deterrence presented by the Intercontinental Ballistic
Missile, by burgeoning technology, and by an expanding
Soviet threat. You who serve in SAC today share with
your predecessors a noble tradition of dedication to the
unrelenting demands of constant watchfulness, instan-
taneous readiness, and unyielding professionalism.

On this, the 30th anniversary of SAC's first alert, I
extend to every member of the Strategic Air Command
family the appreciation of a grateful nation, along with
my personal congratulations on a job well done.

Ronald Reagan

PRESIDENT RONALD REAGAN HONORS THE SAC ALERT FORCE

**GENERAL JOHN T. CHAIN, THE FIRST CINCSAC TO PERFORM
MISSILE ALERT, MALMSTROM AFB, MONTANA, 26 SEPTEMBER 1986**

Ironically, the world in which SAC celebrated the Year of the Alert Force differed significantly from the one which had led to the creation of an alert program. Better communication and cooperation between the U.S. and U.S.S.R. had produced several nuclear arms reduction treaties and greatly reduced superpower tensions. Technological innovation had improved intelligence assessment and warning against strategic attack. "The chances of a bolt-out-of-the-blue kind of attack these days is virtually gone," observed one SAC spokesman. By 1989, the greatest threat confronting the Soviet Union was not Western military power but the collapse of the Soviet economy. With their economy in shambles, Soviet leaders had begun to institute democratic reforms at home, release their grip on Eastern Europe, and look to the West for economic and technical assistance. Economics was also a major concern in the United States. The national debt was increasing at an alarming rate and cost reduction had become a major defense activity. These circumstances led General Chain to propose an end to continuous airborne command post operations in late 1989. Defense leaders instantly rejected his suggestion, believing it would send the wrong signal to the Soviets at a moment when democracy in Eastern Europe stood at a critical juncture.

In November 1989, the world finally witnessed the destruction of the Berlin Wall. This milestone marked the start of a phenomenally rapid series of events that would

fundamentally alter international relations and the strategic posture of the United States. Within eight months, the U.S.S.R. had begun to withdraw its forces from Eastern Europe, laying the foundation for the November 1990 Treaty on Conventional Forces in Europe between the United States and the Soviet Union which limited conventional weapons and weapon systems in the European theater, widely heralded as marking the end of the Cold War.

With the threat of attack diminishing, confidence in attack warning and detection increasing, and pressure to reduce operating expenses growing, new life was breathed into General Chain's airborne command post proposal. The Secretary of Defense reexamined the issue and, with the concurrence of the President, accepted SAC's recommendation. Casey One, the CINCSAC's EC-135 aircraft, took off from Offutt AFB, Nebraska, at 6:59 AM on 24 July 1990 with General Chain on board as the Airborne Emergency Action Officer. When the aircraft landed at 2:28 PM, almost thirty years of continuous airborne command post operations and over 250 million hours of accident-free flying came to an end. The new alert plan which went into effect did not alter the role or mission of the Looking Glass and included airborne and ground alert postures. EC-135s continued to fly random sorties each week, but quick reaction ground alert constituted the bulk of daily Looking Glass operations.
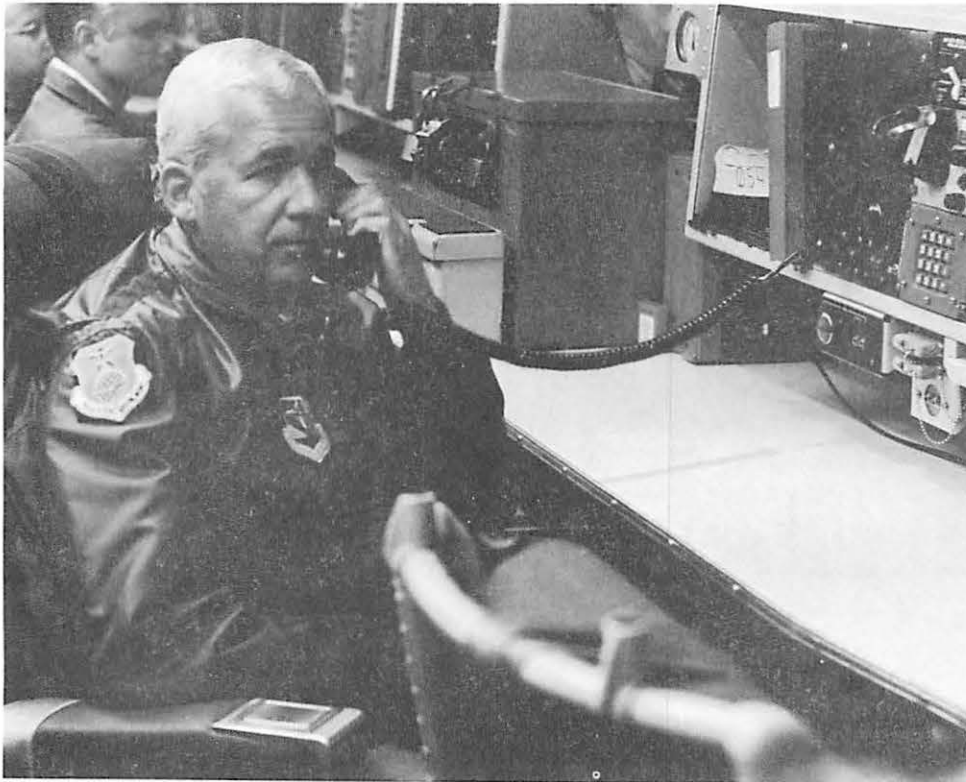
**GENERAL JOHN T. CHAIN PERFORMS DUTY AS
THE AIRBORNE EMERGENCY ACTION OFFICER ON THE LOOKING GLASS**

These changes foreshadowed others that would radically alter alert operations. The breathtaking transformation of the communist world continued without abatement. By mid-1991, the Soviet Union had largely completed its withdrawal of forces from Eastern Europe and on 1 July 1991 it announced the dissolution of the Warsaw Pact. Thirty days later, Soviet President Mikhail S. Gorbachev and President George Bush signed a Strategic Arms Limitation Treaty (START) that limited nuclear warheads and strategic delivery systems. Hardline Communist Party officials, discontented with the radical changes, attempted a coup in August. Their objective was to overthrow Gorbachev and the reform movement, end the disintegration of the U.S.S.R. into independent republics, and restore the central authority of the Party. The poorly organized coup collapsed quickly. Its legacy was to strengthen the democratic forces, emasculate the Communist Party, and accelerate the reform movement. On 6 September 1991, the Soviet Union recognized the independence of the Baltic Republics. With gold reserves nearly exhausted and their economy in ruins, Soviet leaders desperately appealed to the United States and its allies for economic assistance.

President George Bush interpreted the unsuccessful coup as a firm sign that democracy had taken hold in the Soviet Union and that a fundamental shift in superpower relations was in order. He addressed the nation on the evening of Friday, 17 September 1991. "The prospect of Soviet invasion into Western Europe launched

A 2D WING SECURITY GUARD STANDS WATCH
AS A B-52 IS REMOVED FROM ALERT

AIR-LAUNCHED CRUISE MISSILES BEING TOWED TO STORAGE AREA

with little or no warning," he informed the country, "is no longer a realistic threat." He expressed his desire to move away from global confrontation, shrink the nuclear arsenal, and rely on defensive measures to increase stability and reduce the risk of war. At the same time, he wanted to give the Soviets an incentive to shift their collapsing economy from building defenses to building democracy. He then announced major changes in the nation's strategic posture. "First," he stated, "to further reduce tensions, I'm directing that all United States strategic bombers immediately stand down from their alert posture." All intercontinental ballistic missiles scheduled for deactivation under START (i.e. Minuteman IIs) were also to be brought off alert immediately. Substantial changes in the nation's tactical nuclear arsenal were ordered and several major programs including Rail Garrison Peacekeeper and the mobile portion of the small ICBM were canceled. President Bush also indicated he would simplify strategic command and control by establishing a new strategic command, the United States Strategic Command.

The Secretary of Defense signed an execution order the next morning directing Strategic Air Command to implement the actions ordered by the President. Maintenance crews at twelve SAC bases began removing ALCMs and gravity bombs from the approximately 40 B-52 and B-1 bombers that were kept on day-to-day alert (the FB-111As had already come off alert and been retired in June 1991). Launch Control Center crews removed launch enable control panels and codes to preclude launch orders from being transmitted to the 450 Minuteman II missiles. As each

weapon was taken off alert, SAC's wing commanders reported the action to the SAC Command Center where General George L. Butler, the CINCSAC, monitored their progress. At 2:59 PM, he received notification that all bombers and Minuteman IIs were off alert.

GENERAL GEORGE L. BUTLER MONITORS THE ALERT FORCE STAND DOWN

General Butler called his wing and unit commanders from the SAC Command Center immediately upon completion of the stand down. He first told them:

> . . . what an enormously exhilarating and gratifying moment this is for me as the CINCSAC, and by extension, the entire command. It is clearly one of the singular events of our time that as I sit here in my command center I see all of SAC's bomber forces off alert."

He saluted the men and women of the Minuteman II force and characterized the occasion as "a sweeping tribute to 45 years of unparalleled devotion" that allowed the nation to begin its climb "back down the ladder of nuclear confrontation." "In the meanwhile," he concluded,

rest secure in the knowledge that for the first time in over 40 years we can truly promise our children and our grandchildren a world drained from the tension of superpower confrontation. God bless you all for what you have accomplished. CINCSAC out.
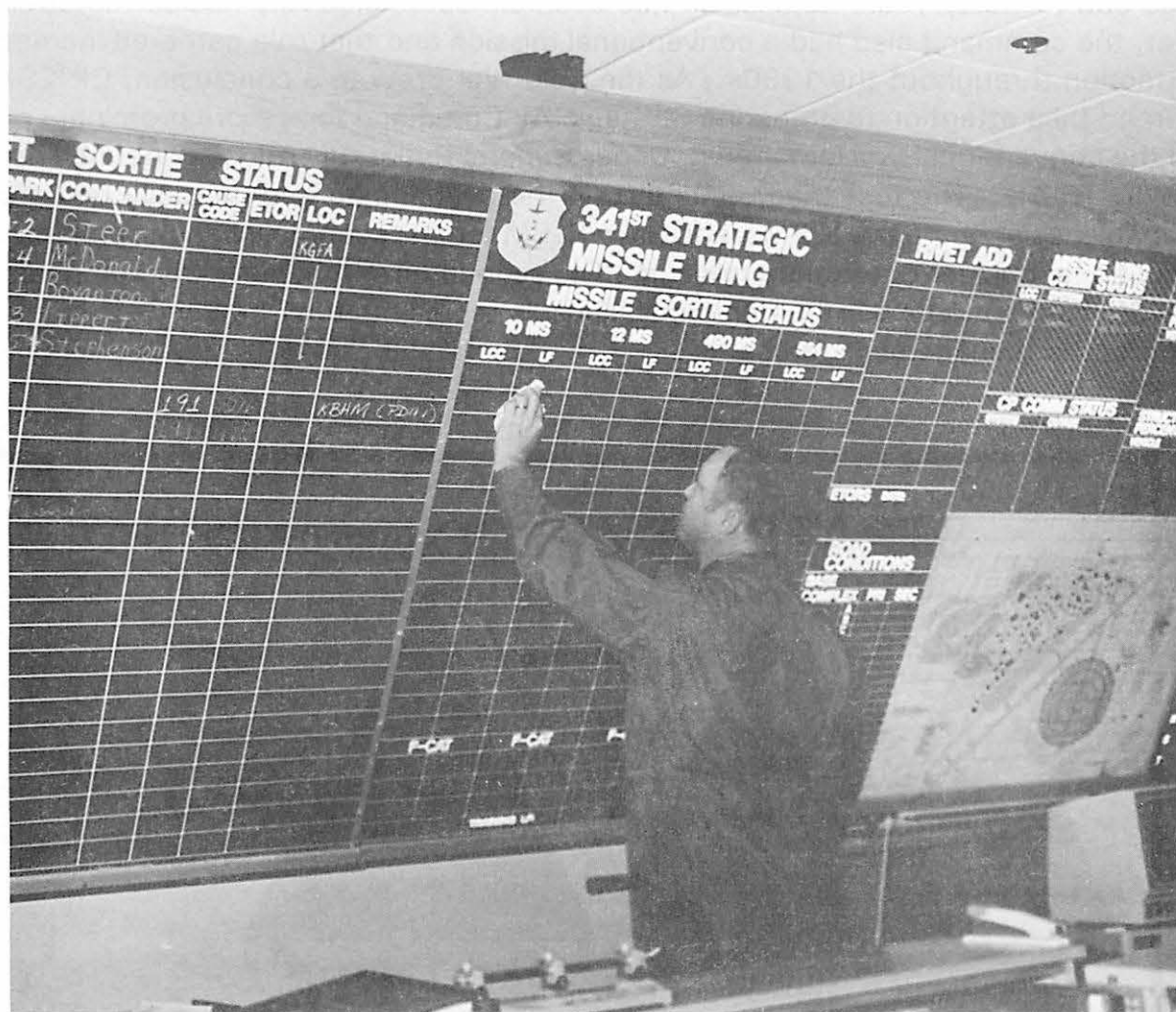
A BATTLE STAFF CONTROLLER MONITORS THE ICBM STAND DOWN AT THE 341ST SMW, MALMSTROM AFB, MONTANA

Over the next two days, missile maintenance crews visited each of the 450 launch facilities and installed safety control switches that prevented the missiles from being launched. With the turn of a key at the Alpha 9 missile silo near Stockett, Montana, the last Minuteman II was made safe on 20 September 1991. This event was especially symbolic since Alpha 9 was where the first Minuteman was placed on alert in 1962, an act President Kennedy called his "ace in the hole" because it made a critical difference in his negotiations with Premier Khrushchev during the Cuban

Missile Crisis. After the stand down, SAC maintained 450 Minuteman III and 50 Peacekeeper ICBMs on alert and was capable of generating the bomber force within 24 hours.

The dramatic events that were reshaping alert operations were also causing Strategic Air Command to develop new doctrine. SAC was the child of the nuclear age and for forty years its mission had been almost exclusively nuclear deterrence. Yet, the command also had a conventional mission and that role garnered increasing attention throughout the 1980s. As the Cold War drew to a conclusion, CINCSACs turned their attention to preparing Strategic Air Command for a more prominent place in the conventional warfare arena. Under General Butler this role was defined as the TWIN TRIAD. The first triad, embodied in the overlapping and mutually reinforcing capabilities of bombers, ICBMs, and Navy SLBM forces, accomplished the command's traditional nuclear deterrence mission. The second or non-nuclear triad emphasized SAC's conventional warfighting capabilities as represented by its bombers, tankers, and battle management forces.
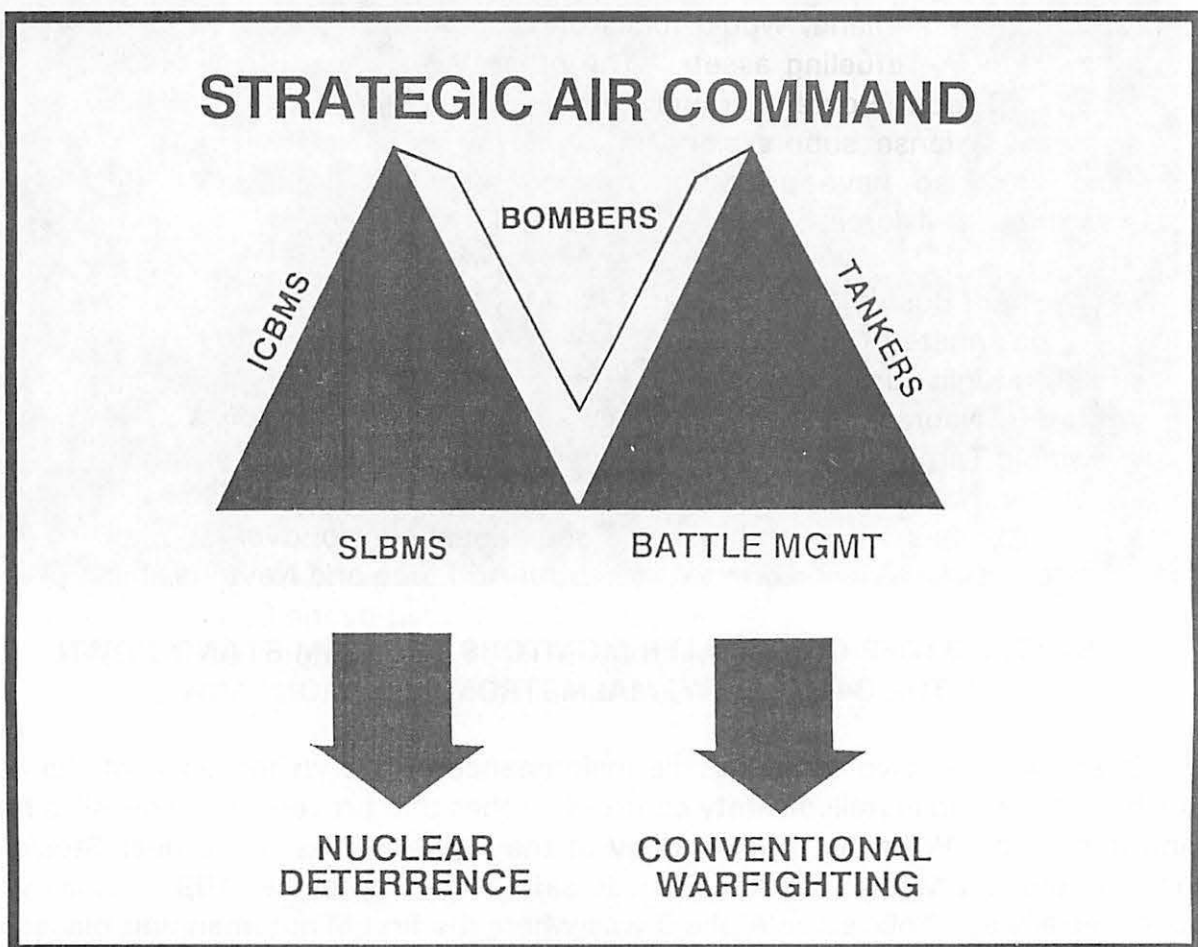
THE TWIN TRIAD CONCEPT

A major reorganization on 1 September 1991 restructured SAC's combat forces along functional lines to meet the operational and force management requirements of the twin triad. Second Air Force was reactivated and assigned responsibility for SAC's reconnaissance and battle management assets. Twentieth Air Force was reactivated to manage the command's ICBM force. Finally, SAC's two existing air forces began a gradual transition that would eventually place functional control of bomber operations under Eighth Air Force and tanker operations under Fifteenth Air Force.

SAC's internal reorganization occurred amid a fundamental reorientation of Air Force structure and doctrine. The same forces which altered alert operations were also redefining defense force structure. Simultaneously, modern warfare and new airpower doctrine were blurring the distinction between strategic and tactical weapons and platforms. As the 1991 air campaign against Iraq demonstrated, force structure had to focus on weapon employment rather than weapon system. To this end, Air Force leaders reevaluated their service organization and in September 1991 announced a major restructuring. The three major operational commands — SAC, TAC, and MAC — would inactivate and two new commands would activate. One, the Air Mobility Command, would focus on Global Reach through management of most airlift and air refueling assets. The other, Air Combat Command, would be dedicated to Global Power through the application of bomber, fighter, battle management, defense suppression and some air refueling resources. This new command will also have peacetime responsibility for organizing, training, and equipping the ICBM force.

In President Bush's 17 September address, he announced the creation of a new command, designated United States Strategic Command, to simplify command and control of strategic nuclear weapons. STRATCOM would be activated in June 1992 at Offutt AFB, Nebraska, and occupy the same building that housed SAC and the Joint Strategic Target Planning Staff. As a unified command comprised of members from the Army, Navy, Air Force, and Marine Corps, STRATCOM would report directly to the Joint Chiefs of Staff and exercise operational control over all of the nation's strategic nuclear offensive alert systems, both Air Force and Navy. General George L. Butler, the thirteenth and last CINCSAC, was selected by the Chairman of the Joint Chiefs of Staff and forwarded to the President as the nominee to be the first Commander in Chief of U.S. Strategic Command.

APPENDIX I

HEADQUARTERS STRATEGIC AIR COMMAND
Office of the Commander in Chief
Offutt Air Force Base, Nebraska

9 November 1957

MEMORANDUM TO: Each Member of the SAC Alert Force

As a member of SAC's Alert Force, you are contributing to an operation which is of the utmost importance to the security and welfare of this nation and its allies in the free world. The purpose of this memorandum is to discuss with you some aspects of this operation and the importance of your part in it. For you must fully understand the reasons for the establishment of the Alert Force in order to believe in what you are doing and, consequently, do it with all your heart and to the best of your ability.

When SAC was organized, less than twelve years ago, its long-range bombers and stores of atom bombs were unmatched throughout the world and, therefore, represented an effective deterrent to aggression. Initiation of hostile action against this country would have been the signal to launch SAC's strike forces for the counterattack within a few days, and little could have prevented these forces from inflicting unacceptable damage upon any aggressor.

But while SAC's basic mission has not changed, there have been radical changes in the factors which affect the manner in which we must accomplish that mission. We no longer have a monopoly in nuclear weapons and long-range bombers. Many of the rapid advances in military technology which are reflected in our weapon systems are also utilized by the Soviets, permitting them to attack us with greater speed, firepower, and accuracy. Our own strike forces are no longer immune to destruction before they can be launched, and continuous improvements in the Soviet's aerial defenses make successful counterattacks more difficult.

None of these problems is insurmountable but we must devote a great deal of effort and talent toward their solution. I am confident that we can cope with them because SAC is not based on any particular weapon system but on an organization of experienced men like you, flexible enough to be

readily adaptable to any new weapon system or technique, no matter how revolutionary. This applies, in particular, to the problems posed by the limitations of warning time.

As most of you know, we deal with two types of warning--"Strategic Warning" and "Tactical Warning." Strategic Warning is defined as that kind of long-range warning which gives the field commander enough time to move into fighting position and configuration. Tactical Warning means there is so little advance warning of an impending attack that the commander must fight from his present position and configuration.

We received a form of strategic warning of communist aggression as early as 1848 when Karl Marx and Friedrich Engels published the "Communist Manifesto." Ever since, all the top men of the communist hierarchy-from Lenin and Stalin to Khrushchev-have made it clear that the ultimate goal of communism is the liquidation of the capitalist countries and, primarily, of the United States.

As for the Tactical Warning, we can expect the Soviets to use the oldest and most successful military stratagem--surprise, because they surely would want to exploit our weaknesses, not our strengths. Therefore, we cannot count on any warning of overt hostile action against this country until after such action has been initiated. This would give us only a few hours to launch SAC's strike forces for the counterattack. And, once ballistic missiles become operational, the tactical warning period would shrink further to a mere fraction of an hour.

It stands to reason that the brunt of the initial attack would be directed against SAC because the Soviets know only too well that the price they would have to pay for aggression would be unacceptable to them unless they succeed in preventing SAC's strike forces from being launched. We can gain a certain degree of protection against overt and covert actions, designed to immobilize our forces, by appropriate means to deal with sabotage attempts, by a limted amount of base hardening, by dispersal, and by similar defensive measures. However, the only way of insuring the survival of some of SAC's combat capability, even in case of the most unexpected and massive attack, is our Alert Force.

As long as the Soviets know that, no matter what means they may employ to stop it, a sizeable percentage of SAC's strike force will be in the air for the counterattack within minutes after they have initiated aggression, they will think twice before undertaking such aggression. For this reason, it is my considered opinion that a combat-ready Alert Force of adequate size is the very backbone of our deterrent posture.

To achieve our goal of maintaining as much as one-third of our strike forces on continuous alert will not be easy, but it can and must be done. I realize that this will entail personal inconvenience and sacrifices to you and your families. But you can be sure that I will do everything possible to ease this aspect of your alert duties. The success of this system depends on you, and I count on you to insure that the Alert Force will always be ready to achieve its vital objectives.

/s/
THOMAS S. POWER
General, USAF
Commander in Chief

APPENDIX II

GENERAL JOHN T. CHAIN'S YEAR OF THE ALERT FORCE
MESSAGE TO THE COMMAND

301400Z Sep 87

CINCSAC OFFUTT AFB NE

AIG 740

AIG 9470

SUBJECT: 1988, The Year of SAC Alert

1. Strategic Air Command personnel have fought their war of deterrence every day for over 30 years. Bomber and tanker crews first began SAC ground alert on 1 Oct 57. Those initial alert crews and support personnel formed the cornerstone of America's deterrence--SAC alert. The men and women of our aircrews, missile crews, and all the SAC people who support them should never forget that it is their vigilance and dedication which allow Americans to live in freedom in this great nation. For those reasons, I've declared 1988 "The Year of the SAC Alert Force."

2. The goals of our program are to reaffirm the importance, enhance the prestige, and upgrade the environment of SAC alert. To aid in this effort, I've established a Headquarters SAC working group to gather, develop, and expedite good ideas. We are already working a number of projects which include: upgrading alert facilities, simplifying the SIOP, flying on alert, streamlining procedures, improving intelligence support, revitalizing the public affairs campaign, and examining unit awards programs.

3. I encourage all of you to build the best possible unit programs and implement local initiatives that support "The Year of the SAC Alert Force" program. I also want to share your good ideas with others across the command. Therefore, the numbered air forces and 1st STRAD should catalogue the new ideas and initiatives their units plan for 1988 and forward them to this headquarters by 1 Dec 87. Direct your inputs to my POC, Capt Chip Beck, HQ SAC/XOKM, AUTOVON 271-4464.

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4. SAC alert is the foundation of our mission--and of our nation's defense. The people of this country have entrusted us with providing the deterrent shield that safeguards American liberty. Everyone in SAC shares that responsibility. With your help, we'll achieve our goals and improve the way we carry out our mission. I look forward to working with you as we celebrate the year of SAC alert.

APPENDIX III

HQ SAC COMMAND CENTER

GENERAL GEORGE L. BUTLER:

TEXT OF REMARKS TO SAC WING AND UNIT COMMANDERS UPON STAND DOWN OF BOMBER AND MINUTEMAN II ALERT

28 SEPTEMBER 1991

This is General Butler. I thought it would be appropriate if I had the opportunity to say to all of your units through you as their leaders and principle spokesmen what an enormously exhilarating and gratifying moment this is for me as the CINCSAC, and by extension, the entire command. It is clearly one of the singular events of our time that as I sit here in my command center I see all of SAC's bomber forces off alert.

I was in Washington, D.C., last night when the President made his historic address, and as I listened to his words, I was filled with a sense of pride and fulfillment. His words and the initiatives they conveyed were made possible in every sense by the thousands of men and women past and present who have manned the quiet ramparts of nuclear deterrence. This includes a multitude of professionals from virtually every service and across a wide spectrum of specialties and expertise.

Today we especially salute the men and women of the Minuteman II force. Their contribution to this mission has now been achieved and they can stand down from alert with enormous pride and the gratitude of the entire nation, indeed of the entire world.

This is a great day for SAC. It's a sweeping tribute to 45 years of unparalleled devotion along with our brothers in the SLBM force. We can sit quietly and reflect on the wondrous news that we've begun to climb back down the ladder of nuclear confrontation.

My congratulations to all of you. You have made this possible, and most importantly, we can truly say that the world is becoming a safer place. With that in mind I know that you will have a multitude of questions with respect to how we proceed. That guidance will be forthcoming shortly.

The most important thing that you have to do right now is to convey to your people in a very positive way what this represents. The fact that we are able to take bombers and tankers off alert for the first time in 34 years, that we can take those Minuteman II missiles down with full confidence, that we created an era where nuclear deterrence can be preserved at lower force levels. We can proceed in a measured way with the rest of the President's agenda.

Tell your folks that this is a very exciting event for those of us here in headquarters as we gather and watch the numbers of alert aircraft and Minuteman II missiles come down off the boards. That we are working diligently with guidance from Washington on where we go from here. We will have more specific instructions out with regard to the continued contributions of the Minuteman II crews as we work through this period.

So from me to all of you, my deepest thanks, my admiration, my appreciation. Come back to us with your individual questions, but recognize that we will be getting out to you with very broad guidance in the very near future.

In the meantime, rest secure in the knowledge that for the first time in over 40 years we can truly promise our children and our grandchildren a world drained from the tension of superpower confrontation. God bless you all for what you have accomplished. CINCSAC out.

APPENDIX IV

MANPOWER
1946 - 1990

SAC MANNING - OFFICERS, AIRMEN, CIVILIANS

HEADQUARTERS STRATEGIC AIR COMMAND

MISSILE CREWS

STRATEGIC AIR COMMAND

MANNING - OFFICERS, AIRMEN, AND CIVILIANS

1946 - 1990

Year	Officers	Airmen	Civilians	Total
1946	4,319	27,871	4,902	37,092
1947	5,175	39,307	5,107	49,589
1948	5,562	40,038	6,365	51,965
1949	10,050	53,460	7,980	71,490
1950	10,600	66,600	8,273	85,473
1951	19,747	113,224	11,554	144,525
1952	20,282	134,072	11,667	166,021
1953	19,944	138,782	12,156	170,982
1954	23,447	151,466	14,193	189,106
1955	26,180	151,595	18,222	195,997
1956	27,871	169,170	20,238	217,279
1957	29,946	174,030	20,038	224,014
1958	34,112	199,562	25,029	258,703
1959	36,435	199,970	26,204	262,609
1960	37,562	202,507	26,719	266,788
1961	37,555	216,148	26,879	280,582
1962	38,542	217,650	26,531	282,723
1963	36,206	211,482	23,984	271,672
1964	35,035	201,933	22,903	259,871
1965	30,336	164,414	21,931	216,681
1966	26,558	147,197	23,102	196,887
1967	25,745	143,412	22,148	191,305
1968	24,323	124,221	19,956	168,500
1969	23,167	122,828	18,333	164,328
1970	23,244	112,401	18,722	154,367
1971	23,043	118,300	19,732	161,075
1972	24,040	119,777	18,884	162,701
1973	23,686	121,060	19,008	163,754
1974	22,873	109,778	19,670	152,321
1975	21,788	98,890	20,057	140,375

Figures as of 31 December

Year	Officers	Airmen	Civilians	Total
1976	19,662	91,722	16,175	127,599
1977	18,726	89,440	14,876	123,042
1978	18,177	90,625	13,698	122,500
1979	18,451	86,315	14,201	118,967
1980	18,575	85,401	14,217	118,193
1981	18,708	87,055	13,036	118,799
1982	18,674	89,918	14,105	122,697
1983	17,767	89,267	13,009	120,043
1984	17,165	88,458	12,861	118,484
1985	17,475	88,341	13,160	118,976
1986	17,681	91,111	12,938	121,730
1987	17,453	90,320	12,816	120,679
1988	17,319	88,045	12,179	117,879
1989	16,788	83,418	12,574	112,780
1990	16,688	82,407	12,272	111,367

Year	Officers		Enlisted		Civilians		Total	
	Auth	Asgd	Auth	Asgd	Auth	Asgd	Auth	Asgd
1976	907	875	676	600	434	408	2017	1883
1977	897	773	634	589	421	403	1952	1965
1978	1021	967	944	891	492	469	2457	2327
1979	1088	965	1026	939	531	459	2645	2363
1980	1085	1014	1066	999	544	514	2695	2527
1981	1121	1010	1091	1043	558	508	2770	2561
1982	1086	1034	1032	1031	539	509	2657	2574
1983	1043	992	972	965	514	488	2529	2445
1984	996	963	807	895	497	469	2300	2327
1985	1041	1018	877	866	488	479	2406	2383
1986	1047	1033	895	921	493	471	2435	2425
1987	1030	1027	899	895	508	479	2437	2401
1988	919	787	942	866	554	486	2415	2139
1989	922	727	917	834	549	500	2388	2061
1990	895	876	792	792	535	507	2222	2175

MISSILE CREW MANNING

1961 - 1990

Year	Authorized	Formed
1961	155	150
1962	747	654
1963	1169	1159
1964	1378	1261
1965	781	767
1966	872	834
1967	906	838
1968	996	947
1969	1059	1020
1970	1090	1036
1971	1109	1096
1972	1036	1089
1973	1162	1144
1974	1200	1188
1975	1185	1194
1976	1185	1100
1977	985	893
1978	885	869
1979	886	863
1980	885	843
1981	884	866
1982	892	863
1983	890	897
1984	782	743
1985	757	714
1986	670	663
1987	630	640
1988	634	627
1989	630	576
1990	614	575

Figures as of 31 December

APPENDIX V

WEAPON SYSTEM INVENTORIES
1946 - 1990

TACTICAL WEAPON SYSTEMS

BOMBARDMENT AND TANKER AIRCRAFT

BOMBARDMENT AIRCRAFT

TANKER AIRCRAFT

POST ATTACK COMMAND AND CONTROL SYSTEMS

INTERCONTINENTAL BALLISTIC MISSILES

INTERCONTINENTAL BALLISTIC MISSILES BY MODEL

TACTICAL WEAPON SYSTEMS

1946 - 1990

Year	Fighters	Bombers	Tankers	Recon	PACCS	ICBM	Missiles	Total
1946	85	148		31				264
1947	350	319		35				704
1948	212	556		54				822·
1949	161	525	67	80				833
1950	167	520	126	112				925
1951	96	669	208	173				1146
1952	230	857	318	193				1598
1953	235	762	502	282				1781
1954	411	1082	683	410				2586
1955	554	1309	761	448				3072
1956	366	1650	824	574				3414
1957		1655	766	388				2809
1958		1769	962	218				2949
1959		1854	1067	205		6	1	3133
1960		1735	1094	139		12	147	3127
1961		1526	1095	164		63	627	3475
1962		1595	1018	65	5	224	983	3890
1963		1335	895	60	41	631	1085	4047
1964		1111	844	40	47	931	1043	4016
1965		807	642	32	23	880	1007	3391

Figures represent assigned systems as of 31 December

Year	Fighters	Bombers	Tankers	Recon	PACCS	ICBM	Missiles	Total
1966		674	636	40	26	968	1005	3349
1967		669	641	48	17	1036	925	3336
1968		655	632	53	20	1026	757	3143
1969		549	629	55	18	1065	779	3095
1970		501	630	49	28	1039	775	3022
1971		478	622	40	26	1048	770	2984
1972		462	616	42	27	1012	982	3141
1973		491	641	43	29	1027	1397	3628
1974		494	643	54	28	1056	1891	4166
1975		489	642	50	31	1067	2114	4393
1976		487	643	51	31	1152	2074	4438
1977		483	640	50	30	1219	2018	4440
1978		410	640	46	30	1237	1408	3771
1979		408	642	41	30	1227	1396	3744
1980		406	517	38	31	1223	1383	3598
1981		406	523	38	31	1220	1388	3606
1982		362	562	43	30	1206	1620	3823
1983		323	535	49	30	1192	2063	4192
1984		322	543	47	32	1171	2518	4633
1985		321	673	55	31	1161	2580	4821
1986		286	556	59	31	1149	2568	4649
1987		306	550	60	31	1179	2529	4655
1988		411	548	66	31	1201	2638	4895
1989		400	545	68	31	1202	2620	4866
1990		346	530	49	31	1149	2512	4617

BOMBARDMENT AND TANKER AIRCRAFT

1946 - 1990

Year	B-29	B-50	KB-29	B-36	B-47	KC-97	B-52	KC-135	B-58	FB-111	KC-10	B-1	TOTAL
1946	148												148
1947	319												319
1948	486	35		35									556
1949	390	99	67	36									592
1950	286	196	126	38									646
1951	340	219	187	98	12	21							877
1952	417	224	179	154	62	139							1175
1953	110	138	143	185	329	359							1264
1954		78	91	209	795	592							1765
1955			82	205	1086	679	18						2070
1956			74	247	1306	750	97						2474
1957				127	1285	742	243	24					2421
1958				22	1367	780	380	182					2731
1959					1366	745	488	322					2921
1960					1178	689	538	405	19				2826
1961					889	651	571	444	66				2621
1962					880	503	639	515	76				2613
1963					613	306	636	589	86				2230
1964					391	190	626	654	94				1955
1965					114		600	642	93				1449

Figures represent assigned aircraft as of 31 December

Year	B-29	B-50	KB-29	B-36	B-47	KC-97	B-52	KC-135	B-58	FB-111	KC-10	B-1	TOTAL
1966							591	636	83				1310
1967							588	641	81				1310
1968							579	632	76				1287
1969							505	629	41	3			1178
1970							459	630		42			1131
1971							412	622		66			1100
1972							402	616		60			1078
1973							422	641		71			1134
1974							422	643		72			1137
1975							420	625		69			1114
1976							419	584		68			1071
1977							417	547		66			1030
1978							344	512		66			922
1979							343	514		65			922
1980							343	517		63			923
1981							344	517		62	6		929
1982							300	514		62	12		888
1983							262	515		61	20		858
1984							262	515		60	28		865
1985							261	506		60	39		866
1986							233	506		51	50	2	842
1987							260	493		60	57	76	946
1988							258	490		59	58	94	959
1989							248	487		58	58	94	945
1990							222	471		30	59	94	876

BOMBARDMENT AIRCRAFT

1946 - 1990

Year	B-29	B-50	B-36	B-47	B-52	B-58	FB-111	TOTAL
1946	148							148
1947	319							319
1948	486	35	35					556
1949	390	99	36					525
1950	286	196	38					520
1951	340	219	98	12				669
1952	417	224	154	62				857
1953	110	138	185	329				762
1954		78	209	795				1082
1955			205	1086	18			1309
1956			247	1306	97			1650
1957			127	1285	243			1655
1958			22	1367	380			1769
1959				1366	488			1854
1960				1178	538	19		1735
1961				889	571	66		1526
1962				880	639	76		1595
1963				613	636	86		1335
1964				391	626	94		1111
1965				114	600	93		807
1966					591	83		674
1967					588	81		669
1968					579	76		655
1969					505	41	3	549
1970					459		42	501
1971					412		66	478
1972					402		60	462
1973					422		71	493
1974					422		72	494
1975					420		69	489

Figures are assigned aircraft as of 31 December

Aircraft and Missile figures 1973-1990 include SAC aircraft undergoing maintenance and modification work at Air Force Logistics Command facilities. Prior to 1973, these aircraft were assigned to AFLC rather than SAC.

Year	B-52	FB-111	B-1B	TOTAL
1976	419	68		487
1977	417	66		483
1978	344	66		410
1979	343	65		408
1980	343	63		406
1981	344	62		406
1982	300	62		362
1983	262	61		323
1984	262	60		322
1985	261	60		321
1986	233	51	2	286
1987	260	60	76	396
1988	258	59	94	411
1989	248	58	94	400
1990	222	30	94	346

TANKER AIRCRAFT

1949 - 1990

Year	KB-29	KC-97	SAC KC-135	ARF KC-135	KC-10
1949	67				
1950	126				
1951	187	21			
1952	179	139			
1953	143	359			
1954	91	592			
1955	82	679			
1956	74	750			
1957		742	24		
1958		780	182		
1959		745	322		
1960		689	405		
1961		651	444		
1962		503	515		
1963		306	589		
1964		190	654		
1965			642		
1966			636		
1967			641		
1968			632		
1969			629		
1970			630		
1971			622		
1972			616		
1973			641		
1974			643		
1975			625	17	
1976			584	59	
1977			547	93	
1978			512	128	
1979			514	128	

Figures represent assigned aircraft as of 31 December

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Year	KB-29	KC-97	SAC KC-135	ARF KC-135	KC-10
1980			517	128	
1981			517	128	6
1982			514	128	12
1983			515	128	20
1984			515	128	28
1985			506	128	39
1986			506	124	50
1987			493	134	57
1988			490	134	58
1989			487	134	58
1990			471	147	59

POST ATTACK COMMAND CONTROL SYSTEM (PACCS)

1961 - 1990

Year	EB-47	EC-135	E-4
1961			
1962	5		
1963	26	15	
1964	22	25	
1965		23	
1966		26	
1967		17	
1968		20	
1969		18	
1970		28	
1971		26	
1972		27	
1973		29	
1974		28	
1975		28	3
1976		28	3
1977		27	3
1978		27	3
1979		27	3
1980		27	4
1981		27	4
1982		26	4
1983		26	4
1984		28	4
1985		28	3
1986		28	3
1987		27	4
1988		28	3
1989		28	3
1990		28	3

Figures represent assigned aircraft as of 31 December

AIR LAUNCHED MISSILES

1959 - 1990

Year	Snark*	Quail	Hound Dog	SRAM	ALCM
1959	13		1		
1960	30	93	54		
1961		397	230		
1962		436	547		
1963		492	593		
1964		477	566		
1965		465	542		
1966		457	548		
1967		448	477		
1968		445	312		
1969		430	349		
1970		430	345		
1971		430	340		
1972		417	338	227	
1973		417	329	651	
1974		415	327	1149	
1975		355	308	1451	
1976		355	288	1431	
1977		354	249	1415	
1978				1408	
1979				1396	
1980				1383	
1981				1374	14
1982				1332	288
1983				1327	736
1984				1309	1209
1985				1309	1271
1986				1128	1440
1987				1125	1404
1988				1138	1500
1989				1120	1500
1990				1048	1464

* Snark was a surface-to-surface intercontinental missile

Figures represent assigned missiles as of 31 December

INTERCONTINENTAL BALLISTIC MISSILES

1959 - 1990

Year	Thor*	Atlas	Titan	Minuteman	Peacekeeper
1959	13	6			
1960	30	12			
1961		62	1		
1962		142	62	20	
1963		140	119	372	
1964		118	115	698	
1965			59	821	
1966			60	908	
1967			63	973	
1968			59	967	
1969			60	1005	
1970			57	982	
1971			58	990	
1972			57	955	
1973			57	970	
1974			57	999	
1975			57	1010	
1976			58	1094	
1977			57	1162	
1978			57	1180	
1979			57	1170	
1980			56	1167	
1981			56	1164	
1982			53	1153	
1983			43	1149	
1984			31	1140	
1985			21	1140	
1986			9	1140	
1987				1151	28
1988				1152	49
1989				1152	50
1990				1099	50

* Thor was an intermediate range ballistic missile

Figures represent assigned missiles as of 31 December

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INTERCONTINENTAL BALLISTIC MISSILES
BY MODEL

1959 - 1990

Year	Atlas D	Atlas E	Atlas F	Titan I	Titan II	Minuteman A	Minuteman B	Minuteman F	Minuteman G	Peace-keeper
1959	6									
1960	12									
1961	30	32	1	1						
1962	30	32	80	62		20				
1963	28	33	79	63	56	151	221			
1964	13	30	75	56	59	142	556			
1965					59	138	663	20		
1966					60	116	616	176		
1967					63	77	534	362		
1968					59	11	504	452		
1969					60		503	502		
1970					57		423	507	52	
1971					58		333	500	157	
1972					57		191	485	279	
1973					57		100	503	367	
1974					57			505	494	
1975					57			452	558	
1976					58			494	600	
1977					57			474	688	
1978					57			502	678	
1979					57			492	678	
1980					56			491	676	
1981					56			492	672	
1982					53			490	663	
1983					43			485	664	
1984					31			486	654	
1985					21			486	654	
1986					9			486	654	
1987								489	662	28
1988								489	663	49
1989								489	663	50
1990								489	610	50

Figures represent assigned missiles as of 31 December

APPENDIX VI

ALERT RATES
1946 - 1990

BOMBER ALERT RATES

AIRBORNE ALERT RATES

ICBM ALERT RATES

BOMBER ALERT RATES

1958 - 1990

YEAR	REQUIRED ALERT	ACTUAL ALERT
1958		233
1959		327
1960		428
1961		519
1962		625
1963		551
1964		464
1965	340	314
1966	352	301
1967	248	223
1968	202	166
1969	190	100
1970	156	89
1971	156	112
1972	174	49
1973	170	126
1974	125	106
1975	107	107
1976	103	103
1977	103	97
1978	101	101
1979	101	101
1980	101	101
1981	101	101
1982	89	89
1983	76	76
1984	75	75
1985	74	74
1986	74	76
1987	69	69
1988	63	63
1989	65	64
1990	53	53

Figures as of 31 December

AIRBORNE ALERT RATES

1 FEBRUARY 1958 - 31 DECEMBER 1990

	B-36	B-52	PACCS	TOTAL
1 Feb 1958	1			1
1958				0
1959		11		11
1960		6	13	6
1961		10	1	11
1962		12	1	13
1963		11	1	12
1964		9	1	10
1965		12	1	13
1966		3	1	4
1967		4	1	5
1968			1	1
1969			1	1
1970			1	1
1971			1	1
1972			1	1
1973			1	1
1974			1	1
1975			1	1
1976			1	1
1977			1	1
1978			1	1
1979			1	1
1980			1	1
1981			1	1
1982			1	1
1983			1	1
1984			1	1
1985			1	1
1986			1	1
1987			1	1
1988			1	1
1989			1	1
1990			0	0

Figures represent actual aircraft on alert as of 31 December

ICBM ALERT RATES

30 OCTOBER 1959 - 31 DECEMBER 1990

Year	Atlas	Titan	Minute-man	Peace-keeper	ERCS	Total
30 Oct 59	1					1
1959						0
1960	5					5
1961	26					26
1962	5	48				143
1963	68	82	276			426
1964	90	96	678			864
1965		47	782			829
1966		50	837			887
1967		56	899			955
1968		55	923			978
1969		55	975			1030
1970		53	936			989
1971		54	937			991
1972		54	900			954
1973		54	911			965
1974		55	975			988
1975		54	931			985
1976		54	917			971
1977		53	921			974
1978		50	910			960
1979		52	957			1009
1980		50	976		8	1034
1981		51	978		10	1039
1982		49	971		10	1030
1983		39	975		9	1023
1984		30	977		10	1017
1985		18	946		10	974
1986		5	948	9	10	958
1987			916	16	10	942
1988			899	42	10	951
1989			898	49	10	957
1990			901	50	10	961

Figures represent actual ICBMs on alert as of 31 December