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HISTORY OF THE STRATEGIC AIR COMMAND

1 January 1958 - 30 June 1958

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HISTORICAL STUDY NO. 28 VOLUME I

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Chapter II

COMPRESSING THE REACTION TIME

The Dispersal Concept

SAC recognized as early as 1952 that its growing tactical force presented an increasingly vulnerable target for enemy attack, especially in view of increased Soviet capability and a relatively static base structure. On 24 June 1954 the Air Force Council issued its 31/30 decision which established base utilization objectives which were the foundation of the dispersal program. This was subsequently approved by the Chief of Staff, USAF, on 28 June 1954.¹ In July the Joint Air Defense Board recommended action to limit the number of aircraft concentrated on any one base. It was not until August 1955, however, that USAF approved, in principle, a SAC proposal for dispersal of its heavy and medium bomb force. No funds for dispersal were allocated until fiscal year 1957.²

Steady progress marked the SAC dispersal program during the January through June 1958 period. By the end of June three

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1. Air Council Decision 31/30, 13 July 1954, Incl 2 to Prog Plan 1-57, Exhibit 24, History of SAC, Jul-Dec 1956, Vol V, filed in OIH, Hq SAC.
 2. History of SAC, Jul-Dec 1957, Vol I, pp 78, 80, filed in OIH, Hq SAC.

dispersed squadrons (B-52 Strategic Wings) had been activated;
all were non-combat ready and only one had received B-52 aircraft.
Strategic Air Command also was able to obtain Headquarters
USAF approval of a new "maintenance dispersal" concept for
the B-52/KC-135 wings to replace the previously approved
"main base-satellite base" concept.

New Support Concept. SAC's original concept for dispersing
the heavy bomb force provided for moving a heavy wing of three
squadrons located on one base to three bases with one squadron
on each base. In addition, an air refueling squadron with 10
aircraft would be assigned to each of the three bases. This
would result in a dispersal to 33 bases, each assigned one B-52
squadron (15 aircraft) and one KC-135 squadron (10 aircraft).

The concept also provided for control from an Air Division
Headquarters to each of three bases with one base (designated
the main base) providing specific support to the other two.

* See chart on p 12.

3. 4123d SW, Carswell AFB, Texas, received its first B-52 on 19 February; 4238th SW, Barksdale AFB, Louisiana; 4134 SW, Mather AFB, California, (Info see Strategic Wing Activations, p 23). For information concerning dispersal within the Fifteenth Air Force see History 15AF, Jan-Jun 1958, Vol I, pp 4-17, filed in OIH, Hq SAC.
4. For additional information on SAC's original concept for dispersal see ltr, with three Incls, Maj Gen J. P. McConnell, Dir of Plans, Hq SAC, to Dir of Manpower and Org, Hq USAF, "Programming for Support of SAC Dispersal Program," 16 Apr 1957, Exhibit 1.

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Support consisted of heavy field, armament and electronic, and periodic maintenance; administrative and logistical support; and operation of trainers.

By early 1958, however, it was evident that the above concept for supporting dispersal was no longer feasible. The original concept did not include the requirement for one-third alert which increased considerably flying time requirements. Also, the original concept was predicated on a maximum distance of 200 miles between the main and satellite base. This distance criteria was not possible in the final location of the dispersal complex, and resulted in too many non-production flying hours between main and satellite bases. For economy's sake the old B-36 heavy bases with their excellent facilities had to be used. This resulted in most of the main bases being located in the Fifteenth Air Force. The majority of the satellite bases were located in the Second Air Force, again because of existing facilities, although political pressure played no small part in their selection. In December 1957 the proposed heavy base structure contained several examples of extreme distances between main and satellite bases. Ellsworth AFB, South Dakota, a main base, had Warner Robins AFB, Georgia, as one of its satellites, and Ramey AFB, Puerto Rico was the main base for air bases in Mississippi

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(Columbus) and North Carolina (Seymour-Johnson).⁵

SAC Heavy Dispersal Program as of 31 December 1957⁶

Travis AFB, California

Mather AFB, Sacramento, California
Beale AFB, Marysville, California

Castle AFB, Merced, California

Wurtsmith AFB, Oscoda, Michigan
Kinross AFB, Sault St. Marie, Michigan

Fairchild AFB, Spokane, Washington

Glasgow AFB, Glasgow, Montana
Minot AFB, Minot, North Dakota

Ellsworth AFB, Rapid City, South Dakota

Grand Forks AFB, Grand Forks, North Dakota
Warner Robins AFB, Macon, Georgia

Walker AFB, Roswell, New Mexico

Amarillo AFB, Amarillo, Texas
Eglin AFB, Pensacola, Florida

Biggs AFB, El Paso, Texas

Bergstrom AFB, Austin, Texas
Turner AFB, Albany, Georgia

Altus AFB, Altus, Oklahoma

Clinton-Sherman AFB, Clinton, Oklahoma
Blytheville AFB, Blytheville, Arkansas

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5. Incl 1, Ltr, Maj Gen Edwin B. Broadhurst, C/S, Hq SAC, to Gen T. D. White, C/S, USAF, "Dispersal of Heavy Wings," 1 May 1958, "Home Satellite Concept," Exhibit 2; DF, Col Charles D. Trail, Dep Ch, Log Div, D/Mat, to Hist Div, "Review of SAC History," 10 Nov 1958, filed in OIH, Hq SAC; Info from Lt Col O. H. Erickson, Prog Off, ZI Prog Br, Prog Div, D/Plans, Hq SAC, 16 Oct 1958.
 6. Info from Lt Col O. H. Erickson, Prog Off, ZI Prog Br, Prog Div, D/Plns, Hq SAC, 15 Oct 1958, and files of that office.

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Carswell AFB, Ft Worth, Texas

Shepherd AFB, Wichita Falls, Texas
Barksdale AFB, Shreveport, Louisiana

Ramey AFB, Puerto Rico

Columbus AFB, Columbus, Mississippi
Seymour-Johnson AFB, Goldsborough, North Carolina

Westover AFB, Springfield, Massachusetts

Griffis AFB, Rome, New York
Dow AFB, Bangor, Maine

Loring AFB, St. Agathan, Maine

Wright Patterson AFB, Dayton, Ohio
K. I. Sawyer AFB, Negaunie, Michigan

Because of the great distances between some bases, it was apparent that movement of equipment and personnel between bases in the "main-satellite" concept would result in greater expense than a concept in which all bases would be "self-sufficient."⁷ The cost of giving support was directly proportionate to the distance involved. Also, since the original concept had been developed prior to the Alert Concept, consideration had not been given to the flying hour requirements generated by an aircrew/aircraft ratio of 1.6 to 1. To put one-third of its striking force on alert, and at the same time provide the additional flying hours with only two-thirds of the aircraft, SAC's manpower requirements would be strained to the maximum. The

7. Ltr, Brig Gen C. B. Westover, Dir of Plans, Hq SAC, to Maj Gen Thomas C. Musgrave, Dir of Manpower and Org, Hq USAF, "Dispersal of Heavy Wings," 14 Jan 1958, Exhibit 3.

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additional manpower required to periodically maintain aircraft from satellite bases on temporary duty for repair at distant main bases would not be available.⁸ SAC sought permission to make each main base "self-sufficient" and each dispersal B-52/KC-135 wing capable of performing its mission without relying on a main base for support. The command figured the cost at approximately \$4.64 million (total cost) per satellite base exclusive of family housing. This represented a maximum cost of self-sufficiency for 22 satellite bases (no family housing)⁹ of approximately \$102 million.

Strategic Air Command's proposal to make all programmed heavy dispersal bases self-sufficient represented a departure from the approved "main base-satellite" concept. General Curtis E. LeMay, Vice Chief of Staff, responded to the SAC request by saying that ". . . in the light of imposed monetary restrictions on the USAF, [the plan] cannot be justified for each and every heavy dispersal base."¹⁰ USAF suggested

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8. TWX, Col L. E. Lyle, Dep Dir of Plans, Hq SAC, to CoFS, USAF, DPLCZ 532, "Heavy Dispersal Program," 9 Jan 1958, Exhibit 4; History of SAC, Jul-Dec 1957, Vol I, p 84, filed in OIH, Hq SAC.
 9. TWX, Col L. E. Lyle, Dep Dir Plans, Hq SAC, to CoFS, USAF, DPLCZ 532, "Heavy Dispersal Program," 9 Jan 1958, Exhibit 4.
 10. Ltr, Gen C. E. LeMay, VCS, Hq USAF, to CINCSAC, "Dispersal of Heavy Wings," 26 Feb 1958, Exhibit 5.

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a rearrangement of the complexes. The organization pattern need not be limited to three strategic wings to one Air Division; a variable number of wings could be assigned to one Air Division to reduce the distance between main and satellite bases. If, after this reshuffling, there were still bases which required self-sufficiency, they would be handled on an individual basis. ¹¹ Also, contrary to SAC's original findings, ¹² a review of manpower requirements by USAF and SAC representatives indicated that there was a small increase in manpower requirements to support maintenance "self-sufficiency" for the entire dispersal complex over that required by the original concept. ¹³

After a review of USAF proposals contained in General LeMay's 26 February letter and a thorough study of the problem, Headquarters SAC presented its final recommendations concerning maintenance dispersal to USAF for approval on 1 May 1958.

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11. That is, requests would be submitted in terms of individual base requirements, individual function and/or activity requirements, individual additional facility requirements, and individual manpower requirements over and above that to be programmed in the PM 60-1. (Info from Ltr, Gen C. E. LeMay, VCS, Hq USAF, to Gen T. S. Power, CINCSAC, "Dispersal of Heavy Units," 26 Feb 1958, Exhibit 5).
 12. Ltr, Gen C. B. Westover, Dir of Plans, Hq SAC, to Maj Gen Thomas C. Musgrave, Dir of Manpower and Org, Hq USAF, "Dispersal of Heavy Wings," 14 Jan 1958, Exhibit 3.
 13. Ltr, Gen C. E. LeMay, VCS, Hq USAF, to Gen T. S. Power, CINCSAC, "Dispersal of Heavy Units," 26 Feb 1958, Exhibit 5.

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The original home base-satellite system was outmoded by the many changes in concepts, e.g., Alert, that had occurred since its inception. Dispersal of the maintenance function would provide more independent operation and increase maintenance capability to insure adequate support at minimum operating costs. It would reduce initial cost and operating costs in moving aircraft from satellite base to home base and return for heavy maintenance; flying time to and from home bases; and transportation of spares to fill pipeline between depot, home base and satellite base. Regarding USAF's suggestion that rearrangement of the bases would solve most of the problem, SAC rejoined that any attempt at rearrangement of the dispersal base complex would still retain the long distances between the home and satellite bases.

Strategic Air Command believed that the "old" concept was unrealistic with respect to sound management principles and span of control and economy. Operating expenses would be out of proportion for benefits gained; the Alert Force would be reduced due to the loss of aircraft to the maintenance pipeline; aircrew duty time would be increased as a result of numerous flights between bases; and although \$745 million had been expended for support facilities, maintenance facilities were still concentrated on the 11 main bases,

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leaving the heavy force as vulnerable as ever.

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Strategic Air Command asked that the following be approved:

a. That the Strategic Air Command be authorized to expend \$1.2 million of FY 1959 major repair program funds for projects shown in attached study.

b. That the Strategic Air Command/Air Materiel Command Fiscal Year 1959 Financial Plan include an additional 0.6 million dollars for procurement of equipment.

c. That the Fiscal Year 1960 Military Construction Program include an additional authorization of 12.8 million dollars for construction of maintenance shops and on-base housing as shown by line items in attached study.

d. The major commands of the United States Air Force be informed of the change to the maintenance concept of the heavy dispersal program as developed by the attached study. Further, that the commands be instructed to expedite necessary programming documents . . . as required.

e. That the major commands of the United States Air Force be directed to furnish maximum joint utilization of facilities in accordance with the provisions of Air Force Regulation 11-14.

f. That the SAC manpower ceiling be increased by 353 spaces to provide the satellite bases with the maintenance capability outlined in the attached study. This is in accordance with the agreement reached at the USAF/SAC Manpower conference conducted during February 1958.

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14. TWX, Personal for Gen C. E. LeMay, VCS, Hq USAF, from Gen T. S. Power, CINCSAC, C 5154, 29 Apr 1958, Exhibit 6.
 15. Ltr, Maj Gen E. B. Broadhurst, C/S, Hq SAC, to C/S, Hq USAF, "Dispersal of Heavy Wings," 1 May 1958, w/1 Incl, "Home Satellite Concept," Exhibit 2.

Strategic Air Command was successful in "selling" its maintenance dispersal concept for the B-52/KC-135 programs.

On 15 May 1958 Headquarters USAF agreed to the above listed ¹⁶ six main points submitted by this command. For an additional \$21 million in facilities and equipment SAC would achieve true dispersal of the heavy force and thus reduce the potential enemy's ability to immobilize the SAC strike force under conditions of surprise attack. ¹⁷ Facilities for support of the complete maintenance dispersal would be programmed in the FY-60 MCP. ¹⁸

Reference to the chart on the following page shows that the old rules of one main base and two satellite bases to each complex no longer applied in June 1958. Base groupings no longer reflected main-satellite distinction (since all were self-sufficient), but showed command organization. SAC planned for 10 bases, each of which would have an air division. Bases grouped under these command bases would report through the air division to numbered air force headquarters. Five bases would report directly to numbered air forces. Two new bases appear

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- 16. TWX, Hq USAF to CINCSAC, CVC 50919, "Maintenance Dispersal Concept," 15 May 1958, Exhibit 7.
 - 17. Incl 1, Ltr, Maj Gen E. B. Broadhurst, C/S, Hq SAC, to Gen T. D. White, C/S, USAF, "Dispersal of Heavy Wings," 1 May 1958, "Home Satellite Concept," Exhibit 2.
 - 18. Incl 3, DF, Lt Col James Yeater, Ex, D/Mat, to Hist Div, OI, "History of SAC, Jan-Jun 1958," 18 Jul 1958, filed in OIH, Hq SAC.

on the chart, Bethel AFB, Minnesota, and Chanute AFB, Illinois. They will be funded in the FY-60 MCP and will be used to disperse SAC's twelfth heavy bomb wing scheduled to receive its first aircraft in May 1960.

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SAC Heavy Dispersal Program as of 1 July 1958

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Westover AFB, Massachusetts

Dow AFB, Maine
Griffis AFB, New York

Wurtsmith AFB, Michigan

Kinross AFB, Michigan
K. I. Sawyer AFB, Michigan
Wright Patterson AFB, Ohio

Ellsworth AFB, South Dakota

Minot AFB, North Dakota
Grand Forks AFB, North Dakota

Fairchild AFB, Washington

Glasgow AFB, Montana

Beale AFB, California

Travis AFB, California
Mather AFB, California

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Castle AFB, California

19. USAF PD 60-1B, 9 Jul 1958 filed in ZI Prog Br, Plans Div, D/Plans, Hq SAC; Brochure, "Second Stage," SAC Comdr's Conf, 19-21 Aug 1958 at Pease AFB, N. H., p 9, filed in OIH, Hq SAC.

20. Chart prepared for Historical Division by Lt Col O. H. Erickson, ZI Progs Br, Progs Div, D/Plans, Hq SAC, 15 Oct 1958, and files of that office.

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Walker AFB, New Mexico

Biggs AFB, Texas
Amarillo AFB, Texas

Altus AFB, Oklahoma

Clinton-Sherman AFB, Oklahoma
Sheppard AFB, Texas

Barksdale AFB, Louisiana

Columbus AFB, Mississippi
Blytheville AFB, Arkansas

Carswell AFB, Texas

Bergstrom AFB, Texas

Turner AFB, Georgia

Seymour Johnson AFB, North Carolina
Robins AFB, Georgia
Eglin AFB, Florida

Ramey AFB, P. R.*

Chanute AFB, Illinois*

Bethel AFB, Minnesota*

* These bases will report directly to the numbered Air Force Headquarters.

Funding. As of 30 June 1958 Congress had appropriated enough funds to complete dispersal of the 11 heavy bomb wing force to an end position of one B-52 squadron per base. To

* Twenty-two additional bases, together with its 11 original heavy bases, would enable SAC to reach a 33 heavy base dispersal.

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Alert Concept

Introduction. The Soviet Air Force, no match for the United States in long range bombers and atomic weapons immediately following World War II, 10 years later strode into the missile era wearing seven league boots. In order to counter the increased Soviet strike capability (especially in the field of intercontinental missiles), as early as 1956 the SAC staff began planning how the mission could best be accomplished during the crucial 1958 through 1970 time period.

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Out of staff studies prepared at Headquarters SAC grew the Alert Concept. It proposed a plan whereby the command would maintain a portion of its strategic offensive force in a high state of readiness from which it could react rapidly upon receipt of tactical warning. Because it was not feasible economically or operationally to keep the entire force on

35. The year 1958 represented the time when the enemy would have developed a missile capability while at the same time manned bombers would constitute the major portion of the SAC force. The year 1970 represented the earliest time when missiles would be dependable, accurate, and lethal enough to replace manned bombers as SAC's primary weapon. (Info from Minutes, "SAC Alert Committee Conference," 4 Oct 1956 (B-57107), Exhibit 8. This document gives an excellent account of the preliminary planning for alert.)

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alert, SAC established a goal of one-third of the strike force capable of reacting within 15 minutes.³⁶

After completion of three test programs during 1956 and 1957, enough information was available to the CINC to enable him to establish the initial ZI force in October 1957. Previously, on 1 July, the command had begun testing an overseas alert concept called REFLEX ACTION. By the end of 1957 SAC had 134 aircraft on alert in the ZI and overseas.³⁷

During the January through June 1958 period the command continued to expand its alert force until by 1 July SAC had 194 bombers,³⁸ 47 tankers, and four ECM aircraft on alert in the ZI and overseas.³⁹ SAC also prepared to put a variation of the

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36. History of SAC, ^{Jul-Dec 57} ~~Jan-Jun~~ 1957, Vol I, p 85. For additional information on the Alert Concept see the above cited history, pp 84-103; History of 2AF, Jan-Jun 1958, Vol I, pp 187-217; and History of 15 AF, Jan-Jun 1958, Vol I, pp 246-252, filed in OIH, Hq SAC.
37. History of SAC, Jul-Dec 1957, Vol I, pp 102, 92, 103.
38. A delay in the B-52 program caused a degradation from the originally planned alert force of 202 bombers by 1 July. (Info from DF, Col E. W. Holstrom, Ch, Ops Plans Div, D/Ops, to D/Ops, "USAF Commanders Conference," 25 June 1958, Exhibit 9.)
39. Ibid.

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overseas REFLEX ACTION, called AIRMAIL, into operation at Andersen AFB, Guam, beginning in July 1958. In addition, as a further refinement of the Alert Concept, the command began testing an Airborne Alert in January 1958.

Funding and Facilities. In order to attain the goal of one-third of the SAC force on alert, extensive additions and modifications had to be completed at existing ZI and overseas bases. Most bases needed some additional alert parking stubs and runway access pavement together with alert crew facilities. Each SAC base would receive some of the facilities as deemed necessary according to its peculiar situation.

Prior to the launching of the Soviet sputnik in October 1957, facilities for alert received only modest support at USAF level. In fiscal years 1957 and 1958 facility requirements were supported only at bases where a pavement deficiency already existed.⁴⁰ Funds in 1957 provided a certain portion of the aircraft parking apron in alert configuration on bases destined for B-52 dispersal where additional parking apron was needed. Alert parking areas were provided at seven B-52

40. History of SAC, Jul-Dec 1957, Vol I, p 95.

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bases in FY-57 and at five in FY-58.⁴¹ Post-sputnik anxiety resulted in alert facilities requirements receiving greatly increased consideration. Information from Washington in late 1957 indicated that General White desired that all important programs, i.e., SAC alert,⁴² be pushed to the hilt. SAC received \$24.6 million in the Supplemental FY-58 MCP. This completed alert facilities at all B-52 bases approximately one year earlier than if the program had been left until FY-59.⁴³ In the FY-59 MCP, as of 8 May 1958, SAC had been advised by Headquarters USAF that \$79 million had been allocated to alert out of approximately \$500 million to be submitted to Congress.⁴⁴

Initially, unit commanders were given considerable latitude in establishing procedures and facilities to meet alert requirements. This resulted in a wide diversion in the manner in which

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41. House of Representatives Report 1279, "Authorizing Certain Construction for the Department of the Air Force," 14 Jan 1958, 85th Cong, 2 Sess, p 8, filed in OIH, Hq SAC.
 42. Memo, Maj Gen A. M. Minton, Dir of Instl, DCS/Ops, Hq USAF, to Dep Dirs of Real Property, Construction and Facilities Support, "Important USAF Progs," 12 Dec 1957, Exhibit 10.
 43. House of Representatives Report 1279, "Authorizing Certain Construction for the Department of the Air Force," 14 Jan 1958, 85th Cong, 2 Sess, p 8, filed in OIH, Hq SAC.
 44. Presentation, "Colonels' Indoctrination and Financial Management Seminar," by Col G. D. Fremouw, Dep Dir of DE, Hq SAC, 5 May 1958, Exhibit 11.

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aircraft and crews were scheduled for alert. A SAC Inspector General report submitted to the staff in November 1957 stated that facilities provided for the alert crews varied from "marginal to excellent."⁴⁶ By late November SAC had gained enough alert experience for General Power to issue general guidance to his numbered air force commanders. Of prime importance was that the "highest consideration" be given to alert air and ground crews in the matter of facilities.⁴⁷

The comfort of his alert crews remained a matter of intense personal concern to General Power during the first six months of 1958. Because he felt that his directive of

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45. For example, there was no Headquarters SAC directive in existence which regulated the number of hours an alert crew was on duty and off duty. The CINC purposely avoided a standardization program with regard to duty and off duty hours. The wing commander established his own program and apportioned duty time as it suited his particular situation. This policy provided SAC with a greater flexibility in its alert operations. (Info from Tp, Robert M. Kipp, Historian, with Lt Col J. E. Farrell, Dep Ch, Tng Surveillance Br, Tng Div, D/Ops, Hq SAC, 2 Dec 1958; Interview, E. R. Caywood, Historian, with Col W. R. Smith, Dep Ch, Tng Div, D/Ops, Hq SAC, 2 Dec 1958).
46. Incl 1, "Alert Force Evaluation," p 2, to DF, Brig Gen E. B. Broadhurst, SAC IG, to CofS et al, "Alert Force Evaluation," 4 Nov 1957, Exhibit 12.
47. Ltr, Gen T. S. Power, CINCSAC, to Maj Gen J. P. McConnell, Comdr 2AF, 29 Nov 1957, Exhibit 28, Chap II, History of SAC, Jul-Dec 1957, Vol IV. Identical letters were sent to all other numbered Air Force Commanders.

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29 November 1957 had not been properly carried out by some commanders, the CINC and his key directors met to discuss the problem on 9 June 1958. General Power pointed out that crews with first priority mission deserved first priority treatment.

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He directed that:

a. Each director look into his area of responsibility in regard to alert/reflex crew facilities, equipment and morale.

b. Determine the status of these items and insure appropriate and timely action is taken to correct any deficiencies that exist.

General Power admonished his subordinate commanders that

"Based on my personal observation and on reports received, I am convinced that these instructions [contained in his 29 November 1957 letter] have not been properly carried out." He wanted

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48. Prog Plan 18-58, "Reflex/Alert Facilities, Services and Equipment," 15 July 1958, Exhibit 13.
49. TWX, personal from Gen T. S. Power, CINCSAC, to Maj Gen J. P. McConnell, Comdr 2AF and all other numbered air force and overseas air division commanders, C 6934, "Alert Crew Facilities," 16 Jun 1958, Exhibit 14. For replies from the 15th and 16th AFs and the 3AD concerning measures being taken by these commands to provide optimum alert facilities, see TWX, personal for Gen T. S. Power, CINCSAC, from Maj Gen C. W. Schott, Comdr 3AD, "Alert Force Facilities," C 789-6, 26 Jun 1958, Exhibit 15; TWX, Comdr 15AF to CINCSAC, "Alert Force Facilities Committee," DOOP 2605, 26 June 1958, Exhibit 16; TWX, personal from Maj Gen H. K. Mooney, Comdr 16 AF, to Gen T. S. Power, CINCSAC, "Alert Crew Facilities," C 1895, 20 June 1958, Exhibit 17.

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adequate and comfortable crew facilities, and emphasized that
substandard temporary quarters would not be tolerated.⁵⁰

Adequate furniture, radios, TV sets, games, etc., were to be provided as well as maid and janitor service. Special messing must be available to alert crews. Minimum restrictions consistent with alert schedules were to be placed on personnel, and transportation would be made available during non-duty hours. The CINC also informed his numbered air forces that authorization for increased pay for alert and reflex crews was being sought; * specifications for a new type flying suit were being prepared; and action was being taken to improve alert force communications and control. In order to gain additional detailed "grass roots" information on how to improve his alert force, the CINCSAC called a symposium of selected crews to meet at SAC headquarters on 26 June 1958.⁵¹

In a 16 June 1958 letter General Power apprised General C. E. LeMay of the existing deficiencies in the treatment of alert crews and in substandard alert facilities. In the areas of

* See Alert Pay, Chap IV.

50. TWX, personal from Gen T. S. Power, CINCSAC, to Maj Gen J. P. McConnell, et al, "Alert Crew Facilities" C 6934, 16 Jun 1958, Exhibit 14.

51. Ibid.

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transportation, furniture, and recreational equipment, maid and janitor service, flying clothing, and additional pay, SAC needs required approximately \$1.5 million to be funded in the FY-59 budget.⁵²

Permanent type alert facilities were planned for all ZI bases, plus Goose and Harmon ABs and Ramey AFB.⁵³ In May 1958, 63 SAC bases were programmed to receive the alert crew facility. All of the personnel facilities necessary to sustain the alert program would be located in one building. It would house flight and maintenance crews and be located near the alert aircraft.⁵⁴ Until these structures were completed, however, alert crews would have to use interim facilities. An interim facility tested during the January through June 1958 period was the 50 foot house trailer. It was cheap, practical, and mobile. After permanent facilities became available the trailers could still be used to further disperse the force and to house crews when wind conditions dictated use of the opposite end of the runway from where permanent facilities

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52. TWX, personal from Gen T. S. Power to Gen C. E. LeMay, VCS, Hq USAF, C 53458, 16 Jun 1958, Exhibit 18.
 53. DF, Brig Gen C. B. Westover, to all SAC Dir and Staff Agencies, "Use of House Trailers for Alert Force," 26 Feb 1958, filed in Central Files, DE, Hq SAC.
 54. Presentation, "Colonel's Indoctrination and Financial Management Seminar," by Col G. D. Fremouw, Dep Dir of DE, 5 May 1958, Exhibit 11.

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were located. Tests of commercial trailers completed at Barksdale AFB in May proved "highly successful." Trailers provided an adequate facility and enhanced quick launch

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requirements. On 25 June 1958 Headquarters USAF approved the purchase of 56 fifty-foot house trailers amounting to
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\$336,000 in the FY-59 program.

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REFLEX ACTION. Background. The overseas portion of the alert concept bore the nickname REFLEX ACTION. As the name implied, small units deployed to forward bases were
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ready to react instantly to an overt attack. REFLEX represented SAC's counter to the increased Soviet aircraft and short range missile threat against the overseas base

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55. "Minutes of Master Planning Board Meeting," prep by Brig Gen J. B. Knapp, Dir of DE, 4 Feb 1958, filed in DE, Hq SAC; DF, Brig Gen C. B. Westover, to all Dir and Staff Agencies, "Use of House Trailers for Alert Force," 26 Feb 1958, filed in Central Files, DE, Hq SAC.
56. TWX, Col C. A. Tate, Ch, Mission Br, Ops Plans Div, D/Ops, to CINCPACAF, "Movable Shelter," 15 May 1958, filed in Missions Br, Ops Plans Div, D/Ops, Hq SAC.
57. TWX, Maj Gen M. E. Bradley, Asst DCS, Hq USAF to Maj Gen J. D. Ryan, Dir of Mat, Hq SAC, "Requirement of Commercial . . . Trailers . . ." AFMDG 52588, 25 June 1958, Exhibit 19.
58. For additional information on REFLEX ACTION activities within the numbered air forces see History of 2AF, Jan-Jun 1958, Vol I, pp 71-77, 217-255; and History of 15th AF, Jan-Jun 1958, pp 37-44, filed in OIH, Hq SAC.
59. Thirty minutes after tactical warning for the first aircraft to be ready to take off with the remaining aircraft to follow at one minute intervals.

network. Until such time as SAC had sufficient long range bombers, tankers, and Intercontinental Ballistic Missiles (ICBMs) to negate the dependence on overseas bases, REFLEX 60 would dictate the framework of forward base utilization.

Small alert forces overseas substituted for the ponderous and highly vulnerable wing rotation program. Under the rotation program, units deployed to the United Kingdom, North Africa, and Guam, usually for a 90-day period. Each wing rotation

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entailed the movement of 45 aircraft, about 1,600 people, and approximately 190 tons of cargo; and was an extremely expensive operation. Positioned at forward bases the rotation forces could strike targets in the Soviet Union and post-strike at friendly bases without refueling.

- * However, overseas bases would continue to be exceedingly important in the politico-military area, possibly as "jumping-off" places for highly mobile forces to combat "brushfire" wars of a limited nature.
- 60. For example, alert dictated the concept for use of the Canadian tanker bases. Headquarters SAC reduced its requirement for these bases from nine to four with REFLEX tankers on each base. (Info from DF, Col W. M. Shy, Dep Ch, Progs Div, D/Plans, to Hist Div, "Review of SAC History," 19 Dec 1958, filed in OIH, Hq SAC.) See also Refueling Facilities in Canada, pp 286-295.
- 61. For example, the cost of deploying a medium bomb wing from Lincoln, AFB, Nebr, to the UK for a 90-day period has been estimated at \$2,774,000. It has also been estimated that facility requirements to support 45 B-47s on rotation totaled 144 line items at a cost of \$42,428,000. REFLEX required 54 line items at a cost of \$14,736,000 to maintain 10 aircraft. These figures assumed that both base complexes are constructed from "scratch." The cost of the land, utilities, roads, etc., are not included. (Info from "Hearings Before the Subcommittee of Dept of Def appropriations, of the Committee on Appropriations, House of Representatives," Dept of the AF, 85th Cong, 2d Sess, 5 Mar 1958, p 41, filed in OIH, Hq SAC; "Minutes of Master Planning Board Meeting," prep by Brig Gen J. B. Knapp, Dir of DE, 4 Feb 1958, filed in Central Files, DE, Hq SAC.

As Soviet air strength increased, however, SAC's overseas bases became increasingly vulnerable. SAC planners were forced to provide for the most pessimistic eventuality. They foresaw that in the event of a complete surprise only those aircraft on an alert status would have a retaliatory capability. Consequently, the command could either discontinue rotations and launch its aircraft solely from the ZI, or it could replace overseas rotations with an alert force in the forward area. The decision to maintain only an alert force overseas was made because of the need to keep some aircraft there due to political considerations; the necessity of attacking Soviet targets as soon as possible after initial warning; and because the limited number of tankers available to the command did not permit launching the entire force from ZI home bases.

The overseas REFLEX concept for bombers consisted of two phases: (1) moving a certain number of B-47 aircraft to and from forward bases in peacetime configuration; and (2) after arrival at forward bases, loading the aircraft with EWP weapons, full fuel load, ammunition, etc., and maintaining them on a 24

62. Memo, Current Ops Br, Ops Plans Div, D/Ops, to Hist Div, OI, "Operation REFLEX ACTION," 12 June 1958, Exhibit 20.

hour basis for a specified length of time.⁶³ With fewer aircraft and crews required overseas, facilities formerly needed to provide full field maintenance were no longer needed. Staging facilities for minor maintenance only would serve the REFLEX mission. Furthermore, no permanent facilities would be programmed overseas to support REFLEX.⁶⁴

In one year since its modest beginning in July 1957 with the Sidi Slimane test, the REFLEX operation expanded to eight overseas bases and three ZI bases by 30 June 1958. Eighty-one

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alert aircraft overseas on 30 June 1958 carried out a total of 162 deployments and redeployments each week.⁶⁵ Although tied to the taut, demanding schedule required of this type operation, crews generally favored it because of its realistic contribution to SAC's deterrent posture.

63. Ibid.

64. Incl 1, Summary of Conference on REFLEX and AIRMAIL, 16 May 1958, to DF, Col H. F. Ledbetter, Actg Dep Ch, Progs Div, D/Plans, to See Distribution, 22 May 1958, Exhibit 21.

65. Memo, Current Ops Br, Ops Plans Div, D/Ops, to Hist Div, OI, "Operation REFLEX ACTION," 12 June 1958, Exhibit 20.

Sidi Slimane Test. SAC began a test of REFLEX ACTION on 1 July 1957 by deploying five aircraft and ten crews from each of four medium bomb wings (305th, 306th, 308th, and 379th) of the Second Air Force to Sidi Slimane AB, Morocco.

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From the beginning the test was unusually successful. The problems encountered by temporary duty crews at the forward base were more irritating than critical in nature and not unusual considering the newness of the operation.

Three bomb wings reported as inadequate the housing and messing facilities at Sidi Slimane.

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Paper work schedules for crews and maintenance personnel meant little. "Off-duty" crews were constantly being called to the alert line to

66. During October, November, and December 1957 the 2nd Bomb Wing alternated with the 308th on the weekly overseas flights, thereby relieving instructor personnel of the two wings of REFLEX assignment and permitting additional concentration on the upgrade program. (Info from History of 308th BW, Sep 1957, pp 23-24, filed in OIH, Hq SAC.)

67. The histories of the four bomb wings engaged in the North African REFLEX from July through December 1957 contain detailed information on crew participation in this program. See also History of 3906th AB Gp, Jul-Dec 1957; History of 2AF, Jul-Dec 1957, pp 209-213; and History of SAC, Jul-Dec 1957, Vol I, pp 90-91, filed in OIH, Hq SAC.

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68. Msg, ZIPPO 08-129B, COMADIV 6 to CINCSAC, COMAF 2, Exhibit 13, History 305 BW, Aug 1957; Msg, ZIPPO 07-125C/B-27/36-57/2AF/306BWM/REFLEX ACTION, COMADIV 6 to COMAF 2, Info CINCSAC, COMADIV 5, Exhibit 22; History of 306th BW, Jul 1957; History of 379th BW, July 1957, p 14, filed in OIH, Hq SAC.

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assist in "cocking" and "uncocking" aircraft.⁶⁹ Maintenance personnel were definitely overworked and the function suffered. The 306th and 379th Bomb Wings reported maintenance "limited" and "marginal" in July.⁷⁰

For example, the Maintenance Control Group at Sidi Slimane was manned by three sergeants with two airmen for record keeping. They carried on this function

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24 hours a day, seven days a week, resulting in an 80 to 90 hour week for each man. Operations Analysis personnel from Headquarters Second Air Force commented after observing the REFLEX function that "It would seem that the Alert service tests such as 'Try-Out' had taught little about how to predict personnel loads and maintenance requirements for

'Reflex.'⁷¹ Initially, ground support vehicles such as alert jeeps were in serious disrepair.⁷² Also, difficulty

69. See footnote 86, below.

70. Memo for the Record, "Report of TDY to Sidi Slimane," n.d., prep by O/A, Hq 2AF, Exhibit 134, History of 2AF, Jul-Dec 1957, filed in OIH, Hq SAC.

71. Msg, ZIPPO 07-125C/B-27/36-57/2AF/306BWM/REFLEX ACTION, COMADIV 6 to COMAF 2, Info CINCSAC, COMADIV 5, Exhibit 22, History of 306th BW, Jul 1957; History of 379th BW, Jul 1957, p 14, filed in OIH, Hq SAC.

72. History of 3906th ABGp, Jul-Dec 1957, pp 5-6.

was experienced in successfully accomplishing refueling hook-ups
between B-47s and tankers in the Kindley AFB, Bermuda, area. ⁷³

None of the above discrepancies created any major bottle-necks in the development of a functional systemized overseas alert force, however. With operational experience the problems associated with initial flights were gradually eliminated.

The SAC Inspector General conducted an extensive examination of the REFLEX operation at Sidi Slimane in October 1957. He reported: ⁷⁴

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Strong base command and staff support have been given to this concept. Implementing and continuing action is commendable and the expressed opinions of commanders and crews alike reflect an optimistic and enthusiastic attitude.

In November 1957 the 305th Bomb Wing Commander commented "It appears that most problems pertinent to the Reflex Operation

- 73. Msg, ZIPPO 08-129B, COMADIV 6, to CINCSAC, COMAF 2, Exhibit 13, History of 305th BW, Aug 1957; History of 379th BW, July 1957, pp 13-14, filed in OIH, Hq SAC.
- 74. Incl 1, REFLEX ACTION, n.d., pp 3-4, to Incl 1, "Alert Force Evaluation," n.d., to DF, Brig Gen E. B. Broadhurst, IG, Hq SAC, to C/S, D/Ops, D/Mat, D/Pers, "Alert Force Evaluation," 4 Nov 1957, Exhibit 12.

have been eliminated." ⁷⁵ Crews of the 306th Bomb Wing felt
" . . . without exception, that REFLEX ACTION is the most
effective, practical, best planned, and coordinated EWP Plan." ⁷⁶
Crews at the forward base maintained that the operation
finally gave them the kind of readiness the American people
had been led to expect of SAC. ⁷⁷

In October 1957 Brigadier General K. K. Compton, Commander,
Fifth Air Division commented on the impact of REFLEX on SAC
operations. Shrinkage of warning time had redefined "Forces
in Being" to mean "Alert Forces." Other elements could not
be considered forces in being until they had trained to an
alert posture. According to General Compton, placing materiel,
facilities, and manpower in the forward area to support anything

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- 75. Msg, ZIPPO 12-004B/B-27/36-57/2AF/305BW/REFLEX ACTION, COMADIV 6 to CINCSAC, COMAF2, COMADIV 5, Exhibit 15, History 305th BW, Nov 1957, filed in OIH, Hq SAC.
 - 76. Msg, ZIPPO 08-027/B-27/36-57/2AF/306BWM/REFLEX ACTION COMADIV 6 to COMAF2, Info CINCSAC and COMADIV 5, 5 Aug 1957, Exhibit 30, History of 306th BW, Aug 1957, filed in OIH, Hq SAC.
 - 77. Memo for the Record, Edgar O. Berdahl, Ch, O/A, Hq 2AF, "Comments on REFLEX ACTION Based on Visit to Sidi Slimane, 23-27 Aug 1957, Exhibit 135, History of 2 AF, Jul-Dec 1957, filed in OIH, Hq SAC.

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but alert forces and post strike recovery was not consistent with the threat or sound tactical planning. He recommended that the SAC War Plan be changed to limit forward bases to REFLEX and post strike staging only; base stocks, facilities, and manpower be adjusted to fit these missions; alert forces be rotated as often as possible; maintain the forward area maintenance and operations support package on the six month rotation; and begin rotating weapons with alert forces as soon as possible.

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After a careful examination of the various alert force operations in the ZI, the SAC IG decided that the Sidi Slimane alert force was the most effective of all alert operations. It recommended that "SAC's primary alert force be patterned after 'REFLEX.'" SAC's Directorate of Operations did not

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- 78. Ltr, Brig Gen K. K. Compton, Commander, 5AD, to Maj Gen G. W. Mundy, Commander, 2AF, 1 Oct 1957, B-63884, Exhibit 22. For comments from various Headquarters SAC directorates on General Compton's recommendations see DF, Col A. J. Walker, Ch, Tng Div, D/Ops, Hq SAC to Ch, Ops Plans Div, D/Ops, and Dir of Ops, Hq SAC, "Carrying Weapons on Reflex," 2 Dec 1957, Exhibit 23; Cmt #2, DF, Col E. W. Holstrom, Ch, Ops Plans Div, D/Ops, to Dir of Ops, "Carrying Weapons on Reflex," 17 Dec 1957, Exhibit 24.
- 79. Incl 1, "Alert Force Evaluation," n.d., p 19, to DF, Brig Gen E. B. Broadhurst, IG, Hq SAC, to C/S, D/Ops, D/Mat, D/Pl, D/Pers, "Alert Force Evaluation," 4 Nov 1957, Exhibit 4.

concur. The extent to which the REFLEX force could be expanded was dependent on three major peacetime factors: 80

(1) The capability of available air refueling units to provide peacetime deployment/redeployment air refueling sorties without degrading the overall training program.

(2) The capability of the ZI wings to provide augmentation technical support personnel without degrading the home station peacetime training capability.

(3) The number of aircraft maintained on alert at any one station should not exceed the number of aircraft that can be launched within the specified alert time. This number will vary dependent on each station's physical facilities.

The Operations Directorate did agree, however, that the REFLEX force should be expanded, commensurate with the command's capability to provide air refueling and TDY personnel. 81

Expansion. Beginning on 1 January 1958 SAC extended the REFLEX operation to three other overseas bases and three northern United States bases. The 2nd, 308th, and

80. DF, Col Richard E. Barton, Dep Ch, Ops Div, D/Ops, to Ops Plans Div, D/Ops, "Alert Force Evaluation," 19 Dec 1957, Exhibit 25.

81. Ibid.

384th Bomb Wings began rotating to Fairford AB, UK; the 98th, 307th, and 310th Bomb Wings flew to Greenham Common AB, UK; and the 22nd, 43rd, and 320th Bomb Wings reflexed to Eielson AFB, Alaska. In addition, the 19th Bomb Wing replaced the 308th at Sidi Slimane.

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In the ZI units of the Fifteenth and Second Air Forces reflexed to northern bases of the Eighth Air Force. The 509th Bomb Wing, Walker AFB, New Mexico, sent five aircraft to Pease AFB, New Hampshire; the 97th Bomb Wing, Biggs AFB, Texas, moved aircraft to Plattsburgh AFB, New York; and the 44th Bomb Wing, Lake Charles AFB, Louisiana, and the 321st Bomb Wing, Pinecastle AFB, Florida, each maintained three aircraft at Loring AFB, Maine.

Additional changes were made in February and April 1958 which effected a dispersal of the overseas alert force.

On 18 February SAC expanded the North African exercise to include the use of Benguerir AB by the 379th Bomb Wing, and Nouasseur by the 305th Bomb Wing. The 19th and 306th Bomb

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82. Memo, Current Ops Br, Ops Plans Div, D/Ops, to Hist Div, OI, "Operation REFLEX ACTION," 12 June 1958, Exhibit 20.

Wings continued at Sidi Slimane. On 1 April, however, the 306th began operations at Zaragoza AB, Spain. Also on that date the 2nd and 308th Wings moved their reflex force to Brize Norton AB, UK, leaving only the 384th at Fairford AB.

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Procedures. Initially, the test phase of REFLEX ACTION employed a crew to aircraft ratio of two to one on a 14-day cycle, each crew being on alert 50 percent of the time. This ratio could not be maintained, however, because of the limited number of combat ready crews available throughout SAC. In February Headquarters SAC reduced this ratio to seven crews to five aircraft on a nine-day cycle in order to keep a minimum number of crews static. This was a very austere ratio and it proved fatiguing to the crews although they received two days free time during their nine-day overseas period. Current with the 4 May 1958 rotation, the ratio of crews to aircraft was changed again to nine crews to six aircraft (1.5:1) on a 22 day cycle.

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83. Ibid.

84. Fourteen days on alert; eight days free time. Five aircraft were maintained on the alert line; the sixth acted as a spare, but was completely configured and ready. (Info from Memo, Current Ops Br, Ops Plans Div, D/Ops, to Hist Div, OI, REFLEX ACTION, 12 June 1958, Exhibit 20; History of 306th Bomb Wing, June 1958, pp 7-8, filed in OIH, Hq SAC).

The REFLEX operation was supported by permanent party personnel at the overseas base. At major bases like Sidi Slimane and Greenham Common, for example, support was provided by an air base group; at smaller bases, like Fairford, by an air base squadron.

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The commander of the base unit served as the REFLEX commander with his deputy normally being the commander of the TDY unit. The base unit was augmented by personnel from participating wings. They were integrated directly into the base functions and workload. Normally support personnel from the tactical unit served an overseas stint of 90 days.

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An aircraft deployed on REFLEX became part of the forward base's alert force almost immediately upon arrival. A maintenance crew assigned to the aircraft during its entire stay began aircraft "cocking" procedures almost as soon as the incoming B-47 rolled to a stop. The aircraft was downloaded; crew debriefed; after-flight inspection performed; camera magazines, chaff dispenser side panels, and ammunition

85. Memo, Maj Alex Ziel, Staff Observer, to Comdr 14th AD, "Rpt of Visit to Observe B-47 REFLEX ACTION," 10 Feb 1958, Exhibit 7, Hist of 14AD and 5th ABGp, Jan 1958, filed in OIH, Hq SAC.

cans removed and cameras loaded; fuel system inspected for leaks; aircraft refueled; and unscheduled maintenance performed prior to weapon loading. The aircraft was then placed in the alert line and ATO racks loaded, ammunition and chaff loaded, and drag and approach chutes installed.

The following day aviation depot squadron personnel loaded a MK-39 weapon aboard, and the aircraft was serviced with water alcohol and liquid oxygen.

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After the crew pre-flighted the aircraft and loaded their equipment, the B-47 was placed in a "cocked" position.

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86. "Cocked" aircraft were maintained in the following configuration:

1. MD-3 (Ground Power Unit) in place with power cables connected to aircraft.
2. Fire extinguishers in place outboard of #3 and #5 engine of each aircraft.
3. Wheel chock in place forward of forward gear and aft of aft gear.
4. One grounding wire connected.
5. All panels, hatches, and doors kept secure except for bomb-bay doors.
6. Canopy and entrance doors left open during daylight hours unless weather prohibited.
7. Bomb-bay doors open with left door safety lock installed.
8. Ground interphone cord connected and headset placed in aft wheel well.
9. Weapon servicing ladder in place.
10. Pilot covers installed.
11. Main and outrigger gear locks installed.
12. Tail gun barrel ends taped with waterproof masking tape.
13. Liquid oxygen system in build-up position.
14. Flash curtain installed.
15. ATO rack lock pins removed and ATO pullout plugs disconnected. ATO wrenches installed.
16. Aircrews completed "cocked configuration" checklist.
17. "Cocked" sign displayed on entrance ladder.

(Info from History of 3909th ABGp, May 1958, pp 11-13.)

The new REFLEX crew was processed in, debriefed, and given the remainder of the day off for rest. The following day the crew entered the 22 day alert cycle (14 days on alert, 8 days off). Each day the crews were briefed on weather and intelligence and individual crews preflighted their aircraft in accordance with SAC alert check lists. If any discrepancies were discovered the aircraft was "uncocked" and maintenance immediately performed to correct the deficiency. While their aircraft was in a "cocked" position the alert crew was permitted to move about the base freely, but always together, whether it be to the Base Exchange, the movie, or church. A personal jeep was provided each alert crew. When the alarm was sounded the crews hurried to their aircraft prepared to execute any type of practice alert (Alpha, Bravo, Coco, ^{*}Romeo) called.

At a specified hour on the day before it was to redeploy the previous alert crew relinquished alert duties to a new

* For definitions of these various types of alert see History of SAC, Jul-Dec 1957, Vol I, pp 88-89.

REFLEX crew and began preparing to return to its home station. The outgoing alert aircraft was removed from the alert line by a reverse of the "cocking" procedure. The weapon, ATO ammunition, chaff, and camera magazines were off-loaded; unscheduled maintenance was performed; and the aircraft readied for deployment. The next day the previous alert crew departed for home.

Most of the problems encountered by REFLEX crews during increased operations beginning in January 1958 could be traced to that ancient bane of the airman, the weather. Poor flying conditions along routes to the forward bases caused schedule deviations on deployments and redeployments and difficulty in completing air refueling hook-ups. At the UK bases of

Fairford and Greenham Common in January and March, respectively, inclement

87. History of 3909 ABGp, May 1958, pp 11-13, filed in OIH, Hq SAC. This history contains an excellent account of Reflex procedures at a typical forward base. See also Memo, Current Ops Br, Ops Plans Div, D/Ops, to Hist Div, OI, "REFLEX ACTION," 12 June 1958, Exhibit 20.
88. History of 305th Bomb Wing, Mar 1958, p 15; History of 306th Bomb Wing, Jan 1958; pp 8-9; History of 98th Bomb Wing, March 1958, pp 16-17; Hqs 7AD Management Summary, March 1958; RCS: SAC-U54, 25 March 1958; History of 15th AF, Jul-Dec 1957, Vol I, pp 209-210; History of 22nd Bomb Wing, March 1958, p 18; History of 320th Bomb Wing, Feb 1958, p 20; History of 321st Bomb Wing, Jan 1958, pp 16-17; History of 509th Bomb Wing, Feb 1958, p 29, filed in OIH, Hq SAC.

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weather caused about one-third of all arrivals and departures
to be late. ⁸⁹ Aircraft scheduled into Loring AFB, Maine, were

"erratic" due to weather conditions and hazardous runway condi-
tions. ⁹⁰ At Pease AFB, New Hampshire, in January, the REFLEX

force was incapable of launching for about 30 hours because
of snow clogged runways. ⁹¹ Units stationed normally at

southern United States bases also experienced other minor
problems, i.e., excessive maintenance, lack of support equip-
ment, and low morale because of the drastic change in climate
at bases in the frigid northern United States and Alaska. ⁹²

These difficulties, again, were not unusual considering the
newness of the operation. With more favorable spring weather,
experience on the part of support personnel, and continually
improving facilities, most of these problems disappeared.

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- 89. Hqs 7 AD Management Summary, March 1958, RCS: SAC-U54, 25 March 1958; History of 98th Bomb Wing, March 1958, p 17; History of 310th Bomb Wing, March 1958, p 22, filed in OIH, Hq SAC.
 - 90. Wing Comdrs Remarks, Part IV, RCS-5-SAC-T12, Jan 1958, Exhibit 8, History of 44th Bomb Wing, Jan 1958, filed in OIH, Hq SAC.
 - 91. History of 509th Bomb Wing, Feb 1958, p 29, filed in OIH, Hq SAC.
 - 92. History of 320th Bomb Wing, Jan 1958, p 18; History of 321st Bomb Wing, April 1958, pp 17-18, filed in OIH, Hq SAC.

In July 1958 Major General J. V. Edmundson, Director of Operations, Headquarters SAC informed General Power of the overseas alert situation. Facility-wise, REFLEX compared quite favorably with conditions in the ZI. Crew quarters used by the alert force were the best available, and only slightly inferior to the new alert buildings being constructed specifically for that purpose. Alert aircraft were parked on existing ramps or parking stubs. Parking provisions ranged from a configuration similar to ZI alert parking to standard ramps. Taxi times varied with the parking location and ranged from a minimum of one minute to as high as seven minutes.

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Pacific REFLEX. Introduction. Except for the 100th Bomb Wing's rotation to the UK in January 1958 for 90 days, Andersen AFB, Guam, was the only overseas base still receiving full medium wing rotations during the first six months of 1958. This would change beginning 1 July, however, with the beginning of a combination of rotation and REFLEX called AIRMAIL.

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- 93. Memo for Gen Power, from Maj Gen J. V. Edmundson, Dir of Ops, "CINC Items on Northwest Trip," 25 Jul 1958, (B-68107).
 - 94. Incl 1, "Summary of Conference on REFLEX and AIRMAIL," pp 9-10, to DF, Col H. F. Ledbetter, Actg Dep Ch, Progs Div, D/Plans, to See Distribution, "REFLEX And AIRMAIL Conference," 22 May 1958, Exhibit 21; See also History of 15th AF, Jan-Jun 1958, VOL I, pp 33-37, filed in OIR, Hq SAC, for additional information on AIRMAIL.

Planning for this operation and expansion of the Alaskan alert force almost immediately uncovered the problem of lack of manpower. Despite the attention given by Headquarters SAC and the Fifteenth Air Force to this problem during the January through June 1958 period, no manpower source was found to support AIRMAIL by permanent personnel. Although it worked a recognized hardship on the bomb wings participating in the operation, TDY personnel would have to support the Guam and Alaskan operation indefinitely.

AIRMAIL. The massing of 45 medium bombers on Guam, the small (30 miles long and four to eight miles wide) island over 5,000 miles from the continental United States, was not desirable within the framework of SAC's Alert Concept. Guam, its defenses non-existent, represented a peculiar situation. The standard REFLEX operation wasn't feasible because of the distances involved. Consistent with SAC policy to put its strike reliance only on alert aircraft, a rotation at Guam meant that an entire wing's resources supported a small alert force. It was apparent that Andersen AFB required a special alert force operation to give its force maximum capability with minimum jeopardy.⁹⁵

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95. Incl 1, "Summary of Conference on REFLEX and AIRMAIL," pp 9-10, to DF, Col H. F. Ledbetter, Actg Ch, Progs Div, D/Plans, to See Distribution, "REFLEX and AIRMAIL Conference," 22 May 1958, Exhibit 21.

General Power submitted SAC's operational concept for FY-59 to General White in late 1957. It was based on maintaining the fleet in an alert status, insofar as possible, to enable reaction to tactical warning within 30 minutes. Guam rotational requirements would be met by placing 15 aircraft on the island at all times, with 10 on continuous alert. The remaining 30 aircraft would remain on home station ready to move forward in a minimum amount of time. This would reduce vulnerability and improve reaction time in the forward area. A Joint Chiefs of Staff (JCS) decision of 7 February 1958 approved deletion of the SAC rotation to Guam in favor of 15 aircraft on continuous alert. On 17 February 1958 SAC informed the Fifteenth Air Force Commander of the JCS approval. It was his responsibility to work out the details of the Guam alert concept. Subsequent briefings made by Fifteenth Air Force representatives at Headquarters SAC outlined the procedures. As part of an expansion of the REFLEX operation in the Pacific, Fifteenth

96. DF, Brig Gen C. B. Westover, Dir of Plans, Hq SAC, to Comd Sect, et al, "JCS 2147/176," 24 Feb 1958, filed in War Plans Div, D/Plans, Hq SAC. This DF represents a brief for the CINCSAC on the subject JCS paper.

97. TWX, CINCSAC to COMAF 15, Info COMAF 2, 8, "Guam Rotation," DOPLM 2071, 17 Feb 1958, Exhibit 26.

98. The expansion featured a dispersal of the Eielson REFLEX force to Elmendorf (to begin in October), establishment of a Guam REFLEX, and a split of the Andersen force to Kadena AB, Okinawa, also beginning in October 1958. (Memo for Gen Westover, "Eielson-Elmendorf and Guam-Kadena Reflex Proposal," prep by Col E. C. Hardin, Ch, Plans Div, D/Plans, Hq SAC, 4 April 1958, Exhibit 27.)

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Air Force proposed that on 1 July 1958 SAC begin an operation to Guam in which participating wings would send 15 aircraft for 90 days. Ten of the 15 would be kept on alert. Five crews and maintenance crew chiefs would rotate every 10 days via Military Air Transport Service (MATS). Of the total force, one-third would be used as support. This allowed one-third of the AIRMAIL force to train periodically on "shake-down" and limited 50-8 flights while the remaining third was on alert status. Benefits gained from the AIRMAIL program were: a reduced number of aircraft in the vulnerable forward area, decreased logistical cost, increased morale because crews rotated only about 30 days a year, and stabilized training.

A key problem recognized early in planning for the support of the concept was manpower. Because far fewer personnel were needed for AIRMAIL than for rotations, Brigadier General C. B. Westover, SAC's Director of Plans,

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99. Briefing, "Operation AIRMAIL," n.d., Exhibit 28; Memo for Gen Westover, ". . . Guam-Kadena Reflex Proposal," prep by Col E. C. Hardin, Ch, Plans Div, D/Plans, Hq SAC, 4 April 1958, Exhibit 27.

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informed Major General C. W. Schott, Commander, Third Air Division, that it was logical that a major portion, if not all, of the manning should be provided by General Schott's command. It was the CINCSAC's policy to restrict overseas manning to the minimum to accomplish the mission. General Schott had initially believed a Guam REFLEX would not be in the best interests of SAC, and his reply stated that he was "deeply concerned" that Headquarters SAC thought that the PCS strength of Third Air Division could be reduced concurrent with implementation of AIRMAIL. With the reduction from 45 to 15 aircraft, Guam would lose about 1,500 support personnel furnished by the rotation wings. Under AIRMAIL Third Air Division would still have to support 17 tenant units having 45 aircraft and approximately 2,500 personnel. Reduction in the number of aircraft had no effect on requirements for fire-fighting, communications,

100. TWX, Brig Gen C. B. Westover, Dir of Plans, Hq SAC, to Maj Gen C. W. Schott, Comdr, 3AD, DPL 3873, 31 Mar 1958, filed in M&O Div, D/Plans, Hq SAC.

101. TWX, personal from Maj Gen C. B. Schott, Comdr 3AD, to Maj Gen R. H. Terrill, Dir of Ops, Hq SAC, C 2585-11, 29 Nov 1958, Exhibit 29.

personnel services, etc. General Schott estimated that instead of being able to handle AIRMAIL within his own resources he would need 180 to 250 additional personnel.

On 6 May 1958 comments were forthcoming from Major General Archie J. Old, Commander of the Fifteenth Air Force concerning the Pacific REFLEX manpower problem. General Old thought manpower resources and operational plans were out of step. The Fifteenth Air Force was committed to TDY support of these operations for an "indeterminate" period of time. This would impose hardships on the units involved. Training and the upgrade program would suffer. In Alaska, in particular, the two bomb wings concerned would require additional technical personnel on TDY because the bases were non-SAC. Support of Alaska would seriously affect any single wing and deplete an air division supporting the two REFLEX bases. General Old envisioned some personnel spending six months of the year on TDY.

102. TWX, personal from Maj Gen C. W. Schott, Comdr 3AD, to Maj Gen C. B. Westover, Dir of Plans, Hq SAC, "PCS Strength Under AIRMAIL," C 473-4, 3 Apr 1958, Exhibit 30; See also Memo for Gen Westover, "Eielson-Elmendorf-Guam-Kadena Reflex Proposal Manpower Requirements," prep by Col J. D. White, Ch, M&O Div, D/Plans, Hq SAC, 14 Apr 1958, Exhibit 31.
103. Ltr, Maj Gen A. J. Old, Comdr 15th AF, to Gen T. S. Power, CINCSAC, 6 May 1958, Exhibit 32.

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General Power's reply to General Old pointed out the impossibility of authorizing additional troop spaces to support AIRMAIL and the Eielson-Elmendorf REFLEX. To support alert

SAC needed over 21,000 additional spaces, but Headquarters USAF had granted only about 11,000 spaces. Even more were needed with expansion of the REFLEX operation during 1958-59. The 3rd Air Division, after an exact survey, required 133 additional spaces plus retention of 173 spaces previously identified to be deleted. General Power was aware that this might result in a degradation of the operational capability of the wings involved in a continuous overseas alert mission. Headquarters SAC believed, however, that providing crews and maintenance personnel to support overseas alert was not too great a difficulty for the parent wing, the major problem was in key supervisory areas. If a source could be found for the

- 104. Ltr, Gen T. S. Power, CINCSAC, to Maj Gen A. J. Old, Comdr 15AF, 26 May 1958, Exhibit 33; TWX, CINCSAC to Maj Gen J. P. McConnell, Comdr 2AF, "Reflex Action Support Personnel," C 6470, 29 May 1958, Exhibit 34.
- 105. By 1 July 1958 SAC would have 193 officers and 3779 enlisted men committed to REFLEX on TDY from their home stations. (Info from Ltr, Maj Gen C. B. Westover, Dir of Plans, Hq SAC, to CofS, Hq USAF, "Support of Reflex Operations," 2 June 1958, Exhibit 35.

minimum number of supervisory personnel in the Guam and Alaskan operation, the spaces would be authorized. For the immediate future, however, TDY manning would continue.

Despite the limited manpower available for expansion of the alert force in the Pacific, General Power decided to begin the Andersen operation on 1 July, but plans for dispersal of that force to Kadena AB, Okinawa, were postponed. The 96th Bomb Wing was designated the unit to initiate the AIRMAIL rotation. In accordance with SAC Operations Order 76-58 ("Green Fire"), the 96th Bomb Wing was to have its first increment of 15 aircraft in place no later than 1 July 1958.

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SAC continued with its plans to divide the Alaskan alert force between Eielson AFB and Elmendorf AFB in October.

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106. One possible source was being investigated in June 1958. The Air Staff had authorized inactivation of five UK bases and one Moroccan base. SAC sought USAF permission to turn these spaces back to USAF for reallocation to REFLEX. (Info from Ltr, Maj Gen C. B. Westover, Dir of Plans, Hq SAC, to CofS, Hq USAF, "Support of Reflex Ops," 2 June 1958, Exhibit 35.)

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107. Ltr, Gen T. S. Power, CINCSAC, to Maj Gen A. J. Old, Comdr 15AF, 26 May 1958, Exhibit 33; Memo for Gen Terrill, prep by Col Wilson Moore, Dep Ch, Ops Plans Div, D/Ops, Hq SAC, 21 May 1958, Exhibit 36.

108. History of 96th BW, June 1958, pp 11-12; "SAC Air Operations Schedule, (Peacetime)," Part III, pp 12-13, filed in OIH, Hq SAC.

109. Ltr, Gen T. S. Power, CINCSAC, to Maj Gen A. J. Old, Comdr 15AF, 26 May 1958, Exhibit 33.

The Airborne Alert Concept. Another concept designed to improve SAC's reaction to enemy attack was Airborne Alert. During the January through June 1958 period the command gave this plan considerable emphasis. The program did not evolve overnight, however. For the past several years SAC had some form of Airborne Alert in mind, but until recently the state of the art precluded its introduction into the command's arsenal of tactics. 110

Brigadier General K. K. Compton made the first formal recommendation for implementation of a form of Airborne Alert when he held the position of Commander, 823rd Air Division. It was part of his "Simplex" proposal made in September 1956. 111 In October 1957 a study group within the Combat Operations Branch, Directorate of Operations, Headquarters Second Air Force, headed by Major R. W. Daniels, began a study of the concept. In early November the results of their research, called CURTAIN

110. Info from Maj W. B. Kamp, Special Projects Officer, Mission Br, D/Ops, Hq SAC, 15 Aug 1958.

111. Info from Lt Col R. W. Daniels (subsequently promoted from major and assigned to Hq SAC), Mission Br, Ops Plans Div, D/Ops, Hq SAC, 30 Aug 1958; Info from Maj F. G. Lester, Force Structure and Future Weapons Br, Plans Div, D/Plans, Hq SAC, 7 Oct 1958. The "Simplex" presentation by Gen Compton contained the basic proposal for REFLEX ACTION. "Simplex" also stated that aircraft on their way to the forward base could be configured so as to have an immediate EWP capability (Airborne Alert).

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RAISER, were presented by Major Daniels to the Director of Operations and the Commander, Second Air Force. Later in the month, Major Daniels brought the proposal to Headquarters SAC where he presented it to the FY-59 EWP Planning Board. Initially, Airborne Alert tests were considered for four bomb wings--the 72nd (B-36), 2nd (B-47), 340th (B-47), and 92nd (B-52). Subsequently, however, it was decided to test only the 72nd Bomb Wing portion of the proposal.

On 2 December 1957 the Second Air Force sent the 72nd Bomb Wing, Ramey AFB, Puerto Rico, advanced information on the CURTAIN RAISER concept. The wing was directed to work up the details for implementation of the operation. In the meantime, on 8-9 January 1958, Major General J. P. McConnell, Commander,

112. Currently, SAC is authorized to maneuver on its own authority only atomic weapons. The B-36 is the only command aircraft with the bomb bay configuration required for this weapon. SAC's jet bombardment fleet is normally configured to carry only hydrogen (TN) weapons, and can maneuver these weapons only with Presidential authority. A modification could be made to allow delivery of atomic weapons from B-47's and B-52's, but this would require time consuming maintenance, numerous changes in the SAC war plan, and it would preclude realistic combat crew training deemed very necessary by the command. As of the end of this reporting period (June 1958) SAC had yet to receive the authority to maneuver TN weapons (Info from Maj W. B. Kamp, Special Projects Officer, Mission Br, D/Ops, Hq SAC, 27 Aug 1958).

113. TWX, Comdr 2AF to Comdr 72nd BW, DODPS 14885, "Airborne Alert," 2 Dec 1957, Exhibit 37. For additional information concerning CURTAIN RAISER see History of 2AF, Jan-Jun 1958, Vol I, pp 203-206.

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Second Air Force, and Major Daniels presented a briefing to the CINCSAC in which they proposed the 72nd Bomb Wing test¹¹⁴ only. General Power quickly gave his approval to the project, and on 10 January an order to begin the operation effective 13 January was forwarded to the 72nd Bomb Wing. Operations Order 17-58 called initially for a test duration of 60 days. The results of the test were so excellent that the operation was extended to 1 June 1958.¹¹⁵

The first support aircraft departed Ramey AFB for Nouasseur Air Base, Morocco, on 12 January 1958. The first tactical aircraft of the 72nd Bomb Wing took off on schedule at 1700Z one day later. The mission requirement was to maintain a strike aircraft on airborne alert 24 hours a day, seven days a week, for the duration of the operation. One aircraft provided alert coverage, deploying daily from Ramey AFB to Nouasseur AB, and one aircraft returned daily from Nouasseur to Ramey.

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During the four and one-half month operation all combat crews of the 72nd Bomb Wing flew five alert cycles, and more

- 114. Briefing by Second Air Force to SAC, presented by Maj Gen J. P. McConnell, Comdr 2AF, CURTAIN RAISER, 8-9 Jan 1958, Exhibit 38.
- 115. Final Report, "Operation CURTAIN RAISER," 72nd Bomb Wing, 27 June 1958, filed in OIH, Hq SAC.

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 than half flew six cycles. Officers and key supervisors
 rotated every 30 days so personnel could get experience in
 this type of operation. Support personnel served 60 days. 117

The B-36 proved an excellent vehicle for carrying out the
 test. Only 14 hours (.004 percent) during the 139 day period
 of CURTAIN RAISER were not covered by an airborne B-36. 118
 Two other strong points of the operation were the duration of
 TDY and the morale of personnel involved. The short duration of
 TDY for CURTAIN RAISER personnel proved extremely acceptable,
 much more so than the 90 day periods associated with previous
 operations. Morale was very high. Although crews knew they
 could get a "Go" word and thereby be involved in combat, they
 believed in the purpose and practicality of the mission and

116. The exact cycle followed was:

- a. One aircraft took off from Ramey AFB at 1700Z and re-
 mained airborne alert until 1030Z.
- b. Other aircraft took off from Nouasseur AB at 1030Z and
 maintained airborne alert until 1900Z.

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Alert crews adhered to a weekly schedule as follows:

- a. 1700Z Monday-Depart Ramey on Airborne Alert
- b. 1030Z Tuesday-Airborne off alert (landing at Nouasseur)
- c. 1330Z Tuesday-Crew rest and maintenance
- d. 0930Z Thursday-Ground Alert (Reflex, 30 minutes)
- e. 0930Z Saturday-Stations and take-off procedures
- f. 1030Z Saturday-Airborne Alert (Ramey bound)
- g. 1700Z Saturday-Airborne off alert
- h. 0500Z Sunday-Land Ramey

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(Final Report, "Operation CURTAIN RAISER," 72nd Bomb Wing,
 27 June 1958, filed in OIH, Hq SAC.)

117. Ibid.

118. Second Air Force Monthly Analysis, RCS: SAC-U54, 20 July
 1958, filed in OIH, Hq SAC.

knew that they were performing something worthwhile. Maintenance personnel knew for the same reasons that the aircraft had to be in the best of condition. Contributing also to the high morale was the consistent work cycle of the operation and the absence of long, drawn out TDY. The incentive inspired in those participating in the Airborne Alert test was one of the most valuable lessons learned in this operation.

Notwithstanding the overall success of the operation, there were numerous problems encountered at the outset of the exercise.

One of the weakest areas of the CURTAIN RAISER exercise was the lack of Airborne Alert coverage at 1030Z (Landing and take-off at Nouasseur). In subsequent operations this problem can be re-

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solved by insuring a scheduled overlap at both ends of the flight path. Another problem encountered was the inadequate alerting

facilities at Nouasseur Air Base. Initially, only telephones

were used to notify crews of an alert. Later in the operation Klaxon horns were installed. These partially solved the problem, however, the high background noise level made this system only marginally acceptable. Other problems were the necessity of manning two command posts, poor personnel facilities at the forward base, and a periodic maintenance cycle too short to permit generation of the required amount of flying hours. The latter problem was successfully resolved by extending the periodic cycle from 150 to 200 hours.

119. Final Report, "Operation CURTAIN RAISER," 72nd Bomb Wing, 27 Jun 1958, filed in OIH, Hq SAC.

Even before the beginning of the CURTAIN RAISER test, on 23 December 1957, General Power indicated a desire to establish some form of Airborne Alert. Soon after the introduction of sealed pit weapons into the SAC inventory, he envisioned the alert force flying off in the direction of the target as a routine rather than an exceptional operation. The CINC planned in the future to apply this concept to all Unit Simulated Combat Missions (USCMs) and other large scale exercises.

The Operations Plans Division in the Directorate of Operations, Headquarters SAC was the agency responsible for coordinating the planning for Airborne Alert. On 3 February 1958 the division formed an Ad Hoc committee to formulate plans and procedures for the ultimate establishment of a form of Airborne Alert throughout SAC.

During the Committee's meetings numerous concepts were advanced. These were all studies from the viewpoint of how they would fit into the war plan and physical situation of individual SAC units. The committee determined that no one concept would serve the need of the overall command. For some units the concept as used during CURTAIN RAISER would suffice.

* For information on sealed pit weapons see pp 78-85.

120. Memo for the Record, Maj Gen R. H. Terrill, Dir of Ops, Hq SAC, 27 Dec 1958, Exhibit 39.

121. Memo for the Record, Maj W. B. Kamp, Ops Plans Div, D/Ops, Hq SAC, 3 Feb 1958, Exhibit 40.

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In other units a "round robin" type of operation was in order. ¹²²

On 4 June 1958 the work of the Ad Hoc committee and the Operations Plans Division, Directorate of Operations evolved into the proposal for a new Airborne Alert Service Test nicknamed HEAD START. This was to be a test using the 42nd Heavy Bomb Wing (B-52/KC-135). The test was programmed to be conducted in three phases. Phase I would be conducted by the complete wing at Loring AFB, Maine. Phase II would be a stand-down period in which results of Phase I would be evaluated for possible improvement of procedures. During this stand-down period the 42nd Bomb Wing is programmed to disperse one squadron to Bergstrom AFB, Texas. Phase III was a test of the Airborne Alert by the dispersed squadron at Bergstrom. ¹²³ This headquarters published an outline plan for the coming test on ¹²⁴ 13 June 1958.

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122. Info from Maj W. B. Kamp, Special Projects Officer, Missions Br, D/Ops, Hq SAC, 15 Aug 1958; Appendix to SAC Briefing on Airborne Alert, presented to Gen Power, 21 May 1958, Exhibit 41.
123. Memo for the Record, Col J. C. Thrift, Ex Officer, D/Ops, Hq SAC, "Ad Hoc Committee on Airborne Alert," 4 Jun 1958, Exhibit 42.
124. Brochure, "Outline Plan for Airborne Alert Test, Nickname 'HEAD START'," 13 June 1958, filed in OIH, Hq SAC.

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In the meantime personnel of the Operations Plans Division, Headquarters SAC, drew up an operational plan for the test and briefed SAC and USAF staffs on the proposed test. As briefed the test was to consist of a non-stop "round robin" operation with one air refueling enroute. The Airborne Alert sorties would have a 19.75 hour duration. Each combat ready, lead and select crew would perform 3.2 sorties per month. Standardization and instructor crews would carry out one and two alert sorties per month, respectively. It is anticipated that the wing will have to generate 120 alert sorties for 2,370 flying hours; 100 training sorties for 950 hours flying time; and 12 test hops for 48 hours flying time. In short, the 42nd Bomb Wing must generate a total of 232 sorties comprising 3,368 hours of flying time. Tanker requirements were in addition to this. CURTAIN RAISER previously proved that the benefits to be derived from this type operation included: an increased deterrent due to force invulnerability, increased flying time, increased sortie rate, lowered cost per sortie, lowered over-¹²⁵time, and higher morale.

As the Airborne Alert concept matures additional historical coverage will be afforded it in subsequent installments of the command history.

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125. Briefing presented by Ops Plans Div, D/Ops, Hq SAC, to General Power, 21 May 1958. The same briefing was also presented to the Air Staff, and the Subcommittee of the Scientific Advisory Board in early June 1958, Exhibit 41.

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Fail Safe (Positive Control)

It is the belief of SAC that the Soviet Union has the capability today to execute a surprise attack on the United States of sufficient magnitude to do tremendous damage. Observations of Soviet maneuvers both in the Arctic and elsewhere revealed that by an extension of their maneuver pattern their attack capability could be expanded to the point where the United States could be dealt a fatal blow. In view of the rapidly decreasing warning time, normal communications lag time, and the time required by present decision making processes, SAC might find it necessary to launch aircraft prior to the receipt of a strike execution order. In such a case, "Fail Safe" or "Positive Control" permitted General Power to launch the alert force towards the target with positive assurance that no aircraft would penetrate enemy territory

* On 19 April 1958 the term "Fail Safe" was deleted in favor of the more definitive and understandable term "Positive Control." It will be remembered that at this time representatives of the USSR were loudly voicing their fears that WW III might be inadvertently started due to an error on the part of a SAC crew. The term "Positive Control," being more absolute in intonation than "Fail Safe," assisted in dampening the Soviet propaganda attempt to turn world opinion against SAC's realistic training program. For additional information see "Fail Safe" Newspaper Clip File, on file in Hist Div, Hq SAC; TWX, CINCSAC to See Distribution, DO 4715, 19 April 1958, Exhibit 43.

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or the periphery of the enemy early warning radar net
without further positive instructions to proceed on the strike. ¹²⁶

The Strategic Air Command's view on this subject was initially outlined in a 19 October 1957 letter from General Thomas S. Power, CINCSAC, to General Curtis E. LeMay, Vice Chief of Staff, USAF. ¹²⁷ General Power stated that with the present communications available " . . . it would be next to impossible to effect HF radio re-direction of the strike force once it is launched." To correct this situation General Power requested approval for the establishment of four ultra high-power High Frequency (HF) Single-Sideband (SSB) radio stations within the United States. The main station would be located at Headquarters SAC with the three additional stations spotted at each SAC ZI numbered Air Force Headquarters. In addition, all SAC tactical aircraft would be ¹²⁸ equipped with multichannel SSB transceivers.

126. Prior to Positive Control CINCSAC would launch the fleet under "10 Plan" procedures. Following this plan SAC aircraft would deploy to assigned areas to await instructions. Positive Control eliminated for the alert force this procedure of orbiting and the consequent loss of time, fuel, etc. (Info from interview, T/Sgt A. W. Scott, Hist Tech, with Maj F. G. Davies, Controller, Control Div, D/Ops, Hq SAC, 13 July 1958; Briefing presented to the VCS, USAF, and the Air Staff, on Positive Control, 27 Feb 1958, Exhibit 44).
127. History of SAC, Jul-Dec 1957, Exhibit 4, Vol III, filed in OIH, Hq SAC.
128. Ibid.

In answer to General Power's letter, the Vice Chief of Staff indicated personal approval, but stated that the extreme cost of the program would require Department of Defense (DOD) approval.¹²⁹ Further, he requested that Headquarters USAF be afforded more detailed information concerning the program.¹³⁰ General Power, in order to comply with assurance that the information forwarded would be factual, directed a service test of current communications facilities.¹³¹

The test, code name NOAHS ARK, was conducted between 15 November 1957 and 15 January 1958. For testing purposes, alert force outbound strike routes were broken down into 12 general routes along which were located several HF and UHF ground radio stations. During the testing period each numbered Air Force and applicable overseas air division were to schedule a minimum of six missions over each route. One or more aircraft would constitute a mission.¹³² While on the mission aircrews were directed to make radio contact with selected stations along the route in an attempt

129. Ibid., Exhibit 7, Vol III.
 130. Ibid.
 131. Ibid., Exhibit 8, Vol III.
 132. Ibid., Exhibit 9, Vol III.

to receive the "GO" code prior to reaching the "Fail Safe" point. The "GO" code would be relayed from Headquarters SAC through the Air Force global communications network to the applicable ground stations.¹³³ These stations would then relay the "GO" code to SAC aircraft upon contact. After the mission was completed, the aircrew would transmit a message to Headquarters SAC enumerating the message received.

Overall, 65 "Fail Safe" missions were flown during the test period using the outlined procedures. Of these missions 50 were successful with the major trouble caused by inadequate briefing of crews and supporting North American Defense Command (NORAD) and AACS facilities. Considering the number of agencies that had to be used in passing the "GO" code the outcome of NOAHS ARK was remarkable.¹³⁴

Upon conclusion of NOAHS ARK a new system was implemented which precluded error. Under the new system aircraft commanders

133. Ibid.

134. DF, Dir of Ops, Hq SAC, to Ops Analysis and Chief Scientist, Hq SAC, "Final Test Results on NOAHS ARK," 13 Feb 1958, Exhibit 45.

were issued envelopes on the outside of which was printed a code word, e.g., "Bulldog." If after contacting a ground radio station along the mission route, the crew was to receive a message containing the words "Bulldog Baker" the word "Bulldog" would mean to open the envelope. The word "Baker" would be found on the inside of the envelope and serve as a double authentication. This message, the "GO" code, would authorize the aircrew to proceed past the "Fail Safe" point to the previously assigned target. For purposes of clarification the "Fail Safe" point is a pre-determined geographical point along the mission route beyond which the strike aircraft cannot proceed unless directed to do so. ¹³⁵

Although interim "Positive Control" measures proved fairly reliable, SAC continued to press for approval of the ultra-high powered SSB radio system. It listed as justification for its ¹³⁶ request the following:

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135. A communications training program along these same lines was initiated for all SAC aircrews on a continuing basis. (Info from SAC Reg 50-6, 24 Jun 1958; Interview, T/Sgt A. W. Scott, Hist Tech, with Maj F. G. Davies, Controller, Control Div, D/Ops, Hq SAC, 13 Jul 1958).
136. DF, Dir of Ops, Hq SAC, to Ops Analysis and Chief Scientist, Hq SAC, "Final Test Results on NOAHS ARK," 13 Feb 1958, Exhibit 45.

1. The number of agencies that must be utilized as links in the execution chain to relay the "GO" code to the aircraft introduces delay, possible distortion and compromise.
2. Many ground station personnel are unfamiliar with KAC-1 authentication procedures and with SAC Collective Call Signs.
3. Propagation, limited frequencies, and jamming probability reduces the HF reliability.
4. Due to limited UHF coverage the "GO" code must be relayed by HF on several routes.
5. The possibility of control elements relaying the "GO" code to ground stations when they receive the execution order.
6. The questionable reliability of ADC sites during emergencies. It was evident throughout the briefings of ADC personnel overseas, that site participation in the 'Fail Safe' test would be secondary to the Air Defense Peacetime Mission.

With NOAHS ARK concluded, SAC now possessed the factual information required by Headquarters USAF. Accordingly, a briefing team, under the command of Lieutenant General Francis H. Griswold, Vice Commander in Chief, SAC, was dispatched to Washington. On 27 February 1958 the team presented two briefings, one to the Vice Chief of Staff, USAF, and one to the Air Staff, USAF. At the conclusion of the briefings General LeMay indicated his complete approval

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of the program. Funding for the program was also assured at
this time with allocation of funds due early in fiscal year 1959. 138
The overall program would cost approximately \$34 million. 139

With USAF concurrence, SAC began in earnest the physical as-
pects of the program. A tentative schedule was established whereby
work would commence on both ground installations and aircraft
retrofit very early in 1958. 140 Subsequently, this schedule suf-
fered an approximate four month slippage due to labor and other
difficulties. 141 Barring additional problems the system would
be EWP operational in late 1959. 142

Priorities established for the ground complexes stipulated
completion of the stations at Offutt AFB, Barksdale AFB, March AFB,

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137. Memo for the Record, "Fail Safe and Radio Portion of SOCS Briefing Presented to the VCS, USAF," signed by Gen F. H. Griswold, Vice CINCSAC, 4 Mar 1958, Exhibit 46; For additional information on General LeMay's approval of the program see DF, Ch, Comm/Elec Div, Hq SAC, to D/Ops, Hq SAC, "Priority for Aircraft SSB Retrofit," 25 Feb 1958, Exhibit 47.
138. Gen Griswold Memo for the Record, 4 Mar 1958, Exhibit 46.
139. Tp, T/Sgt A. W. Scott, Hist Tech, to Lt Col J. H. Beler, Ch, Air Elec Br, Comm/Elec Div, D/Ops, Hq SAC, 15 Jul 1958; Incl 1 to ltr Comdr AMC to Comdr Rome AF Depot, "SSB" 11 Feb 1958, filed in CE Div, D/Ops, Hq SAC.
140. Chart, "Air-Ground SSB Milestones," n.d., Exhibit 48.
141. Interview, T/Sgt A. W. Scott, Hist Tech, with Lt Col J. H. Beler, Ch, Air Elec Br, Comm/Elec Div, D/Ops, Hq SAC, 13 Jul 1958.
142. Chart, "Air-Ground SSB Milestones," n.d., Exhibit 48.

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and Westover AFB in that order. As pertains to aircraft, all SAC B/RB-47s, B-52s, KC-135s, and KC-97s were to be completed as listed. To avoid confusion independent wings and air divisions were to be retrofited as a unit. ¹⁴³ All new B-52G and KC-135 aircraft beginning with number 458 and 186, respectively, were ¹⁴⁴ scheduled to be equipped in production. On 7 June 1958 personnel of the AACS obtained approval for the SSB sites at Offutt and Barksdale AFBs from USAF installations representatives at ¹⁴⁵ Omaha and Dallas, Texas. Headquarters USAF forwarded its ¹⁴⁶ formal site concurrence on 18 June.

Meanwhile, other AACS personnel were screening various USAF depots in an effort to locate major equipment for the two sites. Accordingly, the desired equipment was located and as of 1 July was being prepared for shipment to Offutt and

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- 143. DF, Ch, Comm/Elec Div, Hq SAC, to D/Ops, Hq SAC, "Priority for Aircraft SSB Retrofit," 25 Feb 1958, Exhibit 47.
 - 144. TWX, CINCSAC to All Subordinate Commands, DOCEN 2386, 24 Feb 1958, Exhibit 49.
 - 145. Interview, T/Sgt A. W. Scott, Hist Tech, with CWO E. P. Smith, Radio Officer, Air Elec Br, Comm/Elec Div, D/Ops, Hq SAC, 17 Jul 1958; Ltr 1823 AACS Gp to Comdr Barksdale AFB, "Site Concurrence High Power C/A SSB Barksdale AFB, Louisiana," 18 Jun 1958; Ltr 1823 AACS Gp to Comdr Offutt AFB, "Site Concurrence High Power C/A SSB Offutt AFB, Nebraska," 18 Jun 1958, filed in C/E Div, Hq SAC.
 - 146. TWX, Hq USAF to CINCSAC, AFMME-CE 32362, 18 Jun 1958, Exhibit 50.

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147 Barksdale AFBs. This equipment had originally been intended for use in the USAF globe-com program--a program now shelved. Its use by SAC would keep the price tag for the Offutt and Barksdale stations at a level manageable with current funds. 148 Other progress in the program as of 1 July included the Headquarters SAC station which was in partial operation and some aircraft 149 retrofits accomplished for service test purposes.

Nuclear Weapons Development

Introduction. The SAC strike force had available at least one nuclear weapon per bomber and ready access to them through its bombs-on-base program and its overseas weapons storage areas. 150

- 147 Interview, T/Sgt A. W. Scott with CWO Smith, 17 Jul 1958; Msg, from USAF to CINCSAC, Comdr AMC, Comdr 1823 AACCS Gp, CT AFMME-CE-38045, subj "High Power SSB at Barksdale and Offutt," 9 Jul 1958.
148. Ibid.
149. Ibid.
150. SAC was still required to maintain a conventional bombing capability. In a 1 November 1957 letter to General White, the CINCSAC questioned the need to continue conventional bombing capability in the B-47 force because of the severe penalty it placed on SAC's capability to fight either an effective local or general war. General White replied that the nation required flexibility to combat limited aggression. He said, "It is the policy of the United States to place main, but not sole, reliance on nuclear weapons." (Info from Ltr, T. S. Power, CINCSAC, to Gen T. D. White, CofS, USAF, 1 Nov 1957 (B-63470), Exhibit 51; Ltr, Gen T. D. White, CofS, USAF, to Gen T. S. Power, CINCSAC, 16 Dec 1957 (B-64124), filed in Planning Documents Group, Progs Div, D/Plans, Hq SAC.

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The command's prime concern in the field of nuclear weapons development during the first six months of 1958 was to obtain authority to exercise its Alert Force with complete nuclear weapons on board. Because of safety considerations, emphasis was placed on using the new sealed pit weapon. During the same period SAC also reaffirmed its requirement for a 60 megaton bomb for use with the B-52 portion of the Alert Force. Significant progress was also made during the period January through June 1958 in the SAC-RAF Bomber Command Atomic Coordination Program. SAC sought to coordinate atomic strike plans and actual combat operations between SAC and Bomber Command and to develop plans to provide United States atomic weapons for the RAF "V" Force.

Maneuver Authority. With the achievement of an Alert Force in-being in the ZI and overseas, SAC was prepared to launch aircraft within minutes after receiving notice of impending attack. Constant and realistic training was required to maintain this force in its high state of readiness. As of 30 June 1958, however, General Power did not have authority to launch alert aircraft with nuclear capsules on board, except under certain emergency conditions. This was due to

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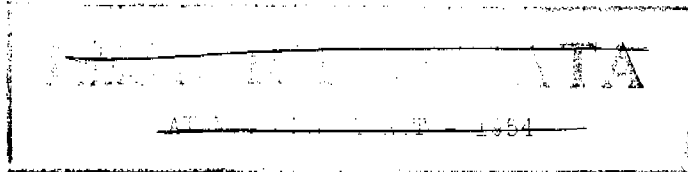
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restrictions placed on weapons maneuvers by Department of
 Defense (DOD) and Atomic Energy Commission (AEC) agreements. ¹⁵¹

The importance of the SAC mission demanded that the com-
 mand possess an effective EWP capability at all times. In a
 15 October 1957 letter to General T. D. White, Chief of Staff,
 USAF, General Power expressed concern over the fact that he
 was restricted from exercising any portion of the Alert Force
 on a realistic "no-notice" basis. ¹⁵² The critical element of

151. DF, Brig Gen J. V. Edmundson, Dep Dir of Ops, Hq SAC, to
 D/M, D/Pl, Comd Sect, Hq SAC, "Authority to Exercise the
 SAC Alert Force," 10 Oct 1957, Exhibit 52; DF, DOOP to
 Dir of Ops, Hq SAC, "History of SAC, Jan-Jun 1958," 2
 Sep 1958, filed in OIH, Hq SAC.
152. SAC had previously attempted to obtain permission to fly
 weapons with capsules on board and inserted. In September
 1957 a request to exercise the REFLEX ACTION force in
 North Africa was disapproved. USAF did recognize the limi-
 tation this placed on SAC's realistic training program,
 however, and informed this command that a Joint Chiefs
 of Staff (JCS) paper was being prepared to authorize
 flying atomic weapons with nuclear capsules installed
 for testing capability. SAC was authorized to airlift
 nuclear capsules during the two large scale exercises
 conducted during October and November 1957 (DARK NIGHT
 and IRON BAR). Both the AEC (custodian of the weapons)
 and Hqs USAF granted this authority with the condition
 that the capsules would be carried in the crew compart-
 ment. (Info from Ltr, Gen T. S. Power, CINCSAC, to Gen
 T. D. White, C/S USAF, 15 Oct 1957, Exhibit 53; DF, Brig
 Gen J. V. Edmundson, Dep Dir of Ops, Hq SAC, to D/M,
 D/Pl, Com Sec, "Authority to Exercise the SAC Alert
 Force," 10 Oct 1957, Exhibit 52).

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time did not permit removal of weapons and nuclear components prior to launching aircraft, but to remove them prior to notice would result in a loss of experience gained from "no-notice" capability tests.

Because of the additional hazard caused by airlifting atomic weapons with nuclear capsules installed in the in-flight insertion mechanism, in early 1957 SAC asked Air Research and Development Command (ARDC) to conduct a study to determine if the safety features in weapon designs and procedures were adequate to prevent accidental or premature detonation. The general conclusions for weapons stockpiled by SAC were that the design features and procedures provided "adequate" safety to crews and friendly populaces provided standard operating procedures were rigidly followed.

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General White's reply of 31 October to General Power expressed agreement with SAC's requirement to test the Alert Force under realistic conditions. He suggested, however, that SAC consider testing that part of the force destined to be armed

153. Ltr, Gen T. S. Power, CINCSAC, to Gen T. D. White, CofS, USAF, 15 Oct 1957, Exhibit 53.

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 with sealed-pit weapons. Whereas there was a 15 percent probability of up to 40,000 pounds of nuclear yield in the event of one point detonation of a weapon requiring the

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154. A description of the sealed pit weapon and further explanation of why it represented a significant advancement in weapons development is in order. The sealed pit atomic device normally associated with the so called "new family" of weapons consists of a metal sphere and explosive lens charges similar to the older type bomb. The term "pit" as applied to nuclear weapons is a descriptive word which refers to a hollow sphere made of metal which is the innermost part of the bomb and is necessary to start a nuclear reaction. The term "sealed" is used to indicate that the pit has no opening to the outside of the bomb, but is a complete sphere and is closed to atmospheric pressure.

The principal difference between the sealed pit weapon and the older types is in the composition of the "pit." The pit walls of new weapons were made of a very thin layer of active material, whereas the older type pit walls did not contain active material. To the pit is connected, by a small pipe, a cylinder of active gas. This is known as the gas boosted principle and replaces the capsule ball. The desired nuclear reaction of a nuclear weapon is obtained as a result of simultaneous squeeze of active material for a specific period of time. These requirements are not as critical in the older weapon as they are in the new sealed pit types. Therefore, the older weapon may produce a nuclear yield if fired by some other means than the weapon circuit, whereas the new sealed pit will not. Should the weapon explode as a result of impact or fire the explosion will be from the high explosive content of the weapon, not the nuclear material. Hence, the sealed pit weapon is considered "one point safe." (Info from DF, Armt Elec Div, D/M, to OI, Attn: OIH, "Information for History of Nuclear Weapons," 3 Oct 1958, filed in OIH, Hq SAC. For an historical summary of SAC nuclear weapons and their characteristics see Chart, "Summary of Nuclear Weapons . . .," Sec II; See also History of 8AF, Jan-Jun 1958, Vol I, pp 165-208, filed in OIH, Hq SAC, for additional information on sealed pit weapons.

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insertion of an in-flight capsule, with the sealed pit
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weapon the plutonium hazard was not significant.

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Initially, General Power found General White's proposal unacceptable because SAC had no sealed pit weapons in stockpile and it was thought that it would be some time before a substantial number would be available. By 26 November 1957, however, new weapon production figures together with the sealed pit modification schedule, indicated SAC would get a significant number of the weapons earlier than was first anticipated. General Power anticipated a portion of the Alert Force would be equipped with these weapons by February 1958. By the following May the entire ZI Alert Force would be completely armed (MK-15 and MK-39 weapons).¹⁵⁶ This proved to be an optimistic forecast, however; the first weapons did not arrive until June 1958.¹⁵⁷ Not until November 1958 would the MK-36 bomb be modified for use by the overseas "REFLEX" force.¹⁵⁸

- 155. Ltr, Gen T. D. White, CofS, Hq USAF, to Gen T. S. Power, 31 Oct 1957, Exhibit 54.
- 156. Ltr, Gen T. S. Power, CINCSAC, to Gen T. D. White, CofS, USAF, 26 Nov 1957, Exhibit 55.
- 157. DF, DOOP, to Dir of Ops, Hq SAC, "History of Strategic Air Command," Jan-Jun 1958, 2 Sep 1958, filed in OIH, Hq SAC.
- 158. Ltr, Gen T. S. Power, CINCSAC, to Gen T. D. White, CofS, USAF, 26 Nov 1957, Exhibit 55.

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Although no sealed pit weapons were available to SAC in late 1957, General Power requested of General White that a higher priority be given to obtaining authority to test launch the Alert Force with these weapons. ¹⁵⁹ On 19 December 1957 a reply from General LeMay assured General Power that "Every effort will be made to obtain the required authority to exercise . . . with sealed-pit weapons as soon as possible." ¹⁶⁰

But no early decision was forthcoming. Strategic Air Command re- ¹⁶¹ stated its position on flying war reserve weapons in early May 1958:

To provide a realistic no-notice test of the alert force, weapons must be flown. During Unit Simulated Combat Missions in order to generate and launch on an EWP schedule while exercising all phases of ground support it is mandatory to fly this weapon.

The initial release of MK-15 Mod 2 and MK-39 Mod 1 sealed-pit weapons came in early May. Although the release gave technical approval for maneuver and readiness exercises of these weapons, the AEC cautioned that their use was ". . . administratively ¹⁶² prohibited pending policy agreement between AEC and DOD."

- 159. Ibid.
- 160. Ltr, Gen C. E. LeMay, VCS, USAF, to Gen T. S. Power, CINCSAC, 19 Dec 1957, Exhibit 56.
- 161. TWX, CINCSAC to CofS, USAF, DOOPW 5639, "Maneuver of Weapons," 9 May 1958, Exhibit 57.
- 162. TWX, James L. McCraw, USAEC, Albuquerque, N. Mex, to ComAF 2, 8, 15, 16, et al, 7 May 1958, Exhibit 58; TWX, Hq AMC, W-PAFB, Ohio, to CofS, USAF, MCW 315561, 3 June 1958, Exhibit 59.

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Weapons could be loaded on alert aircraft, but not flown. Strategic

Air Command had no initial difficulty in complying with this directive, because it did not receive its first sealed-pit weapons (MK-39 Mod 1) until 1 June 1958 at Loring AFB, Maine. By 30 June weapons were in place at Loring, Westover, Ellsworth, Fairchild, Pease, Plattsburgh, and Mountain Home AFBs. All were MK-39 Mod 1's except Mountain Home which received MK-15 Mod 2's.

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A basic disagreement existed between the AEC and the JCS on the maneuvers of sealed-pit weapons. The AEC believed, in opposition to the JCS, that sealed-pit weapons should be maneuvered only in direct Alert Force exercises and not for training exercises ("no-notice" inspections, USCM's, etc.). The AEC favored using training devices for any training beyond Alert Force operations. The Commission maintained that since a hazard was associated with Alert Force use of sealed-pit weapons, Presidential

- 163. DF, DOOP, Hq SAC to D/Ops, Hq SAC, "History of Strategic Air Command, January-June 1958," 2 Sep 1958, filed in OIH, Hq SAC.
- 164. During the period 5 through 11 January 1958 the USAF Nuclear Weapon Safety Group convened at Kirtland AFB to review the safety aspects of the sealed-pit weapon. It was generally concluded that there was no significant degradation of safety when flying the weapons with safety pins installed and the U-2 rack locked, versus the stockpile configuration. There was, however, a significant degradation of safety if the weapon was involved in an aircraft crash or was jettisoned with the safety pins removed. The estimated probability of a nuclear detonation of the weapon in a crash with pins removed was one in ten thousand. The estimated probability of a nuclear detonation if the weapon was jettisoned or an inadvertent release occurred with pins removed was one in five hundred. (Info from Memo for General Terrill, from Col Roland A. Campbell, Ch, Ops Div, D/Ops, "(C) USAF Safety Review of Sealed Pit Weapons," 14 January 1958, Exhibit 60).

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approval was required annually for the exercises scheduled for
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the following year.

Strategic Air Command agreed with the JCS and the AFSWC
viewpoint that use of training shapes for EWP exercises was
operationally unsuitable. For the foreseeable future it would
be necessary for manned bombers to fly simulated combat mis-
sions with ground preparations, timing, launch, and tactics
approximating as nearly as possible the EWP. Strategic Air
Command needed to do this to develop a positive capability
to accomplish the unit assigned mission, and to test and
evaluate this capability. In line with this timing, it was
vitally important that actual war reserve weapons be used
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to realistically exercise all supporting units.

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Other considerations bearing on the problem were:

a. Prior to 1955 when launch timing under the EWP
was measured in hours and days instead of minutes and
hours as of the present date, SAC was for the most part
limited to carrying training weapons and practice shapes.

- 165. DF, Col K. A. Reeher, Dep Ch, Plans Div, D/Pl, to Dir of
Ops, Attn: DOPLC, DOOPW, "Weapons Maneuver," 25 Jun 1958,
Exhibit 61.
- 166. DF, Dir of Ops to Dir of Plans, "Weapons Maneuvers," 26 June
1958, Exhibit 62; TWX, CINCSAC to CofS, USAF, DPL 67679,
"Weapon Maneuver," (B-67679), 28 June 1958, filed in Ops
Plans Div, D/Ops, Hq SAC.
- 167. DF, Dir of Ops to Dir of Plans, "Weapons Maneuvers," 26
June 1958, Exhibit 62.

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It became evident at that time that to develop a realistic capability to execute the EWP and to further test and evaluate this capability, it would be necessary to prepare the aircraft with actual EWP weapons during USCM's. With the fast reaction time required at the present date, this has become a much more critical factor.

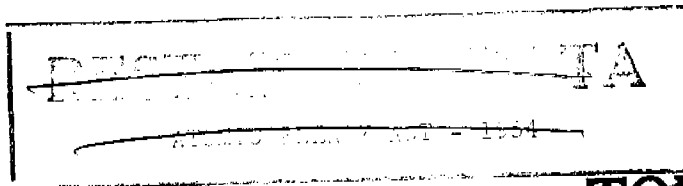
b. With sealed pit weapons on board during a USCM an aircraft would require only the necessary fuel to be ready for launch during an emergency. A training weapon on board would degrade the reaction time to an unacceptable degree.

c. It is considered highly desirable from the standpoint of unit and crew morale and motivation to maneuver with war reserve weapons.

d. Normally, not more than a total of seven (7) training weapons and practice shapes of a specific type at a SAC base are available. Additional practical shapes would have to be procured along with the necessary handling equipment.

In late June 1958 SAC responded to a USAF query about it's requirements for sealed-pit weapons maneuver authority for FY-59. The command needed weapons for the Alert Force, an Airborne Alert test, and miscellaneous USCM's, but it could not be final in its forecast of ultimate requirements because the lack of sealed-pit maneuver authority had not given SAC any operational experience. Initially, it was planned to test launch each unit's Alert Force once a year, repeating only when a unit fell below the prescribed standard. Due to problems such as uncertainty in the production availability of SAC's total allocated sealed-pit stockpile by quarter, and the problems involved in acquisition of suitable ATO drop

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areas, test launch of alert forces outside the ZI was doubtful
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 during FY-59.

Second to ground alert force test launch requirements, SAC sought permission to use sealed-pit weapons in connection with the test of an Airborne Alert concept during FY-59..* The test would be divided into two phases. The first phase would require 848 weapon maneuvers on 424 sorties; the second phase required 552 weapon maneuvers on 276 sorties. This was a total weapon requirement of 1,400 for both phases. Although a test, war reserve sealed-pit weapons were mandatory to ". . . avoid degradation of the unit's alert capability."¹⁶⁹

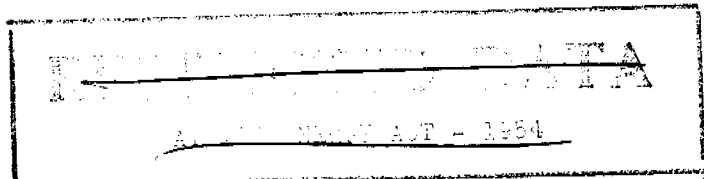
Some weapons would also be required on the two USCM's per bomb wing scheduled for FY-59. None of these maneuvers were in the large scale category, nor would there be deployment to overseas areas. In late June 1958 SAC could not predict quantitative requirements for sealed-pit weapons for USCM's.¹⁷⁰

* See Airborne Alert Concept, pp 58-65.

168. TWX, CINCSAC to CofS, Hq USAF, DPL 67679, "Weapons Maneuver," (B-67679), 28 June 1958, filed in Ops Plans Div, D/Ops, Hq SAC.

169. Ibid.

170. Ibid.



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On 30 June 1958 Headquarters SAC still awaited presidential authority for sealed pit weapon maneuver.

The 60 Megaton Weapon. SAC continued its efforts during the first six months of 1958 to acquire a new Class A weapon. The command had established a requirement for this bomb as early as 8 December 1954 and twice again in June and October 1956.¹⁷¹ In a letter to Chief of Staff, Headquarters USAF, in December 1956, General C. E. LeMay, then CINCSAC, noted that criticism had been directed at SAC's requirement for this bomb. Critics saw no useful military purpose in producing it and its production would increase the possibility of global contamination. General LeMay dismissed these arguments as illogical. A Headquarters USAF study had determined that such weapons were mandatory to destroy hardened targets. Also, only use of a weapon caused contamination and production did not necessarily mean use. The deterrent value of the weapon dictated its development. General LeMay agreed that six small weapons could destroy more targets than one large weapon, but the six did not have the deterrent value of the largest possible weapon. The value of a weapon

171. Ltr, Gen C. E. LeMay, CINCSAC, to CofS, Hq USAF, "Requirement for a New Class A Weapon," 12 Dec 1956, (B-69948), Exhibit 63.

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which successfully deterred could not be measured in a real war or in a paper battle because the assumption would have
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to be that it had failed to deter.

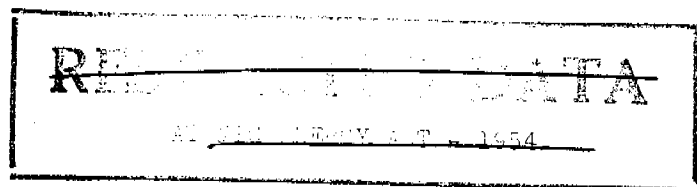
General Power reasserted SAC's position on the 60 MT bomb in December 1957. A feasibility study of this weapon had been completed the previous April and the President decided the next step would be an actual test. The CINCSAC was concerned over reports that the test shot scheduled for the Operation HARDTACK nuclear tests in the summer of 1958 was to be cancelled. He considered failure to continue development a delay at best, and cancellation of the project by default, at worst. General Power placed top priority upon development of the Class A
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weapon in normal rather than clean configuration.

Despite SAC's interest in testing the 60 MT bomb in the HARDTACK tests, President Eisenhower limited the series to
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weapons of not more than 15 megatons yield. By October 1958,

172. Ibid.

173. Ltr, Gen T. S. Power, CINCSAC, to Gen T. D. White, CofS, USAF, 26 Dec 1957, Exhibit 64; Memo for the Chief of Staff, "Development of New Class A Weapon," prep by Col L. E. Lyle, Dep Dir of Plans, Hq SAC, 6 Dec 1957, Exhibit 65.

174. Interview, Robert Kipp, Historian, with Mr. J. A. Englund, Operations Analyst, Ops Analysis Div, D/Ops, Hq SAC, 4 Dec 1958.



however, the University of California Radiation Laboratory was able to provide SAC with an estimate of Class A weapon parameters attainable without further tests.

Version 1 was a 60 MT, 25,000-pound bomb and Version 2 was a 22,000-pound, 45 MT weapon.

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The original requirement for the new Class A weapon was based primarily on its deterrent value, but in 1958 SAC was increasingly interested in the bomb's practical use should deterrence fail. With SAC placing its reliance on a relatively small alert force, it was mandatory that its effectiveness be increased. This could be done by arming the B-52 portion of the strike force with Class A weapons. One of these high yield weapons could destroy targets and even target complexes that now require several lower yield weapons. General Power urged continued

175. DF, A. D. Chittam, Dep Ch, Ops Analysis, to Com Sec, "Class A Weapon," 6 Oct 1958, filed in Ops Analysis, Hq SAC.

176. For example, one Class A weapon placed on Moscow would destroy the city and neutralize or disrupt all airfields and installations within 14 nautical miles of the city. Also, one weapon dropped in the Stalino area would disrupt Stalino, Gorlovka, Maleyevka, and Yenakiveyo plus numerous less significant complexes. (Info from TWX, from Gen T. S. Power, CINCSAC, to Lt Gen D. L. Putt, DCS/Dev, USAF, "New Class A Weapon," (B-64339), 6 Jan 1958, filed in D/Intell, Hq SAC.)

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development of lighter weapons with greater yields to
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provide maximum growth of the strike force.

Status of Nuclear Weapons Storage. As of 30 June 1958

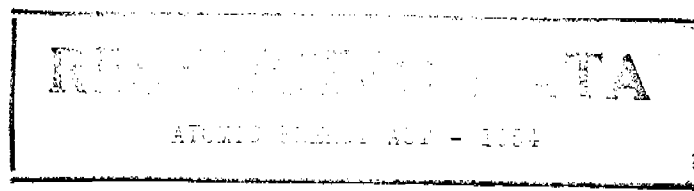
the status of weapons storage in the ZI and overseas was as
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follows:

<u>ADS</u>	<u>PARENT ORGANIZATION</u>	<u>AFB LOCATION</u>	<u>TYPE OF WEAPON STORED</u>
18th	11th ABG	? Altus	MK-6, MK 15, Mod 0
35th	810th ABG	? Biggs	MK-6, MK 15 Mod 0, MK 39 Mod 0
28th	7th ABG	? Carswell	MK-6, MK 15 Mod 0, MK 39 Mod 0
22nd	93rd ABG	? Castle	MK-6, MK 15 Mod 0
31st	803rd ABG	? Davis-Monthan	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 39 Mod 1 SP, MK 36 Mod 1
42nd	819th ABG	? Dyess	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 15 Mod 2 SP
29th	823rd ABG	? Homestead	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 36 Mod 1
30th	804th ABG	? Hunter	MK 36 Mod 1
32nd	806th ABG	? Lake Charles	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 36 Mod 1
34th	818th ABG	? Lincoln	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 36 Mod 1

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177. Ibid.

178. USAF OPU II-59-1, Aug 1958. Working Paper, "SAC Nuclear Weapons Statement, 1 July 1958," filed in Air Munitions Br, A&E Div, D/Mat, Hq SAC.



<u>ADS</u>	<u>PARENT ORGANIZATION</u>	<u>AFB LOCATION</u>	<u>TYPE OF WEAPON STORED</u>
27th	825th ABG	Little Rock	MK-6, MK 15 Mod 0, MK 39 Mod 0
33rd	809th ABG	MacDill	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 36 Mod 1
38th	807th ABG	March	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 36 Mod 1
39th	321st ABG	McCoy	MK-6, MK 15 Mod 0, MK 39 Mod 0
17th	9th ABG	Mt Home	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 15 Mod 2 SP, MK 36 Mod 1
41st	817th ABG	Pease	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 39 Mod 1 SP, MK 36 Mod 1
40th	820th ABG	Flattsburgh	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 39 Mod 1 SP, MK 36 Mod 1
21st	72nd ABG	Ramey	MK-6
36th	802nd ABG	Schilling	MK-6, MK 15 Mod 0, MK 39 Mod 0, MK 36 Mod 1
37th	812th ABG	Walker	MK-6, MK 36 Mod 1
16th	340th ABG	Whiteman	MK-36 Mod 1
14th	15th AF	Eielson	MK-6, MK 39 Mod 0, MK 36 Mod 1
7th	4082nd ABG	Goose	MK-6
11th	4083rd ABG	Thule	MK-6, MK 36 Mod 1
2nd	7th AD	Brize Norton	MK-6, MK 36 Mod 1
Det 1 4th	7th AD	Fairford	MK 36 Mod 1
4th	7th AD	Greenham Common	MK-6, MK 39 Mod 0, MK 36 Mod 1

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* No nuclear material.

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<u>ADS</u>	<u>PARENT ORGANIZATION</u>	<u>AFB LOCATION</u>	<u>TYPE OF WEAPON STORED</u>
8th	7th AD	Lakenheath	MK-6, MK 7, Mod 5
Det 1 8th	7th AD	Mildenhall	MK 39, Mod 0
10th	16th AF	Ben Guerir	MK-6, MK 36 Mod 1
6th	16th AF	Nouasseur	MK-6, MK 36 Mod 1, MK 7 Mod 4 and 5
5th	16th AF	Sidi Slimane	MK-6, MK 36 Mod 1
3rd	3rd AD	Andersen	MK-6, MK 39 Mod 0, MK 36 Mod 1
12th	3rd AD	Kadena	MK-6, MK 39 Mod 0
15th	3973rd ABG	Moron	MK 36 Mod 1
1st	3970th ABG	Torrejon	MK-6, MK 36 Mod 1
13th	16th AF	Zaragoza	MK-6, MK 39 Mod 0
23rd	42nd ABG	Loring	MK-6, MK 39 Mod 0 MK 15 Mod 2 SP, MK 39 Mod 1 SP
43rd	28th ABG	Ellsworth	MK-6, MK 15 Mod 0, MK 39 Mod 1 SP, MK 36 Mod 1
26th	92nd ABG	Fairchild	MK-6, MK 15 Mod 0, MK 39 Mod 1
24th	814th ABG	Westover	MK-6, MK 36 Mod 1

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* Stored for CINCEur.

** Weapons are stored in adjacent AMC OSS; SAC ADS furnishes loading capability only.

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SAC-UK Atomic Coordination Program. Although the USAF had stored nuclear weapons in the United Kingdom since 1951, these weapons were for USAF aircraft only, and it wasn't until the latter half of 1957 that the UK and SAC, as executive agent for the USAF, began negotiations to provide U. S. atomic weapons for Royal Air Force (RAF) bombers.

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It was planned that the U. S. would supply the RAF Bomber Command's V-series aircraft (Valiant, Vulcan, Victor) not already committed to NATO, with MK-5 atomic weapons in the event of general war, and that the atomic strike plans of SAC and the RAF would be coordinated.

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Upon mutual agreement concerning the Bomber Command's requirement for U. S. atomic weapons, the CINCSAC would request yearly that the U. S. Joint Chiefs of Staff earmark and include in SAC's dispersal authority and weapons allocation the appropriate numbers and types of weapons for use by Bomber Command forces. The SAC and Bomber Command would each

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179. History of SAC, 1 Jul-31 Dec 1957, p 52, filed in OIH, Hq SAC.

180. Ibid., p 53, filed in OIH, Hq SAC.

181. "Memorandum of Understanding Between the United States Air Force and the Royal Air Force," 24 May 1957, B-60880, filed in OIH, Hq SAC.

command and control its own forces; and SAC would retain command and control of weapons storage sites on RAF bases as well as authority for decisions on emergency disposition of weapons (evacuation and/or demolition).

The following schedule for modification of V-aircraft to accept the Mark-5 weapon was furnished by the Bomber Command (figures are cumulative).

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	1958 October	1958 November	1958 December	1959 March
Valiant	-	5	24	44
Vulcan	5	5	15	24
Victor	-	-	6	12
Totals	5	10	45*	80*

Representatives of Bomber Command met with personnel at this headquarters on 25-26 February 1958 to continue coordination of atomic strike plans and actual combat operations of SAC and the V-Force. A comparison was

* Eight of these aircraft were to be used as training aircraft.

- 182. Ibid.
- 183. Hq SAC Prog Plan 4-58, "SAC-RAF Atomic Coordination Program," 14 Jan 1958, Exhibit 3, Vol III, History of SAC, 1 Jul - 31 Dec 1957, filed in OIH, Hq SAC.
- 184. Conference Report, "(U) Strategic Air Command - Bomber Command Coordination Program," to CINCSAC and CINC Bomber Command, (B-65181), 26 Feb 1958, Exhibit 66.

made of the target lists of both commands, and the initial list of 45 targets prepared by Bomber Command was mutually agreed upon. It was revealed, however, that Bomber Command had allocated at least two weapons to each of the targets. Since this was excessive, the duplication, with the exception of Moscow and Leningrad, was eliminated. The additional weapons made available by this action provided a quicker reaction time against certain targets, increased the probabilities of success against priority targets, and destroyed additional Soviet defenses. The final RAF target list contained 106 targets, 25 of which were to be priority for the Bomber Command Alert Force at such time as an alert capability was achieved by that command.¹⁸⁵

The detailed coordination of targets provided SAC with the information required to justify allocation of weapons for this program; however, implementation of the logistical aspects of the coordination program was directly related to the modification of the V-Series aircraft to carry U. S. weapons. In February it was learned that the modification program had been accelerated and expanded. The following

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¹⁸⁵. Ibid.

figures are cumulative and indicate the availability
 schedule of Valiant, Vulcan and Victor aircraft modified
 186
 to carry U. S. atomic weapons:

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<u>Oct 1958</u>	<u>Dec 1958</u>	<u>Mar 1959</u>	<u>Jun 1959</u>
28	41	65	93

The additional number of aircraft were within the capabilities of the planned manning for the Aviation Depot Squadron (ADS) detachments and the numbers of weapons were within the storage capabilities of special weapons sites at the RAF stations. In early March 1958 Major General Charles B. Westover, SAC Director of Plans, stated that, "The overall program appears to be progressing satisfactorily and according to schedule."
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By May the modification schedule had changed slightly. At a coordination conference during that month the V-aircraft modification schedule was given as follows:
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- 186. Memorandum for General Power from Maj Gen Westover, "SAC-BC Coordination Program," (B-65448), 7 Mar 1958, Exhibit 67.
- 187. Ibid.
- 188. Conference Report, "Strategic Air Command/Bomber Command - Coordination Programme," CINCSAC and CINCBC, (B-66453), May 1958, Exhibit 68.

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	<u>1958</u>			<u>1959</u>				
	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>
Vulcan	5	10	12	14	16	18	20	22
Valiant	6	15	26	29	34	38	44	49
Victor	0	0	4	6	8	10	12	14
Cumulative Total	11	25	42	49	58	66	76	85

Bomber Command's responsibilities grew as its potential increased. In mid-1959 Bomber Command's contribution to a joint offensive with SAC was to attack 106 targets located in Soviet Russia. The two commands' strike plans were to be coordinated effective 1 July 1958, and on that date Bomber Command was to become responsible for a portion of the total target catalog. A number of targets were to be struck by both commands, and SAC aircraft were scheduled through the same geographical areas as Bomber Command. It was determined that the operational profiles flown by Bomber Command would allow adequate separation between bomb strikes of that command and SAC. However, this was on the assumption that both commands reacted simultaneously. If Bomber Command aircraft were delayed, conflicts would arise.

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189. Ibid.

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The importance to the deterrent force of the earliest possible intelligence warning was recognized by both commands. While Bomber Command relied entirely upon the National Warning System, SAC had developed a supplementary system of its own. The purpose of this system was not to duplicate the established warning system, but to increase its sensitivity in accordance with the requirements of the CINCSAC. It was believed that valuable time could be saved in the preliminary stages of an alert by better coordination between the Bomber Command Intelligence Branch and the National Warning System. SAC also desired to supplement the warning intelligence received at Bomber Command with the information used to determine SAC operational readiness conditions.

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During the May coordination conference it was determined that agreements and interpretations of existing directives limited the release of weapons to "release for employment" only. The Alert and Readiness Plan concept of the Bomber Command involving dispersal of aircraft in combat-ready (weapon loaded) configuration, and the possibility of a dispersed alert force

190. Ibid.

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both indicated the necessity for a re-examination of directives to determine action required to allow combat-ready dispersal of the V-Force aircraft.¹⁹¹ General Power in June informed the USAF Chief of Staff that, "The program of weapons allocation, weapons facilities and ADS manning is progressing satisfactorily and RAF crews will commence training in the near future." However, General Power pointed out that: ". . . there are serious obstacles to the final realization of an in-being "V" Force capable of operating under alert concepts similar to SAC's."¹⁹²

Bomber Command had developed plans which met the basic requirements of dispersal and fast reaction, and would produce an effective alert force when placed in operation. The major problem in making these plans effective was the custodial restrictions imposed by the Atomic Energy Commission (AEC). This command had attempted to interpret weapons agreements in favor of Bomber Command's dispersal and alert plans, and had even considered the proposal of dispersing V-Force aircraft in combat ready configuration

191. Ibid.

192. Ltr, Gen Power to Gen T. D. White, CofS, USAF, (B-67436), 11 Jun 1958, Exhibit 69.

during periods of international tension, with a USAF
custodian aboard. The CINCSAC noted that, "At best, any solu-
tion under current restrictions is complicated and results in
a degradation of RAF operations."¹⁹³ He thought that the RAF
Bomber Command had a definite place in the deterrent alert
force and that authority should be obtained to permit the RAF
to disperse the combat configured V-Force when under alert
or to launch under "positive control" conditions.¹⁹⁴

General White, USAF Chief of Staff, acknowledged that
many of the obstacles preventing improvement of the RAF V-Force
alert posture would be alleviated by enactment of legislative
changes to the Atomic Energy Act of 1954; however, he expressed
doubt concerning the successful passage of such legislation.
Rather, he believed that the Air Force would have to face, as
an interim measure, an increased cost in U. S. custodial
personnel and continue an awkward arrangement in order that
U. S. statutes not be violated. To maintain even the "token"
custodianship which was allowed by a broad interpretation of the
present law, some type of guardian arrangement was called for.

193. Ibid.

194. Ibid.

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The Chief of Staff instructed his staff to take the initiative in planning a workable arrangement to allow the RAF Bomber Command to operate under an alert concept similar to SAC's.¹⁹⁵

Thor Targeting. It was determined in May that the targeting concepts for the IREM Thor unit in the UK, as expressed by Bomber Command and SAC, were compatible. In view of operational data presented by SAC representatives at the May Coordination Conference, a tentative selection of targets¹⁹⁶ for the first Thor Squadron was made. Major General William H. Blanchard, 7th Air Division Commander, believed, however, that assignment of targets for the IREM's in the UK would present problems. He was not convinced by the SAC presentation during the conference as to the merits of SAC's recommendation in regard to IREM targeting. The fact that the British had considerable authority in the case had not been given sufficient consideration by the SAC representatives, and it was General Blanchard's belief

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195. Ltr, Gen T. D. White, CofS, Hq USAF to Gen T. S. Power, CINCSAC, (B-67789), 3 Jul 1958, filed in War Plans Br, Plans Div, D/Plans, Hq SAC.
196. Conference Report, "Strategic Air Command/Bomber Command - Coordination Programme," CINCSAC and CINCBC, (B-66453), May 1958. Exhibit 68.

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that the presentation was not sufficiently "comprehensive, persuasive, and irrefutable." Since the Supreme Allied Commander, Europe (SACEur) would, for the first time, have offensive weapons capable of deep penetration to targets which were traditionally SAC's, he felt that the missile targeting problem presented considerable difficulty.

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MK-15/39 Weapons For UK.

It was learned through the 7th

Air Division Commander during December 1957 that the Engineering Liaison Office, Third Air Force had been furnished information relative to phasing Mark 15/39 weapons into the Atomic Co-ordination Program to replace or augment the programmed

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Mark 5 weapons. This information had been furnished the British on 31 December, however, the CINCSAC had not been officially notified of such an undertaking.

Accordingly,

SAC requested the USAF Chief of Staff to furnish this headquarters a copy of the Technical Memorandum Report, 3 MEL-7, Study, Feasibility of Equipping British V-Forces for Combat Delivery of Mark 15/39 Weapons.

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197. Ltr, Maj Gen W. H. Blanchard, 7AD Comdr to Maj Gen R. H. Terrill, Dir of Ops, Hq SAC, 23 May 1958, Exhibit 70.

198. TWX, CINCSAC to Cofs, USAF, "(S) USAF-RAF Atomic Co-ordination Program," DPL 122, 4 Jan 1958, Exhibit 71.

In reply to this request, the Chief of Staff indicated that the Third Air Force Engineering Liaison Office was the agency responsible for the technical aspects of compatibility problems with the Air Ministry and RAF, insofar as the V-Force was concerned. Headquarters USAF pointed out

that it would probably take eight to 12 months to complete the Mark 15/39 V-aircraft technical phase of the program. Upon acceptance of the Mark 15/39 weapons by the RAF and the successful conclusion of the technical capability program, it was anticipated that the operational aspects

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would be delegated to the CINCSAC. Until that time, it was not considered appropriate that the Feasibility Study
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be released to SAC.

Headquarters SAC advised the 7th Air Division that until such time as specific authority was received in regard to the Mark 15/39 program, any discussions with the RAF relative to the USAF-RAF Atomic Coordination Program would be in accordance with the United Kingdom Atomic Guide
200
and/or the Atomic Information Exchange Guide.

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199. TWX, CINCSAC to COMADIV 7, "(U) Coordination Program," DPLBP 648, 17 Jan 1958, Exhibit 72.

200. Ibid.

On 19 February SAC issued Staff Memorandum 205-14, outlining procedures for controlling the release of classified USAF restricted data information in implementing the USAF-UK Atomic Coordination Program. Releasable information included technical information as necessary to insure compatibility between UK aircraft and such U. S. atomic weapons as had been furnished or programmed for use by the RAF. Such information would only be released to an officially sponsored representative of the UK who had been specifically accredited by Headquarters USAF for the receipt of restricted data.

99th ADS Activation. Effective 23 May 1958 the 99th Aviation Depot Squadron (ADS) was activated at RAF Station Lakenheath, UK, and further assigned to the 7th Air Division. The unit was activated under Organizational Table (OT) 4485A, and was to be comprised of 36 officers and 162 airmen. It had been SAC's desire that the 99th ADS be placed on an installation which did not have a bomber rotation or reflex mission. This was not achieved, however, since Lakenheath did possess such a mission.

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- 201. Staff Memorandum 205-14, "(U) Release of Special Category Classified Military Information to Foreign Nationals," 19 Feb 1958, Exhibit 73.
- 202. GO 15, Hq SAC, 17 Mar 1958, Exhibit 1, Chapter I.
- 203. Progress Report #1 on SAC Programming Plan 4-58, (S) SAC and RAF Atomic Coordination Program, D/Compt to CofS, Hq SAC, 11 Apr 1958, Exhibit 74.

The unit was to be composed of nine satellite detachments at RAF stations to provide maintenance for and custody of the American atomic weapons to be used by the V-Force.

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²⁰⁴ The detachment personnel were also to be responsible for security of the ADS area. This would be accomplished by having a U. S. technician on duty in the control room where he would have burglar alarms to all structures in the area, control panels for the electronic fence surrounding the area, and closed-circuit television surveillance of the access gate. Command and control of all the U. S. detachments was to be exercised through the parent unit, which would consist of approximately ²⁰⁵ 10 officers and 20 airmen.

The 7th Air Division formulated and submitted construction plans to SAC for facilities to support the 99th ADS. The plans, which were approved at this headquarters, provided guidance to the British who were to build and pay for all facilities. A lack of funds at Air Materiel Command (AMC) caused some difficulty in equipping the squadron and detachments, however, SAC requested USAF assistance and AMC subsequently accepted

204. Ibid.

205. Amendment #2 to SAC and Bomber Command RAF Atomic Coordination Program, (Short Title: (U) Programming Plan 4-58), D/Plans, Hq SAC, 16 Apr 1958, Exhibit 75.

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funding responsibility for these units. By the end of
June assembly-trained officers and other officers for the
squadron had either been assigned or programmed. Airmen
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requirements had been programmed by SAC.

Mutual Use of Facilities. During a February RAF -
SAC Atomic Coordination Conference, Air Vice Marshal S. O. Bufton,
senior staff officer, RAF Bomber Command, recommended that an
examination be made as to the possibilities of SAC and
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RAF forces using the same UK base facilities. The
subject was broached again in April when Air Marshal Sir
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Harry Broadhurst stated that the coordination program
was an important step toward preserving the peace but that,
"We may, however, be able to go further in publicly demonstrat-
ing our coordination through the mutual use of facilities
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and bases in peacetime." The CINCSAC agreed that this area

* Air Officer Commanding (AOC), RAF Bomber Command.

206. Progress Report #2 on SAC Programming Plan 4-58, (S) SAC and
RAF Atomic Coordination Program, D/Compt to CofS, Hq SAC,
18 Jul 1958, Exhibit 76.
207. Ibid.
208. Conference Report, "(U) Strategic Air Command - Bomber Com-
mand Coordination Program," to CINCSAC, CINC Bomber Comd,
(B-65181), 26 Feb 1958, Exhibit 66.
209. Memorandum for D/Plans, from Col E. C. Hardin, "(U) SAC-RAF
Mutual Use of Facilities," (B-66408), 20 May 1958, Exhibit 77.

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should be explored, and General Blanchard in May discussed the subject with Air Vice Marshal Bufton. The RAF and Bomber Command were cognizant of the mutual benefits to be gained from joint use of the facilities; however, they did not indicate an urgent desire to proceed too far with such arrangements. It was suggested that an exchange of servicing and operational details be completed, and that elements of the two forces (SAC and Bomber Command) exercise each others bases in the UK on a limited basis. General Blanchard considered this desirable since the Bomber Command bases in the UK were, in some respects, considerably better than those occupied by SAC. He recommended that a committee be established to exchange the necessary technical and operational details in order to assure a reasonable EWP capability and to allow limited UK peacetime exercises. The General indicated that the political problems associated with joint use of facilities outside the UK were fully appreciated by the RAF.

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210. Ibid.

211. TWX, personal from Maj Gen W. H. Blanchard, to Maj Gen C. B. Westover, CNWC 681, "(U) SAC-RAF Mutual Use of Facilities," 13 May 1958, Exhibit 78.

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This headquarters concurred in the establishment of a committee to exchange information, but desired that discussions be confined to joint use of SAC and Bomber Command bases within the UK only.²¹²

Questioning the advantages of mutual use of facilities, Colonel E. C. Hardin, Jr, Chief, Plans Division, Directorate of Plans, Headquarters SAC, pointed out that such joint use would not improve SAC's retaliatory or deterrent capability, would undoubtedly be adverse financially to the U. S., and would tend to complicate SAC operations in the UK.²¹³ He noted that the deterrent potential of the V-Force, without a quick reaction capability, was little or no greater than an equal number of TAC bombers in the UK. In addition SAC would continue to plan for unilateral action and cover all first priority targets, regardless of the RAF capability. Thus, the RAF capability would not influence the overall SAC force or targeting requirements. While an agreement with the RAF on joint usage would contribute to improved U.S. - UK relations, extreme caution was indicated to insure that the capability of the UK REFLEX

212. TWX, personal from Maj Gen C. B. Westover, to Maj Gen W. H. Blanchard, DPL 5927, "(U) Mutual Use of Facilities," 19 May 1958, Exhibit 79.

213. Memorandum For D/Plans from Col E. C. Hardin, Jr, "(U) SAC-RAF Mutual Use of Facilities," (B-66408), 20 May 1958, Exhibit 77.

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Forces would not be undermined and that SAC would not be
placed in an adverse future position.²¹⁴ The joint use of
facilities could be used by the RAF as leverage to regain
permanent possession of certain SAC-UK bases for themselves.²¹⁵

In the latter part of May General Blanchard noted that
the Bomber Command was rapidly developing high yield weapons
of their own, and that their weapon/aircraft ratio was be-
coming quite favorable. Relative to this situation, was
the fact that the American weapons on RAF stations could
be utilized by SAC aircraft provided the aircraft had the
ability to get on and off of the Bomber Command airfield.
He recommended that SAC not only have available the technical
and operational information, but actually schedule a few
aircraft in and out of the two commands' (SAC and Bomber
Command) bases.²¹⁶

214. Ibid.

215. Ibid.

216. Ltr, Maj Gen W. H. Blanchard to Maj Gen Robert H. Terrill,
23 May 1958, Exhibit 70.

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Crashes. On 13 March 1958 two B-47s were lost resulting in the deaths of five crew members. A B-47B of the 379th Bomb Wing, Homestead AFB, Florida, was observed to break up in flight after a normal takeoff. Examination of the wreckage revealed that the airplane had broken into four major components prior to impact: left wing, right wing, forward fuselage, and aft fuselage. All four crew members died in the crash. The accident investigation board determined the primary cause of the accident was structural failure. Disintegration of the airplane occurred because of failure of the wing center section just inboard of the buttock line 45 splice plates at approximately buttock line 35, left wing.⁹⁶ In another accident at McConnell AFB, Kansas a TB-47B assigned to the 3520th Combat Crew Training Wing, Air Training Command (ATC) disintegrated in flight, scattering parts over a wide area around the city of Tulsa, Oklahoma. Two crew members bailed out successfully, one failed to eject and was fatally injured. The conclusion of the board investigating the accident was that the primary cause of the crash was failure of the bottom skin plates of the left wing at leftbutt line 35. The crack

96. History of 379th Bomb Wing, Mar 1958, pp 17-18, filed in OIH, Hq SAC.

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or cracks existing in the aft plate of the lower wing skin at left butt line 35 at the time of the fatal flight were contributing causes of the accident.⁹⁷

Eight days following the twin accidents another B-47 was lost. This airplane, belonging to the 306th Bomb Wing was flying a low level "Pop-Up" mission over Avon Park Bombing Range, Florida, when it disintegrated during a pull-up. Four crew members died. Although the accident was ruled pilot error, because the pilot physically induced positive forces on the aircraft which in combination with other forces exceeded the structural limits of the aircraft, it was significant that the failure occurred at the right wing center box section. The crew was one of the best qualified in the entire wing to perform low level maneuvers.⁹⁸

The "Milk Bottle" Program. Plans were immediately forthcoming to establish the parameters* of the problem and to

* A constant having a series of particular and arbitrary values, each value characterizing a member in a system or family of expressions, curves, surfaces, functions, of the like.

97. AF Form 14, TAB 1, "History of Flight," in file Report of Major Accident TB-47B 50-013, 13 Mar 1958, filed in Safety Div, D/Ops, Hq SAC; "Conclusions of Investigation and Analysis," TAB B, same file.

98. History of 306th Bomb Wing, 1 Feb-31 Mar 1958, pp 19-20, filed in OIH, Hq SAC.

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