

CHAPTER II

COMMAND CONTROL COMMUNICATIONS

Introduction

(U) Command control communications systems, both pre- and post-attack, are discussed in this chapter, as well as surveillance and warning systems for detection of hostile aircraft and missiles. Command relationships and general management items are also considered.

Relationships and Management

SAC/DCA/DCS Relationship

(U) As directed by OSD in early 1968, SAC continued to study its relationship with the Defense Communications Agency (DCA) and the Defense Communications System (DCS) during FY-69. The first of three six-months evaluations required by JCS had covered January-June 1968, and no major dissatisfaction was reported with the DCA service provided under its new charter.<sup>1</sup> This was repeated in the second report, for July-December,<sup>2</sup> and for the January-June 1969 period the feeling was that "the effectiveness of the DCA/DCS has improved considerably since the revised charter was issued."<sup>3</sup> SAC maintained its position, however, that the DCA should not be established as a separate command.

(U) The JCS summaries of the reports of the various commands did not include specific conclusions or recommendations, but they did note, as SAC had, that there was an apparent improvement in effectiveness of the DCA.<sup>4</sup> It was anticipated that the final JCS summary and proposed changes, if any would be received in early FY-70.

Submission of CC3P

(S) The Consolidated Command, Control, and Communications Program (CC3P) for FY-68 through FY-75, was submitted to USAF in January 1969. New subjects included were the support requirements for satellite basing of strategic aircraft alert force, and for Program 949, the synchronous satellite system for detection of missile launches and nuclear detonations. Planning for the pre-attack telephone and teletype systems recognized the gradual reduction in their use concurrent with

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was followed in January 1969 by a Systems Management Directive (SMD) that assigned to SAC the management responsibility for improving the computer program for the SAC Automated Command Control System (Project SEED CUPS).<sup>29</sup> This was to be accomplished in accordance with SAC's system improvement plan that had been published in September 1968.<sup>30</sup>

(S) The next PCR was sent to OSD in May 1969 and covered several items. One was a request to provide additional civilian spaces to permit phase-out of contractor maintenance and programmer support for the SACCS system; another restored modifications funding inadvertently deleted in a PCD; a third confirmed an earlier decision to procure input keyboards for SACCS in FY-71; and a fourth recommended provision for automatic interface between SACCS and a space sensor program.<sup>31</sup> No action had been taken on this PCR by OSD by the end of June.

#### Post-Attack Systems

(S) It was expected that the pre-attack systems would fail during a nuclear attack since they, in most cases depended upon vulnerable land lines. Five fully operational systems provided trans- and post-attack communications: the airborne command post with communications relay aircraft, survivable low frequency communications, emergency rocket communications, airborne launch control, and the northern area ultra-high frequency radio net. Systems still in development were airborne data automation and communications satellite.

#### Existing Systems

(S) Composed of 14 airborne command post and 18 communications relay aircraft, the post-attack command control system (PACCS) provided a highly survivable means of maintaining control of the SAC force in event of incapacitation of the SAC underground command post and related communications facilities.<sup>32</sup> One command post aircraft from Offutt AFB was continuously airborne with a SAC general officer and a battle staff of ten to serve as the alternate command post in emergency. Emergency auxiliary command post aircraft were on 15 minute alert at Barksdale, March and Westover; communications relay aircraft were on 15 minute alert at Grissom AFB, Ind, Ellsworth AFB, SD, and Minot AFB,

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North Dakota. When launched they could provide line-of-sight communications with the National Command Authority (NCA), and between CINCSAC and the numbered air forces, the SAC strike force, and the North American Air Defense Command headquarters.<sup>33</sup>

(S) These aircraft had access to the pre-attack systems by ultra-high frequency (UHF) radio from five ground grouping stations. One of these, at Red Oak, Iowa, was phased out during the year and replaced by a station at Fairview, Kansas (see map, following page). At Fairview Independent Communications Inc., a subsidiary of JBN Telephone Company, installed equipment in an AT&T facility which gave SAC access to the hardened transcontinental AT&T cable.<sup>34</sup> Service at Fairview started on 15 April. Services continued to be duplicated for 90 days at Red Oak. On 15 July, it was discontinued.\*<sup>35</sup>

(S) The survivable low frequency communications system (SLFCS), Program 487L, was a radio net for transmission of low data rate teletype:\*\*<sup>36</sup>

(U) . . . to provide a survivable means of teletype communications that can be used during or after a nuclear attack on the United States to:

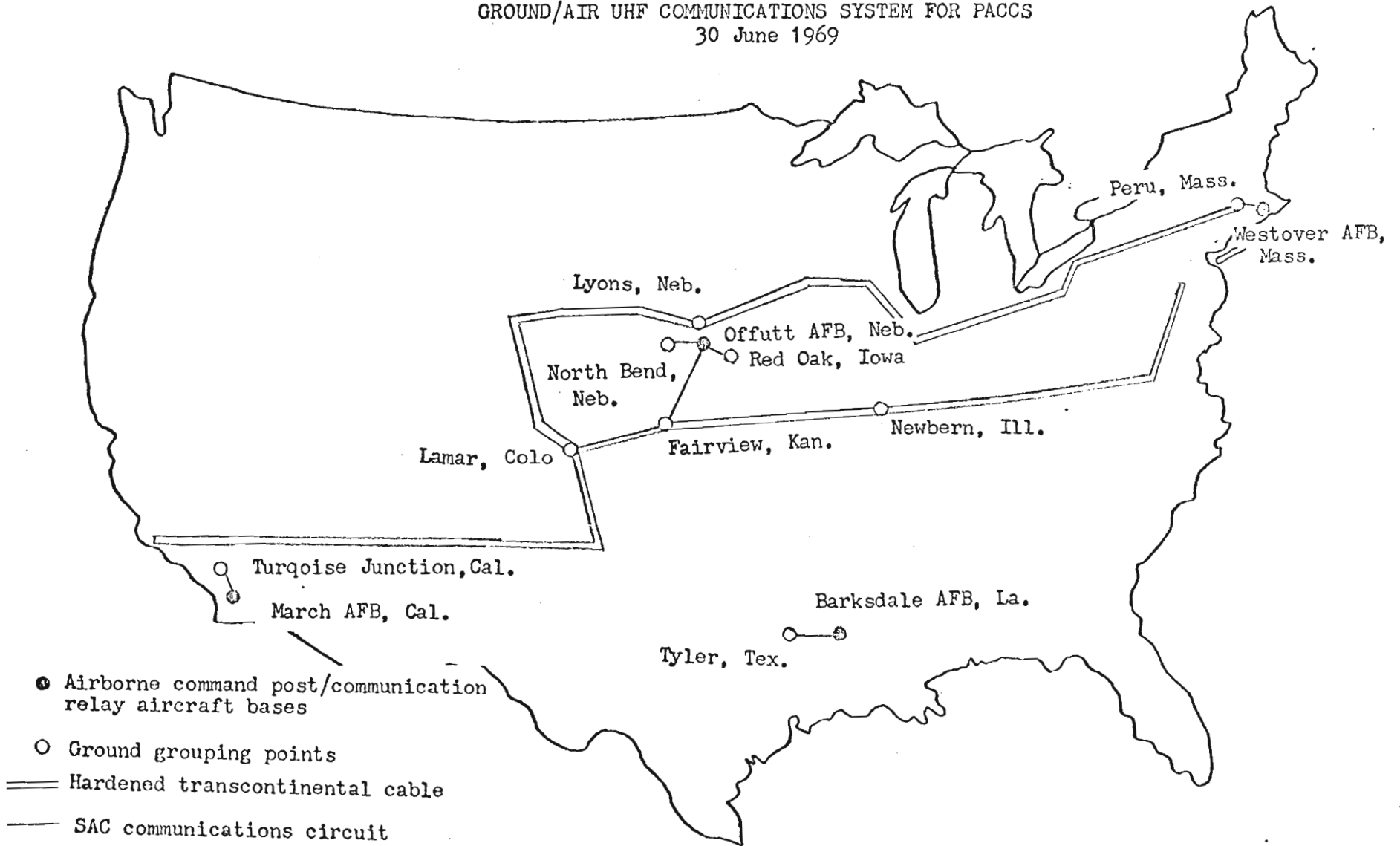
(S) Pass between SAC and the JCS that information required to announce that an attack is in progress, to initiate execution of the Emergency War Order, and for continued communications thereafter.

(S) Pass from CINCSAC to its numbered Air Force, air bases, missile launch control centers and the northern area UHF relay stations that information required to initiate and to control the execution of SAC war plans.

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- \* (S) On 15 April service at the Fairview installation was accepted on a 30-day conditional period; on 12 May it was extended to 15 June, and then again extended to 15 July. At that time the facility was conditionally accepted with an antenna deficiency.
- \*\* (U) Teletype transmission rates were to be 5 baud (7 words per minute) under the worst propagation conditions; 50 baud (71 WPM) under normal conditions; 75 baud (107 WPM) when conditions were most advantageous.

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GROUND/AIR UHF COMMUNICATIONS SYSTEM FOR PACCS  
30 June 1969



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(S) The completed SLFCS would consist of a ground system and an airborne system. The ground portion had two transmit and receive sites. Initial operational capability (IOC) of one, at Hawes Radio Relay Annex, California, was attained 31 May 1968,<sup>37</sup> and at the other, at Silver Creek, Nebraska, on 6 September 1968.<sup>38</sup> There were 206 receive only sites, at the locations shown on the map on the following page.<sup>39</sup> All receivers had been installed and the system was being tested, and full operational capability was anticipated in late 1969.

(S) The airborne portion was to consist of installation of AN/ARC-96 transceivers, with accompanying trailing wire antenna mechanism, in the 14 airborne command post EC-135Cs. The transceivers had been installed in six aircraft by the end of June 1969.\* Category I\*\* tests were completed in the spring of 1968, and Category II tests started in August on the trailing wire antenna. The antenna was 28,000 feet long, and on 10 flights varying lengths of it either broke off and were lost or were cut loose due to mechanical malfunction of the reeling device.<sup>40</sup> On 16 December, 27,000 feet of stranded steel cable antenna had to be cut away over the Pacific. After this loss tests were stopped for the time being. Then, in January 1969 an engineering change proposal (ECP) was prepared which would modify the reeling system slightly.<sup>41</sup> This was in addition to attempts to reduce the size and weight of the antenna.<sup>42</sup> At the end of FY-69 no solution to the antenna problem had been found.

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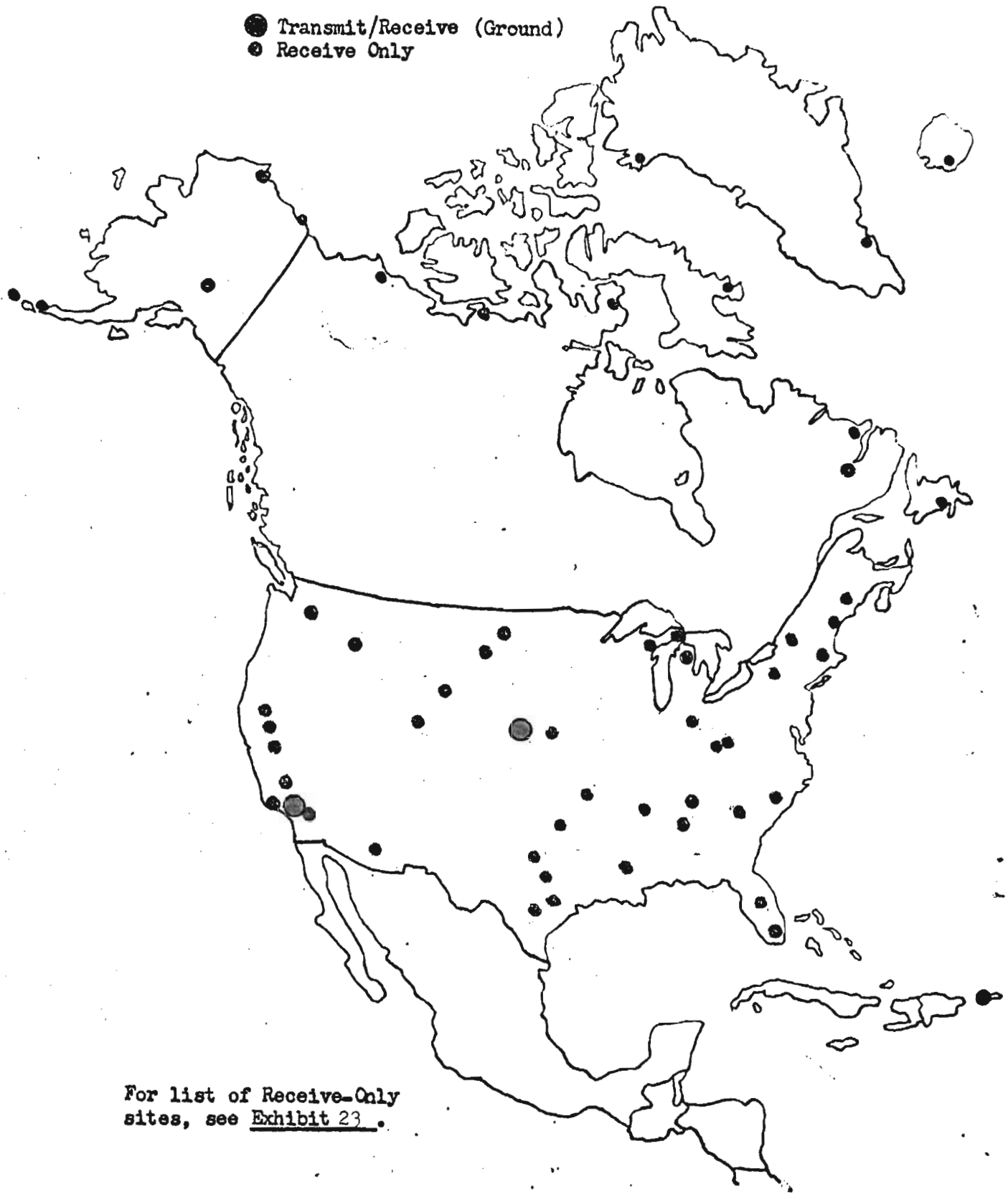
\* (S) EC-135C aircraft, tail numbers 62-3581, 62-3584, 63-8046, 63-8047, 63-8050, and 63-8054.

\*\* (U) Category I tests were primarily for subsystem development and evaluation. Category II covered system development and evaluation, and generally included integration of subsystems into a completed system with tests in as near an operational configuration and environment as practicable. Category III completed testing, and was conducted by the using command with technical support provided by AFSC or AFLC. AFR 80-14, 24 Feb 67.

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SURVIVABLE LOW FREQUENCY COMMUNICATIONS SYSTEM (487L)  
30 June 1969

- Transmit/Receive (Ground)
- Receive Only



For list of Receive-Only sites, see Exhibit 23.

(~~S~~-NOFORN) The emergency rocket communications system (ERCS) consisted of six Minuteman missiles, each equipped with a recorder and two 1000 watt UHF transmitters. The missiles were dispersed in Minuteman Wing IV at Whiteman AFB, Missouri. A 30 to 90 second message could be inserted into the recorder after receipt of weapons expenditure authority. The missiles would then be launched individually into northeast or northwest trajectories. Play back of execution orders would start approximately 30 seconds after launch and continue during the missile's trajectory. The initial execution would consist of one ERCS missile in each trajectory, with the remaining sorties available for retransmission of the initial directive or for other orders. This system, which became operational in January 1968, was designed to provide CINCSAC the capability to pass execution orders to aircraft and missile forces under the most adverse conditions.<sup>43</sup> Supporting communications facilities were direct landline circuits, the SAC telephone net, PACCS UHF air/ground and HF/SSB radio facilities.<sup>44</sup>

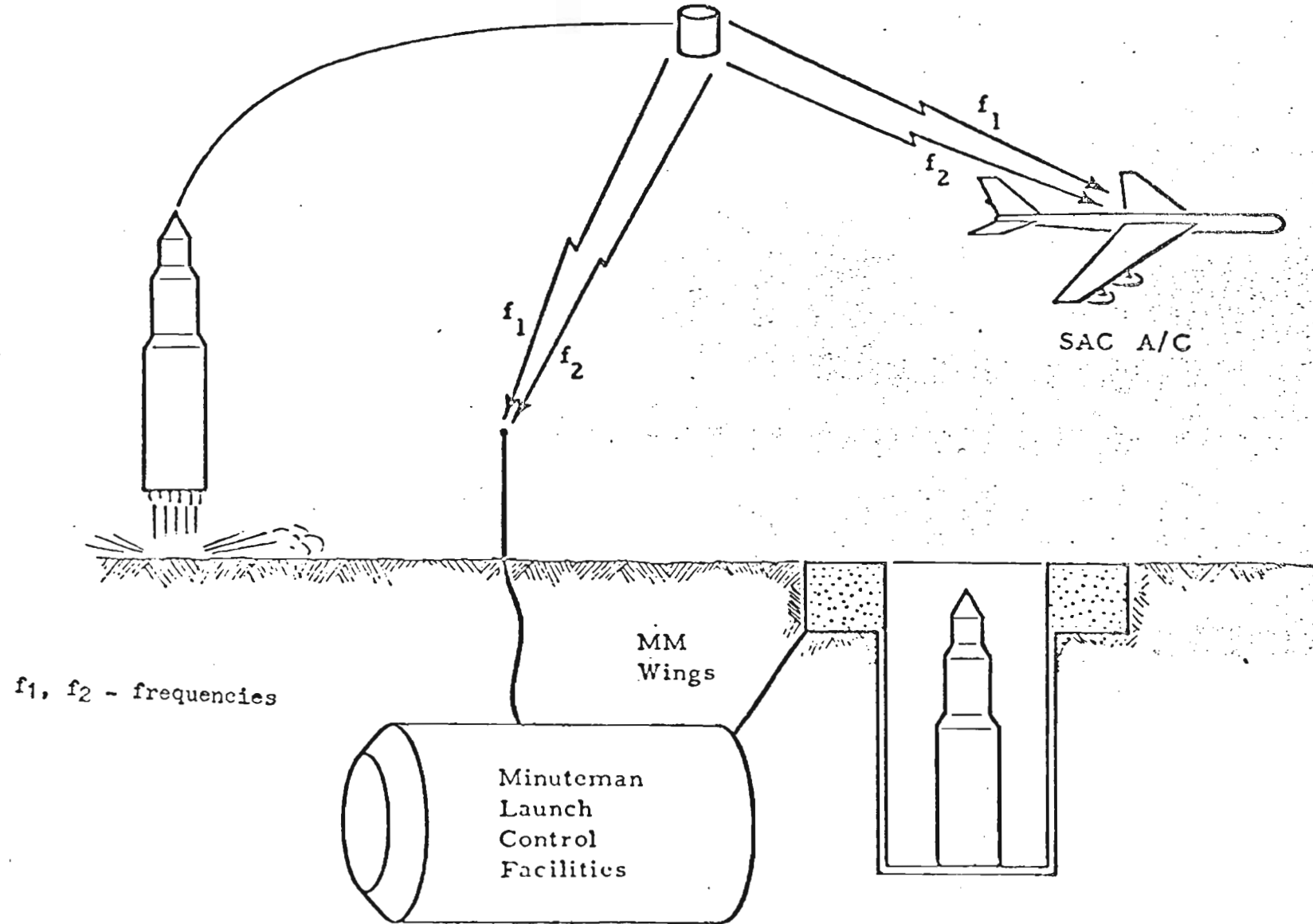
(~~S~~) A new Systems Management Directive (SMD) was issued in May 1969, replacing one published in December 1967.<sup>45</sup> It terminated acquisition of the system and turned over management responsibilities to the operator (SAC) and the support command (AFLC).<sup>46</sup> The exception was survivability and vulnerability studies which continued to be monitored by ESD.

(~~S~~) The survivability/vulnerability analysis, and development and installation of protective hardware was programmed in three phases. Phase I, which included a study by Gulf General Atomic Corporation, was completed 1 July 1968<sup>47</sup> and resulted in a technical plan for corrective action. In mid-August USAF approved the plan and funded Phase II, investigation of hardware vulnerability and

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\* (U) The May 1969 SMD directed that the system program identification of 494L be dropped, and the name Emergency Rocket Communications System (ERCS) be used instead.

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494L, EMERGENCY ROCKET COMMUNICATIONS SYSTEM  
COMMUNICATIONS CONCEPT



Source: Rpt, "494L Capabilities  
Applicable to the MEECN," 1 Oct  
68, Bendix Corporation

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SPECIAL HANDLING REQUIRED  
NOT RELEASABLE TO FOREIGN NATIONALS  
OR THEIR REPRESENTATIVES



determination of the degree of survivability required.<sup>48</sup> In addition, \$1.5 million was included in the FY-70 budget for Phase III development, acquisition, and installation of hardware.<sup>49</sup> The PCR requesting funds for FY-70 through FY-75 for testing, hardening, and requalification of the payloads was prepared in early 1969 and sent to OSD on 12 May.<sup>50</sup> No reply had been received by the end of June.

(S) Problems were encountered with the ERCS communications payload when the four authorized spares proved to be inadequate. Complicating this was expiration, with no immediate renewal, of the repair contract with Bendix Corporation in July 1968.<sup>51</sup> Thus, from 1 July through 9 August, when an open end contract was negotiated, no repair work was accomplished, and on 15 August only five, instead of the required six payloads were on alert. It was estimated that repair of the five units would be completed in October and would exhaust the \$155,000 available in the temporary contract.<sup>52</sup> Another contract was negotiated, in addition to one purchasing two extra recorder/processors and one oscillator in an attempt to reduce repair time. Later in the year the forming of a Specialized Repair Activity (SRA) at Ogden Air Materiel Area was approved and funded. Repair activity would be transferred from Bendix to Ogden by the end of 1970.<sup>53</sup>

(S) The JCS considered both ERCS and SLFCS as part of the MEECN. The MEECN was under the direction of J-6 (Communications-Electronics), JCS, but the technical, engineering, and support responsibilities for the individual systems remained with the owning command, which was SAC in these two instances. This net would be activated if during or after attack both the JCS Alerting Net (JCSAN) and the Emergency Message Automatic Transmission System (EMATS) were disrupted. Other systems that would be included in this emergency net were the Navy's low frequency facilities and their LORAN C secure teletype net.\* Any

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\* (S) The LORAN C net served the Poseiden/Polaris fleet; the low frequency net was world-wide, see map, "Low Frequency Transmit Facilities Available for Minimum Essential Emergency Communications Network, 1967," Hist. of SAC, Jul-Dec 67, Chap II, p. 72.

or all of these nets could receive messages from the JCS for relay which would result in preemption for the period required to transmit after which they would revert to control of the owner.<sup>54</sup>

(S) SAC was directed to prepare an operational concept and procedural plan for use of the SLFCS within MEECN, to bring up to date a 1967 plan. Both ERCS and SLFCS were then added to the emergency action plan of the JCS for July 1969.<sup>55</sup>

(S) The airborne launch control system (ALCS) provided a method of launching the missile fleet by signal from the airborne command post in event missiles were isolated from their launch control centers through communications failures. ALCS became operational in February 1968, and the acquisition phase was terminated in mid-1969 when a Systems Management Directive transferred operational control to SAC and logistic support to AFLC.<sup>56</sup> At the end of June, 850 of the 1000 Minuteman missiles were configured for launch by this method, and the remaining 150, all at Grand Forks AFB, would be modified by mid-1970.<sup>57</sup>

(S) There were four tests of the ALCS during FY-69, with three successes and one failure. The three successful launches of Minuteman missiles from Vandenberg AFB occurred on 18 April, 28 May,<sup>58</sup> and 18 June 1969.<sup>59</sup> The failure occurred on 12 March, and was caused by a Boeing/Autonetics master tape error during test Giant Fist 3.<sup>60</sup>

(S) The Green Pine (488L), northern area UHF ground/air transceiver system, was composed of 14 stations. Thirteen were located along 70° north latitude, from Alaska to Iceland, with the fourteenth station at Mt. Limbara, Sardinia.\* The primary use of this system would be to relay the "Go-Code" to SAC aircraft launched under positive control procedures. These stations could receive both ERCS and SLFCS broadcasts for retransmission.

(S) In 1968 SAC proposed modifying the system by adding automatic touch tone switches at Eielson AFB, Alaska, and Goose Bay AB,

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\* (U) A map of the Green Pine circuitry is included in Hist of SAC, Jul-Dec 67, p. 49.

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Labrador, with retermination of the circuits from these remote sites and the three CONUS control centers through the two new switches. The JCS approved the modification in principle, provided it increased speed of service at a reduced cost. However, increased use of the DCA/DCS circuitry was to be considered as an alternative.<sup>61</sup> A PCR was submitted by USAF in June 1968 concerning the switches,<sup>62</sup> and in October the OSD noted that "a DCA study on the use of Autovon switches by the SAC network may result in a reduction in the above investment (\$0.7M) for switches through PBD action."<sup>63</sup> At the end of FY-69, no decision had been made on changes in this system, and the study was still underway to determine capability of DCA/DCS to support it.<sup>64</sup>

#### Future Systems

(S) During the fiscal year research and study was being conducted on three systems for future use: airborne data automation, advanced airborne command post, and use of UHF/SHF satellites.

(S) The airborne data automation (ADA) program was designed to provide a data processing and display system in a command post aircraft. The program objective was to provide specifications for an operational airborne system that could be used, not only by SAC but also by other airborne command posts, i.e., those belonging to CINCEUR, CINCPAC, and the National Command Post (NEACP).

(S) In 1967 the Radio Corporation of America (RCA) had been awarded a contract to supply the Variable Instruction Computer (VIC) for ADA.<sup>65</sup> An EC-135C (#62-3584) was chosen for the modification, delivered to Oklahoma City Air Materiel Area (OCAMA) in September 1968, there to receive the basic kit that would permit installing of the computer and peripheral equipment. On 20 January 1969 the EC-135C went to Hanscom Field, Massachusetts, to receive the equipment. Following a successful test at the RCA plant, movement of the components from the plant, started on 3 February and their installation in the aircraft at Hanscom was completed on 7 March. On 17 March the aircraft was removed from the hangar and connected to power sources for testing. All computer components were found to operate properly.

## CHAPTER III

## OPERATIONS AND TRAINING

Introduction

(S) Conventional B-52 bombing operations in Southeast Asia continued unabated throughout Fiscal Year (FY) 1969. There were strong indications, however, that the Arc Light sortie rate had reached a plateau and would be reduced in the future. SAC's historic commitment to maintain the strategic aircraft force as a credible element of the U.S. nuclear deterrent remained unchanged. For the first time since SAC began conventional operations in Southeast Asia, the command's contingency commitment began to seriously impinge on its primary role of nuclear deterrence. The resulting competition for available resources caused SAC to look for ways to provide COMUSMACV with effective B-52 support at a lower sortie rate. Insofar as the strategic nuclear mission was concerned, the essential questions were resources available, readiness of the force, and ability to complete the mission.

ResourcesAircraft

(S) The primary strategic aircraft in the SAC inventory were B-52 and B-58 bombers, supported by KC-135 tankers. During FY 1969, B-58 and KC-135 authorizations remained at 78 and 615, respectively; and the inventory did not change appreciably.<sup>1</sup> Early in the fiscal year, the authorized B-52 force declined from 510 to 450 in accordance with the retirement schedule for B-52 C through F units established by the Secretary of Defense in December 1965 and modified in December 1967.<sup>2</sup> The reduction in the B-52 inventory was less immediate and less severe because of the Air Force policy to retain with active units all B-52s which had not exceeded service life limitations (based on accumulation of "E" hours, a measurement of structural fatigue or aircraft stressed service life).<sup>3</sup> The actual SAC B-52

inventory was 579 at the end of December 1968, and 532 in early July 1969.<sup>4</sup>

(S) The basic Air Force policy concerning retention of unrestricted B-52s had been established in April 1967 by the Chief of Staff, General J. P. McConnell.<sup>5</sup> He then approved retaining as non-operational active (NOA) assets all unrestricted B-52s rendered surplus by the B-52 unit phase out schedule. These aircraft would be readily available for replacing or augmenting the B-52D force if necessitated by prolonged continuation of the conflict in Southeast Asia and the Arc Light mission. Initially, the NOA program included retention through FY 1968 of aircraft phasing out in FY's 1967 and 1968. General McConnell later directed continuation of the program as long as it was feasible.<sup>6</sup>

(S) Technically, the NOA program began on a modest scale in 1967 following the inactivation of one F and two E squadrons during the January-March quarter. The unrestricted aircraft were absorbed by the remaining nine E and F squadrons, which were assigned 154 B-52s at the end of 1967.<sup>7</sup> This number was not significantly greater than the authorized unit equipment (UE) (135) for nine squadrons plus 10 percent for command support. (By definition, aircraft assigned in excess of authorized UE plus 10 percent were NOA assets.)

(S) The Strategic Air Command lost three more B-52 squadrons during the first half of 1968. As initially planned in 1967, these would also have been E and F units; and the Air Staff considered storing some of the unrestricted surplus aircraft with active B-52G units. (The number of B-52 E and F models requiring NOA storage increased and the number of active E and F units decreased.) Mixing unlike models complicated training, supply, maintenance, and alert management; and Headquarters SAC studied alternatives which would permit storing NOA aircraft with units equipped with the same models.<sup>8</sup> Before these issues affecting management of the B-52 force in FY 1968 were settled, the Office of the Secretary of Defense (OSD) made

a decision concerning the program for the next fiscal year which further complicated matters.

(S) Late in 1967, the OSD ordered inactivation of four B-52 squadrons in the first instead of the final quarter of FY 1969.<sup>9</sup> Thus, in order to provide a foundation for the actions required in FY 1969, it became necessary to revise plans governing inactivation of the three B-52 squadrons during the last two quarters of FY 1968. The programmed loss of seven B-52 squadrons in nine months (January-September 1968) required a major reshuffling of aircraft, units, and missions. This loss would leave SAC with 30 B-52 squadrons: 17 equipped with B-52 G and H models and 13 with C through Fs. Unless some changes were made, the latter force of 13 squadrons would consist of 11 B-52 C/D dual-mission squadrons and two E/F crew training squadrons in the 93d Bombardment Wing. Except for the 93d Wing, there would be no active B-52 E or F units with which to store like model aircraft in non-operational active status during FY 1969.<sup>10</sup> As a result, Headquarters SAC recommended, and Headquarters USAF approved in early 1968, a program which would reduce the number of C/D squadrons to eight,<sup>11</sup> assign 45 D models to the Southeast Asia (SEA) pipeline (in practice, to other C/D units), maintain two F squadrons at the 93d Wing, re-equip the 22d Wing (two squadrons) with E models, and retain E models at the 96th Wing.<sup>12</sup> The result was a reduction of three B-52 C/D squadrons (without detracting from the contingency mission) instead of three E/F squadrons during FY 1968.

(S) These actions late in FY 1968 provided the necessary foundation for accelerated unit inactivations in FY 1969. In July 1968, B-52 operations ended at Homestead, Travis, and Altus AFBs. Rarely were the B-52 models headed for storage or the wing designators slated for inactivation actually located at the bases being vacated. The aircraft assigned to NOA status at March (22 BW), Dyess (96 SAW), and Castle (93 BW) were B-52Es from Altus (11 SAW) and Wright-Patterson (17 BW) and B-52Fs from Mather (320 BW). The B-52Hs from Homestead

and the B-52Gs from Travis replaced the Es at Wright-Patterson and Fs at Mather, respectively. The wing designators at Homestead and Travis also moved, to still other bases: the 19th Wing replaced the 465th Wing designator at Robins and the 5th replaced the 450th Wing designator at Minot.

(S) The fourth B-52 squadron originally slated for early inactivation was located at Carswell AFB, Texas. Since Carswell remained a SAC base and was scheduled to assume another B-52 mission in the near future, Headquarters SAC preferred to maintain a continuous operation there. The Air Staff approved a SAC proposal to phase out bomber and tanker operations at Homestead and bomber operations at Travis and Altus sufficiently early in the July-September 1968 quarter to save enough funds to continue the Carswell B-52F squadron on a modified operating basis until mid-1969.<sup>13</sup>

(S) As a result of these actions, the programmed loss of seven and the actual loss of six B-52 squadrons during the first nine months of 1968 had little immediate effect upon the number of B-52s assigned. The SAC B-52 inventory dropped only from 588 in early January 1968 to 579 in December 1968.<sup>14</sup> Most aircraft assigned in excess of the UE authorization were accounted for by 33 B-52Es in NOA storage at March and Dyess, 33 B-52Fs in NOA storage at Castle and Carswell, and 45 B-52Ds in the SEA pipeline.<sup>15</sup>

(S) Originally, the explicitly stated purpose of the NOA storage program had been to insure that aircraft would be readily available for contingency operations in the event structural fatigue induced by Arc Light missions restricted the operation of B-52Ds. In May 1968, the Oklahoma City Air Materiel Area (OCAMA) completed a review of B-52D structural fatigue, based upon current sortie rates and usage in Southeast Asia. Accumulation of "E" hours by Arc Light aircraft was considerably less than previously calculated, and OCAMA extended the estimated B-52D service life by two years.<sup>16</sup> Thus, availability of B-52 Es and Fs for possible contingency requirements became less urgent. Another reason for keeping bombers readily available was the possibility that

the new Administration in Washington might authorize additional B-52 C through F squadrons. By early April 1969, this appeared unlikely because Headquarters USAF could not secure approval for retaining the existing 13 B-52 C/F squadrons in FY 1970. Since the need for an extensive NOA program was not well defined, and in view of the cost of the program, SAC Headquarters recommended that the NOA B-52Es at Dyess and March be delivered to the Military Aircraft Storage and Disposition Center (MASDC) at Davis-Monthan AFB.<sup>17</sup> Headquarters USAF concurred,<sup>18</sup> and 33 NOA B-52Es were delivered to the MASDC from the 22d and 96th Wings during May and June 1969.<sup>19</sup>

(S) Headquarters SAC intended to keep sufficient B-52Fs in NOA status at Castle AFB to support continuing crew training requirements, but most of the B-52Fs in NOA at Carswell had earlier been scheduled for retirement concurrently with the conversion of the 7th Wing. At the end of June 1969, the 7th Wing was in the process of equipping with B-52 C/D models. In July 1969, it would replace the 454th Bombardment Wing as one of the primary contingency units (eight squadrons). The 454th Wing and its bombardment squadron would be inactivated on 2 July 1969 (from a practical standpoint, the Columbus unit would be the fourth and final B-52 squadron inactivated in FY 1969). The Strategic Air Command would then have 30 squadrons: 17 equipped with G and H models, 8 with C/D, 3 with E, and 2 with F models. Upon completion of the Carswell conversion program, the 45 B-52Ds in the SEA pipeline and 20 B-52Fs in NOA storage at Castle would account for the bulk of B-52s assigned in excess of the basic authorization (450 UE). The actual SAC B-52 inventory on 3 July 1969 was 532, down from 579 in December 1968.<sup>20</sup>

(S) Also complementing the B-52 fleet were air-to-surface and decoy missiles. Twelve B-52 squadrons (ten G and two H) were assigned a total of 445 ADM-20 Quail decoy missiles on 3 July 1969. Also on that date, the SAC inventory included 311 AGM-28B Hound Dog air-to-surface missiles, each capable of carrying a 1.1 megaton warhead. The AGM-28Bs were assigned to 17 B-52 squadrons (ten G, six H, and one D).<sup>21</sup>



Rated Personnel Shortages

(S) An Air Force wide shortage of rated personnel created serious difficulties for the command during FY 1969. The shortage had existed since 1965, and had its roots in the Vietnamese War, but SAC had not been seriously effected until mid-1967. In order to fully understand the situation that existed in July 1969, it is necessary to go back several years and review the actions that led up to this dilemma.

(S) For many years SAC had enjoyed better than 100 percent manning in the combined operations staff and combat crew force. That situation had changed in 1965, when the Air Staff said it could guarantee SAC no more than 100 percent of its authorized positions in the crew force and 93 percent in the operations staff. The crew shortage steadily worsened during 1966. Faced with the problem of distributing inadequate crew resources among the various commands, the Air Staff established a Pilot Requirements Study Group. This group, headed by Major General Jack Catton, was to study all aspects of the crew shortage problem and make recommendations to the Air Staff for its long term solution. A new system of priorities based on mission requirements was established. Some activities, because of the importance of their missions, were given first priority. Combat units operating in Southeast Asia were to be manned at 100 percent, as was the SAC crew force. The shortages, therefore, had to be absorbed by non-priority requirements. Staff rated requirements were not accorded a priority by the Air Staff. These positions were averaged among the various commands according to their approved authorizations. At the time, this average was roughly 85 percent. SAC felt this was adequate as a minimum to satisfy mission requirements.<sup>22</sup>

(S) Early in 1967 the USAF Military Personnel Center notified SAC that it would be required to provide 150 experienced pilots per month for Southeast Asia replacements.<sup>23</sup> Together with normal losses, the command could expect to lose approximately 200 pilots per month. SAC would receive replacements in the form of undergraduate pilot trainees and pilots returning from SEA. The program was based on the

these indications of concern about the cost of avionics, the future of the manned strategic bomber appeared brighter than at any time since the demise of the B-70.

Launch Survivability

Ground Alert Status

(S) Although the number of aircraft weapon systems was important, the ability of a sizable portion of the force to respond to tactical warning was more so. Since 1957, the Strategic Air Command had maintained bombers on ground alert, loaded with nuclear weapons and able to launch within available warning time.

(S) Revisions D (July-December 1968) and E (January-June 1969) of Single Integrated Operational Plan-4 (SIOP-4) governed alert and EWO commitments during FY 1969. The major influences on the actual number of aircraft committed by SAC to the Joint Strategic Target Planning Staff (JSTPS) for SIOP alert were the specified 40 percent alert rate, existing resources and force structure, and management of the Arc Light operation. The B-58 alert commitment remained at 32, where it had been since 1 July 1967. However, the B-52 commitment generally continued to decline--from 194 in Revision C to 170 in Revision D, and then up slightly to 176 in Revision E. The reduction of 24 sorties on 1 July 1968 represented the alert commitment of four 15 UE squadrons, and reflected the impending inactivation of three squadrons in July 1968 and the formal designation of an additional (fourth) squadron as an Arc Light cadre unit.<sup>95</sup> Effective 1 January 1969, SAC reverted to the three-cadre Arc Light operation, and so an additional squadron was available for commitment to SIOP-4E.

(S) The four cadre units exempted from home station alert commitments during Revision D were the 70th, 92d, 454th, and 509th Wings from July through September 1968; and the 454th, 99th (30 UE--double cadre), and 306th Bombardment Wings from October through December 1968. The three Revision E cadre units were the 306th and 99th (double cadre) Bombardment Wings during January-March 1969; and the 70th, 92d, and 509th Wings during April-June 1969. Because of the scope of the combat

crew training program at Castle AFB, the two B-52 squadrons of the 93d Bombardment Wing also continued to be relieved of the requirement to maintain an alert force.

(S) Inactivation of three B-52 squadrons in July 1968 left SAC with 31 B-52 squadrons (30 officially programmed plus the B-52F squadron at Carswell) during FY 1969. As discussed earlier, B-52 squadrons exempted from alert commitments totaled six (four Arc Light and two training) during Revision D and five (three Arc Light and two training) during Revision E. The remaining squadrons (25 in Revision D and 26 in Revision E) were each assigned six alert sorties. Addition of the requirement for 20 B-52 alert sorties at Andersen AFB, Guam, brought the total B-52 SIOP alert requirement to 170 during Revision D and 176 during Revision E.

(~~TS-FRD-NOFORN~~) The following table illustrates the number of strategic bombers, intercontinental ballistic missiles (ICBMs), and nuclear weapons required for the day-to-day alert posture in Revisions D, E, and F of Single Integrated Operational Plan-4. These revisions became effective on 1 July 1968, 1 January 1969, and 1 July 1969, respectively. Since some changes occurred on 1 October 1968 and 1 April 1969, the table reflects similar statistics for those mid-points of Revisions D and E. Also included for comparative purposes are the theoretical yields of all SAC alert weapons required by the SIOP.<sup>96</sup>

(S) In contrast to the declining B-52 alert requirement, the KC-135 alert commitments increased slightly during FY 1969. The actual figure changed each quarter and ranged between 198 and 205 KC-135s required on alert.<sup>97</sup> In comparison, the KC-135 alert commitment had been 192 during the April-June 1968 quarter.<sup>98</sup> The authorized tanker force did not change (615 UE), and the increased alert resulted primarily from a modification in the SAC policy concerning commitments of reconnaissance support tanker units.

(S) During FY 1968 (Revision B and C of SIOP-4), the three reconnaissance support squadrons (the 70 ARS, 306 ARS, and 903 ARS with a total of 55 UE aircraft) were not required to maintain any tankers on

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SIOP alert. This policy changed following General Nazzaro's decision to give the 7th Bombardment Wing at Carswell AFB a SIOP assignment in Revision D. Since planning for Revision D had assumed inactivation of the 7th Wing's B-52F squadron, the Carswell tanker squadron had been committed to supporting the Reflex alert operation at Goose AB. In order to free the 7th Air Refueling Squadron's tankers for continued support of the parent wing's B-52s, the DCS/Operations, Lieutenant General A. C. Gillem II, directed that the reconnaissance support units provide six KC-135 alert sorties for the Goose Reflex operation.<sup>99</sup> The 903d Air Refueling Squadron at Beale AFB was not affected; but beginning 1 July 1968 the 70th and 306th Air Refueling Squadrons each maintained three Reflex alert tankers at Goose AB. (The total reconnaissance tanker SIOP commitment was six alert and 16 follow-on sorties.) This policy continued in Revision E, but the two squadrons each maintained three alert tankers at their home bases of Little Rock and McCoy.<sup>100</sup>

(S) Exemptions from ground alert commitments continued for the two KC-135 crew training squadrons (93 ARS and 924 ARS with a total of 30 UE aircraft) and the Arc Light refueling support units. The latter force varied in number and was generally composed of squadrons or elements of squadrons assigned to the TDY B-52 Arc Light cadre units. The primary Arc Light support tankers represented forces of 50, 45, 30, and 35 UE, respectively, during the four quarters of FY 1969.<sup>101</sup> The changing size of this force caused the fluctuation in KC-135 SIOP alert commitments.<sup>102</sup>

(S) Because of runway construction at Robins AFB,<sup>103</sup> alert bombers and tankers were relocated to other bases from early July to early September. Six alert B-52s were maintained at Loring AFB, and six alert KC-135s at Pease AFB.<sup>104</sup> Shifts in aircraft models and equipment resulting from B-52 inactivations in July 1968 also resulted in the Mather B-52G and the Wright-Patterson B-52H alert sorties being temporarily maintained (partially or wholly) at Travis and Homestead from 1-22 July 1968.<sup>105</sup>

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(U) In addition to providing operational commanders with information concerning the vulnerability and survivability of existing systems, the knowledge gained would have a direct influence upon the design of future systems. In early 1969, the Director of Defense Research and Engineering, the Air Staff, and AFSC all emphasized the importance of considering nuclear vulnerability and hardness characteristics in early planning for new systems.<sup>212</sup> In February 1969, prior to dissemination of this policy, SAC and AFSC met and agreed upon the degree of resistance to all nuclear effects which should be incorporated in the design for the Advanced Manned Strategic Aircraft (AMSA).<sup>213</sup>

(U) As directed by Headquarters USAF, the Strategic Air Command supported the Defense Atomic Support Agency (DASA) in its nuclear weapons effects research. Of considerable interest to SAC was DASA's work on the vulnerability of aircrews to nuclear effects.<sup>214</sup> The Strategic Air Command also monitored the Air Staff's efforts to establish more precisely B-52 non-nuclear vulnerability and survivability.<sup>215</sup>

#### Training and Capability

(S) The basic objective of the previously discussed plans and programs for ground alert, satellite basing, SEAGA, and improved aircraft positioning was to insure aircraft pre-launch survivability under conditions of either tactical or strategic warning. To a considerable degree, the subsequent effectiveness of a SAC sortie depended upon the ability of the combat crew. Although general concepts, policies, and requirements were outlined in SAC Manual 50-8, the unit had the ultimate responsibility for maintaining an effective aircrew training program.

#### Unit EWO Evaluations

(U) For many years, Headquarters SAC had regarded the no-notice operational readiness inspection test (ORIT) as the best single evaluation of the EWO capability of a tactical organization. Within the limits of peacetime operations, an ORIT provided a thorough evaluation of an individual unit. Analysis of the results of all exercises also provided

an important indicator of command-wide capabilities and trends. Results of these evaluations were instrumental in establishing or validating reliability and accuracy standards of particular weapon systems for SIOP planning. In addition, these mission-oriented tests also provided a valuable measurement of SAC training policies and unit training programs.

(U) Headquarters SAC could direct an ORIT either in conjunction with or independently of an operational readiness inspection (ORI)--a complete inspection of a unit and all mission support areas. The actual flight mission was the crucial part of the test; but, at the least, the visiting inspector general checked the following on a separate ORIT:<sup>216</sup>

Evaluate COCO and support team exercises.

Test alert crews on air weapons, tactical doctrine, electronic warfare signal recognition, launch execution procedures, and related EWO procedures.

Evaluate EWO effectiveness by rating the unit's ORIT flight mission.

Evaluate unit aircraft generation.

Inspect marginal and unsatisfactory areas reported during the previous inspection to determine adequacy of corrective action. . . .

Test unit controllers and positive control custodians.

(U) Unless specifically exempted, all combat-ready SAC tactical units were continuously vulnerable for an operational readiness inspection and usually received at least one inspection annually. Just as an ORIT could be conducted independently of an operational readiness inspection, so might a unit undergo an ORI without an operational readiness inspection test. In the first place, all tactical units were not vulnerable for an ORIT. Exempted during FY 1969 were reconnaissance units (wings and elements), the primary B-52/KC-135 crew training organization (93d Bombardment Wing), and units directly engaged in combat operations in Southeast Asia.<sup>217</sup> Temporary exemptions of 60 days following completion of a move were granted to units involved in redeployment or relocation. Headquarters SAC might also waive the ORIT requirement for other units for valid operational reasons.<sup>218</sup>

(U) Headquarters SAC also continued to conduct a series of related evaluation missions which were not rated by the inspector general. Originated in 1961 and initially called Bar None, these exercises were nicknamed Buy None beginning in January 1968.<sup>219</sup> Bombardment units planned these missions in accordance with the requirements of the ORIT/ORI manual; and the flight mission profile of a particular unit at a given time was identical for an ORIT and a Buy None exercise. The SAC Inspector General scheduled and executed all ORIT and Buy None exercises on a no-notice basis; but an inspection team from higher headquarters was not required for the latter. The wing commander was authorized to make decisions and provide guidance normally furnished by the inspector general.<sup>220</sup>

(c) Although not specifically outlined in applicable manuals, a general SAC policy that each bombardment unit would receive two EWO evaluations annually had been in effect since 1965. This requirement could be satisfied by completion of two ORITs or one ORIT and one Buy None exercise. Headquarters SAC generally planned to have each bombardment unit accomplish either an ORIT or a Buy None exercise every six months.<sup>221</sup> The command more nearly achieved this goal during the two semiannual cycles of FY 1969 than it had during the January-June 1968 period.

(c) The vulnerability periods for the semiannual ORIT/Buy None cycles extended from 1 August through 15 December and from 1 February through 15 June. One of SAC's three Radar Bomb Scoring (RBS) Express trains was designated as the primary ORIT/Buy None bomb scoring site, and remained in position during each semiannual vulnerability period. Bombardment units could not use this site for normal training missions until they had completed an EWO evaluation exercise. If a unit failed and was re-evaluated during the same cycle, the mission was flown against another RBS Express location. During the last half of 1968, the primary ORIT/Buy None low level route was Oilburner 53, with a scoring site located near Newcastle, Wyoming. During the February-June 1969 cycle, it was Oilburner 59, with a scoring site located near Eunice, New Mexico.

(S) Primarily to accommodate Arc Light cadre units, Headquarters SAC extended the vulnerability period for the July-December cycle to mid-January 1969. The 70th, 92d, and 509th Wings returned from a six-month Arc Light tour in October 1968, and were scheduled for another one in April 1969. Despite the difficulties of frequent contingency tours, Headquarters SAC considered it imperative that the cadre units remain in the inspection system.<sup>222</sup> Each of these units actually did accomplish an ORIT in late December 1968 (almost as soon as they were vulnerable--60 days after return of the last crew). Headquarters SAC also extended the vulnerability of another unit, the 416th Bombardment Wing, because of its participation in the Old Rover AGM-28B launch program. The 416th Wing accomplished in January 1969 a Buy None exercise which was credited to the July-December 1968 series.

(U) The portions of a bombardment ORIT or Buy None exercise which determined passing or failing (critically scored items) were weapons delivery capability and bombing reliability. The former was the only critical item when the "whole mission concept" was adopted in January 1967; but Headquarters SAC reinstated bombing reliability at the beginning of 1968.<sup>223</sup> The score for weapons delivery capability was based on the number of required weapons (represented by all scheduled aircraft) reliably "delivered." Bombing reliability was determined by the number of scored releases which met accuracy standards. During the July-December 1968 cycle, the passing standards for weapons delivery capability--which had been raised slightly at the beginning of 1968--remained at approximately 75 percent for B-58 units, 77 percent for B-52 wings with AGMs, and 79 percent for B-52 units without AGMs.<sup>224</sup> For the cycle beginning 1 February 1969, SAC Headquarters developed more sophisticated scoring tables for determining B-52 weapons delivery capability. The basic change involved consideration of the number of AGMs in the total weapon requirement. (The result was that the passing standard was eased slightly for a B-52 AGM unit with a high proportion of AGMs to total weapons.)<sup>225</sup> The minimum standard for bombing reliability remained at approximately 85 percent for all B-52 and B-58 units.<sup>226</sup>



(S) Nineteen B-52 wings and both B-58 units completed a total of 23 operational readiness inspection tests during the July-December 1968 cycle. Four B-52 units failed the tests--the 5th, 22d, and 92d Wings because of unsatisfactory bombing reliability, and the 2d Wing because of unsatisfactory scores in both weapons delivery capability and bombing reliability.<sup>229</sup> The 5th and 22d Wings successfully completed reevaluations during the period (these rechecks were flown on Oilburner 57 low level route).<sup>230</sup>

(S) The B-52 units effectively "delivered" 1295 of 1565 weapons required on the 21 ORIT missions for an overall weapons delivery capability percentage of 82.7. The B-52 bombing reliability percentage was 89.6 (1147 of 1280). Results in both of these critical categories were lower than during the January-June 1968 cycle. However, overall results in B-52 enroute effectiveness (95.2 percent) and AGM-28 reliability (78.8 percent) were slightly better than during the previous period.<sup>231</sup>

(S) Both B-58 wings successfully passed ORITS during the July-December 1968 cycle. Combined results were 84.5 percent for weapons delivery capability, 89.7 percent for bombing reliability, and 93.9 percent for enroute effectiveness.<sup>232</sup> These results were slightly below those achieved on EWO evaluations during July-December 1967 (the B-58 units did not accomplish an ORIT or Buy None during January-June 1968).<sup>233</sup>

(S) Four B-52 wings completed Buy None exercises during the July-December 1968 cycle (including the 416th Wing's January 1969 mission). One unit, the 28th Bombardment Wing, failed the test because of an unsatisfactory score in weapons delivery capability. Overall results were comparable to those achieved on B-52 ORITs during the period.<sup>234</sup>

(S) During the February-June 1969 cycle, 18 B-52 units and both B-58 wings completed operational readiness inspection tests. Overall results were better than during the previous cycle, and there was only one failure--the 17th Bombardment Wing because of unsatisfactory bombing

reliability.<sup>235</sup> Command-wide results for the 18 B-52 ORITs were 90.6 percent in weapons delivery capability (1099 of 1213 required weapons) and 94.9 percent in bombing reliability (921 of 970).<sup>236</sup>

(S) Three B-52 wings also completed Buy None exercises during the February-June 1969 evaluation cycle. There was one failure: the 22d Wing demonstrated an unsatisfactory bombing reliability.<sup>237</sup> During the previous cycle, the 22d Wing had also failed an initial ORIT because of unsatisfactory bombing reliability, but it had successfully accomplished a re-evaluation.<sup>238</sup>

(S) During the August-December 1968 cycle, all but four of the SAC bombardment organizations completed an EWO evaluation (ORIT or Buy None). Exceptions were the 93d Wing, relieved because of its crew training commitments; the 454th Wing, which was an Arc Light cadre unit for most of the July-December period; and the 99th and 306th Wings, which were Arc Light cadre units beginning 1 October 1968. Except for the interference of the weather, the participation rate would have been similar for the February-June 1969 cycle. Units which were not scheduled for an EWO evaluation were the 70th, 92d, and 509th Wings, which were Arc Light cadre units beginning 1 April 1969, and the 93d Wing. In addition, ORITs were initiated for both the 99th and 320th Wings; but the tests could not be completed because of severe weather on the low level route. However, the only vulnerable bombardment unit which did not complete an EWO evaluation during either cycle of FY 1969 was the 99th Wing.

#### Aircrew Professionalism

(U) By the fall of 1968, results of ORITs, trends in evaluations by the 1st Combat Evaluation Group,<sup>239</sup> and the increase in aircraft accidents and incidents all indicated deficiencies in aircrew performance. In an effort to reduce the factor of crew error, Major General S. W. Wells, SAC DCS/Operations, established a special committee to review command policies and directives which influenced aircrew performance.<sup>240</sup>

(U) A basic problem was personnel instability caused by attrition and requirements of the conflict in Southeast Asia. The combination of constant crew member changes and heavy unit workloads increased the

(S) Short Trip XIV Alpha consisted of a series of test flights to certify a full internal load of eight 2000 pound Navy mines for B-52 delivery. The Air Force Special Weapons Center, using its own aircraft, conducted tests at White Sands Missile Range between February and December 1968 which led to certification for B-52 delivery of eight MK-55, MK-39, MK-25, and MK-56 naval mines.<sup>332</sup>

(S) In the Short Trip IX series, SAC completed continental United States testing of a new B-3C Bomb Release Intervalometer Control (BRIC) unit (Short Trip IX Uniform) and the A-6 rack release mechanism (Short Trip IX Victor) in March 1969.<sup>333</sup> The Third Air Division subsequently began evaluation of the new items on Arc Light missions. A Short Trip IX Sierra<sup>334</sup> mission in November 1968 involved release of MK-82s filled with Minol high explosive, and Short Trip IX Tango identified September and October 1968 tests of M-117 bombs with MAU-103A/B fins.<sup>335</sup>

(S) During FY 1969, the Strategic Air Command also completed a comprehensive series of close support bombing tests (Short Trip IX Romeo),<sup>336</sup> and a related evaluation of the Marine Corps' TPQ-10 ground directed bombing system (Short Trip XXII).<sup>337</sup>

#### Contingency Operations

(S) SAC combat operations in Southeast Asia during FY 1969 were characterized by a stability unknown during the previous three years. Since its inception in mid-1965, the Arc Light operation had increased steadily, reaching a peak of 1800 sorties per month in February 1968. From that time through the end of June 1969, the sortie rate remained the same. The number of B-52s assigned to the Arc Light force actually decreased slightly. The elaborate and detailed justification for 1800 sorties required by OSD made it apparent that the operation had reached a plateau. But while the size of the Arc Light operation remained relatively unchanged, the importance of the operation to COMUSMACV seemed to increase. The B-52 contingency force was used more and more to counter enemy ground threats. The November 1968 bombing halt shifted action away from the I Corps Tactical Zone and the DMZ to the infiltration routes and the enemy threat to Tay Ninh Province and Saigon. Strikes tended to be more concentrated and more closely integrated with COMUSMACV's

overall strategy. SAC developed several new tactics to increase the flexibility of its forces and to provide COMUSMACV with more concentrated striking power. The basing of additional bombers at U Tapao made possible a small reduction in the number of B-52s assigned to Southeast Asia. At the same time, the bombing halt in North Vietnam reduced both the tactical air refueling requirement and the number of KC-135s. At the end of June 1969, SAC operations in SEA continued relatively unchanged, but an economy-minded administration committed to reducing the level of combat in South Vietnam, made it unlikely that the next year would pass without major changes in the operation.

Organization and Location of Forces

(S) There were no changes in the basic command structure of the Strategic Air Command in the western Pacific during FY 1969. The size and scope of the operation remained relatively stable for the first time since SAC forces entered the conflict. The Paris peace negotiations, a new administration in the White House, and a changing tactical situation in South Vietnam, however, combined to exert considerable pressure for change in the future. SAC forces in the western Pacific remained under the operational control of the Third Air Division, located at Andersen AFB, Guam. The 4133d Bomb Wing (Provisional), also located at Andersen, controlled part of the Arc Light bomber force. This force was comprised entirely of TDY personnel commanded by the senior TDY bomb wing commander. Bomb wings sent TDY from the United States were augmented by individual crews and aircraft from units based in the continental U.S. The 4252d Strategic Wing, located at Kadena AB, Okinawa, controlled a second element of the Arc Light bomber force. In addition, KC-135 tankers from Kadena provided refueling support for the Arc Light force and PACAF operations in northeast Asia. The 82d Strategic Reconnaissance Squadron, also located at Kadena, fulfilled SAC reconnaissance requirements in the western Pacific. Finally, the 4220th Air Refueling Squadron, based at Ching Chuan Kang AB, Taiwan, supported KC-135 radio relay (Combat Lightning) operations for PACAF in Southeast Asia. This squadron also provided refueling support for Arc Light and

Young Tiger operations. The 4258th Strategic Wing, located at U Tapao Airfield, Thailand, controlled the Young Tiger refueling operation. The Young Tiger force provided PACAF with refueling support for its tactical operations in Southeast Asia. The 4258th also controlled the third element of the Arc Light bomber force.<sup>338</sup>

(S) The remaining Third Air Division subordinate units were the 3960th Strategic Wing and the 27th Communications Squadron, both located at Andersen AFB, Guam. The 3960th provided the Division headquarters and the 4133d Bomb Wing with base support, and the 27th Communications Squadron provided communications support. Two operating locations, OL 20 at Bien Hoa and OL 40 at Da Nang in South Vietnam, provided additional communications support for the Arc Light force. In addition to the Third Air Division units, Headquarters SAC maintained a SAC ADVON at Tan Son Nhut Airfield, Saigon. SAC's First Combat Evaluation Group (1CEG) maintained seven operating locations in Southeast Asia and one in Korea to provide Combat Skyspot support for PACAF tactical aircraft and the Arc Light force. The self-contained ground directed radar bombing systems at these sites provided tactical aircraft with an all-weather bombing capability, and supplemented the B-52 Radar Bombing System with an important and versatile bombing option.<sup>339</sup>

(S) By mid-year 1968 the sortie rate had been fixed, at least until the end of the year, at 1800 sorties per month. COMUSMACV, supported by CINCPAC and the JCS in turn, seemed determined to continue the 1800 rate until the tactical situation in South Vietnam improved measurably. It was less certain whether Kadena would continue as a launch base for the Arc Light force. Opposition to basing the B-52s on Okinawa was growing, both on that island and in Japan. In approving the 1800 sortie rate the Secretary of Defense had noted that it would be in the national interest to remove the B-52s from Kadena as soon as possible. Responding to a directive from the Secretary, the JCS began a review of the feasibility of supporting 1800 sorties from Guam and U Tapao alone.<sup>340</sup> When questioned on the subject, SAC replied that with some additional construction at U Tapao, cyclic bombing, and

a reduction in the number of tankers there, 990 sorties could be flown from U Tapao with 35 B-52s and the remaining 810 could be flown from Guam.<sup>341</sup>

(S) The JCS supported the retention of Kadena as a launch base for the Arc Light force and forwarded a memorandum to the Secretary of Defense to that effect. They pointed out, however, that it would be feasible to fly 1800 sorties from Guam and U Tapao alone with 35 B-52s at U Tapao (plus up to four rotational aircraft) and 70 at Guam. The Ching Chuan Kang tanker force would have to be increased from 15 to 21 in that event.<sup>342</sup> Regardless of whether two bases or three were used, all the interested agencies had agreed that the increase at U Tapao should be approved. SAC had pressed for approval of the additional B-52s at the earliest date. Twenty-five B-52 parking stubs were available by this time, and the ten additional bombers could use the KC-135 ramps temporarily. SAC felt the maximum number of sorties should be flown from the Thai base because of the lower cost.<sup>343</sup>

(S) Despite the JCS recommendation, approval for the ten bomber increase at U Tapao was slow coming. Before the aircraft could be brought in, permission had to be obtained from the Thai government to raise the aircraft and manpower ceilings. Permission also had to be obtained to increase the number of KC-135s at Ching Chuan Kang to make up for those displaced at U Tapao.<sup>344</sup> Initial notification of approval came on 11 July when the Secretary requested the United States Embassy at Bangkok to ask for Thai approval.<sup>345</sup> On 21 August the Secretary notified the JCS of his approval of the U Tapao increase;<sup>346</sup> but it was a month before Ambassador Unger was able to present the plan to the Thai government.<sup>347</sup> The Thais agreed to the increase, but requested that the whole matter be kept confidential to avoid drawing public attention to the deployment.<sup>348</sup> The increase in tankers at Ching Chuan Kang proceeded without difficulty. Additional aircraft were sent to that base in September, raising the total there from 15 to 21 KC-135s.

(~~S - AF EYES ONLY~~) In the meantime the Air Staff had notified SAC that U Tapao should be limited to 25 B-52s until additional parking stubs had been prepared.<sup>349</sup> This unexpected development created

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a number of new problems. On 30 August the JCS had directed that the ten B-52s be deployed to Thailand as soon as diplomatic clearance was received, and SAC had planned accordingly.<sup>350</sup> The rotation of the Arc Light force, planned for 10 September through 11 October, was tailored to fit this new basing plan. If it was delayed, considerable shifting of manpower, supplies, and equipment would result. In addition, operating costs would be higher than anticipated, and should Kadena be lost to the Arc Light operation, it would not be possible to maintain 1800 sorties per month. These and other considerations caused SAC to request that the Air Staff reconsider the early deployment.<sup>351</sup> General J. D. Ryan, Air Force Chief of Staff, replied that SAC's concern over the early deployment to U Tapao was understandable, but the Air Staff had studied the matter and decided it would be undesirable to operate loaded B-52s from the ramp area. He felt the protection of revetted stubs was necessary. At the same time, he pointed out that 35 B-52s flying 900 sorties per month from U Tapao with no increase in facilities would demonstrate the ability to maintain 1800 sorties from two bases and would probably result in the loss of Kadena as a B-52 base. It might also result in the cancellation of additional construction at U Tapao.<sup>352</sup>

(S) Construction on the first five additional revetted stubs was expected to be complete by 1 January. This would allow 30 B-52s plus four rotational aircraft to operate from U Tapao. The last five stubs would be complete on 24 February. Thirty nine bombers, including four rotational aircraft, could then operate safely from the Thai base.<sup>353</sup> There were no plans, however, to exceed a total of 35 B-52s at U Tapao. Thirty bombers plus the rotational aircraft would provide 900 sorties per month. Only if Kadena was lost to the Arc Light operation would more aircraft be needed at U Tapao. Still more construction would be necessary then, such as additional servicing facilities, fuel storage, and a second runway.<sup>354</sup>

(S) By early December most of the new parking stubs were complete. SAC reported that accelerated construction had made it possible to

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begin moving aircraft by mid-December.<sup>355</sup> The first increment of B-52s arrived on 27 December, and three days later the movement was complete. Including rotational aircraft, the total number of B-52s based at U Tapao was 36 on 1 January.<sup>356</sup> By 11 January all the new stubs, a total of 38, were complete. Almost all essential construction was finished by the end of the month.<sup>357</sup> The Arc Light force at U Tapao began flying 900 sorties per month on 1 January, and actually flew 955 sorties by the end of the month.<sup>358</sup> Thus, with the additional aircraft at U Tapao, the Arc Light force was based as follows:<sup>359</sup>

U Tapao	-	36 B-52s	-	900 sorties
Andersen	-	51 B-52s	-	540 sorties
Kadena	-	18 B-52s	-	360 sorties

(S) The move to U Tapao enabled SAC to decrease slightly the number of B-52s in Southeast Asia. Initially, SAC planned to return five B-52s, leaving a total of 100 in SEA, but because of strong objections from Third Air Division this number was reduced to three aircraft leaving 102 B-52s in theater. At the same time, the Arc Light air refueling requirement decreased, making it possible to further reduce the number of tankers at Kadena. The tanker force there averaged 28 (down from an average of 33) during December and January, and was dropped to an average of 24 tankers from February through the end of June 1969.<sup>360</sup>

(S) In February the Air Staff notified SAC that the question of removing the B-52s from Kadena had been raised again. SAC was asked to look into the possibility of continuing the 1800 sortie rate using only Andersen and U Tapao.<sup>361</sup> The answer was not too different from the one it gave to the same question in June 1968. It was possible, but only if additional resources were provided. Further, these additional resources would have to come from a smaller B-52 fleet. SAC estimated the impact on the SIOP would be the loss of 54 to 64 sorties. The two base operation would be more expensive, would require added construction at U Tapao, and additional tanker support. Using only the resources then available, the two bases could produce 1620 sorties per month. SAC strongly recommended that Kadena be retained as a

B-52 launch base.<sup>362</sup> Fortunately, these arguments proved effective, and Kadena was still being used at the end of FY 1969.

(S) One of the major problems associated with maintaining the 1800 sortie rate was the shortage of personnel to augment the four cadre wings. The B-52 C/D fleet was fully committed, with each of the eight wings alternating every six months between its home base and Southeast Asia. These units could provide no augmentees. The three remaining units committed to the contingency operation were not able to provide all the required augmentees. The planned elimination of four more B-52 squadrons in the first quarter of FY 1969, and the restriction on sending SEA returnees TDY before 60 days after their return aggravated the situation. One method chosen by SAC to ease this augmentee problem was a reduction in the number of cadre units from four to three. At the same time, the equivalent of one unit's personnel (less crews) would be sent PCS to Southeast Asia. This would reduce the number of TDY personnel required to about 150 maintenance personnel in addition to the crews.<sup>363</sup>

(S) The Air Staff authorized an additional 1213 PCS spaces for SAC units in Southeast Asia through the end of 1968, and SAC planned to fill the spaces by October 1968. Although the authorizations were only temporary, SAC expected to retain them if the 1800 sortie rate continued beyond 1 January 1969. These additional spaces would allow reducing the cadre units to three on 1 January 1969. The unit scheduled to rotate at that time would not be replaced.<sup>364</sup>

Contingency Force Capabilities

(S) Although 1800 sorties per month had been approved through the end of the year, this was not considered to be the final position. In approving the 1800 rate, the Secretary of Defense had said that B-52 sortie requirements would be reviewed within the next 60 days and periodically thereafter. He then directed the JCS to conduct a thorough study of the Arc Light operation and determine a permanent sortie rate.<sup>365</sup> The JCS study, a follow-on to an Arc Light study completed by the JCS on 23 May 1968, was to be as comprehensive as possible and provide a