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319th Bombardment Wing [H]

April - June 1970

(UNCLASSIFIED Title)

VOLUME I

Assigned to

4th Strategic Aerospace Division

Fifteenth Air Force, Strategic Air Command

Stationed at

Grand Forks AFB, North Dakota

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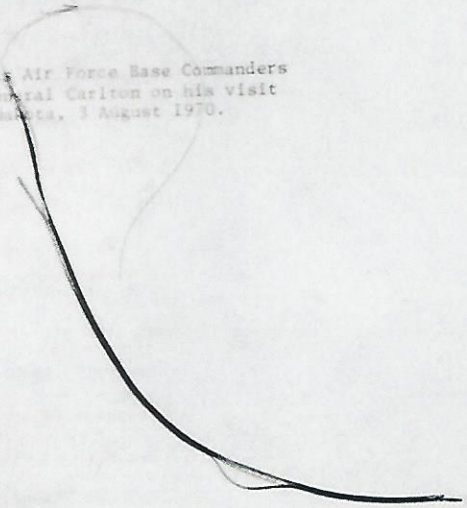
(U) This volume has been placed in downgrading Group 1, because it contains Restricted Data Material [pages 106-107]. The historian's analysis and consolidation of information from many sources, which individually may have lower downgrade provisions, results in a synthesis which may have wider implications than the material on which it is based. Therefore, paragraphs have been individually classified, but have not been marked with individual downgrade instructions, and all portions of this volume will be excluded from automatic downgrading.


106-60

LEFT TO RIGHT: Brigadier General Robert H. Gaughan, Commander 4th Strategic Aerospace Division, Grand Forks AFB, ND; Lieutenant General Paul K. Carlton, Commander, 15th Air Force; Colonel Paul Krauss, Commander 321st Strategic Missile Wing, GFAFB/ND; Colonel SAMUEL G. TAYLOR, JR, 319th Bomb Wing (H) Commander, GFAFB, ND. T-39 jet transport behind commanders.



Grand Forks Air Force Base Commanders welcome General Carlton on his visit to North Dakota, 3 August 1970.

FOREWORD

(U) I created this history, my second solo attempt, in the midst of a flurry of activities. In July and August the wing received a new commander, DCO, DCM and "sergeant major". Immediately after the change of command ceremony/parade, before anyone could really get his bearings, an Operational Readiness Inspection hit the wing. Both the wing commander's and the DCO's secretaries had applied for leave in August, months before, and their absence was conspicuous during the many new peoples' attempts to produce outstanding results in the ORI. The wing's command section for administration nearly went wild for a three week period, and I joined in their mental state as my impending deadline approached. The weeks before the publication of this history will remain quite unforgetable.

(U) I need to thank, once again, many individuals in the wing for their unsparing cooperation during my work on this history. The people in both the DCO and DCM analysis "shops" -- Captain George E. Koster, Staff Sergeant Daniels, MSgt Trudell, Mrs Sally Newton -- began to expect almost daily visits from "the historian". Colonel Scannell (Assistant DCO), Colonel Stevens (Chief of Training), the command post personnel, Captain Moore in Management Analysis, -- all volunteered a great deal of their time and enthusiasm to the proper instruction

of an all-too-new historian.

(U) Most of all I wish to thank two individuals, my supervisor and friend, Staff Sergeant William J. Milam, and our outgoing wing commander, Colonel Samuel G. Taylor, Jr.

(U) Colonel Taylor first recruited me for this duty, and afterwards provided his support, personal encouragement, and also the public authority that always opened the necessary doors to historical information. Joe Milam continued his professional (and often humorous) assistance of my erratic work despite the fact that he was the only experienced NCO left in the commander's administrative section after the hectic change of command. Sergeant Milam is transferring to Southeast Asia in October of 1970; the next installment of this history will be, for me, a real "solo" work.

(U) I hope that readers of this history will forgive occasional oddities in syntax and sentence structure, remembering that at the time of its writing, the wing in Grand Forks was in a state of small-scale chaos. Once written, my life returns to normal, -- until the next "History".

Berkeley F. Fuller

BERKELEY F. FULLER
Historian

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C H R O N O L O G Y

INTRODUCTION

(U) The 319th Bombardment Wing [Heavy] shared in both the accomplishments and the difficulties of the Strategic Air Command's dual military defense role in spring of 1970. The bomb wing, located in northern North Dakota, maintained its traditional Emergency War Order alert posture, and at the same time, provided large numbers of augmentee combat crew personnel for temporary duty over the war in Southeast Asia.

(U) These two missions continued to be accomplished using an essentially meagre pool of human resources. The story of this wing's struggles to perform the command's "double tasks", to the best of its ability, makes up much of this history.

(U) As will be shown, despite numerous external and internal difficulties, 319th Bomb Wing people performed their essential and complex tasks with courage and creativity.

CHAPTER I

MISSION, ORGANIZATION, AND ADMINISTRATION

INTRODUCTION

(U) The opening chapter of this history concerns itself with the transfer of the 319th Bombardment Wing (H) from the command jurisdiction of Headquarters Second Air Force to that of Headquarters Fifteenth Air Force, which occurred on 1 April 1970.[1] While the wing's missions -- both major and minor -- and its organization continued unchanged, it was inevitable that 319th Bomb Wing people would notice and react to new operating procedures, and, at times yearn for more familiar administrative habits. The overall transition to the new numbered air force was orderly and smooth, however, and did not interfere with the wing's job.

MISSION

(U) The 319th Bomb Wing, one of two Strategic Air Command [SAC] combat units stationed at Grand Forks Air Force Base [GFAFB], North Dakota, maintained two primary and three secondary areas of mission responsibility; from April through June of 1970 these assigned mission tasks remained unchanged from previous periods.

(U) Traditionally this wing, a heavy-bombardment/air-refueling unit, had the primary task of keeping alert forces ready at all times to deliver a nuclear strike against distant enemy targets, within minutes of a properly executed and authorized Emergency War Order [EWO].[2] The bomb wing's alert system consisted of

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1. Special Order G-30, Headquarters SAC, 26 Feb 70, ex 3 .
2. SACM 23-3, "Directory of Strategic Air Command Organizations" 9 Apr 70, p.9-5, para. 9-8(b); p-9-14, para. 9-27(B); and, p. 9-15, para. 9-29(b).

carefully trained crews and their airplanes: combat-configured B-52H jet bombers and fully-fueled KC-135A jet tankers.

(U) Since June 1968, a second large-scale responsibility has challenged 319th Bomb Wing flight, training, and maintenance operations: its participation in the SAC projects that provide augmentee temporary duty (TDY) crews for air operations in Southeast Asia. These two projects ("Arc Light" for bomber crews, and "Young Tiger" for tanker crews) absorbed enough of the 319th Bomb Wing's energies and talent to be considered a major mission area. The wing's tanker crews and their aircraft were assigned additional remote temporary duties other than that in Southeast Asia; air-refueling crews flew a variety of missions for SAC and other commands at Eielson Air Force Base, Alaska, (b) (1) (A) [redacted]

Secondary Missions

(U) The other tactical organization at Grand Forks Air Force Base was the 321st Strategic Missile Wing; the two tactical units operated under the command jurisdiction of Fourth Strategic Aerospace Division (4SAD). All three of these organizations (bomb, missile wings, and division) received their administrative, supply, medical and other support from one centralized unit, the 804th Combat Support Group.

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* For a more detailed discussion of the 319th Bomb Wing's primary and support mission responsibilities, see 319BW History, January-March 1970, Vol. I, pp. 1-4.

(U) The 319th Bomb Wing continued to provide three essential services to these various other units on the base during this quarter. First, it ran a scheduled, daily helicopter service, carrying missile wing and security police crews to the 150 remote Minuteman sites surrounding the Grand Forks area. Secondly, the bomb wing maintained and flew two propellor-driven airplanes (a T-29 and a C-47) on a variety of scheduled and non-scheduled courier runs. The third wing support service was not a flying operation. Under the command of Colonel Mason, 319th Deputy Commander for Maintenance, the 59th Munitions Maintenance Squadron (59MMS) provided and maintained all munitions materiel used at Grand Forks Air Force Base.

(U) The conversion from Second to Fifteenth Air Force did not change the primary and secondary mission responsibilities of the 319th Bomb Wing. The duties of wing people and the working relationships between their missions continued, not significantly altered by the change-over in numbered air force command.

ORGANIZATION

(U) As the missions of the bomb wing continued unchanged, so did its essential organizational structure, again, despite the change in numbered air force.[3] The following page shows how the 319th Bomb Wing was organized to accomplish its mission goals.

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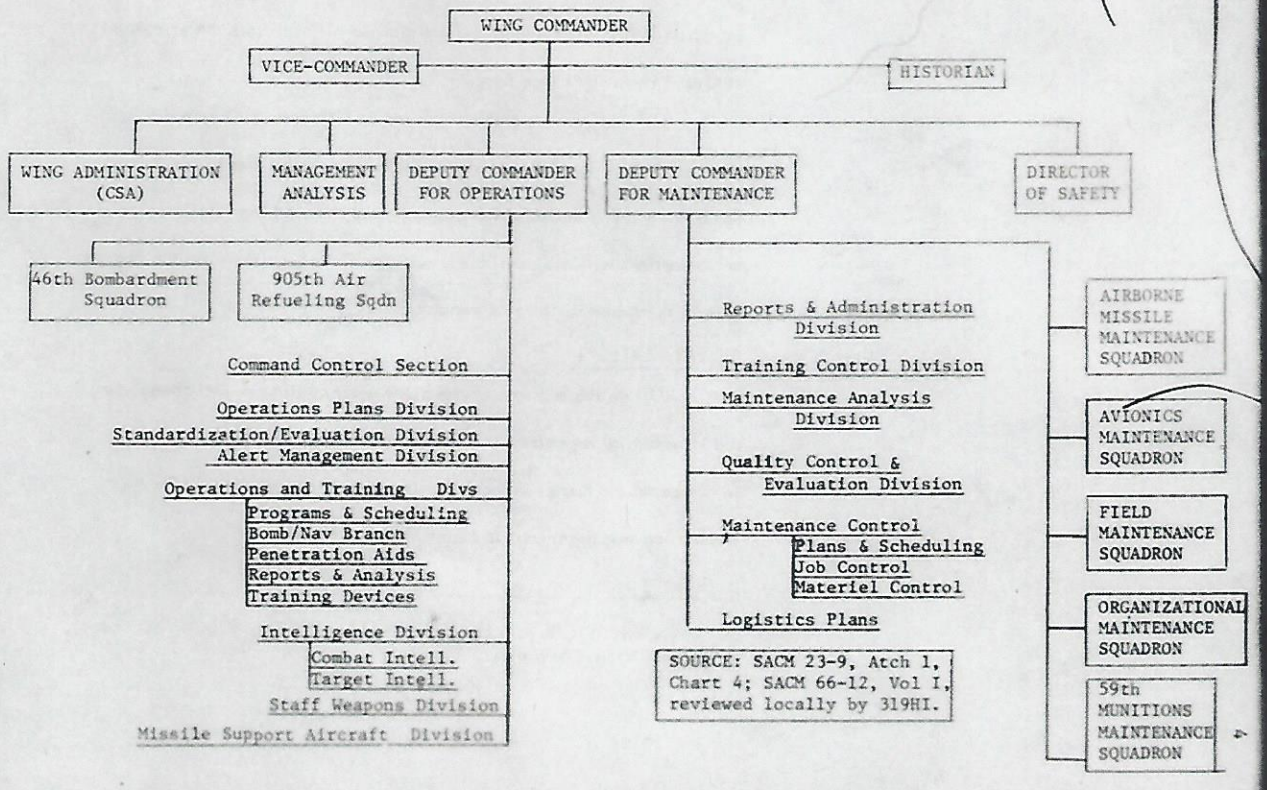
3. Interview, A1C B.F.Fuller, Historian, with Col. R.B.Wolfersperger, 319BW Vice-Commander, 13 July 70,

(U) 319th BOMBARDMENT WING (H) ORGANIZATIONAL CHART FIG I-1



SOURCE: SACM 23-9, Atch 1, Chart 4; SACM 66-12, Vol I, reviewed locally by 319HI.

ADMINISTRATION

Changes in Key Personnel

(U) Four important key personnel changes affected the 319th Bombardment Wing between April and June 1970. First, the Fourth Strategic Aerospace Division received a new Division Commander, Brigadier General Robert H. Gaughan, who assumed command on 27 March.

(U) In the bomb wing, Colonel Richard B. Hudlow left Grand Forks Air Force Base to work in Strategic Air Command's Advanced Echelon, which coordinates SAC bombing and other air operations in Southeast Asia.[4] Replacing Colonel Hudlow as the wing's Deputy Commander for Operations was his former assistant, Lieutenant Colonel Wallace A. Scannell, who took over the office on 1 April 1970.[5]

(U) The 59th Munitions Maintenance Squadron changed its commander on 14 June 1970. Initially on Temporary Duty (TDY) orders, Lieutenant Colonel Donald E. Wing left the bomb wing to design a new munition officer's course, which he will ultimately teach at Lowry Air Force Base. Lieutenant Colonel Robert G. Lucadello took command of the munitions squadron for the remainder of June.[6]

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4. Special Order No. A-668, Request for Permanent Change of Station/Military, 5 Mar 70, ex 84.

5. Personnel Action Request, AF Form 1098, Personnel Action Number 9978, 24 Mar 70, ex 85.

6. Special Order 59MMS/O-17, 12 Jun 70, ex 2 .

(U) A final significant personnel change was the bomb wing's loss of Chief Master Sergeant George C. Lucky. On 27 March 1970, Colonel John C. Fahringer, Deputy Chief of Staff, Plans, at Headquarters Fifteenth Air Force, approved the creation of a new division-level post, Division Sergeant Major.[7] On 3 April, General Shotts, Chief of Staff, Fifteenth Air Force, wrote to the fourth Strategic Aerospace Division, requesting that they begin procedures to select the most highly qualified Chief Master Sergeant on base for the new job at division. Colonel Gaughan* forwarded this request to the commanders of the three base units;[8] Colonel Taylor, 319th Bomb Wing Commander, selected and enthusiastically endorsed the non-commissioned officer in charge of the wing's Maintenance Analysis Section, Chief Lucky.[9] Chief Lucky was indeed selected for the job and, on 8 June 1970 moved out of his office in bomb wing headquarters, a loss for the wing, but a gain for Division.[10]

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* Colonel Gaughan was officially promoted to Brigidier General on 1 May 70.

7. Msg, 15AF(DCS/Plans) to AIG 711(C) et.al., "Sergeant Major Test Program," 271715Z Mar 70, ex 6.

8. Ltr, 15AF(CS) to 4SAD(C) et.al., subj: Fifteenth Air Force Sergeant Major Program [Test], 3 Apr 70, ex 7; Ltr 4SAD(C) to 319BW(C) et.al., subj: Division Sergeant Major, 27 Apr 70, ex 7.

9. Ltr, 319C to 4SAD(C), subj: Division Sergeant Major, 7 May 70, ex 8.

10. Personnel Action Request, AF Form 1098, Personnel Action Number 8456 , 3 Jun 70 , ex 9.

Effects of Transition to Fifteenth Air Force

(U) The 319th Bomb Wing's administrators felt in several ways the effects of the transfer of the Fourth Strategic Aero-Space Division and its subordinate units to Fifteenth Air Force (1 April 1970). While their internal administrative activities continued essentially unchanged after the transfer, wing people discovered that the new numbered Air Force placed different demands on their time and work habits than had Second Air Force.

(U) First, the wing's senior officers altered their flying schedules to meet Fifteenth Air Force monthly staff flight requirements. More significantly, 319th Bomb Wing operations reporting agencies found that their work, the transmission of unit statistics to higher headquarters, had greatly increased.[11]

(U) Until 1 April 1970, each senior staff officer (wing commander, vice-commander, deputy commanders for operations and maintenance, etc) flew at least one sortie per month as a combat crew evaluator. Headquarters Fifteenth Air Force directed the continuance of these evaluation rides; in addition, however, it required the formation of two wing "Command Staff Crews", one of which was headed by Colonel Taylor and the other by Colonel Wolfersperger.[12] Each of these special crews was required to fly

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11. Interview, AlC B.F. Fuller, Historian, with Col. R.B. Wolfersperger, 319BW Vice Commander, 13 Jul 70.

12. Ltr, DCOT to "Individual Concerned", subj: Rated Staff In-Flight Requirements and In-Flight Supervision, 1 Apr 70, ex [redacted]10

a minimum of one crew-sortie per month. In effect, the Fifteenth Air Force command staff flying requirement doubled the minimum flying time of the major staff officers. Although most of these officers had previously flown more than their one evaluation sortie per month, the new policy made the earlier optional overflying mandatory. Because each of the two Command Staff Crews had to fly together each month, two additional monthly sorties were generated which could not be charged to normal combat crew training. While this was not a serious scheduling burden, it represented an increased workload for both operations and maintenance staff.

(U) The other significant change wing personnel noticed as a result of the wing's conversion to a Fifteenth Air Force unit was the startling increase in the amount of reporting required of two unit agencies.

(U) The first of these agencies was the Deputy Commander for Operations Reports and Analysis Branch. Reports and Analysis (known locally as "R & A") continued to be responsible for the assembly, coordination and transmittal of scheduled numbered air force and Headquarters SAC stastistical data reports. This information was sent by letter, messages and in punch card decks. Headquarters Fifteenth Air Force required essentially the same information from the 319th Bomb Wing Reports and Analysis section as had Headquarters Second Air Force. Routine reporting

to Headquarters SAC remained the same. While no requirements were dropped, however, many were added as the wing transferred to the reporting jurisdiction of Headquarters Fifteenth Air Force.

(U) These added commitments included the U-92 Forecast Report [weekly punchcard deck], the RAU (Resources Available and Usable) computer list-out [to be sent each time crew resources changed], the 1-SAC-T12 Report [submitted monthly to Headquarters Second Air Force, but weekly to Headquarters Fifteenth Air Force], the Crew 1 and Crew 2 Reports [required by both headquarters, but three times longer for Fifteenth], and the Lateral Command Support Report[12] (a weekly survey of the wing's tanker support to other units).[13]

(U) Besides the enlargement of normal reports commitments, Captain Koster and his staff in the Reports and Analysis Branch faced a considerable number of additional or "special" information requests from numbered air force agencies. Three of these were: a special monthly "Status Center Chart"[14], a special weekly section of the 1-SAC-T12 Report on Terrain Avoidance (TA) activity[15], and a daily report on the wing's SACM 50-8 aircrew Basic Training Requirements status.[16] One final large-scale project was more

12. Msg, 15AF to AIG 721(DCOT), "Lateral Command Tanker Support," Ø216452 Jul 7Ø, ex 11; Msg, SAC to AIG 676(DCO) et.al., "Lateral Command Tanker Support," 1616382 Jun 7Ø, ex 12.

13. Interivew, A1C B.F.Fuller, Historian, with Capt. G.F.Koster, OIC, 319th DCOTR, 13 Jul 70.

14. Ltr, 15AF(DO) to 319BW(DCOTR), subj: Operations Status Forecasts, 13 Apr 70, ex 13.

15. Msg, 15AF to 319BW(DCOI), subj: "1-SAC-T-12 Terrain Avoidance Training Report," 12Ø215Z Mar 7Ø, ex 14.

16. Msg, 15AF to AIG 712(DCOTR) et.al., "SACM 5Ø-8 Telephonic Report," 2718ØØZ May 7Ø, ex 15.

understandable; the Reports and Analysis staff prepared a special punch card study of aircrew experience for a Headquarters SAC report to the Commander in Chief.[17]

(U) Captain Koster, Officer-in-Charge of Reports and Analysis felt that at least some of the special reporting information was already available in headquarters files. The workload of his section has "at least doubled" since 1 April 1970, "with no corresponding increase in manning, and little hopes for such an increase."[18] Compounding the problems and frustration of his section was the extremely unsatisfactory service provided by the 804th Data Automation Branch, which was itself in the throes of acute manning problems.

(U) Captain Koster mentioned his "IFR Reports," sent to Data Automation at the beginning of June; the computer work on this information was due back at the bomb wing by 6 June. After a letter of inquiry to the computer services chief,[19] the material finally arrived, incorrect, and had to be resubmitted, on 25 June 1970. This was an extreme but not uncommon example of the problems Data Automation was experiencing with its workload.

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17. Interview, AIC B.F.Fuller, Historian, with Capt. G.F.Koster and SSgt T.E.Daniels, 319DCOTR, 13 Jul 70.

18. Msg, 15AF to AIG 719(DCO), "Crew Experience Analysis," Ø61545Z May 7Ø, ex 16.

19. Ltr, 319DCOTR to 804BCR, subj: 319BW Individual Flight Records (IFR) (PCN 22106A, 22107A, 2210A), 20 Jul 70, ex 17.

The airman in charge of RAU (Resources Available and Usable) data in the 319th Reports and Analysis Branch said it was impossible to report each change in crew resources to headquarters, since he had to submit punch cards on this information to Data Automation. By the time his punchcards were processed, the data involved was at least several days obsolete, and therefore, of little use to headquarters personnel.

(U) By the end of June, the Reports and Analysis staff had developed an attitude of grim irony, in part from the receipt of such messages as, "avoid late and erroneous reporting,"[20] from higher headquarters. The key Non-Commissioned officer in the shop, Staff Sergeant Daniels, was awaiting his Permanent Change of Station move to Headquarters Fifteenth Air Force with more than a normal sense of curiosity. Subsequent histories will discuss progress made in the "R & A" section, as well as the state of its support by base computer services.

(U) The other key operations reporting agency affected by the wing's transfer to Fifteenth Air Force was the Command and Control Division (DCOCD). A number of additional teletype reports, most of which were on a daily basis, added significantly to the paperwork and manhours used by command post shift personnel. Fifteenth Air Force supplement 1 to the SAC command post reporting manual* added the following to the regularly scheduled data transmissions: the He15 (daily helicopter activity report); the

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* SACM 55-8, Volume I.

20. Msg, 15AF to AIG 712[DCO] et.al., "Late/Erroneous Reporting", 171505Z Jul70, ex 18.

Fly5A (daily flying activity report); the Crew5A (crew resources message, as changes were generated in the force); the Mods 5 (reported aircraft out of commission for modification programs); the BMB5 (reports on B-52 profile, AGM, ECM, Bombing, and nagigation activities, withen ten days of each mission); and, the Barr5 (report on changes to the wing's aircraft arresting barrier).[21]

(U) Lieutenant Colonel Hodges, Officer-in-charge of the Command Post section showed how increased was the reporting load by comparing the amount of transmittal paper used before and after 1 April 1970. Under Second Air Force, one box of this paper lasted from two to three months; under Fifteenth Air Force, the Command Post used nearly two boxes each month.[22]

(U) More than the increased consumption of supplies, of course, Lt. Colonel Hodges regretted the strain imposed on his staff by the additional work. Command post shifts, which used to have three-man enlisted shifts in addition to the regular senior officer controller, have been made up of only two, and sometimes one, enlisted man this spring. In short, the Command Post was a case of "..a greatly increased workload with no corresponding increase in manning; in fact, there has been a decided drop in the personnel available for DCOCD duty".[23]

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21. SACM 55-8, Volume I, 15AF Supplement 1, pp 1-3, 2 Jun 70.

22. Interview, AIC. B.F.Fuller, historian, with Lt.Col. R.L.Hodges, OIC, 319DCOCD, 13 Jul 70.

23. Ibid.

(U) Under Headquarters Second Air Force, the bomb wing's maintenance analysis section was characteristically swamped with reporting requirements, while the operations data sections had a much milder workload. Everyone involved in these reporting offices agreed that the emphasis under Fifteenth Air Force was exactly the reverse: much less maintenance reporting and much greater operations data transmittal. The transition on 1 April was therefore a pleasant surprise for the Maintenance Analysis section, but a mild shock for the people in Reports and Analysis and in the already undermanned Command Control Division.

(U) By the end of June all of these workers were finding more effecient ways to accomplish their new work; those wing agencies most affected were making what at first had seemed painful, become routine.

Summary

(U) Although the transfer of the 319th Bomb Wing to the jurisdiction of Headquarters Fifteenth Air Force did not change its mission or structure, some administrative customs in the wing's communications with higher headquarters encountered extensive changes. The operations reporting offices in particular, struggled uphill against larger commitments and continuing coordination problems with the 804th Combat Support Group's computer services deficiencies. The wing continued to perform its mission; the transition for most of its officers and airmen was smooth, controled, and safe.

CHAPTER II

PERSONNEL

Introduction

(U) The primary location for United States military activity in 1970 continued to be Southeast Asia; as a consequence of the war there, that sector received the first priority in Air Force manpower decisions. The safe and adequate performance of Air Force and Strategic Air Command (SAC) missions in many other areas continued to be important, but higher headquarters staffs necessarily had to consider personnel problems in the active war zone before they could attempt solutions to those at home.

(U) No easy answers to SAC manning problems were on the horizon, particularly after Congress further cut military appropriations in 1969. Increasingly in SAC, the wing commanders in United States - based units bore the burden of conducting safe maintenance and flight operations with fewer and fewer fully trained individuals on hand to do the work.

(U) At Grand Forks Air Force Base and at the 319th Bomb Wing, the "manning pinch" was all the more serious because of a high transitory rate. Conditions in this very rural area did not promote high morale. Particularly for lower grade and unmarried airmen, Grand Forks offered only isolation, unbelievably cold weather, and poor cultural and recreational diversions. The Air Force, for whatever its reasons, sent many people directly from Southeast Asia assignments to Grand Forks Air Force Base. A significant percentage

of airmen arrived on base from Vietnam, took stock of the area, and immediately put in a volunteer statement for Southeast Asia. Problems at many levels of the command contributed to the generally low morale at this North Dakota base. The morale situation was undoubtedly the major factor in the high local transitory rate: 319th Bomb Wing maintenance squadrons had an average turnover rate in 1969 of 75percent.* Airmen and officers assigned at the wing for more than two years were considered "old-timers."

(U) The 319th Bomb Wing continued to support two distinct missions with its undermanned resources. It carried on the traditional Emergency War Order (EWO) alert, and also provided aircraft and crews to support air operations in Vietnam ("Arc Light" and "Young Tiger"). "Manning Request Letters" sent forward to higher headquarters, and replies to them stating that "Your unit is manned at or above the average for CONUS** units" had become a way of life for the wing commander, who had to employ increasingly effective, tighter management procedures to accomplish the unit mission.

(U) The main purpose of this chapter is to show how the quantity and quality of wing manpower affected the overall mission. This section of the narrative, therefore, contains four sections: the "General Personnel Inventory", which compares authorized versus assigned personnel, by squadron; the "Specific Critical AFSC Shortages" section; "Training Programs"; and, "Retention." A brief conclusion summarizes significant manning trends that occurred between April and June.

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* The historian spot-checked maintenance squadron orderly room closed-out locator cards for the last 12 months to derive this average figure.

** CONUS - CONtinental United States.

GENERAL PERSONNEL INVENTORY

(U) The personnel inventory table on the following page needs introductory explanation. First, it shows the higher headquarters authorizations for each 319th Bomb Wing squadron (from the SAC Management Engineering Team 's "Unit Detail Listing") for January - March 1970 (FY70/3), and for April - June 1970 (FY70/4).[1] The authorized figures for two quarters are included to show any changes made in the wing's manning allocations.

(U) Two different sets of "assigned" personnel figures are presented on the following pages. The first of these are from the 804th Combat Support Group's Military Personnel office records. These statistics list all assigned personnel, including those enroute to and from (permanent change of station - "PCS") the wing as well as those actually on duty.[2] For comparison, the historian has included on-duty assigned manning figures as well, which were provided by the various squadron commanders at the end of each month. These two sets of statistics also invite comparison: the "average" report did not adequately show the true manning picture in the wing.

(U) The most important comparison to be made in this table, however, is that between the authorized (April-June) and actually assigned airmen, (columns 2 and 4, Figure II-1, overleaf).

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1. Rpt, "Unit Detail Listing" (PCN37075A), prepared by GFAFB SACMET, on file with 319BW(HI), for FY70/3 vs FY70/4.

2. Rpts, "Average Strength Data Report" (AF Form 380), prepared by 804th Combat Support Group, Military Personnel Br, 30 Apr, 31 May, 30 Jun 70, ex 19 , ex 20 , & ex 21 .

FIGURE II-1

(U) 319th BOMB WING AUTHORIZED/ASSIGNED PERSONNEL

April - June 1970

SQUADRON		AUTHORIZED: FY70/3 UDL AUTH'D:	AUTHORIZED: FY70/4 UDL AUTH'D:	ASSIGNED: Avg. Strength Reported Assg'd: APR	MAY	JUN	ASSIGNED: Squadrons Reported Actually Assg'd: APR	MAY	JUN
319 HSS	OFF	69		63	63	64			
	AMN	168	N/A	186	186	174	N / A		
	TOT	237		249	249	238			
46 BS	OFF	137	137	131	133	136	109	110	100
	AMN	30	30	26	23	26	28	26	26
	TOT	167	167	157	156	162	137	136	126
905 ARS	OFF	74	74	83	86	85	70	NA	83
	AMN	27	27	21	23	24	24	NA	24
	TOT	101	101	104	109	109	94		107
319 AMMS	OFF	3	3	3	3	4	3	3	3
	AMN	84	84	97	97	93	95	94	89
	TOT	87	87	100	100	97	98	97	92
319 AMS	OFF	4	4	5	5	5	5	5	5
	AMN	184	184	172	177	184	167	172	178
	TOT	188	188	177	182	189	172	177	183
319 FMS	OFF	4	4	5	5	6	5	6	6
	AMN	349	353	315	323	328	303	308	308
	TOT	353	357	320	328	334	308	314	314
319 OMS	OFF	6	6	6	7	7	6	6	6
	AMN	304	280	259	293	288	161	198	124**
	TOT	310	286	265	300	295	167	204	130
59 MMS	OFF	5	5	5	5	5			
	AMN	91	92	120	111	108	N / A		
	TOT	96	97	125	116	113			

* As of last day of each month, submitted to Historian by each squadron historical officer representative.

** These OMS airmen actually assigned indicated those enlisted [illegible] work [illegible] all aircraft TDY ground crews.

(U) Changes occurred in the numbers authorized for two 319th Bomb Wing squadrons: the Field Maintenance Squadron [FMS], and the Organizational Maintenance Squadron [OMS]. The major change, in OMS, was related to a command-restructuring of its organizational maintenance concepts and manning system.[3]

(U) The usual discrepancy between "Average Strength Data" computations of assigned airman and the number of men reported actually at work occurred again this quarter. The personnel away on temporary duty [TDY] assignments, those charged to the wing but travelling on change of station orders [PCS], and those attending training classes, such as those at the tenant Field Training Detachment [FTD] were included in the "Average" report, but not in the more realistic squadron figures.

(U) Overall, the wing's manning hovered between 75 and 85 percent (depending on squadron and AFSC) of its authorized figures -- presumably about average for CONUS units at this time.

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3. Interview, AlC B.F.Fuller, historian, with Capt. Michael L. Moore, Chief, Management Analysis Division, 4 Sep 70.

SHORTAGES OF CRITICAL (SORTIE-PRODUCING) AFSCs

(U) Combat crew shortages (certainly critical career fields) are fully discussed in the Crew Resources section of Chapter III in this history. The remainder of the Air Force Speciality Code (AFSC) categories which through shortage threatened the success of the 319th Bomb Wing's mission were enlisted maintenance jobs. It was the usual case for the great majority of the "Manning Request Letters" to originate through the Deputy Commander for Maintenance (Colonel Mason). The one exception to this rule during the quarter was the Deputy Commander for Operations' (DCO) request for additional Command Control technicians (AFSC 274X0).

(U) On 15 May 1970, Colonel Scannell, 319th Bomb Wing DCO, sent the request for additional 274X0 technicians to the military personnel office at the 804th Combat Support Group. This letter[4] emphasized the critical nature of the wing's low command post manning. On 2 June 1970, Colonel McKusker, Chief of the 804th Combat Support Group's Personnel Division, forwarded Colonel Scannell's request to Headquarters SAC.[5] The Chief of Airmen Assignments at SAC responded in the negative, stating that the 319th Bomb Wing's Command Post was already manned above the command average (73 percent).[6]

4: Ltr, 319DCO to 804 CBPO-ASN, subj: Manning Assistance (274X0), 15 May 70, ex 22 .

5. Ltr, 804CBPO-ASN to SAC(DPAA), subj: Request for Manning Assistance, 2 Jun 70, ex 23 .

6. 1st Ind, (Ltr, 804CBPO-ASN to SAC(DPAA), subj: Request for Manning Assistance, 2 Jun 70), HqSAC(DPAA) to 804CBPO-ASN, 12 Jun 70, ex 24 .

(U) This unsuccessful 274X0 personnel assistance transaction serves as a good introduction to this section on critical AFSCs. The heart of the bomb wing's alert and flight control operations was the command post. There, highly trained officer and enlisted controllers were on duty at all times, awaiting Emergency War Orders (EWO) and other urgent action messages from higher headquarters.

(U) The command post was a Two-Man Policy restricted area. Previously, each shift of workers was made up of one senior officer controller and three enlisted 274X0 Command Control technicians. Since April, however, the maximum number of enlisted technicians per shift was two. At times, only one enlisted controller was available, which made it impossible for either the airman or the officer on duty to leave the control cab.[7]

(U) It seemed obvious that the wing needed manning assistance for the command post. Yet, Hq SAC's answer made it clear that the 319th Bomb Wing was better off in this area than were some other units. Higher headquarters priorities or decisions had somehow reduced the number of airmen available in the controller field; bomb wing managers realized once again that they would have to "stretch" their local resources to do the job. This conflict in manpower viewpoint and priority between higher headquarters and local unit repeated itself constantly in the maintenance manning categories, as well.

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8. Interview, A1C B. F. Fuller, Historian, with Lt. Col. R. L. Hodges, OIC 319DCOCD, 13 Jun 70.

Maintenance AFSC Manning Request Activities

(U) The 319th Bomb Wing sent forward numerous requests for PCS or TDY manning assistance between April and June 1970. Some of these were more "crucial" to the wing's many missions than were others; however, with the average manning in most functions well below authorized figures, shortages in any one ultimately degraded the unit's overall capability. This installment of the history therefore presents these AFSC request activities as they occurred, in chronological order.

(U) On 23 March 1970, Colonel Mason (319 DCM) had requested manning assistance for AFSC 534X0 [airframe repairman][9]; Headquarters SAC suggested that the wing try to locate TDY assistance from other Fifteenth Air Force units. A message from Headquarters Fifteenth Air Force on 7 April, however, squelched this hope, since it stated that "Your manning approximates that of other 15AF units".[10]

(U) Colonel Mason's office forwarded to the military personnel office on base a manning request for AFSC 43370 (Maintenance Scheduler) on 14 April 1970.[11] Lieutenant Colonel McLellan, Chief of the 804th Military Personnel Division, sent the request to Headquarters SAC on 26 April.[12]

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9. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 23 Mar 70, ex 25.

10. Msg, 15AF to 4SAD, et.al., "TDY Manning Assistance", Ø723Z12 Apr 7Ø, ex 26.

11. Ltr, 319 DCM to CBPO-ASGN, subj: Manning Assistance, 14 Apr 70, ex 27.

12. Ltr, CBPO-ASGN to SAC(DPAA), subj: Request for Manning Assistance, 28 Apr 70, ex 28.

Word came back from that headquarters on 11 May: no assistance could come from SAC, no resources were available. Higher headquarters messages could only suggest that the wing attempt to crosstrain enough people to continue the maintenance scheduling mission.[13] Colonel Mason's Maintenance Supervisor, CMSgt Mueller, advised the three squadrons involved of SAC's advice.[14]

(U) The 319th Bomb Wing sent out another assistance request for supervisory-level enlisted people on 16 April 1970.[15] This request, for a TDY Aircraft Engine Superintendent, continued the wing's history of low manning in this AFSC (43291)*. No TDY aid was forthcoming, but one additional "Chief" did arrive in the beginning of July.[16]

(U) Again this quarter the DCM had to request manning assistance for the other launch-recovery supervisor AFSC, Aircraft Maintenance Superintendent (43191)*. Colonel Mason submitted this request to base personnel on 16 April 1970,[17]

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* See 319BW History, Jan-Mar 70, Vol I, pp 14-15.

13. Ltr, CBPO-ASGN to 319DCM, subj: Hq SAC Response to Manning Assistance Request for AFSC 433XO, 11 May 70, ex 29.

14. 1st Ind (Ltr, CBPO-ASGN to 319DCM, subj: Hq SAC Response to Manning Assistance Request for AFSC 433XO, 11 May 70), 319DCM to AMSC et.al., 12 May 70, ex 29.

15. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 16 Apr 70, ex 30.

16. Interview, AIC B.F. Fuller, historian, with CMSgt O.H. Presley, (new) 319DCM Maintenance Supervisor, 12 Aug 70.

17. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 16 Apr 70, ex 31.

and Lieutenant Colonel McLellan forwarded it to Headquarters SAC on 28 April 1970.[18] SAC's negative reply arrived at the bomb wing DCM's office on 15 April.[19]

(U) On 27 April, the next manning request transaction occurred. The Deputy Commander for Maintenance asked assistance for the bomb wing's impending shortage of metal specialists (AFSC 532X0).[20] Base Personnel forwarded the request to Headquarters SAC eleven days later,[21] and Lt Colonel Buhler in Airman Assignments at Headquarters SAC provided the information that one PCS input to the 319th Bomb Wing would occur in July, which "will raise your projected base manning to 88.8 percent..."[22]

(U) A third recurring manning shortage (besides the two maintenance superintendents) was projected for the wing's aircraft pneudraulics repairman (AFSC 431X2). The DCM sent a letter on this AFSC on 4 May 1970.[23] To answer Colonel Mason's request for assistance, the base personnel office

18. Ltr, CBPO-ASGN to SAC (DPAA), subj: Request for Manning Assistance, 28 Apr 70, ex 32.
19. Ltr, CBPO-ASGN to 319DCM, subj: Manning Assistance - AFSC 43191, 15 May 70, ex 33.
20. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 27 Apr 70, ex 34.
21. Ltr, CBPO-ASGN to SAC (DPAA), subj: Request for Manning Assistance, 8 May 70, ex 35.
22. 1st Ind (Ltr, CBPO-ASGN to SAC (DPAA), subj: Request for Manning Assistance, 8 May 70), 19 May 70, ex 36.
23. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 4 May 70, ex 37.

provided a list of those pneudraulics specialists due in to the bomb wing during the summer months and recommended against further requests to higher headquarters for this AFSC.[24] The low manning problem in the pneudraulics field remained, however, and so the DCM decided to see what results would come from a request for temporary duty assistance. The same day Colonel Mason received his reply from base personnel recommending against higher headquarters PCS assistance requests, he sent a letter to personnel asking for three 42151 pneudraulics technicians for 60 days TDY.[25] Nothing came of this action, but the Field Maintenance Squadron did begin receiving PCS pneudraulics inputs in late June,[26] which relieved the situation somewhat.*

(U) The 59th Munitions Maintenance Squadron (MMS) foresaw a shortage of Re-Entry Vehicle Maintenance personnel for the summer months; in hopes of preventing serious difficulties in

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* Senior Master Sergeant J.W. Price, NCOIC of the FMS Aerospace Systems Branch commented that these PCS inputs were very unusual because, "Unlike the usual bunch of new men, these have seen an airplane before!"

24. 1st Ind (Ltr (319DCM to CBPO-ASGN) subj: Manning Assistance, 4 May 70), 12 May 70, ex 38.

25. Ltr, 319DCM to CBPO-ASGN, subj: TDY Manning Assistance, 12 May 70, ex 39.

26. Interview, A1C B.F. Fuller, Historian, with 1Lt D.M. Crawford, FMS Executive Support Officer, and SMSgt J.W. Price, NCOIC FMS Aerospace Br, 13 Aug 70.

MMS manning, Colonel Mason sent his resume of their personnel problem to the base personnel branch on 6 May.[27] This letter included a list of the many duties airmen holding this AFSC (463X0) are responsible for, and asked not only that the wing receive TDY assistance, but also that the men involved be trained, certified noncommissioned officers (NCOs). Because of a change in the number and training status of permanent party Re-Entry mechanics, this TDY assistance request was modified in a second letter, sent 1 June 1970.[28] A message which seemed to answer Colonel Mason's two requests came to the wing from Headquarters Fifteenth Air Force on 3 June; "Manning percentage at Grand Forks exceeds that of other 15AF bases which would be required to furnish assistance."[29] Although in June, the Munitions Maintenance Squadron received two airmen on permanent assignment, they were newly trained three-level mechanics, just graduated from technical school at Lowry AFB. No TDY assistance came to the squadron in the Re-Entry AFSC in June; however, the situation was eventually eased on 11 August 1970 with the arrival of three TDY 463X0s, one of whom was cleared, trained, and completely certified by quality control for immediate duty.[30]

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27. Ltr, 319DCM to CBPO-ASGN, subj: Critical Shortage of 463X0 Personnel, 6 May 70, ex 40.

28. Ltr, 319DCM to CBPO-ASGN, subj: Request for TDY Assistance for MMS, 1 Jun 70, ex 41.

29. Msg, 15AF to 319DCM et.al., "TDY Manning Assistance, AFSC 463X0", 0315172 Jun 70, ex 42.

30. Interview, AIC B.F. Fuller, historian, with MSgt H.H. Weaver, NCOIC and SSgt J.W. Harbauer, Admin NCO of MMS Job Control, 13 Aug 70.

(U) Vehicle operators (AFSC 603X0) continued to plague wing operations after 1 April.* Accordingly, Colonel Mason requested assistance for the manning in that career field in a letter to base personnel on 22 May 1970.[31] This was answered locally; SMSgt Soza, NCOIC at Military Personnel, provided the wing's projected inputs, which would man the wing at 89.9 percent of its authorized slots.[32]

(U) The 319th Avionics Maintenance Squadron requested manning assistance through Colonel Mason's office for B-52H turret Fire Control Systems Mechanics (AFSC 323X9E), on 27 May.[33] The Military Personnel office reviewed their statistics and forwarded the request for aid to Headquarters SAC on 12 June 1970.[34] No assistance was available that could help AMS by 30 June; the next installment of this history will review any headquarters action on this AFSC shortage.

(U) On 1 June 1970, the wing's DCM requested help for projected shortage of Jet Aircraft Mechanics (over two engines) (AFSC 431X1E).[35] This request was answered when base personnel provided the wing with a

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* 319BW History, Jan-Mar 70, pp. .

31. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 22 May 70, ex 43.

32. 1st Ind (Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 22 May 70), 3 Jun 70, ex 44.

33. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 27 May 70, ex 45.

34. Ltr, CBPO-ASGN to SAC (DPAA), subj: Request for Manning Assistance, 12 Jun 70, ex 46.

35. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 1 Jun 70, ex 47.

list of its projected Jet Aircraft Mechanic inputs through November 1970.[36]

(U) The final AFSC manning assistance request this quarter was for Precision Measuring Equipment Specialists (AFSC 324X0); the first inquiry went from Colonel Mason to the people at the 804th Military Personnel Branch on 9 June 1970.[37] In answer to this inquiry, Lieutenant Gross provided the bomb wing's projected inputs, which, in this case, was in essence a negative reply.[38]

(U) In all, there were 14 requests for enlisted-AFSC manning assistance from the bomb wing in these "critical" areas. Seven career fields (airframe repairman, engine supervisor, aircraft maintenance supervisor, metals specialist, pneudraulics specialist, re-entry vehicle mechanic over two-engines) were immediately crucial to wing flying operations. The one request from the operations half of the wing was also for a "critical AFSC," the command control career field. The chart on the following page shows just how unsuccessful the wing's request for personnel assistance were during April, May and June.

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36. 1st Ind, (Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 1 Jun 70), 16 Jun 70, ex 48.

37. Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 9 Jun 70, ex 49.

38. 1st Ind (Ltr, 319DCM to CBPO-ASGN, subj: Manning Assistance, 9 Jun 70), ex 50.

(U) Figure II - 2

319BW REQUESTS FOR MANNING ASSISTANCE (Apr - Jun)

AFSC	Description	Type Request:	Local Action:	Higher Hqts Action:
274X0	Command Control Tech.	PCS	forwarded to:	SAC/Negative
534X0	Airframe Repairman	PCS	forwarded to:	SAC/Negative
534X0	Airframe Repairman	PCS	forwarded to:	SAC/Negative
433X0	Maint. Scheduler	PCS	forwarded to:	SAC/Negative
43291	Acft Engine Super.	TDY	NO ACTION TO DATE	
43191	Acft Maint Super.	PCS	forwarded to:	SAC/Neg/Info*
532X0	Metal Specialist	PCS	forwarded to:	SAC/Neg/Info
421X2	Pneudraulics Specialist	PCS	Negative/Info**	--
421X2	Pneudraulics Specialist	TDY	forwarded to:	SAC/Negative***
463X0	Re-entry vehicle mech	TDY	forwarded to:	SAC/POSITIVE (August)
603X0	Vehicle Operator	PCS	Negative/Info	--
323X0E	Defense Turrett, Fire Control Syst. Mech.	PCS	forwarded to:	SAC/Negative
431X1E	Jet Acft Mech	PCS	Negative/Info	--
324X0	Precision Measuring Technician	PCS	Negative/Info	--

* "NEGATIVE/INFORMATION" means that higher headquarters (SAC or 15AF) took no special personnel assistance action, but only provided the wing with a list of its already-projected PCS inputs.

** The Historian could not determine if the one PCS input referred to (in ex 36) was a special assistance action, or only a statement of an already-projected PCS input.

*** PCS input assistance was projected for September, 1970.

(U) Only one of these fourteen requests resulted in any action; even in that case (Re-Entry Vehicle Mechanic) the TDY assignees weren't scheduled to arrive until August. Many other units in SAC were evidently feeling extreme manning pressures; this fact did not make 319th Bomb Wing people's lives or jobs any easier. The commander and his staff still had to perform an adequate and safe mission, despite the deficiency in human resources.

(U) The pressure of low manning obviously hit staff administrators, maintenance schedulers and shop supervisory people the hardest. A jet engine mechanic could only work so many hours of overtime before caution demanded that he be given rest. His supervisor, however, could never fully escape the responsibility for getting the shop job accomplished. The shop "foremen" took home the pressures of finding enough people to work on a particular airplane, for rearranging schedules constantly, and for soothing the nerves of complaining lower grade airmen.

(U) The wing's higher staff had the constant overall responsibility for maintenance work accomplishment, just as on a smaller scale the senior officer controller in the Command Post was constantly under local and higher headquarters pressure to perform ever more work with only one enlisted controller to help.

(U) Wing people continued to work hard and diligently. Yet the long range psychological effects of the wing's continued personnel shortages did not bode well for future outstanding mission results, safety or retention.* In short, morale had become a serious problem; since the manpower situation in coming months looked increasingly gloomy, morale threatened to become the problem of this organization.**

OJT, FTD, and the Wing Mission

(U) One of the most important continuing missions of the 319th Bomb Wing was the training and skill-level upgrading of its personnel. In part because of the increasing manpower shortages in recent months, however, a conflict inherent to Air Force training programs grew more visible in the wing.

(U) Supervisors and officers in charge of sections (particularly in maintenance areas) were fully aware of the vital importance of training; to do an adequate job, they needed enough workers who possessed a certain level of certified knowledge and experience. Yet, despite this basic knowledge,

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* The historian realized that these problems were extant throughout CONUS SAC units. As was stated earlier in this chapter, however, the dismal frigid isolation of such bases as Grand Forks AFB and Minot AFB made the increasing pressure caused by undermanning more wearing than it may have been in other locations.

** Futureinstallments will continue to report this relationship between manpower shortages, Grand Forks AFB conditions, and wing morale.

many wing supervisory people began to resent the hours away from necessary work that their men had to spend on on-the-job training [OJT], and away from the wing attending courses at the local Field Training Detachment [FTD]*. This resentment was only natural, since those airmen and NCOs on OJT or "away" at FTD classes were still charged to their squadrons as "assigned", despite the fact that they were not, in fact, usable.

(U) The overall quality of the wing's OJT programs was beyond dispute. The percentage of 319th people who passed their Career Development Course [CDC] final examinations was 90.6 percent for the quarter (compared to 76.1 percent for the 321st Strategic Missile Wing and 70.0 percent for the 804th Combat Support Group).[39]**

(U) The bomb wing's total OJT training figures are given in the BASE OJT Office's Monthly OJT Report, which shows the number of enlisted men reaching their three, five, and seven-level skills, and also wing Apprentice Knowledge Test [AKT***] results.[40] A total of 21 airmen were newly upgraded to the three-level, 71 to the five-level, and 13 to the seven-level.

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* The Air Training Command [ATC] has the 419th FTD on station as a tenant organization at the Grand Forks Air Force Base.

** The figures for all of FY70 are also included, in ex 52, since their numerical volume makes them more statistically significant than were the quarterly readings.

*** The AKT was a special test given to airmen directly assigned to the wing from Basic Training; it was one part of their procedure for earning their three-level.

39. Extract of Worksheet: "Career Development Course Tests Taken/Passed FY70", prepared by 804th Cmbt Spt Gp, OJT Section, 30 Jun 70, ex 51.

40. Rpt, "Monthly OJT Data Report", [Apr/May/Jun], prepared by 804th Cmbt Supt Gp, OJT Section, 30 Jun 70, (by squadron: exhibits 53, 54, 55, 56, 57, 58, 59 & 60.)

41. Ibid.

(U) The wing's high percentage of successful CDC testing, and its aggressive OJT program were the results of an intensive staff interest in keeping up a high-quality supply of trained personnel. This desire was implemented by the conscientious efforts of the various squadrons' training non-commissioned-officers-in-charge [NCOICS]. The Headquarters Squadron's training NCO, Staff Sergeant Jones, for instance, worked long hours to make his program more effective.* One result of his work was an excellent newcomer's brochure, which welcomed lower grade airmen to the wing and explained the OJT system to them.**[42]

(U) The success of the wing's OJT program was certainly the bright side of its efforts to "stretch" the available manpower. Both OJT and the bomb wing's requirements to send men to attend FTD classes had their drawbacks, however. Supervisors often felt an extreme amount of frustration at the lack of "bodies" available to do the most essential and basic squadron duties -- such as repairing airplanes.[43]

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* Headquarters Squadron training office was immediately adjacent to that of the historian; this was the personal observation of the historian.

** This document is included in this history because it provides a clear explanation of the OJT program at the wing and individual levels.

42. Ltr, 319HSST to [to be filled in], subj: OJT Trainee Briefing, [Date to be filled in], ex 61.

43. Ltr, 319OMSM to 319DCM, subj: Maintenance Problem Areas, 25 Jun 70, ex 62.

(U) While the conflict between men-in-training and men-at-work was not a new one, the current "manning pinch" made immediate problems appear more urgent than was the "distant" goal of more highly trained personnel. While higher-level staff administrators saw OJT and FTD attendance as one solution to the manning crisis, lower-level supervisors could not but help blame training for adding to the shortage of usable men.

(U) Compounding the supervisors' feelings was the fact that many of the newly upgraded and trained airmen either went on TDY assignment (as did many five and seven level crew chiefs in OMS), or received positive replies to their Southeast Asia volunteer statements.* One maintenance squadron NCOIC suggested that he was running a "transient OJT academy."[44]

Retention & Retention Programs

(U) The general shortage of manpower, the lack of usable men in critical AFSC areas, and the morale problems peculiar to northern tier bases (Grand Forks, Minot, Malstrom, etc) accounted for some of the 319th Bomb Wing's retention difficulties. Retention figures for first and second term airmen for the months April, May and June and those of all of Fiscal Year 1970

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* See page 15.

44. Interview, A1C B.F.Fuller, Historian, with SMSgt G.B. Walters, NCOIC, OMS Maintenance Supervision, 14 Jul 70.

are included as exhibits 63 through 65.[45]

(U) The bomb wing's overall retention rate for first-termers for the fiscal year was 16 percent, compared to the Fifteenth Air Force rate of 15.3 percent, and the SAC rate of 14.3 percent. Reenlistment statistics for 16 Fifteenth Air Force bases showed that either everyone was in trouble, or that higher headquarters standards for both first and second term reenlistment had become unrealistic.[46]

(U) The previous installment of this history included a special study on wing retention, which had been conducted by the Management Analysis Officer, Lieutenant Michael Moore. A follow-up sheet on this study reiterated its first conclusion: that many retention problems were related to local conditions such as climate and isolation, and that others were higher headquarters variables that could not be controlled by the wing.[47]

(U) One constant Grand Forks Air Force Base complaint that deserved further study was the inadequate parking space provided for private cars. This condition prevailed at most

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45. Rpt, "Reenlistment Rates (1 Apr 70 - 30 Apr 70)", prepared by 804th Combat Support Gp, Career Motivation Divs, 30 Apr 70, ex 63; Rpt, "Reenlistment Rates (1 May 70 - 31 May 70)", prepared by 804th Cmbt Supt Gp, Career Motivation Division, 31 May 70, ex 64; Rpt, "Reenlistment Rates (1 Jun 70 - 30 Jun 70)", prepared by 804th Cmbt Supt Gp, Career Motivation Division, 30 Jun 70, ex 65; Rpt, "Reenlistment Rates, (1 Jul 69 - 30 Jun 70)", prepared by 804th Cmbt Supt Gp, Career Motivation Division, 30 Jun 70, ex 66.

46. Rpt, "Reenlistment Statistics", prepared by 15AF Career Motivation Office, 29 May 70, ex 67.

47. Ltr, 319DCRM to 319C, subj: Special Study Follow-up - Motivation/Retention Program, 10 Jun 70, ex 68.

base service locations as well as near the bomb wing. The too-few number of parking spaces seemed absurd as one looked around at the vast "flat-space" available in the surrounding North Dakota prairie on base.**[48]

CONCLUSION

(U) The wing continued to experience the multifold effects of CONUS Command personnel shortages. By squadron, according to the "average" strength data computing system (which included everyone within certain arrival and departure dates as "assigned"), the shortages did not look too severe. When manning was appraised more realisticaliy,however, it was clear that certain AFSCs were in critical demand, that OJT and FTD levies and requirements hurt as well as helped the local manning situation, and that morale, especially among supervisory top NCOs and junior officers in maintenance areas, was poor.

(U) The "Manning Request Letter" system continued to be almost completely ineffective; higher headquarters used the standard Air Force "average personnel data" figures to compute the wing's authorized versus assigned manning ratios, and therefore could not lend either PCS or TDY assistance to a unit "manned at or above the command average". To be sure, the domestic operation of SAC, with the Air Force's

** Chapter V (Facilities) elaborates on this parking study.

48. Special Study Abstract, "Inadequate Parking Facilities", prepared by 319DCRM, 21 Jul 70, ex 69.

emphasis on Southeast Asia, could not provide more people. Still, there was somehow a lack of communication (and perhaps of understanding) between high level personnel planners and local squadron and shop people-managers.

(U) The delicate relationship between manning shortages, supervisory morale, and retention will be the central focus of future personnel studies in these histories. The following chapter, "Operations and Training", shows how well the wing managed its flight and training missions, and includes a look at combat crew officer resources, a study complementary to the maintenance AFSC research in this chapter.

CHAPTER III

OPERATIONS AND TRAINING

INTRODUCTION

(U) This portion of the wing history is made up of five main parts plus a conclusion. The first part of this "Operations and Training" narrative surveys the 319th Bomb Wing's combat crew and weapon-systems resources during April, May and June of 1970; this section begins by relating the wing's Combat-Rating [C-Rating] story, which each day described in numerical form the overall picture of human and materiel resources in the unit.

(U) The remaining four sections of the text review the success of the 319th Bomb Wing's major air operations: 1) the maintenance of the Emergency War Order [EWO] alert-force commitment; 2) the furnishing of augmentee flying crews for bombing/air-refueling temporary duty [TDY] to Southeast Asia; 3) aircrew training; and 4) flying safety. * The conclusion to this chapter attempts to isolate and analyze those specific operations trends that appeared in the three-month period.

(U) Complicating the normal duties of the wing this quarter were several unusual conditions. These included the continuing Federal Aviation Agency [FAA] controllers' "slowdown", the use of base runways by two commercial airlines while Grand Forks Airport

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* In addition to these principle jobs, the wing had the additional duty of providing helicopter and non-tactical flights for itself and for other Grand Forks Air Force Base units; Chapter VI [Special Activities] includes a discussion of these non-tactical mission activities.

ramps were being renovated, and the wing's BUY NONE Exercise, conducted on 23-26 April 1970. The wing's regular operations tasks and their relation to these unusual circumstances make up most of the following seventy-four pages.

WEAPON SYSTEMS AND COMBAT CREW INVENTORY

C-Rating

(U) One criterion the bomb wing (and higher headquarters) used to measure its aircraft and crew resources was the Combat-Rating [C-Rating] system. Each day, the wing commander or the Deputy Commander for Operations [DCO] staff computed a number grade from one to four; this described the unit's equipment and training levels. The "C-Rating" was derived from a complex formula that included crew and equipment variables such as "authorized versus usable aircraft" and "authorized versus usable crews". Ideally, the C-Ratings which went from the bomb wing to higher headquarters were the daily results of local statistics entered into a prescribed mathematical formula.

(U) Higher headquarters read the Combat-Rating grade sent forward, using a less mathematical interpreting system. SAC Manual [SACM] 55-8 ("Strategic Air Command Operational Reporting") gave its interpretation of the four ratings: a rating of C-1 described a "unit fully capable of performing its missions"; a C-2 described a unit that was "substantially"

combat-ready; C-3 meant "marginally combat-ready"; and, C-4 meant "not combat-ready".[1]

(U) In the previous quarter [January-March] the 319th Bomb Wing's C-Rating had risen and fallen erratically, in part because of an unstable input of combat-crews, and partly because several higher-headquarters changes in the unit's authorized crew figures had affected the rating's daily computation.* The bomb wing's Combat-Rating between 1 Apriland 30 June 1970 was much more consistant; authorized figures remained stable and crew inputs became somewhat more predictable.

(U) A change occurred in April in the methods wing people used to report C-Rating statistics. Previously, the command post had forwarded each day's C-Ratings (one each for bomber and tanker resources) to numbered air force headquarters, in the teletyped 1-SAC-V1 (U) Report. In addition, the chief of the DCO Reports and Analysis Office had sent a confidential message to the Director of Operations at Headquarters Second Air Force, explaining the reasons for C-Ratings changes.

(U) When the Fourth Strategic Aerospace Division (4SAD) and the 319th Bomb Wing transferred to the command jurisdiction of Headquarters Fifteenth Air Force on 1 April, these reporting procedures altered. From that date forward, a special "C-RATE"

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* See 319BW History, Jan-Mar 70, Vol I, pp 23-24, and page 40.

1. SACM 55-8, Vol I (CONFIDENTIAL), "SAC Operational Reporting Manual (U)", 17 Dec 69, Chapt. 5, Fig 501, p.5-3.

command post message reported C-Rating changes to higher headquarters. This teletype message followed a computer-input format, as did all the new command post messages to Headquarters Fifteenth Air Force.*2 The DCO Reports and Analysis officer's written message was discontinued.[3]

Bomber-C-Rating

The wing had maintained a constant C-2 rating for both bombers and tankers in November and December 1969.[4] Then, because of a change from higher headquarters in the wing's crew-authorized figures, the B-52H C-Rating dropped to C-3 (14 January 70)[5], where it remained until 6 April.[6]

In January Headquarters SAC had increased each B-52 unit's authorized crews by four, to ensure the possibility of more complete manning inputs, and hopefully overcoming the drain of men TDY to Southeast Asia [SEA] on operation "Arc Light".[7] The 319th Bomb Wing had thereupon used the resulting new figure of 27 crews (the previous 23 authorized bomber crews plus 4 SEA) as the

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* Sample of a "CRATE" Message format (which changed periodically) is included as exhibit 70 (see footnote 2).

2. Extract from SACM 55-8, Vol I (C), p. 4-20, Fig 4-14, 28 May 70, ex 70.
3. Interview, AIC B.F.Fuller, historian, with Capt. G.E.Koster, OIC, DCO Reports & Analysis office, 17 Aug 70.
4. 319BW Hist, Oct-Dec 69, Vol I, p. 14.
5. 319BW Hist, Jan-Mar 70, Vol I, p. 25.
6. Msg, ~~(C)~~ [Command Post Computer Format], "CRATE", Ø1125Z Apr 7Ø, ex 71.
7. 319BW Hist, Jan-Mar 70, Vol I, p.25.

authorized figure to compute lower C-Ratings. A message from Headquarters SAC on 31 March 70 stated that these four additional crew authorized slots were NOT to be included in unit C-Rating computations.[8] Accordingly on 6 April the bomb wing reverted to its former authorized figure for crews (23), and its C-Rating for bombers returned to a two.[9] This C-2 rating for B-52H crew/equipment resources stayed constant through 30 June 1970.[10]

Tanker C-Rating

~~(C)~~ In the months prior to April there had been some fluctuation in the wing's tanker C-Ratings too. After 9 March 1970, however, it evened out to a steady C-2.[11] The resource shortage which had kept tankers at this "substantially combat-ready" mark was of combat-ready navigators.[12] Between 1 April and 30 June this overall tanker resources situation continued; the wing was at C-2 for tankers for all three months.[13]

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8. Msg, SAC to AIG 754(C) et.al., "SEA Augmentation Authorization", 312319Z Mar 70, ex 72.

9. Msg ~~(C)~~ [Command Post Computer Format], "CRATE", 060026Z Apr 70, ex 73.

10. Interview, A1C B.F.Fuller, historian, with Capt. G.E.Koster, OIC DCO Reports & Analysis Off, 17 Aug 70.

11. 319BW Hist, Jan-Mar 70, Vol I, pp. 26-28.

12. Ibid.

13. Msg ~~(C)~~ [Command Post Computer Format], "CRATE (U)", 011316Z Apr 70, ex 74; Interview, A1C B.F.Fuller, historian, with Capt. G.E.Koster, OIC DCO Reports & Analysis Off, 17 Aug 70.

Weapon Systems Inventory

(b) (1) (A)

(b) (1) (A)

(b) (1) (A)

(b) (1) (A) Figures III-2 and III-3 (pages 44,47) show how many tankers and bombers were authorized the wing, how many were assigned, and how the wing allocated these airplanes. Some explanation of these two figures is necessary.

TANKERS

The 319th Bomb Wing continued to be authorized 15 KC-135A jet tankers for this entire period.[14] Between 1 April and 30 June the number of tankers actually assigned was 16.[15] A seventeenth tanker was technically assigned to the 319th Bomb Wing during this period. Although no one in the wing had ever seen it, this specially-configured airplane was assigned "Combat Lightning" communications duty on a continuing basis in Southeast Asia. Because the wing had no direct relation to this tanker's operation, it was not considered in the history's inventory as an "assigned aircraft".[16]

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14. Interview, A1C B.F.Fuller, historian, with Maj W.L.Marshall, Senior Officer Controller, 319DCOCD, 22 Aug 70.

15. Interview, A1C B.F.Fuller, historian, with Maj W.L.Marshall, Senior Officer Controller, 319DCOCD, 22 Aug 70; Worksheet, "Monthly Recap", prepared by 319DCM Aircraft Records Office, Apr/May/Jun 70, ex 75, ex 76, and ex 77.

16. Interview, A1C B.F.Fuller, historian, with Col D.W.Phillips, 319BW DCO, 22 Aug 70.

~~(S)~~ Since the job of the Deputy Commander for Maintenance (DCM) was to provide usable airplanes for flight operations, his staff's figures are next presented to show the wing's tanker inventory. The DCM's Maintenance Analysis office published a monthly "Maintenance Summary" that included a chart on aircraft utilization for each airplane type. An extract from the June KC-135A "Utilization" chart is reproduced here as Figure III-1:

FIGURE III-1

(U) Aircraft Utilization (KC-135A)[17]

MONTH:	APR	MAY	JUN
Aircraft Possessed	13.6	12.7	13.7
Aircraft Available	7.6	6.7	7.7

The "aircraft possessed" numbers show the average figure for tankers assigned to the wing and on station at Grand Forks Air Force Base. The "aircraft available" figures were always an even six below those "possessed". Three of these six tankers were on "Stable Alert"; they were the airplanes used for the active EWO alert sorties.[18] The other three airplanes were not cocked, but were on alert as "pre-generated" aircraft.[19] The aircraft available were those which were assigned to the wing, and could be worked on by maintenance in preparation for routine Combat Crew Training Missions (CCTM).

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17. Rpt, "Monthly Maintenance Summary", prepared by 319DCM Maintenance Analysis office, May-June 1970, p.37, ex 78.

18. Interview, AIC B.F.Fuller, historian, with Maj W.L.Marshall, Senior Officer Controller, 319DCOCD, 22 Aug 70.

19. SAC EWO Plan 44-4 (~~SECRET~~), "Annex A," (U), p.1.

FIGURE III-2

(U) Availability and Allocation of Tankers

	APRIL	MAY	JUNE
AUTHORIZED:	15.0	15.0	15.0
On EWO alert*	6.	6.	6.
Off-base**	2.4	3.3	2.3
Available to maintenance & CCTMs	7.6	6.7	7.7
AVERAGE ASSIGNED:	16.0	16.0	16.0

These figures (including the total number of tankers assigned) were averages, with the exception of the six alert aircraft. The Aircraft Records worksheets which show the exact location of each 319th Bomb Wing tanker is included for each month in this history to demonstrate how the average figures were computed.[20]

BOMBERS

(U) The 319th Bomb Wing continued to be authorized 15 B-52H intercontinental jet bombers.[21] These authorized figures (for both tanker and bomber) were static -- set by

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* Includes all tankers on alert status: see page 42.

** Includes tankers at maintenance depot for extended work, tankers on TDY missions -- Young Tiger, Eielson and (b)(1) Area Tanker Task Force assignment, RAF Bombing Comp support, etc.

20. Worksheet, "Monthly Recap-KC-135A", prepared by 319DCM Aircraft Records, 30 Jun 70, ex 75; Worksheet, "Monthly Recap - KC-135A", prepared by 319DCM Aircraft Records, 31 May 70, ex 76; Worksheet, "Monthly Recap - KC-135A", prepared by 319DCM Aircraft Records, 30 Jun 70, ex 77.

21. Interview, AIC.B.F.Fuller, historian, with Maj W.L.Marshall, Senior Officer controller, 319DCOCD, 22 Aug 70.

higher headquarters. The assigned figures, on the other hand, fluctuated, sometimes from day to day. In April, the "assigned" figure appeared to be 16 (as shown on the "Monthly Recap" Aircraft Records office worksheet).[22] In may this figure was 17 bombers.[23]

(U) A close look at the bomber records from the DCM's Aircraft Records section, however, shows that the wing did not at all times have the assigned use of all 16 or 17 machines. As was standard procedure in SAC[25], different wings lent airplanes back and forth to cover the loss of bombers to maintenance depots, such as the San Antonio Air Materiel Area [SAAMA] plant.* †

(U) The April Aircraft Records worksheet (exhibit 79) showed 16 airplanes under the jurisdiction of the 319th Bomb Wing.[24] However, bomber number 61-034 was ferried to SAAMA on 7 April, and number 61-034 went to Texas for maintenance on the following day. Bomber 61-035 flew to SAAMA for large-scale work on 17 April. The wing would have been down three assigned airplanes (making an assigned total of 13 -- two below authorized), but the 410 Bomb Wing at K.I. Sawyer Air Force Base lent this bomb

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* Bombers sent to SAAMA are discussed in Chapter IV (Maintenance).

† The historian discussed the Aircraft Records "Monthly Recap" worksheets with DCO command post personnel, to see how the maintenance-derived figures compared with the computing point of view of flight operations.

22. Worksheet, "Monthly Recap - B-52s", prepared by 319DCM Aircraft Records office, 30 Apr 70, ex 79.

23. Worksheet, "Monthly Recap - B-52s", prepared by 319DCM Aircraft Records office, 31 May 70, ex 80

24. Worksheet, "Monthly Recap - B-52s", prepared by 319DCM Aircraft Records office, 30 Apr 70, ex 79 .

wing B-52 number 61-018, which arrived on 7 April and was returned to the Michigan base on 17 May (14 sorties later).[25]

(U) This pattern of replacing 319th Bomb Wing B-52s at SAAMA with occasional substitutes from other bomb wings continued during these three months. Therefore, while the wing's gross number of assigned bombers appeared to be 16 or 17 at times, the average number assigned, computed from those airplanes at depot and from those on loan here, would be 15 -- in keeping with the wing's authorization.

(U) The following table (Figure III-3) gives an extract of "Monthly Maintenance Summary" "possessed" and "available" statistics on the wing's B-52Hs for April, May and June.[26]

FIGURE III-3

(U) Aircraft Utilization (B-52)

MONTH:	APRIL	MAY	JUNE
Aircraft Possessed	13.0	13.7	13.9
Aircraft Available	7.0	7.7	7.9

The "aircraft possessed" numbers relate the average bombers on station at Grand Forks Air Force Base for each month. Subtracting these figures from the average assigned bombers (15) would give an estimate of the airplanes off station (mostly to depot).*

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* See Fig III-4, p.47 for this information.

25. Worksheet, "Monthly Recap-B-52s", prepared by 319DCM Aircraft Records office, 30 Apr 70, ex 79 ; Worksheet, "Monthly Recap - B-52s", prepared by 319DCM Aircraft Records office, 31 May 70, ex 80.

26. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCM Analysis section, 30 Jun 70, ex 78 .

(~~S~~) The "aircraft available" column shows that six B-52H bombers were on stable alert; as with the tankers, three of these airplanes were EWO-configured but not cocked ("Pregeneraged"), and the other three were "hard alert" -- completely ready to go.[27] The difference between possessed and available bombers was a constant six. The available bombers stood by, awaiting use in Combat Crew Training Missions.

(U) The following Figure III-4 concludes this section on the wing's bomber inventory:

FIGURE III-4

(U) Availability & Allocation of B-52H Bombers

	APRIL	MAY	JUNE
AUTHORIZED:	15.0	15.0	15.0
On EWO alert	6.	6.	6.
Off-base (Depot)	1.4	2.3	1.3
Available to maintenance & CCTMS	7.6	6.7	7.7
AVERAGE ASSIGNED:	15.0	15.0	15.0

Exhibits 79, 80, and 81 show the exact locations of each B-52H during April, May and June. These worksheets are included to show how the average figures presented here were computed.[28]

27. SAC EWO Plan 44-4 (~~SECRET~~), "Annex A (U)", p.1.

28. Worksheet, "Monthly Recap - B-52s", prepared by 319DCM Aircraft Records office, 30 Apr 70, ex 79; Worksheet, "Monthly Recap - B-52s", prepared by 319DCM Aircraft Records office, 31 May 70, ex 80; Worksheet, "Monthly Recap - B-52s", prepared by 319DCM Aircraft Records office, 30 Jun 70, ex 81.

(b) (1) (A) ~~SECRET/TRD~~

(U) This third and final 319th Bomb Wing weapon-system was not subject to the off-base ferrying that constantly affected the tankers and bombers. (b) (1) (A)

(b) (1) (A)

(b) (1) (A)

(b) (1) (A)

(b) (1) (A)

(b) (3) (A)

Weapon-Systems Inventory Conclusion

(C) The 319th Bomb Wing maintained a Combat-Rating of "C-2" during all three of these months. The weapon-systems capability of the wing was not the variable which was causing a "substantially" rather than a "fully" combat ready stance. The wing had all of its authorized aircraft and missiles assigned, and there were an adequate number available for training and alert at all times (although the wing borrowed bombers for short periods). The following section, "Combat Crew Inventory", shows from where the wing's real resource problems arose.

29. Interview, AIC.B.F.Fuller, historian, with Col D.W.Phillips, 319BW DCO, 22 Aug 70.

Combat Crews Inventory

~~(C)~~ The second major 319th Bomb Wing resource was its cadre of trained combat aircrews. The proper distribution and allocation of these manpower units between EWO alert, aircrew training, and temporary duty (TDY) missions away from the wing was one of the central conflicts of this unit's recent history. As this section of the history will demonstrate, it was the shortages of combat-ready B-52 and KC-135 aircrews that kept the wing's Combat Rating at its C-2 level between April and June.

(U) Until 1 April the 319th Bomb Wing reported any combat crew changes in the command post 1-SAC-V1 teletype message (which went to Headquarters Second Air Force and Headquarters SAC). After that date a special, unclassified message, the "CREW-A" reported aircrew changes. The format for this computer-input command post message is included in this history as exhibit 82.[30]

(U) This format presented the wing's crew inventory using four measures: "authorized", "formed", "Combat-ready", and combat-ready crews under the operational control of the parent unit ["OPCON"].[31] Before presenting the data on the wing's bomber and tanker crews status for this quarter, some definition of these four terms is in order.

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30. SACM 55-8, Vol I, (U) "Format - Combat Crew Status", Fig 4-17, p.4-26, 15 Mar 70 (effective 1 Apr 70), ex 82.

31. Ibid.

(U) The "authorized" number for combat crews had a definition similar to that for authorized aircraft: higher headquarters set a certain optimum figure for both.

(U) A "formed" bomber or tanker crew was one complete, numbered group of fliers which was assigned to the wing. (Six B-52H crewmen: pilot, radar-navigator, navigator, electronics warfare officer (EWO), and defensive systems operator (gunner); Four KC-135A crewmen: pilot, co-pilot, navigator, boom operator.) The "formed" crews statistics were the wing's "raw score" computation for human resources.

(U) Combat-ready crews were those formed in which a set number of each kind of crew were individually certified as "combat-ready." (Five of the six bomber and three of the four tanker men).[32] To be combat-ready, these individuals had to be current on their required flying time for different training operations, they had to be briefed in all phases of their normal flying, and they had to be currently EWO-certified.[33]

(U) The final inventory category used in the "CREW-A" messages was "Combat-Ready-OPCON."* By subtracting from the combat-ready crews those away on temporary duty (such as operation Arc Light and operation Young Tiger) or leave, the wing arrived at this figure (formerly called "usable crews").

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*OPCON: "Under the operational control of the parent unit," see p. 49.

32. Interview, A1C B.F. Fuller, Historian, with Lt. Col. W.R. Hall, 905th Operations Officer, 21 Aug 70.

33. Ibid.

Bomber Crew Resources

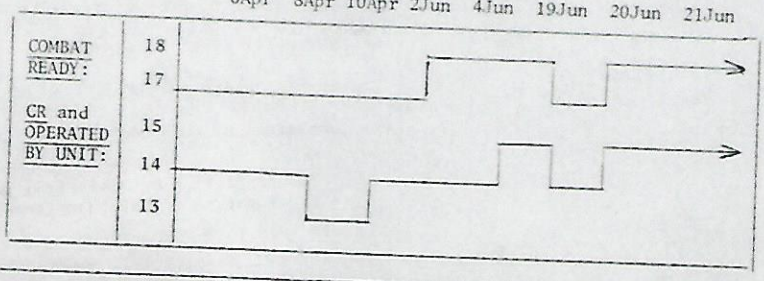
(U) The 319th Bomb Wing had 23 bomber crews "authorized" for the entire period.[34] Although on 16 January 1970 this had been increased to 27 crews,* for methods of C-Rating and crew-inventory reporting this had been changed back again to 23 crews, as of 6 April 1970, when Headquarters SAC clarified their Southeast Asia augmentee authorization system.

(U) According to the command post "CREW-A" messages for April, May and June,** the number of formed 319th bomber crews remained a constant 19 for all three months.[35] This was an increase of one crew over the previous quarter's steady 18-crew figures. The following table, Figure III-5, shows the wing's combat-ready and combat-ready/OPCON bomber crews for this period:

FIGURE III-5

(U) Combat-Ready and OPCON [36]

319BW Bomber Crews



* See this history, pp. 40-41.

** The first and last bomber "CREW-A" command post messages of the quarter are included as samples, ex 83.

34. Msgs, 319DCOCD to 15AF, (U) "CREW-A", Apr/May/Jun, filed with 319HO.
35. Ibid.
36. Ibid.

~~The~~ The combat-ready figures of this chart showing 17 or 18 crews were the cause of the wing's C-2 rating for bombers. According to SAC Manual 55-8, "SAC Operational Reporting Manual", 85 percent of a wing's authorized crews must be combat-ready for it to achieve a C-1 rating.[37] The 319th Bomb Wing at best had 18 combat-ready B-52H crews, which gave a 78.3 percent authorized/combat-ready ratio.*

(U) Figure III-5 shows that it was not primarily the drain of combat-ready bomber crews to Southeast Asia that caused the wing's lowered C-Rating, EWO Alert degrades**, and scheduling and crew hardships; rather, the basic supply of trained bomber crewmen for any function was in short supply for CONUS units. A similar situation prevailed for the wing's tanker crews.

Tanker Crews Inventory

(U) The bomb wing maintained an authorized figure of 24 tanker crews throughout the quarter.[38] Figure III-6 on the following page shows the tanker crews that were formed, combat-ready, and combat-ready/controled by this unit.

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* Computation by historian: ratio of authorized to (highest) combat-ready crews was 23/18, which = 78.3%.

** See this chapter, pp. 58-61.

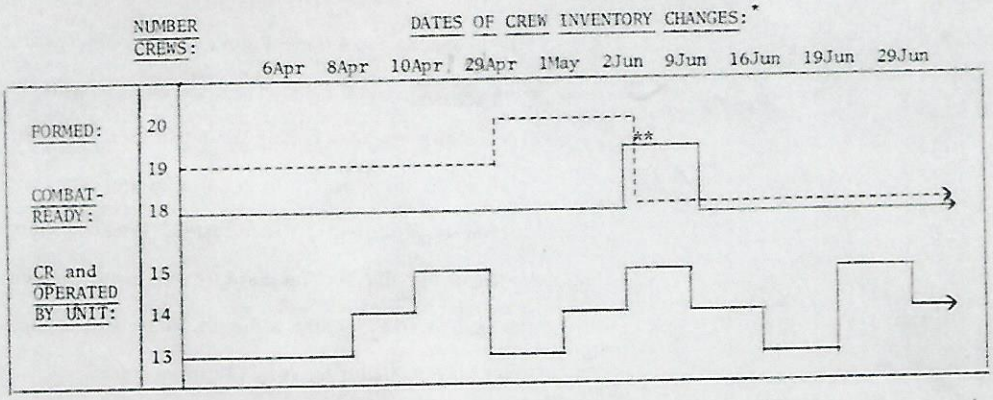
37. SACM 55-8, Vol I, (~~CONFIDENTIAL~~), "SAC Operational Reporting Manual (U)", 17 Dec 69, Chap 5, Fig 5-1, p.5-3.

38. Msgs, 319DCOCD to 15AF, (U) "CREW-A", Apr/May/Jun, filed with 319HO.

FIGURE III - 6

(U) FORMED, COMBAT-READY, AND OPCON [39]

319BW TANKER CREWS



* The first and last tanker "CREW-A" command post messages of the quarter included as ex 84.

39. Msgs, 319DCOCD to 15AF, (U) "CREW-A", April/May/June 70, filed with 319BW(HO).

** 8-9 June Formed vs Combat-Ready crews figures reflect information on "Crew-A" messages, despite apparent higher "Formed" number, which was unlikely.

(U) From the chart it is easy to see that the "raw" or numbered, formed crews wavered between 18 and 20 during April, May and June. The wing had 18 combat-ready tanker crews during this period, except for seven days in the beginning of June, when this jumped to 19. During the last half of June, the number of crews formed equaled the number combat ready, which demonstrated a very complete personnel utilization.

(C) Using the 85-percent criteria from SACM 55-8 again, it was the 18 (or at most, 19) combat-ready tanker crews that kept the tanker C-Rating at C-2 during this quarter.*

(U) The unsettling effects of sending numerous crews TDY on operation Young Tiger, on Eielson Tanker Task Force and b1 [redacted] Area Tanker Task Force deployments, and in support of special projects such as Headquarters Fifteenth Air Force's "Falcon 70" are visible in the fluctuating "Operated by Unit" combat-ready lines in Figure III-6. Although the crews available for local use did not fluctuate by any great amount, their numbers did change often, which affected the ability of the unit to plan its EWO alert scheduling very far in advance.

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* See page 37; Computation by Historian: 19CR crews/24 authorized, equalled a 79.1 percent authorized/CR ratio.

Combat Crew Inventory Conclusion

(C) As far as 319th Bomb Wing resources were involved, it was the effect of an inadequate supply of bomber and tanker crewmembers that dictated C-2 ratings for this period. The wing's weapon-system equipment was in adequate supply for a "fully" combat-ready grade. The shortage of crews overall made Headquarters SAC's augmentee manning requirements on the wing that much more difficult to fulfill.

(U) This final table on the wing's combat crew inventory (Figure III-7) was extracted from the semi-monthly SAC-U92 Report, "Aircraft Combat Crew Status Report."[40] It shows, in simplified form, which crew positions were in greatest demand in the wing:

FIGURE III-7

(U) Shortages of Bomber/Tanker Aircrew positions*

AS OF:	15 Apr	1 May	15May	1Jun	15Jun	1Jul
B-52H Positions	PILOT NAV	PILOT NAV	PILOT NAV	NAV	NAV EW	R-NAV NAV EW
KC-135A Positions	--	NAV	NAV	NAV	--	NAV

* Historian included those positions which were significantly and relatively lower than others in each aircraft type.

40. Report, "SAC-U92 - Aircraft Combat Crew Status Report," prepared by 319DCO Reports & Analysis office, 15 Apr 70, ex 85. Rpt, "SAC-U92 - Aircraft Combat Crew Status Report," prepared by 319DCO Reports & Analysis office, 1 May 70, ex 86; Rpt, "SAC-U92 - Aircraft Combat Crew Status Report," prepared by 319DCO Reports & Analysis office, 15 May 70, ex 87; Rpt, "SAC-U92 - Aircraft Combat Crew Status Report," prepared by 319DCO R&A, 1 Jun 70, ex 88; Rpt, "SAC-U-92 - Aircraft Combat Crew Status Report," prepared by 319DCO R&A, 15 Jun 70, ex 89; Rpt, "SAC-U92-Aircraft Crew Status Report," prepared by DCO R&S, 1 Jul 70, ex 90.

Combat Crew Resource Management Activities

(U) On the second Friday of each month, wing staff members met to discuss the overall combat crew strength situation, and also to review the progress of those individuals upgrading to fill in crew positions that were vacant. The minutes of these two meetings showed crew changes, listed those crews scheduled for Arc Light duty,* and presented forecasts on impending crew changes and deficiencies.[41]

(U) The Upgrade Panel Minutes showed, for each month, which crew members were training to fill vacant flying positions.[42] Together, the Combat Crew Capabilities and Utilization Meeting minutes and the Upgrade Panel Meeting minutes presented a thorough picture of wing crew shortages, and showed how it was working through its training progrem to fill the gaps. The minutes of both meetings are included; they are self-explanatory.

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* For definition and explanation of "Arc Light", see p. 72.

41. Ltr, 319BW(DCOT) to 4SAD(DO), et.al., subj: Minutes of Combat Crew Capabilities and Utilization Meeting, 13 Apr 70, ex 91; Ltr, 319BW(DCOT) to 4SAD(DO),et.al., subj: Minutes of Combat Crew Capabilities and Utilization Meeting, 8 May 70, ex 92; Ltr, 319BW(DCOT) to 4SAD(DO) et.al., subj: Minutes of Combat Crew Capabilities and Utilization Meeting, 15 Jun 70, ex 93.

42. Ltr, 319BW(C) to 15AF(DOTTA/DOTC) et.al., subj: Minutes of Upgrade Panel, 10 Apr 70, ex 94; Ltr, 319BW(C) to 15AF(DOTTA/DOTC) et.al., subj: Minutes of Upgrade Panel, 8 May 70, ex 95 ; Ltre,319BW(C) to 15AF(DOTTA/DOTC) et.al., subj: Minutes of Upgrade Panel, 12 Jun 70, ex 96.

(U) When the wing was low on "usable" crews, these men at Grand Forks Air Force Base were alone responsible for manning the wing's EWO alert commitment. The tightness in aircrew scheduling occasioned by the basic shortage of input crew members, and also by the dual commitment of wing manpower to its own EWO alert and to higher headquarters TDY missions significantly affected the lives of both staff and crews. The particularly severe effects of the combat crew manpower squeeze on the wing's training mission is discussed later on, in the section on crew training.*

THE EWO MISSION: GROUND ALERT

(U) With the aircraft and crew resources that were available, the 319th Bomb Wing had several major mission tasks. The first of these was the maintenance of a ground alert sortie commitment.** The wing kept bombers and tankers*** on alert round the clock, seven days a week; these airplanes were completely combat-configured. Manning these airplanes were "alert crews", who were combat-ready, fully briefed, and who lived on a standby status nearby in special facilities. They were prepared to launch at all times on the Emergency War Order [EWO], within the Ballistic Missile Early Warning System time limits.

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* See this chapter, pp. 81-90.

** The 319th Bomb Wing had no Airborne Alert Commitment.

*** See pages 44, 47 this history, for detail on alert aircraft.

~~CONFIDENTIAL~~

(U) Colonel Taylor, the wing commander, had decided previous to this quarter, that alert crews would have to adopt a standard year-round duty tour length. He preferred a tour of four days (weekdays) or three days (if the crew's turn fell on a weekend) for the wing. The shorter (and more frequent) alert tours provided by this "4/3" system exposed crews more often to their "first day on alert" training, and thereby kept them more current on EWO information. This schedule was continued as the permanent one through 30 June 1970.[43] No significant changes in the alert crew procedures or training occurred in these months; the transition for them to the jurisdiction of Headquarters Fifteenth Air Force was so far an uneventful one.[44]

~~(C)~~ If the wing were fully manned with an adequate number of combat crews, all six bombers and six tankers would have crews on alert. This was the wing's normal crew alert requirement. When the numbers of combat-ready crewmembers fell below a set minimum figure, the Deputy Commander for Operations (DCO) was required to request a "degrade" of a certain number of alert sorties.* In April,

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* Bomber alert sorties were named 001 through 006, tanker sorties 101 through 106.

43. Interview, A1C B.F. Fuller, Historian, with Lt. Col. J.B. Gallion, Chief, Alert Mgmt Division, 319BW, 21 Aug 70.

44. Ibid.

~~CONFIDENTIAL~~

May and June 1970, Colonel Scannell, 319th Bomb Wing DCO, requested three periods of bomber-alert sortie degrades, and two periods of degraded tanker-alert sorties.

Bomber Sorties Degraded

(C) For all of April and through 14 May 1970, a degrade of three B-52H sorties (004, 005 and 006) had been approved by higher headquarters and was in effect.[45] The wing had attempted to increase its combat-ready bomber crew numbers by intensifying its upgrade and Arc Light returnee difference* training program[46], but the Federal Aviation Agency [FAA] controllers' slowdown had continued to curtail flight training through 1 May 1970[47], and the wing had experienced a further disruption to normal training activities during its BUY NONE exercise on 23-26 April.

(U) On 6 April, Colonel Scannell received a 14-day training extension-waiver from Headquarters Fifteenth Air Force for the wing's crews, -- compensation for the FAA delays.[48]

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* See this chapter, p.74.

45. 319BW Hist, Jan-Mar 70, Vol I, p.46.

46. Msg ~~(C)~~, 4SAD(319DCO) to 15AF(DOPT), "Alert Degrade (U)", 192249Z May 7Ø, ex 97.

47. Interview, A1C B.F.Fuller, historian, with Mr. Wayne E. Peterson, FAA Area Representative to Grand Forks AFB, 21 Aug 70.

48. Msg, 15AF to AIG 719(DCO) et.al., "Training Time Limitations", Ø623Ø7Z Apr 7Ø, ex 98.

(S) This training extension took some of the pressure off the flight schedulers, but it also kept the unit from producing enough combat-ready crews to reduce the bomber sorties degraded. Accordingly, on 9 May, Colonel Taylor (wing commander) discussed the wing's crew status with Headquarters Fifteenth Air Force, which in turn relayed his analysis to Headquarters SAC.[49]

(C) Lieutenant Colonel Wiebold, Assistant DCO for the wing, followed up on those actions with a formal degrade request on 19 May 70. He asked that the three bomber alert sorties degraded remain so "for the period 14 May through 2 June ".[50] In his written request, Colonel Wiebold also outlined the wing's bomber crew/degrade status through 31 July 1970, which indicated a three-sortie down condition through that date. Headquarters SAC required the wing to keep a fourth bomber sortie manned, however, through 21 June.[51] Figure III-8, below, summarizes the 319th Bomb Wing's bomber-sortie degrades for the quarter:

FIGURE III-8

(S) 319BW Bomber Alert Degrades

	1Apr-14May	14May-21Jun	21Jun-30Jun
NUMBER SORTIES: DEGRADED	THREE	TWO	THREE
LACKING CREW POSITIONS:	PILOTs	PILOTs	EWOs

49. MSG (~~SECRET~~), 15AF to SAC(DOPL) et.al., "Alert Degrade (U)", Ø91715Z May 7Ø, ex 99.

50. Msg (C), 4SAD(319DCO) to 15AF(DOPT), "Alert Degrade (U)", 192240Z May 7Ø, ex 98.

51. Msg (S), SAC(DOPL) to 319DCOCD et.al., "Alert Degrades (U)", 281927Z May 7Ø, ex 105.

Tanker Sorties Degraded

(S) On 17 March 1970, the wing's DCO, Colonel Richard J. Hudlow, had requested a degrade of three tanker sorties, effective from "3April until 22 May 70"[52]. Headquarters Second Air Force had forwarded his request to Headquarters SAC on 20 March,[53] and had sent official approval for the three degraded tanker sorties to the bomb wing on 30 March.[54] However, on 13 April 1970, inter-unit remating requirements changed, and this wing was asked by SAC to man a fourth tanker sortie, beginning on 18 April.[55]

(S) On 24 April a second meessage from Headquarters SAC authorized the 319th Bomb Wing to return to three degraded tanker sorties, effective 26 April, 1970.[56]

(S) Colonel Hudlow's 17 March message had predicted that the 319th Bomb Wing would be able to support four tanker sorties after 22 May.[57] The same two situations that had slowed the combat-ready training of the wing's bomber crews, however, also

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52. Msg (S) 4SAD(319DCO) to 2AF(DOPT), "SACM 178-1 Degrade Request (U)", 171920 Mar 70, ex 100.

53. Msg (S) 2AF to SAC(DOTA), et.al., "SACM 178-1 Degrade Request (U)", 200012 Mar 70, ex 101.

54. Msg (U), 2AF to SAC(DOTA), et.al., "SACM 178-1 Degrade Request (U)", 302525 Mar 70, ex 102.

55. Msg (S), SAC(DOPL) to 319DCOCD et.al., "Alert Remating Order (U)", 132208 Apr 70, filed with 319BW (DCOP).

56. Msg (S), SAC(DOPL) to 319DCOCD et.al., "Alert Degrade Remating Order (U)", 241937Z Apr 70, filed with 319DCOP.

57. Msg (S), 4SAD(319DCO) to 2AF(DOPT), "SACM 178-1 Degrade Request (U)", 171920 Mar 70, ex 100.

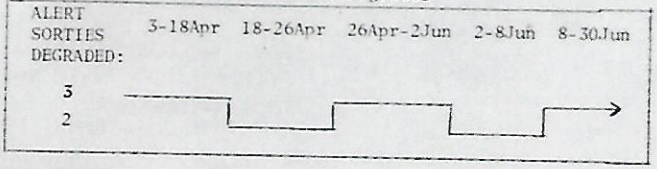
retarded the training and upgrading of tanker-navigators (the "weak link" in the 905th Air Refueling Squadron's manning)[58]. These situations were: the FAA controllers' slowdown (and the 14-day training extention given because of it[59]), and the wing's BUY NONE Exercise.

(S) On 11 May, Lt. Colonel Wiebold accordingly requested a continuance of the wing's three-sortie tanker degrade, to last through 24 July 1970;[60] on 14 May, Headquarters Fifteenth Air Force concurred with this request.[61] Again, however, higher headquarters changes made a 319th Bomb Wing degrade alteration necessary. On 28 May the wing command post teletype printed out: "319BW Sortie 106 [tanker] to be on hard alert only during period 2 June 70 through 8 June".[62]

(S) The following chart, Figure III-9 summarizes the wing's tanker degrade status for the entire quarter:

FIGURE III-9

(S) 319BW Tanker Alert Degrades



58. Msg (S) 4SAD(319DCO) to 2AF(DOPT), "SACM 178-1 Degrade Request (U)", 171920 Mar 70, ex 100.

59 Msg, 15AF to AIG 719(DCO) et.al., "Training Time Limitations" 062300Z Apr 70, ex 98.

60. Msg (S), 4SAD(319DCO) to 15AF(DOPT), "Alert Degrade (U)", 112323 May 70, ex 103.

61. Msg (S), 15AF to SAC(DOPL) et.al., "Alert Degrade (U)", 220111Z May 70, ex 104.

62. Msg (S), SAC(DOPL) to 319DCOCD et.al., "Alert Degrades (U)", 281927Z May 70, ex 105.

Alert Force Exercises

~~(S)~~ The transition to the jurisdiction of Headquarters Fifteenth Air Force coincided with altered procedures for the initation of 319th Bomb Wing alert force exercises. Before 1 April 1970, both Headquarters SAC and Headquarters Second Air Force-scheduled alert exercises for the 319th Bomb Wing's crews were truly "no-notice" for the command post controller staff. After 1 April, only SAC-initiated EWO alerts, and one XRAY-8 exercise* per month from Headquarters Fifteenth Air Force, were truly training exercises for command post people as well as for the flight crews. Instead of receiving an authentic teletyped EWO signal for numbered air force alerts, the controllers merely initiated an exercise that they read from a classified Fifteenth Air Force schedule.[63]

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* For definitions of XRAY alert force exercise names, see this chapter, pp 64-65.

63. Interview A1C B.F.Fuller, historian, with Lt.Col. R.L.Hodges, Chief 319BW Command Control Divs, 11 Aug 70; Interview, A1C B.F.Fuller, historian, with Maj J.F.Huffaker, Chief 319BW Command Control Divs, 26 Aug; Interview,A1C B.F.Fuller, historian, with Maj. C.R.Lee, 319BW Senior Officer Controller, 26 Aug 70.

~~(C)~~ Colonel Taylor, 319th Bomb Wing Commander, continued to be notified as before of the schedule of numbered air force initiated alert messages. On the last day of each month he received the following month's schedule in a confidential "For Commander Only" message.[64] The advance receipt of this scheduling information not only enabled Colonel Taylor to plan his activities around most of the alert exercises, but also permitted him to personally review and critique the response performance of his bomber and tanker crews.

~~(C)~~ The transition to Fifteenth Air Force did not change the nature of the alert force exercises themselves. The four stages of these crew exercises were: XRAY-4, XRAY-6, XRAY-7 and XRAY-8.

~~(C)~~ In an XRAY-4 exercise, the crews responded to the aircraft after notification by telephonic alert; once on board they were ready to start engines. An XRAY-6 went one step further -- the crews started their engines, after responding to the klaxon-call.

~~(C)~~ In XRAY-7 and XRAY-8 practices, the crews taxied the airplanes as if they were actually going to launch. The bombers and tankers moved to the runway hold line in a "Seven". In the XRAY-8 condition, the planes crossed the hold line and were ready to begin the takeoff roll is so directed.[65] Pages 65-67

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65. Msg, ~~[C]~~ [For Commander Only], 15AF to AIG 711~~(C)~~, "Alert Force Exercise Schedule for Apr (U)", 31545ØZ Mar 7Ø, ex 106; Msg, ~~[C]~~ [For Commander Only], 15AF to AIG 711~~(C)~~, "Alert Force Exercise Schedule for May (U)", 23ØØ25 Apr 7Ø, ex 107; Msg, ~~[C]~~ [For Commander Only], 15AF to AIG 711~~(C)~~, "Alert Force Exercise Schedule for May (U)", 241540Z May 70/, ex 108.

66. 319BW Hist, Jan-Mar 70, Vol I., pp. 48-49.

~~SECRET~~

show the bomber and tanker alert force exercises which were conducted in April, May and June (Figures III-10, III-11, and III-12). These charts show the first, last, and average response times from the sounding of the klaxon to the final phase of each exercise. Initiation times are in the left column of each chart (Zulu time).

XRAY-5 Exercise

~~(S)~~ Each quarter the bomb wing was required to demonstrate its "sustained reaction posture" in one practice exercise. The central mission of this "XRAY-5 Exercise" was to "provide and maintain a posture under advanced DEFCON* conditions, which will enable launch of maximum number of EWO tactical aircraft within the shortest period of time after receipt of launch message."[66] This operation was originally planned in response to the Soviet Union's growing fleet of submarine-launched ballistic missiles (SLBMs), which had significantly decreased the possible enemy missile warning time, [redacted] b1

*DEFCON - defense condition

**BMEWS: Ballistic Missile Early Warning System, see pp. 57-58.

65. Plan (~~SECRET~~), "Sustained Reaction Posture Plan (U)", 319BW, 17 Feb 69, with amendments, p.1, filed with 319HO.

67. Interview, A1C B.F.Fuller, historian, with Col R.B.Wolfersperger, 319VC, 7 Jun 70.

66. Plan (~~SECRET~~), "Sustained Reaction Posture Plan (U)", 319BW, 17 Feb 69, with amendments, p.1, filed with 319HO.

~~SECRET~~

~~SECRET~~ (when filled in)

~~SECRET~~

FIG III-10 ~~(S)~~ APRIL ALERT FORCE EXERCISES

# of B-52s	TIME/DATE	BOMBERS XRAY-4	XRAY-6	XRAY-7	XRAY-8		TANKERS XRAY-4	XRAY-6	XRAY-7	XRAY-8	# of KCs	REMARKS
3	11/1755Z		[redacted]								3	
3	20/1126Z		CANX			FIRST LAST AVERAGE		CANX			4	2 1/2 inches snow/ice on runways;
3	22/1515				[redacted]						4	
3	23/2350Z										3	
3	29/1645Z		[redacted]								3	
-	-	-	-	-	-	FIRST LAST AVERAGE	-	-	-	-	-	-
-	-	-	-	-	-	FIRST LAST AVERAGE	-	-	-	-	-	-
-	-	-	-	-	-	FIRST LAST AVERAGE	-	-	-	-	-	-

(*COMPUTED BY HISTORIAN)

SOURCE: XXXXXXXXX Reports, 319BW (DOOCD); Msgs (S), POSX6/POSX8, Apr 70, 4SAD to HqSAC, on file with 319HO.

~~SECRET~~

GROUP 1
Excluded from automatic downgrading and declassification

~~SECRET~~ (when filled in)

~~SECRET~~

FIG. III-11 ~~(S)~~ MAY ALERT FORCE EXERCISES

# of B-52s	TIME/DATE	BOMBERS XRAY-4	XRAY-6	XRAY-7	XRAY-8		TANKERS XRAY-4	XRAY-6	XRAY-7	XRAY-8	# of KCs	REMARKS
3	Ø6/2215Z		[redacted]								3	
3	Ø7/2Ø49Z		[redacted]								3	
3	Ø9/2325Z		[redacted]								3	
3	13/1638Z		[redacted]								3	
3	14/1818Z		[redacted]								3	
3	29/Ø128Z		[redacted]								3	
						FIRST LAST AVERAGE						
						* FIRST LAST AVERAGE						

(*COMPUTED BY HISTORIAN)

SOURCE: [illegible] Msgs, ~~(S)~~, POSX6/POSXB, 4SAD to HqSAC; on file with 319HO.

~~SECRET~~

GROUP I
Excluded from automatic downgrading and declassification

SECRET

FIGURE III-12 (S) JUNE ALERT FORCE EXERCISES

BOMBERS

TANKERS

TYPE/DATE	# of B-52s	XRAY4	XRAY6	XRAY7	XRAY8*	# KC-135	XRAY7	XRAY8	REMARKS
05/1030Z	4	[redacted]							
05/2110Z	4								
05/2127Z	4								
09/2100Z	4								
13/2208Z	4								
17/1530Z	4								
					LAST				
					AVERAGE				
					FIRST				
					LAST				
					AVERAGE				

(b)(1)(A)

GROUP I
Excluded from automatic downgrading and declassification

(* First, last & average times in minutes and seconds.)

* COMPUTED BY HISTORIAN

JUNE 1970
(Month)

TRUE EXTRACT

Msgs(S),POSX6,POSX8, 4SAD to HqSAC, on file wigh 319BWHO (Jun 70).

SOURCE: [redacted]

SECRET

~~SECRET~~

~~(S)~~ This quarter, because the runways at the Grand Forks International Airport were being rebuilt, an agreement between the city and the Air Force had been made under which seventeen commercial airline flights each day used Grand Forks Air Force Base runways.* Because of the increased congestion and added security problems this agreement created for the 319th Bomb Wing, Headquarters Fifteenth Air Force asked SAC for a waiver on the wing's XRAY-5 exercise for this period.[69] Headquarters SAC approved this waiver on 10 June 1970.[70] No XRAY-5 Exercise occurred in the wing between April and June.

Conclusion to Ground Alert Mission

~~(S)~~ The 319th Bomb Wing continued to conduct a successful EWO alert mission between 1 April and 30 June. Despite the degrades the wing was forced to request because of its inadequate supply of crews, all XRAY exercise times were well

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* See Chapter VI, "Special Activities", pp 138-140.

69. Msg, 15AF to SAC(DOCO), "Posture Five Training", Ø52Ø4ØZ Jun 7Ø, ex 109.

70. Msg, 15AF to 319BOMBWG(DCO), "Posture X-RAY Five Training", 1Ø2217Z Jun 7Ø, ex 110.

within the established BMEWS time limits.[71] As far as the degraded alert sorties were concerned, the five-week period (14 May through 21 June) that the wing did maintain four B-52H sorties on "hard alert" represented an improvement over the previous quarter's record of a steady three-sortie degrade.[72]

Rotations/Reflex Operations/Satellite Basing

(U) Rotations in SAC units were large-scale deployments of aircraft and crews (as in the TDY move of an entire unit). SAC wings which "owned" B-52D model bombers continued to be involved in rotations to and from the war in Southeast Asia. Because the 319th Bomb Wing operated only B-52H model bombers, which were designed and usable only for EWO nuclear deterrent operations and flight training, this wing continued not to be involved in "Rotations".[73]

(U) Reflex operations occurred in SAC when unit crews and their airplanes stood EWO alert duty tours at locations other than their home base. Again, the 319th Bomb Wing, located near the Canadian border in North Dakota, has never taken part in these "TDY-Alert" projects.[74]

(U) A current higher headquarters project that entails the spread-out, remote basing of tactical aircraft whose home

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71. 319BW Hist, Apr-Jun 70, Vol I, pp. 65-68.

72. 319BW Hist, Jan-Mar 70, Vol I, p. 48.

73. Interview, AIC B.F.Fuller, historian, with Lt.Col W.A.Scannell, 319BW Asst. DCO, 17 Aug 70.

74. Interview, AIC B.F.Fuller, historian, with Maj M.D.James, 319DCOCD Senior Officer Controller, 22 Aug 70.

bases were in particularly vulnerable locations, was part of the "satellite basing" concept. Once again because of its remote location, this bomb wing had not been required to send its aircraft to remote basing sites; however, on 15 March 1970, Major Talbott, the DCO Programs Officer, prepared the current revision of the 319th Bomb Wing's "Aircraft Reception Plan", which outlined the activities required of the wing should it ever act as a host base to satellite airplanes from other SAC wings.[75]

THE TDY AND SUPPORT MISSION

(U) As a second major mission responsibility, the 319th Bomb Wing continued its support of a variety of higher headquarters and other-unit activities, most of which involved temporary duty assignments (TDYs) for bomber and tanker crews plus tanker aircraft, away from the Grand Forks area.

(U) These TDY, off-station support activities divided into two general groups: those relating to the war in Southeast Asia (SEA), and those which were part of other, non-war projects. This section includes a narrative of the 905th Air Refueling Squadron's non-TDY other-unit fighter support flights, since these were a major portion of that organization's mission.

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75. Plan, (U) "Aircraft Reception Plan [Peacetime] 508-70", prepared by 319BW Programs Section, 15 Mar 70, ex 111.

(U) Strategic Air Command operations Arc Light and Young Tiger provided for the temporary duty (TDY) tours of continental United States [CONUS]-based B-52 and KC-135 combat crews to Southeast Asia. Because of essential differences between these two operations, this section covers them separately.

Arc Light*

(U) Since June 1968, CONUS B-52 combat crews have been subject to TDY tours flying B-52D model bombers over the war in Vietnam. SAC CONUS wings that owned B-52D aircraft, such as the bomber units at Ellsworth and Fairchild Air Force Bases, participated in "Rotations"**; their crews and bombers periodically moved to the war zone. SAC wings operating bomber types which could not carry the conventional weapons required by Southeast Asia [SEA] operations, such as the B-52H models of the 319th Bomb Wing, sent only crews, on a rotating TDY basis.

(U) For the 319th Bomb Wing's crews, these TDY assignments held great personal significance.*** They looked forward to an average of five months away from their families. Operation Arc Light was equally trying for the wing's scheduling and training staffs. Figure III-13, overleaf, shows the duration of the wing's bomber crew tours on Arc Light for this quarter.[76]

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* For complete details on SAC operation Arc Light, see (S) SAC OpPlan 52-71, "Arc Light (U)", 1 Jul 70.

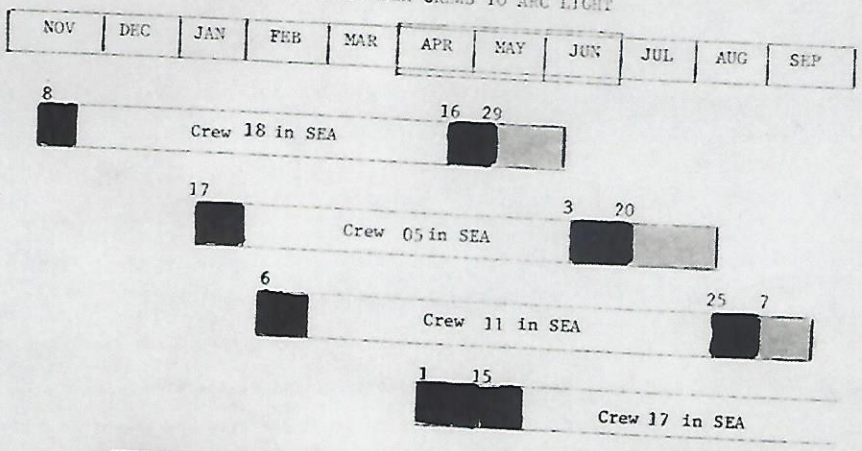
** See p. 70, this chapter.

*** Figure III-13, p.73, gives all crew names on Arc Light, and shows their SEA tour lengths, by crew.

76. Monthly Crew Status Board, "319BW B-52 Crews", Jan-Aug 70, located in 319BW DCO Training Division.

FIGURE III-13

(U) 319BW BOMBER CREWS TO ARC LIGHT



Time on LEAVE

Two weeks "RTU": H-D Model Difference Training, at Castle AFB, California.

Ten days "RTU":D-H Model Diff. Training plus 3 sorties, at 3

CREW 18	CREW 05	CREW 11	Crew 17
Cap Peter J Seberger [P]	Maj Arthur L Huset [P]	Maj Leonard C Lenertz [P]	Cap Bryan L Bennett [P]
Cap Billy G. Butler [CP]	Cap Peter E Morrelli [CP]	Cap Marshall L Christenson[N]	Cap John L Kuntz, Jr [CP]
Cap Gale A. Despiegler [RN]	Cap David R Lawrence [RN]	Cap James W Carter III [CP]	Cap Neil D Boutick [RN]
Cap Gayle R Streff [N]	Cap George Nall, Jr [N]	Cap Frank C Ahlstrom [RN]	Cap Clarence R Green [N]
Cap John A Horyza [EWO]	Cap Andrew N Vittoria Jr [EWO]	Cap Roger L Valentine [EWO]	Cap Glenn M Sell [EWO]
SSgt Daniel L Buttram [G]	SSgt Rayno J Lehtinen [G]	TSgt Roscoe Smith [G]	TSgt James E Braddock [G]

~~CONFIDENTIAL~~

(U) As can be seen in Figure III-13, most bomber crew members took one or two weeks of leave before their arrival at Castle AFB, California.* There they attended the "H" to "D"-model difference training course, which counted as the first two weeks of their Arc Light tours.

(U) After four to five months of Southeast Asia B-52D missions, the crews returned to the United States, rejoined their families, and usually took another two weeks leave. The final phases of Arc Light duty was the retraining course for the B-52H, which was given at the bomb wing.

(U) This "D" to "H"-model difference course was made of two parts: ground, and flight training. The ground training portion took approximately ten days.[77] Flight training consisted of mission planning sessions, and the actual completion of three carefully monitored B-52H sorties.. After the final training sortie, the crews were certified OPCON (usable)** again.

(U) The two sets of crew leaves (before and after the Arc Light tours), and the returning crews' "H"-model training, added an average of six weeks to the time they were not under the operational control of the wing.

~~(C)~~ Each Arc Light crew was absent from the 319th Bomb Wing for over six months (see Figure III-13). In April, May,

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* Crews 05, 11, and 18 may have taken pre-Arc Light leaves; information on these crews was not available.

** OPCON: See this chapter, "Combat Crews Inventory" section, p. 51.

77. Training Schedule, "Arc Light Returnee Package for Crew", prepared by 319DCOT, (undated), ex 112.

~~CONFIDENTIAL~~

and June of 1970, four 319th Bomb Wing B-52 crews were involved in operation Arc Light, and therefore were not usable for the EWO alert mission. The four crews away or in training did not cause the C-2 combat rating for bombers;* their absence, however, did causethe wing its alert degrades. The wing's dual commitment to its nuclear deterrent role and to the support of the war in Vietnam caused it to stretch crew resources, and to necessarily degrade its "EWO performance".

Young Tiger**

(U) The air-refueling operation Young Tiger was similar in overall pattern and effect to Arc Light. The wing only sent crews to SEA on operation Arc Light, however, while it lent crews and airplanes for Young Tiger.*** Figure III-14, page 76, shows which crews were in Southeast Asia from the tanker squadron during this quarter.[78] Their tours were shorter than those of the bomber people, lasting from two and a half to three months.****

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* Seethis chapter, p. 52.

** For complete details on SAC operation Young Tiger, see (S) SAC OpPlan 18-71, "Young Tiger (U)", 1 Jul 70.

*** 319BW Tanker numbers sent to SEA are found in exhibit 75, 76, and 77; Fig III-14 lists all crewmembers on Young Tiger.

**** See Figure III-14, page 76.

78. Crew Roster, "905AREFS Combat Crews", prepared by 905AREFS, 319BW, 30 Jun 70; on file at OPR.

FIGURE III-14

(U) 319BW TANKER CREWS TO YOUNG TIGER

1 — 8 24 Cr 108 in SEA

1 — 6 Cr 107 in SEA no leave

1 — 6 18 Cr 104 in SEA

= on LEAVE

1 — 29 9 Cr 105 in SEA

8 — 8 Cr 115 in SEA *

26 — 26 Crew 114 in SEA *

26 — 26 Crew 117 in SEA *

Crew 104
Maj Richard E Tooke [P]
1Lt Geoffrey S Corsuch [CP]
Maj Richard T Davidson [N]
TSgt Allen E Russell [B]

Crew 105
Maj Bennie L Heathman [P]
Cap George R Giganti [CP]
Maj Frank T Crawford [N]
TSgt Frank R Springhetti [B]

Crew 107
Maj John C Kirk [P]
1Lt James R Wagner [CP]
1Lt Dale H Halstead [N]
TSgt Norman R Culver [B]

Crew 108
Maj Jerome C MacLennon [P]
Cap James H Greshek [CP]
Cap Donald R O'Hare [N]
SSgt Terence E Griggs [B]

Crew 114
Maj David L Grady [P]
1Lt Harold A Higley, Jr [CP]
Cap George E Koster [N]
TSgt William C Morris [B]

Crew 115
Cap Thomas A Robertson Jr [P]
Cap Donald H Bremer [CP]
Cap Hal J Heitler [N]
SSgt Leland R Haack [B]

Crew 117
Cap James T Anderson [P]
Cap David G Gardner [CP]
1Lt Donald H Henry [N]
SSgt Jimmie A Armstrong [B]

* Crews 114, 115 and 117 did not take leave prior to going Young Tiger. Leave status afterwards unknown.

(U) Since the crews flew the wing's normal KC-135A tankers on project Young Tiger, no aircraft retraining was necessary. Crews tended to take leave only at the end of their SEA tour (perhaps because of the comparative brevity of those tours); these averaged ten - 14 days long. A comparison of Figures III-13 (Arc Light) and III-14 (Young Tiger) reveals the fact that bomber crews were in the far east for longer durations, and that more tanker crews in a six-month period went on Young Tiger than bomber crews flew for Arc Light. The retraining necessary when converting from one bomber model to another undoubtedly made the longer Arc Light tour a necessity, so that higher headquarters could "get their money's worth" from the double-retraining sessions.

~~(C)~~ In April, May and June the 319th Bomb Wing had from three to four tanker crews involved in Young Tiger operations. As with the bomber operation, it was the alert degrade situation and not the overall combat-rating, that suffered from these losses of usable, combat-ready crews.* Although Young Tiger and Arc Light projects took up most of the bomb wing's TDY-directed efforts, the unit also supported other higher head quarters directed projects. The two major ones were the Eielson and (b)(1) Area Tanker Task Forces.

* See this chapter, p. 61-62 for discussion of tanker, alert-crew degrades.

TDY Tanker Task Force Support

(U) The wing's 905th Air Refueling squadron provided crews and airplanes for two remote "tanker task forces" [TTF] operations: the (b)(1)(A) (b)(1) and the Eielson TTF (based at Eielson AFB, Alaska). SAC continued to be the only United States Air Force command which owned and operated KC-135A air-refueling jet tankers. Since these SAC tanker units were located on the North American continent (and Hawaii), Air Force activities elsewhere requiring air-refueling support had to borrow tankers and crews from SAC. Tanker task forces were fleets of tankers and crews, rotated from available units.

(U) The [redacted] Area TTF refueled whatever units' aiplanes command operations required: B-52s, fighters, etc. Past air-refueling from (b)(1)(A) [redacted] has included support to NATO [North Atlantic Treaty Organization] training exercises.

(U) Those tankers temporarily assigned to the Eielson Tanker Task Force supported both classified reconnaissance [refueling EC or RC-135 aircraft] and Selective Employment of Air/Ground Alert [SEAGA] operations*. 79

(U) This quarter, the 319th Bomb Wing provided tankers and crews to both task forces. Major Pratt's crew 112 went to the [redacted] Area from 23 April to 22 May 1970, and Major Giller's crew 118 to the same task force from 16 June to 17 July.[80]

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* For full details on SEAGA, see (S) SAC Ops Order 23-71, "Giant Lance (U)", 1 Jul 70.

79. Interview, AlC B.F.Fuller, historian, with Lt.Col. W.R.Hall, 905AREFS Squadron Operations Officer, 26 Aug 70.

80. Monthly Crew Status Board, "319BW KC-135 Crews", Apr-Jun 70, located in 319BW DCO Training Division.

(U) Major Frazier and his tanker crew (110) were TDY to the Eielson Tanker Task Force from 1 through 6 April 1970.[81] These two tanker task force operations used slightly more than two "crew-months". Although these two support activities used far fewer crews than did operation Young Tiger, they did add significantly to the wing's scheduling workload.

Air Refueling Support for Other-Units

(U) The final support mission activity conducted by the 319th Bomb Wing (which was not a TDY activity), was the routine refueling of other-unit fighters (and occasionally, reconnaissance aircraft). The 905th Air Refueling Squadron delivered approximately 215,500 pounds of fuel to 135 non-Grand Forks AFB-unit airplanes during this quarter.*[82]

~~(S)~~ Three large-scale airplane deployments passing within range of Grand Forks AFB also received refueling support from the 319th Bomb Wing. Between 25 April and 4 May, Major Helton's crew 103 refueled fighter aircraft in one large-scale deployment, called oeration "Coronet Swap".[83] Major Wigington's tanker crew 119 refueled 18

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* Exhibits 113-115 show the times, dates, fuel offloads and units supported by these small-cell refuelings; total fuel offloads, and total aircraft for the quarter computed by the historian.

81. Monthly Crew Status Board, "319BW KC-135Crews", Apr-Jun 70, prepared by 319BW DCO Training Divs.
82. Extracts, SAC 60-9 Rpts, "Weekly Flight Schedule", Apr 70, ex 113; May 70, ex 114; June 70, ex 115.
83. Interview, A1C B.F.Fuller, historian, with Maj T.J.Dyer, 319DCOT Tanker Scheduling Officer, 24 Aug 70.

F-4D fighters from the 4531st Tactical Fighter Wing on their deployment from Homestead AFB, Florida to Southeast Asia, and also 18 F-4D fighters returning from SEA to the 4th Tactical Fighter Wing at Seymour Johnson AFB, North Carolina.[84]* The final deployment refueling, "Busy Relay" involved support of 55th Strategic Reconnaissance Wing RC-135 aircraft.[85]

Support Mission Conclusion

~~(C)~~ Figures III-5 (page 51) and III-6 (page 53) make more sense if their crew inventory statistics are seen in the light of the 319th Bomb Wing's TDY support missions. The average of 17 combat-ready bomber crews available to the wing in the quarter was reduced to 13-14 because of the Arc Light levy. Thirteen or 14 crews simply could not rotate to support a six-aircraft EWO alert requirement, hence the bomber squadron's degrades.

~~(C)~~ Similarly, the average of 18 combat-ready tanker crews in the bomb wing was reduced to 13-14 usable crews because of Young Tiger and Tanker Task Force support requirements. Again, this was far too low a number of combat-ready crews on station for the manning of a six-sortie EWO alert mission. Higher headquarters had two responsibilities: the EWO mission and the war in SEA. The compromise which had been worked out to support them both boiled down to alert degrades at the unit

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* Operation "Coronet Swift (U)".

84. Interview, AlC B.F.Fuller, historian, with Maj J.H. Wigington (905ARS Aircraft Commander), 21 Aug 70.

85 Interview, AlC B.F.Fuller, historian,with Maj T.J.Dyer, 319DCOT Tanker Scheduling Officer, 24 Aug 70.

level. The 319th Bomb Wing's combat-ready and combat-ready OPCON crew levels demonstrated how this necessary compromise had affected one such unit.

(U) To get the most from all available crew resources for the manning of both the alert and the TDY missions, the wing had to maintain as constant and as aggressive an aircrew training program as possible. The wing's third mission area -- flight trai ning -- is the subject of the next portion of this narrative.

THE CREW TRAINING MISSION

(U) The third major 319th Bomb Wing mission was the constant and thorough training of its flying personnel. Strategic Air Command Manual (SACM) 50-8* outlined the flight training required of all SAC aircrews. Crew training was measured by six-month periods. To complete the quantitative requirements that higher headquarters set for each six-month period, every combat-ready crew had to fly a certain number each of several types of training sorties.

(U) The wing averaged three B-52H and three KC-135A flights per day during the quarter.** Although some of these were ferry, maintenance, or other miscellaneous sorties, the majority, following the directives of SACM 50-8 and higher headquarters training-sortie levies, were Combat Crew Training

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* SACM 50-8, Vol IV, "Training Requirements for Heavy Bombardment Aircrews-B-52 Aircraft;" and Vol , "Training Requirements for Air-Refueling Aircrews - KC/EC-135 Aircraft."

** Daily Combat Crew Training Sorties presented in each Wing Commander's standup briefing, Historian in attendance.

Missions [CCTMs].

(U) Bomber and tanker crews flying these sorties practiced landings and takeoffs, various forms of visual and instrument navigation, rendezvous skills, and air-refueling techniques. In addition to these standard flight practices, the bomber crews conducted simulations of high and low altitude bombing runs, air-to-ground missile [AGM] launchings, and electronic counter-measure [ECM] activities. B-52H crews also made periodic terrain avoidance [TA] passes, practicing extremely low-level radar ["blind"] flying.[86] The wing's Operations and Training,and Standardization Divisions kept the scores on all of these activities, and compared them against SAC and Fifteenth Air Force standards.

(U) Wing aircrew training this quarter turned out to be rather unusual, in several respects. The major situations that had affected all of the wing's operations -- the FAA controllers' slowdown [March - April], the BUY NONE Exercise* -- had their greatest bearing on flight training.

(U) The FAA slowdown and its restrictions on military flying blocked the way for the completion of certain categories of training sorties. The loss of these sortie-types by the wing's bomber crews was one significant variable in degrading their BUY NONE performance. And, because of the wing's problems in that BUY NONE Exercise, subsequent

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* This BUY NONE Exercise is covered fully later on in this section on "Training", pp. 91-100.

86. Interview, AIC B.F.Fuller, historian, with Capt T.C. Sharpe, OIC Wing Administration [rated], 25 May 70.

aircrew training, in May and June, was not typical of end-of-quarter (and training period) activities.

SACM 50-8 Training

(U) Before relating the unusual aspects of this quarter's training, this history presents its summary of the basic statistics for the three months. Figure III-15, page 84, is a condensed extract of the wing's crew training records for April, May and June.[87] Since June was the final month of a combat crew training period, the extract of the January-March crew training statistics from the last installment of the history is included as exhibit 116. Together, Figures III-15 and exhibit 116 show both the cumulative and the monthly training results for wing bomber and tanker crews. The following interpretation of these crew training statistics includes information pertaining to the entire six-month training cycle.

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87. Rpt, "SAC-T-12", prepared by 319DCORA, 30 Apr 70, filed with 319HO; Rpt, "SAC-T-12", prepared by 319DCORA, 31 May 70, filed with 319HO; Rpt, "SAC-T-12", prepared by 319DCORA, 31 Jun 70, filed with 319HO.

FIGURE III-15 TRUE EXTRACT

(U) SACM 50-8 TRAINING

BOMBERS

30 APRIL	BTR REQ	BTR ACC	BTR %	AST	TOTALS ACC	TOTALS REL	TOTALS %REL*
HI-Bomb	107	75	70.1	169	244	237	97.1%
Lo-Bomb	196	165	84.2	90	255	236	92.5%
AGM	46	38	82.6	57	95	75	78.9%
REFUEL	72	69	95.8	90	159	159	100.0%
ECM	305	222	72.8	206	428	350	81.6%
31 MAY							
HI-Bomb	115	101	87.8	240	341	331	97.1%
LO-Bomb	194	179	92.3	151	330	307	90.0%
AGM	46	42	91.3	69	111	89	80.2%
REFUEL	71	70	98.6	128	198	198	100.0%
ECM	301	252	83.7	296	548	458	83.9%
30 JUNE			**				
HI-Bomb	116	116	100.0	265	378	362	95.8%
LO-Bomb	177	177	100.0	199	376	347	92.6%
AGM	46	46	100.0	85	131	105	80.0%
REFUEL	62	62	100.0	171	233	233	100.0%
ECM	251	251	100.0	395	646	534	82.6%

TANKERS

30 APRIL	BTR REQ	BTR ACC	BTR %	AST	TOTALS ACC	TOTALS REL	TOTALS %REL
NAVIGATION	124	107	86.3	26	133	133	100%
RENDEZVOUS	72	60	83.3	116	176	176	100%
REFUELING	220	186	84.5	142	328	328	100%
31 MAY							
NAVIGATION	125	123	98.4	46	169	169	100%
RENDEZVOUS	73	70	95.9	153	223	223	100%
REFUELING	222	217	97.7	230	447	447	100%
30 JUNE			**				
NAVIGATION	124	124	100%	63	187	187	100%
RENDEZVOUS	72	72	100%	215	287	287	100%
REFUELING	211	211	100%	336	547	547	100%

SOURCE: SAC-T-12 Reports, 30 Apr 70/31May 70/ 30 Jun 70, filed in 319BW DCO/R&A Office.

* This reliability computed by the Historian.

** PERCENTAGES OF 6-MONTH TRAINING COMPLETED AT END OF THIS QUARTER.

(U) The preceding statistical chart, Figure III-15, shows the 319th Bomb Wing crews' Basic Training Requirements (BTRs) completed and also their Additional Specialized Training (AST) accomplished. These two training categories need definition:

Basic Training Requirements

(U) For each six-month period, numbered air force assigned the bomb wing a required number of sorties per crew in each activity category. These higher-headquarters directed sorties were logged as Basic Training Requirements. As of 30 June 1970, wing crews had completed 100 percent of all their BTR sorties (see Figure III-15).

(U) The number of BTR sorties required of wing crews was generally not a static figure until the final month of the six-month training period. The Low-Bombing sorties required, shown in Figure III-15, for instance, fluctuated from 196 in April, to 194 for May, and finally 177 in June; 177 was, therefore, the final "required" figure for the entire period.

(U) The particularly sharp drop in the required BTR low-bombing sorties between May and June had a specific cause -- the FAA controller slowdown.* On 15 April, Colonel Scannell (319BW DCO) received word from Headquarters Fifteenth Air Force that the 319th Bomb Wing was freed from one month's

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* See 319BW History, Jan-Mar 70, Vol I, p. 64, for details of FAA slowdown, which affected this wing through the Minneapolis Air Traffic Control Center.

worth of SAC M 50-8 BTR sorties.[88]

(U) The Basic Training Requirement sorties which reflected the one-time-only "five month" training period granted because of the FAA air traffic slowdown, were: low-bombing (down from 194 required in May to 177 in June); bomber refueling practices (71 in May to 62 June);, bomber ECM runs (301 required as of 30 May, 251 at the end of June); and, tanker refueling sorties (222 reduced to 211).*

Additional Specialized Training

(U) The wing's bomber and tanker crews had begun this quarter in April with well over half of their BTR training runs already accomplished.[89] As a result of the FAA-related reductions in BTR sorties, the figures for June's basic sorties were extremely low.

(U) The second training category, "Additional Specialized Training" [AST], had two major purposes. The first purpose of this second category was to give BTR-completed crews constant further flight training experience. As crews closed out their final BTR sorties, and as the number of these BTR sorties was cut down by higher headquarters waiver, the sorties logged as AST increased considerably. Figure III-16, overleaf, shows this normal, end-of-period pattern for the bomber crews' BTR and AST electronic counter-measure runs.

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* See Figure III-15, p. 84.

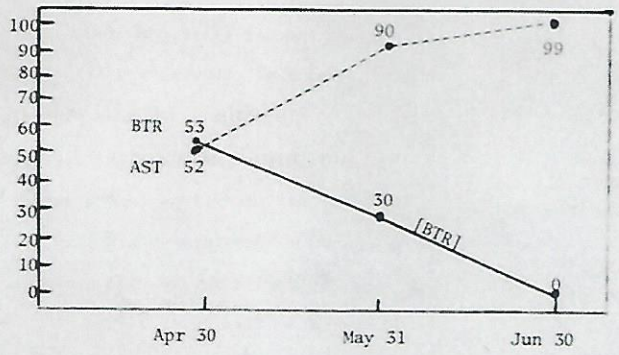
88. Msg, 15AF to 319DCO et.al., "Reduced Training Due To Air Traffic Slowdown", 150030Z Apr 70, ex 117.

89. 319BW Hist, Jan-Mar 70, Vol I, p.62.

FIGURE III -16

(U) BTR vs AST ECM-RUNS ACCOMPLISHED

Non-Cumulative, by Month

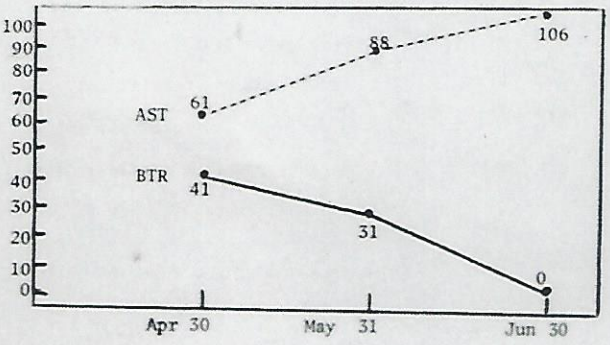


A similar "normal" end-of-period BTR versus AST pattern emerged for the air-refueling practice sorties accomplished by the wing's tanker crews in April, May and June:

FIGURE III-17

(U) BTR vs AST TANKER REFUELING

Non-Cumulative, by Month



(U) Several other training sortie categories, (especially those relating to bombing capability) varied considerably this quarter from the normal end-of-period patterns, because of the air traffic control limitations experienced by the wing's schedulers, and also resulting from the BUY NONE Exercise.

(U) The 319th Bomb Wing did, at any rate, complete its full higher headquarters-directed BTR training load. The various exceptions to the normal AST statistics that occurred during this three-month span are covered later on in this chapter, in the special section on the BUY NONE activities.*

Profile Missions

(U) Another type of training requirement, for wing bomber crews only, was the "Profile Mission". Each combat-ready bomber crew had to perform one each of three types of these missions in every training period. The three types were: "Diversified Profile Missions", Express Profile Missions", and "AGM Express Profile Missions". This SAC program gave crews practice in bombing and AGM launches over unfamiliar targets. In "Diversified Profile Missions", crews from one numbered air force used a bombing route of a different numbered air force. Thus, instead of flying another practice sortie in familiar territory, a bomber crew was challenged with new target conditions.

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* BUY NONE coverage, pp 91-100 , this chapter.

(U) "Express Profiles" (bombing and AGM) were missions directed against radar-scoring targets mounted in railroad cars; these mobile targets were periodically moved to new positions so that crews never flew more than one mission against them in any one place. These Profile Mission types also gave bomb wing crews greater variety of practice than that provided in routine combat crew training sorties. Figure III-18, below, summarizes 319th Bomb Wing Profile activity completed in the six-month period ending on 30 June.[90]

FIGURE III-18

(U) 319BW Six-Month Profile Results

	Jan	Feb	Mar	Apr	May	Jun	TOTAL	REQUIRED
DIVERSIFIED PROFILE MISSIONS	6	1	1	1	3	2	14	14
EXPRESS PROFILE MISSIONS	1	2	3	3	3	0	12	12
AGM-EXPRESS PROFILE MISSIONS	2	3	3	3	2	1	14	14
TOTAL PROFILE MISSIONS:	9	6	7	7	8	3	40	40

Despite the military training flight restrictions imposed by air traffic control problems, which persisted into early May, the wing completed all of its crew profile requirements.

90. Rpt, "SAC-T-12", prepared by 319DCORA, filed with 319HO, 30 Apr 70; Rpt "SAC-T-12", prepared by 319DCORA, 31 May 70, filed with 319HO; Rpt, "SAC-T-12", prepared by 319 DCORA, 30 Jun 70, filed with 319HO; 319BW Hist, Jan-Mar 1970, Vol I, p.67.

(U) Headquarters Fifteenth Air Force conducted its customary inter-unit profile mission training competition, this year called "Giant Beaver II", on 14-15 April. Six of the 40 total 319th Bomb Wing crew profile missions listed in Figure III-18 were accomplished in this competition.

~~(C)~~ The overall results of "Giant Beaver II" were circulated in a message dated 24 April.[91] Because of one late take-off, the 319th Bomb Wing received a 58.3 percent Weapons Delivery Capability (WDC) score, although its bombing reliability was 75.0 percent[92]. Colonel Taylor, wing commander, provided General Carlton with a highly technical explanation of the wing's difficulties.[93] Part of the crew's problems in these missions were related to faulty combat intelligence; grain elevators chosen for radar targetting turned out to be unsatisfactory.[94] Conceivably, some of the problems on the Giant Beaver II competition stemmed from the 319th Bomb Wing crews' recent lack of practice on low-level type missions*, and foreshadowed similar difficulties encountered only eight days later, in the BUY NONE Exercise.**

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* See page 93 , this history.

** See BUY NONE summary, pp. 91-100.

91. Msg, 15AF to 319C et.al., "Giant Beaver II", 242105Z Apr 70, ex 118.
92. Ibid.
93. Msg (C) 4SAD(319C) to 15AF(C), "319BW Giant Beaver II Analysis (U)", 182305Z Apr 70, ex 119.
94. Ibid.

BUY NONE Exercise

~~(S)~~ On 23-28 April, the 319th Bomb Wing conducted a BUY NONE exercise. This was a higher headquarters-directed test of the wing's full Emergency War Order capabilities; the bomb wing was required to generate the maximum number of combat-configured bombers and supporting tankers, which flew a special, pre-planned, simulated enemy territory route. The BUY NONE mission included terrain avoidance, low and high altitude navigation, air-refueling, electronic countermeasure [ECM] chaff dispensing, AGM launch and low-bombing simulation. The complete results of the BUY NONE were reported to Headquarters SAC on 28 April 1970.[95]

~~(S)~~ The wing's performance in most of these training areas was "Outstanding": AGM-28 reliability, low and high navagation reliability, air-refueling reliability, Target Defense Run, and chaff dispensing.[96] All alert aircraft responded within the required times on the XRAY-8 exercise, which was part of the BUY NONE.[97]

~~(S)~~ However, the "meat" of this exercise, the low-altitude bombing, cost the wing a satisfactory rating on [illegible] low bombs, the wing [illegible] unsatisfactory nine.[98] Colonel Taylor and his staff were

95. Msg ~~(S)~~ 4SAD(319C) to SAC(DOTC) et.al.,"SAC-T-54 BUY NONE Report (U)", (no date/time group)28Apr 70, ex 120.
96. Ibid.
97. Ibid.
98. Ibid.

most concerned to find out what had gone wrong -- what had caused the degraded low-bombing performance.

(U) This history does not pretend to have pinned down any absolute reasons for the wing's BUY NONE problems. However, three significant variables that would have degraded any air operation all acted in negative ways on the wing's bomber crews before 23 April. The FAA slowdown had crippled low-level crew training practices; crew scheduling -- the interference of ARC LIGHT tours into normal wing activities -- had disturbed the wing's "EWO crew integrity"; and, the very nature of any BUY NONE or Operational Readiness Inspection [ORI] combined with unusual weather conditions, making low level reliability a near impossibility. The following three sections of this narrative elaborate on these three variables.

7

FAA/Low-Level Training and the BUY NONE

(U) In the beginning of March, 1970, a national air traffic controllers' "non-strike" began to reduce all flight operations -- both commercial and military -- within certain geographic areas. The 319th Bomb Wing had long used the Minneapolis Air Traffic Control Center [ATCC] for its military flight operations; Minneapolis was one of the centers hardest hit by the "slowing" controllers.[99]

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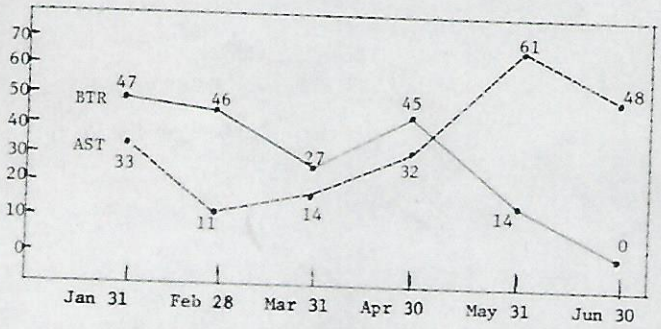
99. 319BW Hist, Jan-Feb 70, Vol I, p.64

(U) Although part of the bomb wing's military training air traffic was diverted to the control of the Great Falls, Montana ATCC, this did not prevent the frequent closing of many entrances to low-bombing practice routes.[100] Figure III-19, below, shows the low-altitude bombing sorties that were accomplished in the six-months, January-June 1970.[101]

FIGURE III-19

(U) BTR vs AST LOW-LEVEL BOMBING

Non-Cumulative, by Month



(U) Figure III-19 points out several vital trends in low-bombing sortie practice. The BTR and AST sorties accomplished in March and the early part of April dipped dramatically, showing the effects of the FAA slowdown. Although the controllers' 'strike' continued on a reduced

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100. Interview, AlC B. F. Fuller, historian, with Mr. Wayne A. Peterson, FAA Local Representative to Grand Forks AFB, 25 May 70.

101. Rpt, 'SAC-T-12', prepared by 319DCORA, 30 Apr 70, filed with 319HO; Rpt, "SAC-T-12", prepared by 319DCORA, 31 May 70, filed with 319HO; Rpt, "SAC-T-12", prepared by 319DCORA, 30 Jun 70; 319BW Hist, Jan-Mar 70, Vol I, p. 65.

scale until 1 May, the low-bombing sorties climbed as April wore on. However, the April sorties shown in Figure III-19 include those flown in the BUY NONE exercise. The overall trend of pre-BUY NONE low-bombing indicated an inadequate amount of training caused by the unavoidable air traffic problems.

(U) The number of AST sorties flown in May increased enormously. As the FAA slowdown lessened, Colonel Taylor and the scheduling staff saw to it that the bomber crews concentrated on remedial low bombing practice. (The BTR sorties had begun their normal end-of-training-period decline at the end of May).

(U) Low-bombing routes were always particularly vulnerable to being closed by turbulence or low-visability weather; the FAA's closing of low-routes on additional occasions made the wing lose further AST low-bombing sorties. The crews had simply had proportionally fewer sorties at low altitude than was normal and necessary in the six weeks prior to the BUY NONE exercise.

ARC LIGHT, Crew Scheduling, and Crew Integrity

(U) Lt. Colonel Stevens, Chief of DCO training, related a second problem area that affected the BUY NONE: crew scheduling for ARC LIGHT temporary duty.

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ARC LIGHT, Crew Scheduling, and Crew Integrity

(U) Lt. Colonel Stevens, Chief of DCO training, related a second problem area that affected the BUY NONE: crew scheduling for ARC LIGHT temporary duty.

(U) Lt. Colonel Stevens and Colonel Taylor were most concerned about bomber crew members who suddenly found themselves facing too many [or too close together] ARC LIGHT tours. An unfair distribution of SEA tours tended to occur for many reasons. Returnees from Vietnam could be picked for instructor status or staff duty. Individual officers on such crews who did not possess the qualifications were reassigned to new groups. A new member on such a crew had a good chance of finding himself assigned to a crew which was just preparing to leave TDY for Southeast Asia duty. Many other crew changes involved potential threats to a fair distribution of TDY tours.

(U) Lt. Colonel Stevens for some time had attempted to avoid the extremely depressing effects that inadvertant and unfair ARC LIGHT tours caused crews and their families. To ensure the most equitable situation possible, the DCO schedulers had periodically shifted men from crew to crew. Such readjustments for ARC LIGHT were added to the more normal shifts that occurred when men moved to instructor or staff duty, or moved PCS to other units.

(U) Since crew coordination experience was a problem in some of the crews during the BUY NONE Exercise[103], it became evident that the wing's attempts to make life more equitable for SEA-prone bomber people had gradually had bad effects on

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102. Interview, AlC B.F.Fuller, historian, with Lt.Col M. Stevens, Chief, DCOT, 21 Aug 70.

103. Interview, AlC B.F.Fuller, with Capt. D.L. Yenzer, Aircraft Commander, 5 Jul 70.

"crew integrity". Lt.Colonel Stevens commented that scheduling policies were changed in the wing after the BUY NONE Exercise. He and his staff had decided that, despite some unfortunate consequences, they had to keep more crews together for longer periods, for the sake of EWO unity and experience.

(U) The DCO Reports and Analysis office surveyed both the causes of crew changes before 30 April 1970, and also the amount of experience the crews had accrued together prior to the BUY NONE. Figure III-20, below, summarizes the crew change survey:[104]

FIGURE III-20

(U) Crew Change Cause Survey
1 January - 30 April

	Changed for PCS	Changed for PCA*	Changed for ARC LIGHT	Changed for Other
PILOTS	7	2	0	0
Rad-Navs	2	0	4	3
Navigators	4	0	6	2

Although this information on crew changes and their causes would be more meaningful if similar data for earlier four-month periods

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* PCA: "Permenant Change of Assignment", as in a crewmembers transfer within the wing to a staff job.

104. Punchcard Worksheet, "Crew Change Causes, 1 Jan- 30 Apr 70", prepared by 319DCORA, 30 Apr 70, filed with 319BW(HO).

were available for comparison, it was clear that the wing had had to make a considerable number of crew changes, for several reasons. Figure III-21, presented next, shows the effects of these various crew changes on the wing's "crew integrity" -- on the ability the crews could demonstrate together as a practiced unit.

105

FIGURE III-21

(U) Crew Experience Stability

No. Months AC Assigned	No. Months RN Assigned	No. Months NAV Assigned
1	1	1
4	4	0
4	4	1
4	4	4
4	4	1
4	4	4
3	3	3
4	1	1
2	4	0
4	4	4
4	0	0
4	0	4
4	0	4
4	4	4

The results of these two Reports and Analysis surveys made it clear that a change in ARC LIGHT crew rescheduling policies was necessary. The occasional resulting hardships that must result from the more vigorous crew integrity policy were one more effect of the wings two-way split between

105. Cardpunch Worksheet, "Crew Experience Stability", prepared by 19DCORA, 30 Apr 70, filed with 319HO.

the EWO alert and the SEA augmentee crews missions.

(U) The wing was run by human beings, who were not always perfect; these officers and airmen had long attempted to maintain a balance between the EWO and the TDY missions, between duty and equity. Perhaps by April of 1970 these balances had swung 'too far' towards democratic scheduling for the crews, considering the current austere and demanding conditions which all AIR Force people were facing. Indirectly, the war in Southeast Asia, its effects on people in the wing, and decisions made long before by other people to minimize those effects, were all part of the second factor which degraded the BUY NONE performance.[106*]

The Buy None Itself, and Weather

(U) The psychological pressures naturally generated by a BUY NONE (or an ORI) was always such that both staff and crews had a natural desire to 'get it all over with'. Opposing these human reactions to pressure was the experience and professionalism of the wing's flying officers. After 24 hours, the time taken by generation of the airplanes and mission planning, the crews were eager to complete their long and complex sorties. Lt. Colonel Stevens outlined the

* Pp. 95-98 is largely derived from a lengthy interview with Lt. Colonel Stevens; see Footnote 106, below.

106. Interview, AIC B. F. Fuller, historian, with Lt. Col. M. Stevens, Chief, DCOT, 21 Aug 70.

weather conditions that were reported at the low-bombing route. As the bombers penetrated this area, one after another by intervals, the turbulence conditions gradually increased. If the first or second crew had decided to "close the route," the low-bombs category would not have been computed into the final score for the day. The crews would have had to return after a second 24-hour period for a second pass.

(U) However, the crews, who had missed much March and April low-level flying, and many of whom had not flown together as often as was desirable, did not elect to make this their decision. The normal psychological pressures of a BUY NONE, plus crew coordination and training problems, combined to create what may well have been a crucially unwise decision--to 'get it over with,' and fly the turbulent route.[107]

(U) The Federal Aviation Agency's slowdown, bomb wing crew training and coordination, weather and pressure, all leavened by the abnormal stress of both alert and SEA duties--spelled out: nine lost bombs.

(U) As stated previously, the wing's crews practiced low bombing intensively in the two months following the BUY NONE Exercise. Tour scheduling policies were altered. And, the FAA problem finally solved itself, to the relief of everyone in the wing. Colonel Taylor, his staff, and most of all, the crews

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107. Interview, A1C B.F. Fuller, Historian, with Lt. Col. M. Stevens, Chief, DCOT, 21 Aug 70.

waited with great anticipation for the Operational Readiness Inspection which was almost sure to come before many weeks passed; all were eager to show how well they could really perform, given more normal external conditions, and also the corrections made to various problems which had existed, for legimitate reasons, within the wing.

Other Training Missions

(U) Crews from the 319th Bomb Wing flew in two joint SAC/NORAD [North American Air Defense Command] training exercises during the quarter. Four bombers participated in "SNOWTIME 70-6-W/A" on 12 May 1970. In this mission, the bomber crews practiced their penetration skills (electronic countermeasure activities) against the defense network of NORAD.[108]

(U) On 9 June 1970, three wing B-52H crews flew "against" a NORAD defense region in operation "Amalgam Mute 71-1-W", which was a NORAD-directed Operational Readiness Inspection of its own capability.[109] Both of these missions were flown as planned by the wing's crews.

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108. Ltr, 319DCOP to 319HO, "ECM Activity", 26 Aug 70, ex 121.

109. Ibid.

Bomber Training Run Reliability

(U) The Bomb/Nav and Penetration Aids Branches of the DCO met periodically with their staffs and the crews to study bombing, AGM, First Sortie After Ground Alert (FSAGA) and ECM run failures. The Bomb/Nav Branch issued letters giving its conclusions about individual mission activity failures or aborts. Before the 23 April BUY NONE Exercise, six such failures were investigated by these panel meetings, and all six were traced to materiel problems.[110]

(U) Three more meetings which met directly after the BUY NONE evaluated 23 individual activity errors. Thirteen of these failures were charged to crew error, and the remaining 10 to materiel problems.[111] One meeting took place in May, one in June, to discuss those months' "bomb/nav" failures. One bombing loss on an 8 May sortie was charged to "Crew", and three more to "crew error" on 8 and 10 June Sorties. The June meeting also evaluated five other lost bombs/AGMs which

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110. Ltr, 319DCOTB to 319DCO et.al., subj: Bombing/AGM Reliability Meeting, 1 Apr 70, ex 122; Ltr, 319DCOTB to 319DCO et.al., subj: Bombing/AGM Reliability Meeting, 15 Apr 70, ex 123; Ltr, 319DCOTB to 319DCO et.al., subj: Bombing/AGM Reliability Meeting, 22 Apr 70, ex 124.

111. Ltr, 319DCOTB to 319DCO et.al., subj: Bombing/AGM Reliability Meeting, 27 Apr 70, ex 125, Ltr, 319DCOTB to 319DCO et. al., subj: Bombing/AGM Reliability Meeting, 28 Apr 70, ex 126, Ltr, 319DCOTB to 319DCO et. al., subj: Bombing/AGM Reliability Meeting, 30 Apr 70, ex 127.

were attributed to materiel causes.[112]

(U) Lt. Colonel Money, Chief of the Penetration Aids Branch, provided his survey of ECM run failures and their causes; 38 out of 202 total ECM runs in April, May and June were unreliable. Exhibit 121 of this history shows Colonel Money's causal breakdown of these failures.[113]

Standardization Board Activities

(U) The quality of the wing crews' flight training was constantly being evaluated by members of the Unit Standardization Board, a group of senior officer/instructor pilots designated as permanent evaluators. During this quarter, no numbered air force or Combat Evaluation Group (CEG) teams visited the wing; besides the rigorous test represented by the BUY NONE Exercise, the wing's STANDBOARD provided the main evaluation system for combat crew training quality.

(U) Minutes of two quarters' "Standardization Review Panel" meetings are included in this history; these provide self-explanatory

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112. Ltr, 319DCOTB to 319DCO et. al., subj: Bombing/AGM Reliability Meeting, 18 May 70, ex 128; Ltr, 319DCOTB to 319DCO et. al., subj: Bombing/AGM Reliability Meeting, 15 Jun 70, ex 129.

113. Ltr, 319DCOTP to 319HI, subj: ECM Activity, 26 Aug 70, ex 121.

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summaries of the wing's crew evaluation programs for April, May, and June.[114] A special study which Standboard members produced is also included in this history; this evaluated problems the wing had been having in its navigator and radar-navigator upgrading program.[115]

Flying Hours

~~(C)~~ Both the DCO and the DCM analysis staffs kept records of the hours crews and airplanes spent on sorties. Figure III-22 on the following page, presents the Headquarters Fifteenth Air Force flight allocations for the wing's bombers and tankers for the quarter against the operations and maintenance staff data on the hours actually flown.[116]

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114. Ltr, 319DCOS to 319C et.al, subj: Minutes of Standardization Review Panel, 24 Apr 70, ex 130; Ltr, 319DCOS to 319C et.al., subj: Minutes of Standardization Review Panel, 14 Jul 70, ex 131.

115. Ltr, 319DCOS to "Members of the Standardization Review Panel", subj: Progress Report on Previously Identified Areas of Weakness, 14 Jul 70, ex 132.

116. Msg (~~CONFIDENTIAL~~), 15AF(DO) to AIG 721(~~C~~) et.al., "FY70/4 Tactical Flying Hour Allocations (U)", 262200Z Mar 70, ex 133; Punchcard Worksheet, "Flying Hours", prepared by 319DCORA, 30 Jun 70, on file with 319DCORA. Rpt, "319th Bombardment Wing Maintenance Summary", prepared by 319DCMA, May-Jun 70, pp 21-22 and pp 36-37, ex 78; Interview, A1C B.F.Fuller, historian, with MSgt . .Reed, NCOIC, 319DCO Maintenance Analysis, 1 Sep 70.

~~CONFIDENTIAL~~

FIGURE III-22

(C) Allocated/Spent 319BW Flying Hours *

		BOMBERS	TANKERS
ALLOCATED:		1680	1054
FLOWN:	DCO:	1554	991
	DCM [A]:	1504	810
	DCM [B]:	1591	1072

(U) The DCO staff's figures described the hours that bomber and tanker crews charged to flying time on their sorties. The DCM analysis staff reported two different sets of flying hours. The first set [A, above] described the hours the airplanes flew under the maintenance responsibility of the 319th Bomb Wing. The second set [B] showed the total hours put on the airplanes, included all sorties generated and maintained by units other than the bomb wing.

(U) The wing-maintained flying hour figures [A] were lower than those reported by the DCO analysis people, while the "total" DCM figures [B] were higher. This was the normal reporting situation since the DCO and DCM agencies used different criteria to measure crew versus plane hours spent in the air.

(U) Fewer crew hours were flown [using DCO figures] than the Headquarters Fifteenth Air Force allocations given by both bomber and tanker operations. In the main, the FAA

* Monthly flying hours from all three sources added together by the historian to produce quarterly figures.

restrictions which most affected the wing's AST sorties accounted for this underflying condition.

Conclusion to Crew Training Mission

(U) The 319th Bomb Wing's crew training mission this quarter was one of its most difficult jobs. Late winter weather combined with the drawn-out FAA controllers' strike, reducing the gross number of sorties possible, particularly Additional Specialized Training sorties in specific categories such as low-level bombing.

(U) Despite these handicaps, the wing completed all of its Basic Training Requirements and Profile Missions, and eight crews flew in two satisfactory SAC/NORAD operations.

(U) The less-than-satisfactory performance in Giant Beaver II and the BUY NONE was undoubtedly related to the restrictions on flight training which had occurred immediately before these operations. Although both were disappointing, the flight training permitted by improved external conditions after 1 May, and changes in crew-assignments policies, assured that the wing would demonstrate greatly improved training in any subsequent test of its capabilities.

FLYING SAFETY

(U) The fourth and final 319th Bomb Wing mission area was safety. Keeping its flight operations as safe as possible, planning to keep the thousands of hours flown accident-free, was the mission responsibility of Major Defer, Director of Safety.

~~(S/RD)~~ The safety incidents the wing experienced, and the obvious effects Major Defer's programs had had on their frequency of occurence, concludes this portion of the history. Following are brief summaries of the four aircraft/ nuclear incidents which occurred between 1 April and 30 June.

24 April - B-52H Aircraft incident: accidental movement of flaps control caused flaps to contact adjacent fuselage area during high wing-flex operations. [117] No loss of control or injuries. Estimated cost of repair: $366.00.[118]

27 April - Fallen Object incident: B-52H lost engine cowling assembly airborne. No injuries or damage reported. Estimated replacement cost: $792.00

117. Msg, 4SAD(319DS) to DIR OF AEROSP SAFETY, NORTON AFB CA, et.al., "USAF B-52H Preliminary Aircraft Incident Report", 242216 Apr 70, ex 134.

118. Msg, 4SAD(319DS) to DIR OF AEROSP SAFETY, NORTON AFB CA et.al., "USAF B-52H Final Aircraft Incident Report", 270057Z Apr 70, ex 135

119. Msg, 4SAD(319DS) to DIR OF AEROSP SAFETY, NORTON AFB CA et.al., "USAF B-52H Preliminary/Final Aircraft Incident Report", 281535Z Apr 70, ex 136.

13 May - ~~(S/RD)~~ ["BENT SPEAR[incident]: Re-entry vehicle (59MMS) found with electrical cable pinched through to bare wire. Immediately replaced, and personnel involved immediately briefed.120

~~(C/FRD)~~ On 27 May, the 13 May "Bent Spear" was downgraded to a "Dull Sword". [redacted]

June - B-52H Aircraft incident: Bomber crew on training sortie noticed that one trim stabilizer had slipped from its previously set position. No-problem landing after stabilizer position was corrected with over-ride controls 122

(U) The wing had no major accidents again this quarter; additionally, the number of aircraft/nuclear incidents dropped sharply from nine last quarter, to only four between April and June. This reduction was largely due to the personal and vigorous efforts of Major Defer and his staff. The gradual improvement in weather as spring approached assisted the mission accomplishment of the safety office.

120. Msg, ~~(SECRET/RD)~~, 4SAD(319DS) to DIR NUCL SAFETY, KIRTLAND NM et.al., "Preliminary and Final Report of Nuclear Incident/319BW Bent Spear 70-02 (U)", 130048Z May 70 ex 137.

121. [redacted]

122. Msg (4SAD/319DS) to DIR AEROSP SAFETY NORTON AFB CA, et.al.,"USAF Preliminary/Final Aircraft Incident Report", [undated/June], ex 139.

(U) Major Defer made sure that all the wing crews knew of the accidental flaps-down incident of 24 April -- that they were briefed so as to avoid such errors aloft in the future. His safety office distributed photographs of the damaged airplane, as a reminder of the results of even the slightest error made while flying jet aircraft.

(U) Two of the more routine activities of the Safety Officer were inspections of equipment and procedures, and the constant motivation of wing people to do their work safely. Other activities of this office included: monitoring wing Quality Control & Evaluation Branch reports and Emergency Unsatisfactory Reports [EURS] to detect safety hazards or long-term trends in maintenance activities; participation in (quarterly) accident board indoctrinations, and participation in Nuclear Safety Sub-Committee meetings.

(U) Finally, Major Defer received Operational Hazard Reports prepared by aircrew members. These served two purposes: 1) the "grassroots" discovery of mechanical hazards, and 2) direct communications between crew members and a separately empowered wing authority that could speak to maintenance people on behalf of the flying crews. The wing's "Safety Mission" this quarter was a definite success.

OPERATIONS & TRAINING CONCLUSION

(U) The 319th Bomb Wing continued all of its normal operational missions after its transfer to the command of Headquarters Fifteenth Air Force on 1 April 1970. Although the aircraft and equipment available was still adequate for satisfactory mission performance, combat crew resources continued in short supply. The number of combat-ready aircrews on station was simply inadequate to meet the demands of both the EWO alert commitment at home and the wing's temporary duty requirements for Southeast Asia.

~~(C)~~ The wing continued to experience degrades of nearly 50 percent of its initial-launch alert sorties because of the manpower shortage. However, operations ARC LIGHT and YOUNG TIGER received the full measure of both crew and materiel support required.

~~(C)~~ The two major 319th Bomb Wing missions, EWO alert and SEA augmentee crews, were still in fundamental opposition: both demanded full consideration and full manning for their best performance. Yet only a finite number of trained men were on hand, and it was the EWO mission which had to suffer.

~~(S)~~ The wing's training mission was interrupted again this quarter by the continuing Federal Aviation Agency

~~SECRET~~

controllers' slowdown. Training restrictions caused by this continuing phenomenon, and also a side effect of the wing's ARC LIGHT commitment* on crew integrity, led to the failure of a BUY NONE Exercise on 23-28 April.

(U) Externally, flight training conditions changed in May for the better; internally, changes were put into effect to improve crew training and coordination.

(U) This wing had another accident-free three month period, much to the credit of Major Defer and also Colonel Taylor, who placed great emphasis on safety-consciousness.

(U) The unit experienced numerous difficulties in these three months. The slump in AST sorties caused by the air traffic controllers' disagreements with the FAA matched everyone's sagging spirits on base at the end of six long months of frigid North Dakota weather. May brought increased flying, sunlight, and a greatly improved psychological climate. The winter "slump" seemed to be over.

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* NOTE: See pages 95 - 98.

~~SECRET~~

CHAPTER IV

MAINTENANCE AND SUPPLY

INTRODUCTION

(U) The central task of the Deputy Commander for Maintenance [DCM], his staff, and the hundreds of airmen and officers in the five 319th Bomb Wing maintenance squadrons was to keep the unit's weapon systems and related equipment in the best possible condition at the lowest possible cost. Colonel George H. Mason headed this giant upkeep and repair task as DCM; he had the responsibility for a stringent quality control program and saw to it that the overall maintenance program produced safe airplanes to meet the flight scheduling commitments of the Deputy Commander for Operations.

(U) This chapter reviews the major maintenance activities accomplished by the DCM and his supervisors and technicians during this quarter. Variables considered are the manhours expended, the effects of maintenance on flight operations, and the role of supply on this maintenance mission. A final portion of the chapter relates any special maintenance projects that took time and consideration. The chapter concludes with a summary of any maintenance trends occurring in April, May or June.

MAINTENANCE ACTIVITIES

(U) The 319th Bomb Wing's major maintenance activities continued to be pre-flight and post-flight aircraft inspections, regularly-scheduled "Phase" Inspections, Corrosion Control [inspect/wash/paint] activities, Time Compliance Technical Order [TCTO] work, and miscellaneous, one-time repairs.

(U) Figure IV-1, below, shows the number of bomber sorties, pre-flights, and corrosion control actions accomplished in April, May and June 1970.[1]

FIGURE IV-1

(U) Bomber Maintenance

	Sorties*	Pre-Flights	Phases	Corrosion Control[2]
APR	61	49	12	3
MAY	69	39	22	1
JUN	61	33	17	3

(U) A monthly letter issued by the wing's maintenance analysis staff presented an excellent recapitulation of all maintenance and repair activity accomplished. Paragraph "1c" of this "Performance vs Plans and Workload Estimates" report,

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* Includes bomber sorties flown from other than 319th Bomb Wing maintenance control, as well as all "local" flights.

1. Rpt, "319th Bombardment Wing [H] Maintenance Summary", prepared by 319DCM Analysis Division, May-Jun 70, pp. 20, 30 & 31, ex 78.

2. Ltr, 319DCMA to 319DCM subj: Performance vs Plans and Workload Estimates, 15 May 70, ex 140; Ltr, 319DCMA to 319DCM, subj: Performance vs Plans and Workload Estimates, 18 Jun 70, ex 141; Ltr, 319DCMA to 319DCM, subj: Performance vs Plans and Workload Estimates, 22 Jul 70, ex 142.

for instance, showed which bombers had received their Phase Inspections; page three of each letter presented all bomber flight activity, and related it to maintenance performance.[3] Figure IV-2, shows tanker sorties and inspections performed this quarter:[4]

FIGURE IV-2

(U) Tanker Maintenance

	Sorties*	Pre-Flights	Phases	Corrosion Control[5]
APR	60	31	6	4
MAY	51	31	8	4
JUN	52	37	3	6

(U) The monthly "Performance vs Workloads" letter to the DCM presented the same information categories on tankers as it did for bomber maintenance. Paragraph 3c indicated actual Phase Inspection by aircraft number, and page six presented the accomplished flights of each airplane.[6]

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* Includes ONLY tanker sorties flown under the maintenance responsibility of the 319th Bomb Wing; maintenance was not concerned with off-station tankers, such as those in SEA.

3. Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 15 May 70, pp 1, 3, ex 140; Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 18 Jun 70, pp 1, 3; ex 141: Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, pp. 1,3; ex 142.

4. Rpt, "319th Bomb Wing [H] Maintenance Summary", prepared by 319DCM Analysis Division, May-Jun 70, pp. 35, 43 & 44, ex 78.

5. Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 15 May 70, ex 140; Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 18 Jun 70, ex 141; Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 22 Jul 70, ex 142.

6. Ibid.

(U) All aircraft flights took place following some type of maintenance review: a pre-flight inspection, a major Phase Inspection, or a shorter "turnaround" inspection. The majority of other maintenance work involved Basic Post-Flight Inspections [BPOs] for all airplanes returning from sorties.

(U) Another maintenance/repair activity which took many manhours was the Time Compliance Technical Order [TCTO] program. As desirable modification or replacement systems for aircraft components were discovered, either by Boeing Airplane Company researchers or Air Force inspectors, individual units were tasked with the similar inspection and modification (if necessary) of their own airplanes. The Technical Order program was "Time Compliance" because the inspections and changes had to be performed within certain time parameters. Sometimes the DCM's office received only instructions for simple modifications; other TCTOs included parts kits for changes. Figure IV-3 illustrates the number of TCTOs received and those inspected/installed on the bomb wing's B-52Hs and KC-135As during the three months.[7]

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7. Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 15 May 70, pp 2 and 5, ex 140; Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 18 Jun 70, pp. 1 and 4, ex 141; Ltr, 319DCMA to DCM, subj: Performance vs Plans and Workload Estimates, 22 Jul 70, pp. 2 and 5, ex 142.

FIGURE IV-3

(U) 319BW Bomber/Tanker

TCTO DATA

BOMBERS			TANKERS	
Rec'd	Accomp.		Rec'd	Accomp
21	19	APR	34	40
25	55	MAY	31	28
99	59	JUN	33	4

(U) The 319th Bomb Wing received TCTOs on a continuing basis; the work these orders required was scheduled on a weekly basis.[8] Because of the load of other work on the maintenance men, the number of TCTOs received was normally significantly greater than that completed in any given period. In April and May of this quarter, however, the wing "caught up" on TCTO work. This was true in part because of the one-month reduction in combat crew sortie requirements which resulted from Federal Aviation Agency problems.* Higher headquarters accompanied the training slowdown message to the wing's Deputy Commander for Operations with a "maintenance speed-up" message addressed to Colonel Mason, the DCM.[9] In June as the sortie level rose to normal, the TCTOs fell behind as was the usual condition.

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* See this history, Chapter III, pp 85-86.

8. Interview, AlC B.F.Fuller, historian, with Capt. R.W. Mrozek, OIC, DCM Plans & Scheduling Divs, 3 Sep 70.

9. Msg, SAC to AIG 674,(DCM) et.al., "Reduced Flying Activity", 302034Z Mar 70, ex 143. Msg, 2AF to AIG 696 (DCM). et.al., "Reduced Flying", 310150Z Mar 70, ex 144.

Maintenance Manhours

(U) The performance of the central aircraft maintenance tasks (pre-flights, BPOs, TCTOs, etc) used 73,938 manhours for the bombers, and 41, 785 for the tankers.*[10] Figure IV-4 below breaks down the bomber totals by squadron and month, and also compares them to those of the previous quarter.[11]

FIGURE IV-4

(U) 319BW Bomber Maintenance
MANHOURS

SQDN:	April	May	June	THIS QUARTER	LAST QUARTER
FMS:	8490	7809	8970	25,269	28,005
OMS	6040	6175	5584	17,799	21,840
AMS	7286	9612	7641	24,539	19,615
MMS	1161	1330	1053	3,544	5,333
AMMS	761	950	1076	2,787	2,550
TOTAL----------				73,938	77,393

Figure IV-5, on the following page, shows this same manhours information pertaining to the bomb wing's tanker aircraft.[12]

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* Total manhours computed by the historian, from squadron manhours figures as presented in the April, and the May-June "Maintenance Summaries"; see footnote 10 below.

10. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCM Analysis Division, 30 Apr 70, (pp. 2-5 extracted), ex 145; Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCM Analysis Divs, May-Jun 70, pp. 2-9, ex 78.
11. Ibid.
12. Ibid.

FIGURE IV-5

(U) 319BW Tanker Maintenance

MANHOURS

SQDN:	April	May	June	THIS QUARTER	LAST QUARTER
FMS	7390	4984	5541	17,915	21,922
OMS	6629	5707	6628	18,964	21,754
AMS	2241	1518	1237	4,996	6,452
TOTAL:				41,875	50,098

(U) These two sets of statistics demonstrate that the majority of the wings's maintenance squadrons worked fewer manhours between April and June than they had in the previous three months. Only for bomber maintenance did the Avionics, Munitions and Airborne Missile Maintenance Squadrons work more hours in the current quarter.

(U) Compared with the number of sorties the wing's bombers and tankers flew this quarter versus the last, the downward manhours trend at first seems mysterious. The wing's bombers flew 157 sorties in the months January through March, and 191 between 1 April and 30 June 1970.[13]

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13. 319BW Hist, Jan-Mar 70, Vol I, p. 81; Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-June 1970, p. 20, ex 78.

The wing's tankers flew 149 local sorties between January and March, and 163 local sorties between April and June.[14] These extra flights in this quarter were in part related to the BUY NONE Exercise, and in part to the Additional Specialized Training [AST] which was conducted in May and June to make up on training sorties lost due to the FAA "slowdown" and weather in earlier months.

(U) In one sense, there were two kinds of maintenance activities performed on wing airplanes. These might be termed "essential", and "extra". The essential tasks included preflighting and postflighting aircraft, and doing the crucial Phase Inspection work. All other kinds of maintenance, including some TCTOs, corrosion control, cleaning, and modifications could fall in the "extra" category. The essential had to be completed in a numerical relationship, in a ratio to such variables as engine hours, number of sorties, etc. accrued; extra work was desirable but not mandatory.[15]

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14. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCM Analysis Division, 31 Mar 70, p.36, (in) 319BW Hist, Jan-Mar 70, Vol I, ex 40; Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCM Analysis Division May-Jun 70, p.35, ex 78.

15. Interview, AlC B.F.Fuller, historian, with MSgt R.F. Trudell, NCOIC 319DCM Analysis Divs, 3 Sep 70.

(U) The increase in bomber and tanker sorties during the quarter necessarily resulted in a corresponding rise in the basic maintenance/inspection operations performed; it also tended to reduce the hours spent on all kinds of optional work. In this quarter, more sorties equalled less overall maintenance time -- and fewer manhours expended.* An old rule of airplane maintenance seemed to apply here: "If the airplanes aren't on the ground, you can't work on them".[16]

(U) The final manhours-spent figures for each month never exactly tallied with their predicted estimates. Many contingencies arose that caused unscheduled or extra labor: inspections revealed that extensive repair work on a system was needed; an unexpected volume of TCTOs might arrive at the wing; a series of seemingly unrelated components in one or more aircraft could go "down" in a short period of time.** The extra manhours which had to be spent on such unpredictable work were logged as "unscheduled maintenance hours". The DCM Analysis Division staff kept up a constant study on the wing's unscheduled workload. Monthly

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* The FMS Manhours figures were far too low for the quarter; an administrative error in the squadron meant the loss of a significant portion of the FMS manhours record (see FN 16); Colonel Pucket commented that the total manhours were still down slightly from those of the previous quarter.

** Two B-52H models were "bad birds" for much of this quarter, dispite continuing work on their various systems defects. See Footnote 16, and page 123.

16. Interview, AlC B.F.Fuller, historian, with MSgt R.F.Trudell, NCOIC, Maintenance Analysis, 3 Sep 70. Interview, AlC B.F. FULLER, Historian, with Col D.L.Puckett, 319DCM (1 Aug-), 6 Sep 70.

reviews of this situation are included in this history, as exhibits 146-148.[17] The following portion of this history reviews the wing's measurement of its maintenance effectiveness during the quarter.

Maintenance Effectiveness

(U) The 319th Bomb Wing had used five indicators to gain a running picture of its own maintenance effectiveness. These five measuring devices were: 1) the operationally-ready [OR] rates for wing aircraft; 2) the late take-off [LTO] rates; 3) the number of sorties cancelled [CANX] before takeoff due to "materiel"; 4) the number of sorties air-aborted for machine-parts problems; and 5), the reliability of First Sortie After Ground Alert [FSAGA] missions.

(U) Higher headquarters was in the process of re-evaluating its Commander's Management System (CMS) maintenance-measuring tools during much of this quarter.[18] Until 1 June 1970, all five of the maintenance-effectiveness indicators listed above were reported to higher headquarters under the Commander's Management System. Under CMS criteria, such variables as LTOs and FSAGA reliability were not only evidences of one-time problems, but were also cumulative. Two "bad" FSAGA missions

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17. Ltr, 319DCMA to SAC(DMA), subj: Scheduled and Unscheduled Maintenance Manhours, 12 May 70, ex 146; Ltr, 319DCMA to SAC(DMA), subj: Scheduled and Unscheduled Maintenance Manhours, 12 Jun 70, ex 147: Ltr, 319DCMA to SAC(DMA), subj: Scheduled and Unscheduled Maintenance Manhours, 13 Jul 70, ex 148.

18. Interview, AlC B.F.Fuller, historian, with Col. B.L.Puckett, 319DCM (1Aug -), 6 Sep 70.

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out of four performed, for instance, meant that the next four FSAGAs in a row had to be reliable in order to meet a "get well date" and "bring the wing up" to six out of eight good missions (75 percent). The pressures of such a cumulative system, in which one was always paying for past mistakes, tended to reduce the value of the reporting system for the wing commander.*

(U) As a part of its re-thinking of the CMS structure, higher headquarters removed LTOs and FSAGA reliability from this cumulative system on 1 June. Future DCM Analysis Division "Maintenance Summaries" will not contain cumulative data breakdowns on these variables.[19]

~~(C)~~ Late take-off data was dropped from Headquarters Fifteenth Air Force "high-interest" reporting in June to reduce the tendency of maintenance men to work too fast getting an airplane ready for an "on time take off", and lessen those on the aircrews to accept bombers or tankers which did-not "feel" just right.[20]

(U) One of the effects of dropping FSAGA reliability from the cumulative CMS reporting was to increase the scheduling flexibility of both the DCM and the DCO's operations. Working under the old higher headquarters pressures for good FSAGA missions, no one cared to combine them with other crew training exercises, such as Profile Missions. If a crew should lose

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* Observation of the historian at many daily Commander's Daily Standup Briefings, Apr/May/June 70.

19. Interview, AlC B.F.Fuller, historian, with MSgt R.F. Trudell, NCOIC, DCM Analysis Division, 3 Sep 70.

20. Speech ~~(C)~~, Lt.Gen Paul K. Carlton, Comdr 15AF, before 15AF Aircraft DCM Conference, 7 Jul 70; [on tape, filed with 319 CSA.]

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a Profile/FSAGA combination (under the old system), the wing would have to explain two losses from one flight problem.

(U) Once higher headquarters announced its de-emphasis on FSAGA reporting, the wing's staff could view these crucial missions as the "most reliable indicator of its true maintenance capability for the EWO".[21] Pressure to "look good" was lessened, and FSAGA missions began to include other crew training activities. The wing gained a measure of local responsibility for its own maintenance effectiveness, and it could utilize fewer missions for more training.[22]

(U) This history continues to report both LTO and FSAGA data; both help to present a picture of the wing's maintenance effectiveness. As part of the new emphasis on "self-evaluation", wing staff members began to analyze their own late takeoff problems, in operations/maintenance panel meetings, which convened after every late takeoff to review the mission's problems. The minutes of these meetings are included in this history [exhibits 153-156] to show how the conversion of LTO data from higher headquarters- to local unit-emphasis, affected maintenance analysis procedures.

(U) The five maintenance indicators (OR, LTO, CANXs, air aborts, and FSAGA rates) are analyzed in the following section of this narrative.

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21. Interview, A1C B.F.Fuller, historian, with Lt.Col.W.A. Scannell, Ast DCO, 5 Sep 70.

22. Ibid.

(U) The operationally-ready rates for B-52H jet bombers were: April, 75.6 percent; May, 69.5 percent; and June, 68.9 percent.[23] The May and June bomber OR rates were slightly below the Air Force Manual [AFM] 65-110 standard of 71 percent.[24] Colonel Puckett attributed a large part of these slightly under-standard rates to two of the wing's B-52 aircraft, which in the final months of this quarter were out of commission for an unusual amount of time.[25] A second factor which may have contributed to the low ready rates was the manning shortage which affected several of the wing's maintenance squadrons in spring and early summer.*

(U) The operationally-ready rates for the wing's KC-135A jet tankers were: April, 75.1 percent; May, 79.9 percent, and June, 81.6 percent.[26] The tankers (which were much less complex airplanes to maintain) were operationally-ready at well above the AFM 65-110 71 percent standard.[27]

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* See Chapter II, this history, pp.14-35.

23. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, p.32, ex 78.

24. Ibid.

25. Interview, AlC B.F.Fuller, historian, with Col D.L.Puckett, 319DCM (1 Aug-), 6 Sep 70.

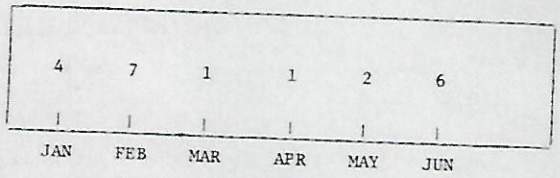
26. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, p.45, ex 78.

27. Ibid.

~~(C)~~ Figure IV-6, below, lists the number of late take-offs that occurred in the six months, January - June of 1970.[28]

FIGURE IV-6

(U) 319BW Bomber LTOs



Interestingly enough, the four LTOs in January and the seven LTOS in February had been cause for a special study on take-off deadline problems in the previous quarter.[29] Although the staff was still concerned to meet its time/flying commitments after the 1 June change in CMS/LTO emphasis by higher headquarters, there was a small increase in the LTO rate in June, which may have reflected the reduced pressure in this area. The 319th Bomb Wing was only one of many Fifteenth Air Force wings to show this interesting LTO rise after 1 June.[30*]

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* In this recorded talk to Fifteenth Air Force DCMs, General Carlton made humorous reference to the "soaring" LTO rate in their wings after the de-emphasis on this variable had been announced; see fn 30, below.

28. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, p.20, ex 78.

29. 319BW Hist, Jan-Mar 70, Vol I, p.88.

30. Speech, ~~(C)~~, Lt.Gen Paul K. Carlton, Comdr 15AF, before 15AF Aircraft DCM Conference, 7 Jul 70; [on tape, filed with 319CSA.

(U) The wing's tanker late-takeoff rates continued to be a no-problem area. Only two sorties were late taking off because of maintenance problems, in each of the three months.[31]

(U) Cancellations and air-aborts for both tactical aircraft types showed no significant trends during the quarter, and continued to be satisfactorily low [see Figure IV-7, below:].[32]

FIGURE IV-7

(U) 319BW Bomber/Tanker Cancellation and Air-Abort Rates

	JAN	FEB	MAR	APR	MAY	JUN
B-52 Cancellations	2	2	0	1	0	1
KC-135 Cancellations	1	0	0	3	0	3
B-52 Air-Aborts	1	1	0	0	2	0
KC-135 Air-Aborts	2	0	0	1	1	1

(b) (1) (A)

(b) (1) (A)

* Headquarter Fifteenth Air Force continued to show an interest in the causes of local-unit "maintenance-variable" rates; The DCM Analysis Division began sending a monthly "15-K1 Maintenance Status Report" to the 15AF Maintenance Analysis staff in April 1970; see Footnote 33.

31. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCM Analysis Division, May-Jun 70, p. 35, ex 78.

32. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCM Analysis Division, May-Jun 70, pp 20 and 35; ex 78.

33. Regulation, 15AF Reg 66-2, "Maintenance Status Report, RCS: 15-K1", 3 Apr 70, [FORMAT], ex 149; Msg, 4SAD(319DCMA) to 15AF(DMA), "Maintenance Status Report, RCS: 15-K1", Ø62ØØ5Z May 7Ø, ex 150; Msg, 4SAD(319DCMA) to 15AF(DMA), "Maintenance Status Report, RCS: 15-K1,"Ø42348 Jun 7Ø, ex 151; Msg, 4SAD (319DCMA), "Maintenance Status Report, RCS:15-K1", ØBØØ25Z Jul 7Ø, ex 152.

FIGURE IV-8

(U) 319BW Bomber/Tanker/AGM FSAGAS

	BOMBER			TANKER			AGMs		
	Number	Rel.	Rate	Number	Rel	Rate	No.	Rel.	Rate
APR	2	2	100%	3	3	100%	10	7	70.0%
MAY	3	4	75%	3	3	100%	8	7	87.5%
JUN	2	4	50%	3	3	100%	6	4	66.7%

The maintenance status reports for each month (exhibits 150-152) discussed the causes for each FSAGA unreliability. The causes of these FSAGA losses showed no specific patterns:[34]

10 April - AGM 2294 - DC Amplifier failure
13 April - AGM 2150 - Computer failure
26 April - AGM 0170 - Wire splice
25 May - B-52 0039 - Time Computer failure
25 May - AGM 2303 - DC Power supply failure
8 June - B-52 1022 - Radar modulator failure
8 June - AGM 2077 - Radar modulator problem
8 June - AGM 2164 - Radar modulator problem
18 June - B-52 1029 - Fuel valve cracked

Together with the late takeoff narratives put together by the "LTO Panel", these 15-K1 Maintenance Status Reports clearly explained the causes (and the repair work accomplished) for each maintenance problem encountered on combat crew training sorties.

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34. Msg, 4SAD(319DCMA) to 15(DMA), "Maintenance Status Report, RCS: 15-K1", Ø62ØØ5Z May 7Ø, ex 150; Msg, 4SAD(319DCMA) to 15AF(DMA), "Maintenance Status Report, RCS: 15-K1", Ø42348Z Jun 7Ø, ex 151; Msg, 4SAD(319DCMA) to 15AF(DMA), "Maintenance Status Report, RCS: 15-K1", Ø8ØØ25Z Jul 7Ø , ex 152.

(U) One final area which the "15-K1" report covered was the wing's overall AGM reliability. Figure IV-9, below, summarizes the "Maintenance Status Report's" statistics for this area:[35]

FIGURE IV-9

(U) 319BW AGM Reliability

	Total AGMS Attempted	Total AGMs Reliable	Percent Effective
APR	21	15	71.4 %
MAY	23	14	60.9 %
JUN	31	24	77.4 %

(U) The commander of the 319th Airborne Missile Maintenance Squadron, Lt. Colonel Baker, provided a complex and technical explanation for the seemingly simple reliability figures for AGMs this quarter. In a letter to the wing's Management Analysis office, Colonel Baker pointed out the ways in which AGM reliability was closely tied to the guidance, electronics and human systems on board the parent B-52H bomber. His letter discussed the many variables involved in inter-system reliability, compared this quarter's trends with those of previous months and years, and isolated a more pure reliability figure for AGM maintenance, which he computed at 85.5 percent for the quarter.[36]

35. Msg, 4SAD(319DCMA) to 15AF(DMA), "Maintenance Status Report", Ø62ØØ5Z May 7Ø, ex 150: Msg, 4SAD(319DCMA) to 15AF(DMA), "Maintenance Status Report", Ø42348Z Jun 7Ø, ex 151; Msg, 4SAD(319DCMA) to 15AF(DMA), "Maintenance Status Report", ØBØØ25Z Jul 7Ø, ex 152.

36. Ltr, 319AMMSMA to 319DCRM, subj: AGM Overall Reliability, 1 Jul 70, ex 157.

Helicopter Maintenance

(U) The 319th Bomb Wing's maintenance staff devoted considerable time and effort to the upkeep of non-tactical airplanes. Transient maintenance (support to visiting military aircraft), the bomb wing's two courier airplanes (a C-47 and a T-29), and its eight UH-1F jet helicopters used 9474 manhours in April, 9750 in May, and 9124 in June.[37] The squadron that provided most of this "Base Flight" support*, OMS, spent the majority of its non-tactical hours on the "Huey" helicopters [see Figure IV-10:]

FIGURE IV-10

(U) OMS Base Flight Maintenance Manhours

J U N E 1970

Base Flight	C-47 T-29	667
Helicopter	UH-1F	4917
Transient	MISC.	+ 1285
	OMS TOTAL:	6869

* Base Flight manhours abbreviated as "BF Manhours" in DCMA Maintenance Summaries, ex 78 and 145.

37. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, Apr 70, pp 2-5, ex 145; Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, pp 2-5, ex 78.

38. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, p.2, ex 78.

(U) This wing had been operating nine UH-1F helicopters in support of the 321st Strategic Missile Wing until 31 March 1970.* On that date, helicopter operations loaned one "chopper" to the missile support activity at the 308th Strategic Missile Wing, Little Rock Arkansas.[39] A summary of the sorties and maintenance effects on them of the remaining eight helicopters appears below, for the six-month period ending 30 June 1970.[40]

FIGURE IV-11

(U) 319BW Helicopter Maintenance Statistics

	JAN	FEB	MAR	APR	MAY	JUN
Sorties	337	331	344	244	326	322
Cancelled	67	67	91	121	112	88
OR** Rate	80.4	74.6	67.9	73.7	77.4	70.0

The number of sorties averaged each month remained approximately the same between the two periods. However, the reduction to

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* See 319BW Hist, Jan-Feb 70, Vol I, p. 94; For description of 319BW support of 321SMW, Grand Forks AFB, see this history, pp 136-155.

39. Interview, AlC B.F.Fuller, historian, with Maj V.F. Ackfeld, Chief 319DCOH (Helicopter Operations), 31 Aug 70.

40. Rpt, "319th Bombardment Wing Maintenance Summary", prepared by 319DCMA, May-Jun 70, p. 48 and p. 56, ex 78.

eight helicopters meant more flying time per aircraft, less maintenance time, and slightly higher cancellation rates. The slightly reduced "Operationally-Ready" rates for the wing's helicopters in the final three months was in part related to the reduction in the number of the airplanes available. For the quarter this rate computed to 71.2 percent*, which was still above the AFM 65-110 standard of 71.0 percent.

SUPPLY

(U) The wing normally had several sources of supply for its maintenance operations. Some kinds of parts materials were kept on reserve in the maintenance shops. When an airplane needed a part that was not on hand in the wing, the Materiel Control officer contacted base supply (the 804th Combat Support Group), which instituted a computer-inventory search to see if the item were on base. When parts were needed urgently, and neither the wing nor the Base Supply warehouse had them on hand, the aircraft awaiting them became, after a specified period, "NORS" [Not Operationally Ready due to Supply]. This status set in motion administrative machinery for depot requests for parts, and if necessary, messages to other units asking their assistance.

* Computed from monthly figures by the historian.

(U) The DCM analysis staff kept track of the "NORS" rates because they provided a quick reference to the quality of support that the various supply channels were giving to the wing. The monthly NORS statistics showed how much supply problems were responsible for those aircraft not operationally-ready. Figure IV-12 presents the NORS rates for the bomb wing's two tactical aircraft types for April, May and June.[41]

FIGURE IV-12

(U) 319BW NORS RATES

BOMBERS		TANKERS
2.4 %	APR	2.7 %
3.5 %	MAY	1.7 %
5.2 %	JUN	1.3 %

Neither aircraft type had NORS problems in excess of the AFM 65-110 ceiling of five percent.[42] The July - September installment of this history will contain a special study on supply procedures and problems in the 319th Bomb Wing.

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41. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, pp. 33 and 46, ex 78.

42. Ibid.

SAS Modifications at SAAMA

(U) Chapter III (Operations and Training) discussed the unusual number of B-52H bombers away from the 319th Bomb Wing to the San Antonio Air Materiel Area [SAAMA] depot. The only major aircraft modification program of this quarter was the Stability Augmentation System [SAS] addition to the wing's bombers. B-52H tail numbers 0059, 1016, 1024, 1028, 1034 and 1035 all flew to San Antonio to receive their SAS modifications. At the Texas depot, new hydraulic actuators were fitted to the bombers' elevator mechanisms, converting their "free floating" movement in one of two directions, to a "positively controlled" one.[43]

MAINTENANCE CONCLUSION

~~(S)~~ No unusual problems, aside from the continuing shortage of personnel and the slightly increased flying, affected the overall quality of the wing's maintenance efforts this quarter. With fewer manhours expended than in the previous three months, the bomb wing did not experience significantly high LTO, cancellation or air abort rates. AGM reliabiltiy continued to be satisfactory (rated "Outstanding" in the 23 April BUY NONE).[44]

(U) At the quarter's end, the DCM and all the wing's maintenance staff waited, as did the rest of the people here, for the "final test" that an impending ORI was sure to bring.

43. Interview, A1C B.F.Fuller, historian, with Capt.R.W. Mrozek, OIC, Aircraft Scheduling, 31 Aug 70.

44. Msg, ~~(S)~~, 4SAD(319C) to SAC(DOTC), "SAC-T-54 BUY NONE Report (U)", (no date/time group), 28 Apr 70, ex 120.

C H A P T E R V

FACILITIES

Introduction

(U) The 319th Bomb Wing continued to enjoy the use of facilities that were in most ways quite satisfactory. Office space was in some areas at a premium (especially considering the projected basement Command Post consolidation plans for the coming winter), and the persistent lack of simple renovation supplies [paint, even floor wax at times] kept the shop areas and offices from looking as fresh as might be possible in less financially austere times.*

"Mudjacking at Grand Forks AFB"

(U) The summer months provided the wing with its only opportunity to test and repair aircraft parking areas and runways. On 15 May 1970, work planned the preceding summer was begun, by private contractor, on the main parking apron.**

(U) This apron was made of many large concrete squares. The subsurface in this part of the North Dakota tundra was of a mushy, oozy consistency which tended to compress and sink under any heavy weights. The parking apron, often holding as many as 15 large airplanes, had to be "leveled" periodically.

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* Observation of the historian of CSA "housecleaning" administration.

** See 319BW Hist, Jan-Mar 70, Vol I, pp 102-103 for map of 319BW facilities, and location of this apron.

(U) "Mudjacking" was performed by a civilian contractor, who drilled large holes in a scientifically-determined pattern in each concrete square. The final step in the leveling operation involved the pumping of tons of liquid concrete through these holes, raising the sagging squares to the proper horizon line.[1] Fourth Strategic Aerospace Division contract GRF-677[2] established the rigid requirements for workmanship and materiel quality for this repair work, which was completed by the end of June.

(U) The next installment of this history will review those runway renovations scheduled for the later months of the summer.

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1. Interview, AlC B.F.Fuller, historian, with Capt. R.C. Callahan, 319DCM Maintenance Control Officer, 3 Jun 70.

2. Brochure, "Technical Provisions - Apron Operational/ Repair", [GRF-67-7], prepared by Hq4SAD(SAC), Jul 69, 1 copy on file with 319BW(HO).

CHAPTER VI

SPECIAL ACTIVITIES

Introduction

(U) Many individual situations occurred at once in the 319th Bomb Wing at any given time in history. Those "special" activities which gave the April-June 1970 quarter its peculiar flavor and coloring are the subject of this final chapter of the history. This section divides itself into four sections: communications, transportation, the wing's complex relations with the local civilian community, and budgetary problems.

Communications

(U) No new information came to light this quarter on the Air Force's command post consolidation project. It had been decided previously that the 321st Strategic Missile Wing would eventually move its control/communications equipment to the Command Post in the basement of the 319th Bomb Wing headquarters building, however.

(U) At the end of June, no one in the wing knew for sure when moving and the inevitable construction would begin. Considerably more restricted area space would be necessary. The repercussions of the forthcoming consolidation would be large -- this much was predictable. Future inspections of either tactical wing would necessarily include both -- because of the combined command/control facility. The increased

inter-wing coordination of supplies, reporting procedures, EWO operations, personnel, training -- all were on the horizon.[1] Future histories will keep careful watch on Control Division modifications because of the effect they will have on the life of the wing.

Transportation

(U) The wing continued its two major phases of non-tactical air operations. Both involved taxiing men and equipment from place to place. The bomb wing had one T-29 and one C-47, which it used on weekly courier shuttles between Grand Forks AFB, Minot AFB and Ellsworth AFB (South Dakota). Eight UH-1F helicopters were assigned to the wing to fly a daily shuttle schedule in support of the 321st Strategic Missile Wing [SMW]; "chopper" operations flew both missile and security police crews to over 150 Minuteman II sites outlying the base.

(U) The two propellor-driven courier aircraft were operationally-ready at noticably different rates again this quarter. Figure VI-1 shows these rates for the six months ending 30 June 1970.[2]

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1. Interview, AlC B.F.Fuller, historian, with Maj.R.L. Coyner, 319DCOCD Senior officer controller, 5 Sep 70.

2. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, pp. 61 and 64, ex 78.

FIGURE VI-1

(U) 319BW Non-Tac OR Rates

	JAN	FEB	MAR	APR	MAY	JUN
C-47	72.2	68.1	62.2	76.1	62.6	95.8
T-29	50.0	57.8	45.7	63.3	76.5	38.6

Intensifying the upkeep problems on these aircraft was their non-compatibility of parts. While the older C-47 had a 95.8 operationally-ready rate in June, for instance, the T-29, which had parts/supply problems* was operable less than half the time. The wing had been trying to trade one of its two non-tactical airplanes for a matching type since the previous summer, with no success. Many other wings had similar problems.

(U) The operationally-ready time for the wing's eight helicopters is presented next: [3]

FIGURE VI-2

(U) 319BW Helicopter OR Rates

Possessed Hours	6696	6048	6696	5987	5952	5760
Operationally Ready Hours:	5382	4514	4548	4414	4605	4071
	JAN	FEB	MAR	APR	MAY	JUN
OR RATEs:	80.4	74.6	67.9	73.7	77.4	70.7

* Observation of the historian, NORs presentation slides, at daily Commander's Standup Briefings, June 1970.

3. Rpt, "319th Bombardment Wing (H) Maintenance Summary", prepared by 319DCMA, May-Jun 70, p.57, ex 78.

(U) Each month a joint bomb/missile wing staff meeting was held to evaluate helicopter flight operations. Minutes of these meetings for April, May and June 1970, included in this history, provide information on scheduling problems, the number of passengers and amount of cargo carried, the total sorties, the availability of pilots, etc., and are self-explanatory.[4]

Relations with the Civilian Community

(U) Two separate events involving both the city of Grand Forks and the people of the 319th Bomb Wing (and Grand Forks Air Force Base), occurred during this quarter which deserve special mention.

(U) The first of these culminated in the sharing of base runways and flight facilities (unloading ramps) with commercial airline flights. The Grand Forks International Airport was due for extensive rennovation starting 1 April. An involved series of letters from national Congressmen, and down to Mayor Hugo Magneson of Grand Forks gradually worked out with the Air Force and with base officials the details of the sharing arrangement.

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4. Ltr, 321VC to 319C et.al., subj: Minutes of Helicopter Employment Management Panel Meeting, 14 May 70, ex 158; Ltr, 321VC to 319C et.al., subj: Minutes of Helicopter Employment Management Panel Meeting, 11 Jun 70, ex 159; Ltr, 321VC to 319C et.al., subj: Minutes of Helicopter Employment Management Panel Meeting, 9 Jul 70, ex 160.

The most interesting and important of these are included in this history as exhibits 161-171.[5]

(U) In brief, Mayor Magnuson contacted Senator Young (R-North Dakota) who endorsed his request to the Air Force for joint use of Grand Forks AFB facilities during the stated period of time. The letters in exhibits 161-171 trace correspondence between Mayor Magnuson, Colonel Green [then commander of the 804th Combat Support Group], Senator Young, and representatives at Headquarters USAF. On 25 March the agreement was finally reached, and 1 April marked the first day of 17 commercial flights by Northwest Airlines and North Central Airlines into the base. As noted in Chapter III, at least one major training exercise had to be waived for the quarter (Sustained Reaction Posture [U]) because of flight congestion. One isolated incident occurred in April of military/commercial tieups[6], but this was not repeated.

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5. Ltr, Milton R. Young, US Senator, to Col R.Green, GFAFB Commander, 8 Dec 69, ex 161; Ltr, Col R.Green, GFAFB(C), to Hugo R. Magnuson, Mayor-Grand Forks ND, 10 Dec 69, ex 162; Ltr, Col R.Green, GFAFB(C) to Senator Milton R. Young, 12 Dec 69, ex 163; Ltr, H.R. Magnuson, Mayor, to Col. R.Green, GFAFB(C), 11 Dec 69, ex 164; Ltr, H.R. Magnuson, Mayor, Grand Forks ND, to Col R.Green, GFAFB(C), 15 Jan 70, ex 165; Ltr, Bernard Dove, Chief Bases & Units Division, Directorate of Aerospace Programs, HqUSAF, to H.R. Magnuson, Mayor, Grand Forks ND, 25 Mar 70, ex 166; Ltr, G.A.McConnel, Chief, Base Flight Operations, to 804CSG(C), subj: Airport Congestion, 20 Apr 70, ex 167; Ltr, 804CSG(C) to Chief BF Ops, 29 Apr 70, ex 168; Ltr, BOBO to BCR, subj: Billing for Commercial Carrier Use of Airfield, 4 May 70, ex 169; Ltr, BOBO to BCR, subj: Billing for Commercial Carrier Use of Airfield, 2 Jun 70, ex 170; Ltr, BOBO to BCR, subj: Billing for Commercial Carrier Use of Airfield, 1 Jul 70, ex 171.

6. Ltr, G.A. McConnel, Chief BF Ops, to 804CSG(C), subj: Airport Congestion, 20 Apr 70, ex 167;

(U) The joint use of the base runways by the bomb wing's and commercial airlines did not affect wing people in a personal way. However, the second town/base relationship situation that occurred in the quarter had a profound effect on many individuals in all three Grand Forks AFB units. On 10 March 1970, because of the department of Health, Education and Welfare announced a reduction in "impact" federal school funding assistance, the Grand Forks Public School Board announced that "air base children" would not return to school in their district after 10 April, unles they individually paid tuition.

(U) The uproar on base was as furious as it was instantaneous. Somehow the townspeople seemed to have thought that it was the Air Force, and not "HEW" that cut the funds. A common attitude was "why are they taking this out on our children?"

(U) A timetable of the major events of this very unpleasant war between the civilian population (represented by the school board) and the government (unfortunately represented by Grand Forks AFB school-age dependents, it seemed) included the following events:

9 March 1970 - North Dakota State Attorney Johanneson advises GF School Board Attorney Schaft to drop support of GFAFB students in response to HEW education funds cut.

10 March 1970 - Grand Forks School Board resolves to discontinue educational services for GFAFB school children, effective 24 Apr 70.

11 March 1970 - Superintendent Worner advises GFAFB Commander of 10 March resolution

24 March - Pending an HEW review of education "impact" funding, Grand Forks school board resolves to "temporarily defer enforcment" of April back-to-school deadline.*

Towards the end of March, the legal council of a large group of concerned air force parents had worked out an injunction against the school board, in order that military dependent education policies might be better negociated in the summer months, after school normally let out. On 31 March, the date of the cancellation of base school service was forwarded to 1 July. For an entire uneasy summer, none of the parents on base knew if their children would return to school in the fall.**

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* Information in this timetable from copies of relevent correspondence, 319VC Brochure, "The School Problem" on file 319HO.

** On 25 August 1970, the U.S. Senate voted (agreeing with the House of Representatives) to overrule President Nixon's veto of their original education appropriations to HEW, thus assuring Grand Forks AFB dependents another year's schooling.

(U) The ill-feeling generated on the base (and in the bomb wing) towards the town because of the unfortunate handling of the school funding situation made for an overall worsening of town/base relations. In light of the cooperative and friendly attitude which the wing and base commanders had demonstrated towards the town regarding sharing the runway facilities, the school board's apparent decision to use dependent school-age education in Grand Forks as a lever to regain federal funding was doubly unfortunate. Whether or not the town needed the additional 25 percent funding it was demanding, the actions of the "NODAKs" against "our children" was an outstanding morale depressant, and made people's tours at this base even less desirable than climactic and cultural conditions already dictated.

(U) Even the usual "Armed Forces Day" open house met its demise this year. Because of the threat of radical demonstrations at 321st Strategic Missile Wing sites, Headquarters SAC "regretfully cancelled" this year's public relations affair -- at a time when public relations were badly needed.[7]

7.
Msg, SAC to AIG 667(DXI) et.al., "Armed Forces Day Open House Programs within this Command", 142107Z May 70, ex 172.

The Budget

(U) 30 June 1970 marked the end of Fiscal Year 1970. Two principle 319th Bomb Wing funding areas had been in critical supply since January; these were: supply funds, and Temporary Duty [TDY] allocation monies. Because of the impending shortages of these funds, both Captain Moore (Chief, Management Analysis), and the wing's vice-commander, Colonel Wolfersperger, had personally reviewed every request for money in these two areas.

(U) The wing's supply funds target did increase slightly between April and June. The 31 March figure had been set at 1,660,000 dollars, while the ending figure targeted (and, incidently, spent) was $1,693,000). In the months April through June 1970, the wing spent $415,000 on its total supplies; this was in marked reduction from the $465,000 spent between January and March, and was the result of stringent cost-monitoring.

(U) The TDY funds target increased by $10,000 during these three months, from $169,000 to a $179,000 ceiling. The wing spent a total of $35,000 on essential TDYs in the "fourth" quarter, again a significant reduction from the average of $48,000 per quarter for the previous three periods. The wing made it through the end of the fiscal year, but all luxuries and some supplies and services

that many people had grown used to and deemed necessities were done without.[8]

(U) The stringent financial situation, the pressures on all personnel with children caused by the "school" situation, the confusion occasionally created by civilian aircraft on base, and the wing's staff anticipation of the impending command post consolidation -- provided the background for the routine operation of the bomb wing's many missions. While the school situation and the civilian airlines sharing of base facilities were temporary, everyone knew that budgetary problems would very like grow worse, and that until settled, the control division changes would provide future interesting diversions to day to day life in the wing.

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8. Interview, AlC B.F.Fuller, historian, with Capt. M.L. Moore, Chief, 319DCRM, 4 Sep 70.

SUMMARY

(U) The first three months of 319th Bomb Wing life under the new numbered air force was not without problems. The wing scored important accomplishments during this period -- all four of its critical operational mission areas were performed successfully. The alert force posture, crew training, higher headquarters directed temporary crew duty for Southeast Asia -- all were accomplished successfully, and safely.

(U) The disappointment of the April BUY NONE led to considerable self-scrutiny and changes in certain wing policies. The maintenance force continued to be hard put to provide an abundance of completely operational airplanes, given its chronic shortage of key AFSC technicians and the wing's overall financial austerity program.

(U) Staff, technicians, clerks and the crews worked harder than ever to overcome many obstacles, including such unrelated headaches as the FAA controllers' strike in April, and the discovery that base children might not receive further public education.

(U) People lived in, and ran the wing, and life had not been particularly easy or pleasant at all times. Yet they continued working, and the wing's many missions moved towards constant completion.

GLOSSARY[1]

ACC	Accomplished
AFB	Air Force Base
AFM	Air Force Manual
AFSC	Air Force Specialty Code
AGM	Air-to-Ground Missile
AKT	Apprentice Knowledge Test
AMMS	Airborne Missile Maintenance Squadron
AMS	Avionics Maintenance Squadron
AREFS	Air Refueling Squadron
ARS	Air Refueling Squadron
AST	Additional Specialized Training
ATC	Air Training Command
ATCC	Air Traffic Control Center
B	Boom Operator
BMEWS	Ballistic Missile Early Warning System
BPO	Basic Post-Flight Inspection
BS	Bombardment Squadron
BTR	Basic Training Requirement
BW	Bombardment Wing
C	Commander
CANX	Cancelled
CBPO	Consolidated Base Personnel Office

CBPO-ASGN	Consolidated Base Personnel Office - Assignments Unit
CCTM	Combat Crew Training Mission
CDC	Career Development Course
CEG	Combat Evaluation Group
CMS	Commander's Management System
CONUS	Continental United States
CP	Copilot
CR	Combat Ready Crew
C-RATING	Combat Rating
CSA	Command Section Administration
DCM	Deputy Commander for Maintenance
DCMA	Deputy Commander for Maintenance - Analysis Division
DCO	Deputy Commander for Operations
DCOCD	Deputy Commander for Operations - Command/Control Division
DCOT	Deputy Commander for Operations - Training Division
DCOTR	Deputy Commander for Operations - Training Division - Reports and Analysis Branch
DCRM	Management Analysis Division
DEFCON	Defense Condition
DS	Director of Safety

ECM	Electronic Countermeasures
EUR	Emergency Unsatisfactory Report
EWO	Emergency War Order Electronic Warfare Officer
FAA	Federal Aviation Agency
FMS	Field Maintenance Squadron
FSAGA	First Sortie After Ground Alert
FTD	Field Training Detachment
FY	Fiscal Year
G	Defensive Systems Operator (Gunner)
GFAFB	Grand Forks Air Force Base
H	Heavy
HSS	Headquarters Squadron Section
IFR	Individual Flight Records
LTO	Late Takeoff
MMS	Munitions Maintenance Squadron
N	Navigator
NATO	North Atlantic Treaty Organization
NAV	Navigator
NCO	Noncommissioned Officer
NCOIC	Noncommissioned Officer in Charge
NORAD	North American Air Defense Command
NORS	Not Operationally Ready due to Supply
N/A	Not Available

OIC	Officer in Charge
OJT	On-the-Job Training
OMS	Organizational Maintenance Squadron
OPCON	Under the Operational Control of the Parent Unit
OR	Operationally Ready
ORI	Operational Readiness Inspection
P	Pilot
PCS	Permanent Change of Station
RAU	Resources Available and Usable
REL	Reliable
REQ	Required
RN	Radar-Navigator
R-NAV	Radar-Navigator
R&A	Reports and Analysis
RTU	Replacement Training Unit
SAAMA	San Antonio Air Materiel Area
SAC	Strategic Air Command
SACM	Strategic Air Command Manual
SACMET	Strategic Air Command Management Engineering Team
SAS	Stability Augmentation System
SEA	Southeast Asia
SEAGA	Selective Employment of Air/Ground Alert
SLBM	Submarine-Launched Ballistic Missile

SMW	Strategic Missile Wing
TA	Terrain Avoidance
TCTO	Time Compliance Technical Order
TDY	Temporary Duty
TTF	Tanker Task Force
USAF	United States Air Force
VC	Vice Commander
WDC	Weapons Delivery Capability
4SAD	Fourth Strategic Aerospace Division
15AF	Headquarters Fifteenth Air Force

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1. With the exception of terms and abbreviations listed here, all other abbreviations and terms shall be found in AFM-11-1, "US Air Force Glossary of Standardized Terms", Volume I, 15 Oct 68; AFM 11-2, "AF Manual of Abbreviations", 15 Aug 69 (as changed); and the USAF Dictionary.