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0003

RESTRICTED

HISTORY

6th AIR DIVISION

JUNE 1953

SECURITY INFORMATION

RESTRICTED

K DIV-6-HI
June 1953

2-4974-48

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SECURITY
INFORMATION

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HISTORY

6TH AIR DIVISION

Including

809th Air Base Group
MacDill Air Force Base

Florida

1 - June - 30

1953

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Division Historical Officer
2d Lt. D. A. Harris

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H. K. MOONEY
BRIGADIER GENERAL, USAF
COMMANDER

SECURITY
INFORMATION

RESTRICTED

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"A" Documents Arranged as Exhibits

"B" Photographs

"C" Statistical Reports

CHRONOLOGY OF MAJOR EVENTS

2 June - Brigadier General H. K. Mooney, 6th Air Division Commander, and Colonel William E. Creer, 6th Air Division Director of Operations, accompany 306th Bomb Wing movement. Colonel Elliott Vandevanter, Jr., 306th Bomb Wing Commander, assumes command of 6th Air Division.

4 June - Colonel Michael N. W. McCoy, 306th Bomb Wing Commander, leads first flight of 15 B-47's from Limestone Air Force Base, Maine, to Fairford, England as 306th deployment begins. Colonel McCoy lands at 5:23 a.m. (Eastern Standard Time), covering 3,120 mile route in five hours, 53 minutes.

5 June - Majors Horace B. Reeves and M. H. Fitchko, both of the 369th "Fightin' Bitin'" Squadron, pilot two B-47's of the second flight of 15 from Limestone to Fairford in five hours, 36 minutes; thus bettering the old record of five hours, 38 minutes established by Colonel McCoy on 6 April, 1953.

6 June - Lieutenant Colonel Benjamin B. Klose, 368th Bomb Squadron Commander; Lieutenant Colonel Lawrence H. Grant, deputy

CHRONOLOGY OF MAJOR EVENTS
(continued)

squadron commander; and Captain James B. Carter, regular aircraft commander, establish new B-47 record from Limestone to Fairford in five hours, 22 minutes.

9 June - Airman Second Class Albert E. Friedly, 23, 306th Periodic Maintenance Squadron, is charged with manslaughter by civilian authorities as a result of an automobile accident on 10 May in which Airman Second Class Andrew J. Lyons, 22, 306th Periodic Maintenance Squadron, was fatally injured while riding with A/2C Friedly.

10 June - Detachment One (rear echelon), 306th Bomb Wing is activated.

13 June - 309th Fighter Squadron, 31st Strategic Fighter Wing, Turner Air Force Base, Georgia, arrives for 30 days transition gunnery training.

15 June - First of two Air Force Reserve Officers Training Corps (AFROTC) summer encampments begins officially.

17 June - General Mooney returns from temporary duty and assumes command of the 6th Air Division

CHRONOLOGY OF MAJOR EVENTS
(continued)

17 June - Radar Air Traffic Control Center (RATCC) begins 90-day trial operations.

22 June - Second fatality during "Operation Safe Wheels" occurs with death of Airman First Class Robert D. Marsh, 22, 305th Bomb Wing, in a motorcycle accident.

30 June - Nine B-47's, led by Colonel Elliott Vandevanter, Jr., 305th Bomb Wing Commander, fly low-level salute to retiring Air Force Chief of Staff, General Hoyt S. Vandemberg.

CHAPTER ONE

ADMINISTRATION

MacDill Air Force Base achieved 83 percent of the maximum total of 1000 points for May, 1953, under the provisions of the Strategic Air Command Air Base Group Rating System.[1] This exact score was predicted by the Base Comptroller's Office[2] which forecasts an 85 percent score for the month of June.[3]

Increases over May's figures were expected in the categories of:

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1. Ltr, Hq SAC to Special Distribution (All Air Base Groups), "SAC Management Control Statement, Air Base Groups - May 1953," 1 July 1953, COA 373.
2. History, 6th Air Division, May 1953 pp 1-2.
3. Rpt, "SAC Air Base Group Rating System Scores Predicted for MacDill AFB for Month of June 1953" prep by Base Comptroller, MacDill AFB, Fla. Exhibit 1.

	May Maximum Score	SAC May Score	Predicted June Score
Airmen MIRS (manning)	80	72	80
Ground Safety	70	56	63
Reports of Survey	60	48	60
Flyaway Kits	50	47	60
Vehicle Utilization	70	56	63
Decreases were expected in the categories of:			
Personnel Records	50	50	45
Reenlistment Rate	50	50	25
Supply Effectiveness	120	120	100

As "Operation Safe-Wheels" continued through the second month of the "180 Deathless Days" campaign,[4] death continued to stalk MacDill's efforts. Fatigue to the operator was attributed as being the principal factor by the Base Ground Safety Office[5] in the fatal motorcycle accident of Airman First Class Robert D. Marsh, 22, 365th Bomb Squadron, 305th Bomb Wing, at about 0210 hours on 22 June. Marsh was traveling south on Dale Mabry highway toward MacDill at a speed estimated at approximately 60 miles an hour, when he lost control of his 1953-model motorcycle. The vehicle threw the rider to the pavement, then swerved

4. History, 6th Air Division, May 1953, pp 2-6.
5. Ground Safety Brief MacDill AFB, Fla., 16 June - 1 July 1953.

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off the highway onto the shoulder, and into a ditch, according to Hillsborough County Traffic Officer Lloyd Simmons.[6] March was dead on arrival at the USAF Hospital at 0258 hours.[7]

This death was the first since 10 May when Airman Second Class Andrew J. Lyons, Jr., also 22, 305th Periodic Maintenance Squadron, 305th Bomb Wing, died in an automobile accident on Bayshore Drive.[8] Lyon's death resulted in a manslaughter charge being preferred by Peace Justice Marion Hendry against Airman Second Class Albert E. Friedly, 23, 305th Periodic Maintenance Squadron, who was the driver of the 1947 Cadillac in which Lyons was a passenger.[9] In turning over the charge to a criminal court, Hendry noted that "Bayshore is worse than the Indianapolis Speedway."

A grim reminder of the one death and nine disabling injuries that had occurred since April as the result of vehicle accidents was held on 17 June in the form of a macabre parade down the main street in front of Base Headquarters, 6th Air Division Headquarters, and the Base Exchange. With the 740th Air Force Band playing Chopin's funeral march, six pallbearers bore an empty casket (for the 22 May fatality), while the "mourners" were nine airmen bandaged, insofar as possible, according to the injuries received in the other accidents. The Ground Safety goat[10] marched in the procession which was terminated

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6. Morning Tribune (Tampa, Fla.), June 23, 1953.
7. Daily Journal, USAF Hospital, (as of midnight) 21 June, 1953.
8. History, 6th Air Division, May 1953, pp 2-3.
9. Morning Tribune (Tampa, Fla.), June 9, 1953.
10. History, 6th Air Division, May 1953, pp 5-6.

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by an Air Force ambulance.[11]

The annual Truck Roadeo which was scheduled originally for 19 and 20 June was postponed to 11 and 12 July, according to Captain Johann H. Steiger, Base Motor Pool Officer, and project officer for the event. He attended a briefing late in the month at Headquarters, Strategic Air Command, Offutt Air Force Base, Omaha, Nebraska, that was given by Major Arnold Glass, SAC project officer.

This competition, patterned after the American Truckers Association program, serves the dual purpose of stressing safety on the part of vehicle operators, and giving the unsung transportation men some deserved recognition and sense of achievement. The Roadeo at MacDill will be one phase (base level) of an Air Force-wide program. Winners of the local competition will be eligible to vie in the Warner-Robins Air Materiel Area (WRAMA) Zone finals to be held at MacDill on 3 and 4 August. The WRAMA Zone includes 20 Air Force Bases in the areas of Virginia, North Carolina, South Carolina, Georgia, and Florida. Captain Steiger has been named also as the WRAMA Zone project officer. Winners of the August meet will go to the Air Force finals that will be held in Minneapolis, Minnesota, in September. Competition in all events will be limited to the regular five types of Air Force automotive equipment: sedans, busses, one and one-half ton stake and platform

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11. The Airman (MacDill AFB, Fla.), June 19, 1958.

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trucks; single-axle, and tandem-axle trucks. Competitive tests will include parallel parking, backing into a dock, driving in a straight line, and parking at a curb without making contact.[12]

Total cost of accidents at MacDill from January through May amounted to $119,155, according to information released at the monthly meeting of the Executive Ground Safety Council on 15 June.[13] Of this amount, private vehicle injury cost was $41,428, and military injury cost was $89,389.

With the deployment of the main body of the 306th Bomb Wing on 90 days temporary duty to the United Kingdom,[14] the rear echelon at MacDill was organized into Detachment One, effective 0001 hours, 10 June, 1953, and attached to the 306th Medical Group for administration only.[15]

12. The Airman (MacDill AFB, Fla.), June 26, 1953.
13. Rpt, "Proceedings of the Executive Ground Safety Council," June 1953, prep by Executive Ground Safety Council, MacDill AFB, Fla. Exhibit 2.
14. History, 6th Air Division, May 1953, pp 22-37.
15. GO 11, Hq 6th AD, 1 June 1953. Exhibit 3.

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CHAPTER TWO

PERSONNEL

Work on the Base Procedures and Individual Job Procedures Manuals under the provisions of the 809th Air Base Group Management Improvement Program[16] continued steadily during the month. The Base Procedures were 90 percent complete as of the first part of June.[17] Announcement was made at the 18 June session[18] of the parent Program Steering Committee that the Manager's Report of Activity was being

16. History, 6th Air Division, May 1953, pp 13-14.
17. Rpt, "Management Improvement Program Steering Committee," 4 June 1953, prep by committee of same name, MacDill AFB, Fla. Exhibit 4.
18. Ibid, 22 June 1953. Exhibit 5.

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revised. It was published on 30 June [19] and the provisions therein were discussed on the 25th June meeting.[20]

An Aviation Cadet Selection Team from the Flying Training Command at Waco Air Force Base, Texas, arrived at MacDill the first week in June for a two-year tour. The team of three airmen and the Officer in Charge, First Lieutenant William E. Boze, has the mission of procuring qualified airmen and civilians for pilot and/or aircraft observer training.[21] The group is attached to Headquarters, 809th Air Base Group.

Airmen promotions for June totaled 162 for 6th Air Division units. Of this number, 101 went to the 809th Air Base Group; 47 to the 305th Bomb Wing, and 14 (all in the upper three pay grades) for the 306th Bomb Wing. Due to the latter's absence from the station, the total number of its promotions were not available for this report.[22]

First Lieutenant Robert L. Moore, 366th Bomb Squadron, 305th Bomb Wing, committed suicide at approximately 0305 hours, 22 June, in Room

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19. Ltr, Hq 809th ABGp to all managers within, "Managers Report of Activity," 30 June 1953. Exhibit 6.
20. Rpt, "Management Improvement Program Steering Committee," 30 June 1953, prep by committee of same name, MacDill AFB, Fla. Exhibit 7.
21. Daily Journal, Hq 809th ABGp, 10 June 1953.
22. The Airman (MacDill AFB, Fla.), June 12, 1953.

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101 of 6th Air Division Headquarters building. Death came from a .38 caliber revolver.[23] The deceased was adjudged to have been insane about 48 hours prior to the act. He was adjudged to have died in line of duty.[24] Lieutenant Moore left a note to the effect that the act was done "for worldly and financial reasons."[25]

The MacDill Chapter of the Air Force Aid Society (AFAS) disbursed $3,194.74 to 52 applicants during May, according to a report received by the Advisory Board.[26] This was the second highest disbursement made in the history of the local chapter; the largest amount was $3,572.75 distributed in July, 1951. A total of 58 applications were received during May, 1953. Five were disapproved, and one was withdrawn on final review.[27]

According to the Base Statistical Services Office, there were 25 separations from the service during June, and 11 reenlistments. Due to the deployment of the 306th Bomb Wing to England, the figures of that unit were not available for this report.

Courts-martial trials during the month amounted to seven Specials,

23. Rpt, "Clinical Record Cover Sheet," USAF Hospital, MacDill AFB, Fla., 22 June 1953. Exhibit 8.
24. History, 305th Medical Group, June 1953, page 4.
25. Morning Tribune (Tampa, Fla.), June 23, 1953.
26. History, 6th Air Division, May 1953, page 20.
27. The Airman (MacDill AFB, Fla.), June 19, 1953.

0019

29 Summary (two men were acquitted), and no Generals.[28] During the previous month there were 13 Specials, 27 Summary (two acquittals), and one General (defendant acquitted).[29]

Strength figures for MacDill for June, 1953, were:[30]

	Auth	Asgd	Atchd
SAC Units			
Officers	1086	1003	49
Airmen	6311	7237	361
Civilians	556	554	
Non-SAC Units			
Officers	29	27	2
Airmen	233	292	16
Civilians	12	11	
Total Units			
Officers	1115	1030	51
Airmen	6544	7529	377
Civilians	568	565	
Grand Total	8227	9124	428

28. Ltr, Hq 809th ABGp to Comdr's all orgns, MacDill AFB, Fla., "Courts-Martial Trials - June 1953," 1 July 1953, MCDCLC-250.4. Exhibit 9.
29. History, 8th Air Division, May 1953, page 18.
30. Rpt, "MacDill Statistical Summary - Part I," for period 1 through 30 June 1953, prep by Base Stat Svs Office. See Appendix "C."

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CHAPTER THREE

OPERATIONS AND TRAINING

The B-47 speed record of five hours, 38 minutes over the 3,120 mile route from Limestone Air Force Base, Maine, to Fairford, England, established by Colonel Michael N. W. McCoy, 306th Bomb Wing Commander, on 6 April, 1953,[31] was broken six times during the deployment of 45 Stratojets of the 306th Wing over the same route during the period of 3-6 June. In addition to the three flights of 15 B-47's each, 22 KC-97 Stratotankers and approximately 2,000 personnel began the 90-day period of temporary duty in the United

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31. History, 6th Air Division, May 1953, page 23.

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Kingdom.[32]

Colonel McCoy, in leading the first flight of B-47's from Limestone to Fairford, made the flight in five hours, 53 minutes. His was the best flying time - better than 550 miles an hour - and he landed at the United Kingdom base at 5:23 a.m., Eastern Standard Time, 4 June. The remaining 14 aircraft landed at subsequent intervals.[33]

Two Stratojets of the second flight which departed Limestone on 5 June clipped two minutes from Colonel McCoy's April mark, and a third was one minute behind them in elapsed flying time. Majors Horace B. Reeves and M. H. Fitchko, both of the 369th "Fightin' Bitin'" Squadron, piloted their B-47's from Limestone to Fairford in five hours, 36 minutes.[34] Captain Kenneth P. Juhn made the flight in 5:37.

It remained for Lieutenant Colonel Benjamin B. Klose, 368th Bomb Squadron Commander; Lieutenant Colonel Lawrence H. Grant, Deputy Squadron Commander; and Captain James B. Carter, regular commander of the aircraft, to establish a new mark on 6 June with a record five hours, 22 minutes - or 575 miles an hour.[35] On the same day, two other Stratojets had made the flight in 5:30 and 5:29 respectively. The aircraft were commanded by Major Frank M. Remelly, and Captain Robert D. Carlstrom.[36]

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32. Ibid, pp 25-37.
33. Daily Times (Tampa, Fla.), June 4, 1953.
34. Morning Tribune (Tampa, Fla.), June 6, 1953.
35. Sunday Tribune (Tampa, Fla.), June 7, 1953.
36. Ibid.

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Accompanying the 306th movement were Brigadier General H. K. Mooney, 6th Air Division Commander, and Colonel William E. Creer, Division Director of Operations. The officers departed 2 June for 15 days temporary duty and returned 17 June.[37] Colonel Elliott Vandevanter, Jr., 306th Bomb Wing Commander, assumed command of the 6th Air Division during General Mooney's absence.[38 and 39]

The 306th began flying missions shortly after arrival in the United Kingdom, as Stratojets dropped 500-pound dummy bombs from high altitudes over a range on the northeast coast of Great Britain. Mid-air refueling was accomplished by 306th Air Refueling Squadron KC-97's.

General Curtis E. LeMay, Commander of the Strategic Air Command, visited the Wing shortly after its arrival overseas.[40]

The movement of the 306th occasioned a visit to MacDill by 16 leading aviation writers and/or cameramen from the eastern part of the nation. Attending the two-day visit, during which interviews were made with Major General Frank A. Armstrong, Jr., Commander of the Second Air Force, General Mooney, Colonel McCoy, and other Division and Wing officials were:

Bruce Hartell, CBS-TV; Milton Bittenbender, CBS-TV; Irving Heilner, NBC-TV; John Langenegger, NBC-TV; William Corrigan, NBC-TV; Wallace R. Fanning, NBC-Radio; Leroy Whitman, Army-Navy-Air

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37. LO, MCDCA6-1638, Hq 6AD, 1 June 1953.
38. GO 12, Hq 6AD, 2 June 1953. Exhibit 10.
39. GO 14, Hq 6AD, 17 June 1953. Exhibit 11.
40. The Airman (MacDill AFB, Fla.), June 26, 1953.

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Force Journal; Gene Thomas, Washington News; John O'Donnell, New York News; John Singerholf, Washington Post; Jim Berryman (cartoonist), Washington Star; Jack Wilson, Look Magazine; Charles Corddry, United Press; Jim Haggerty, Collier Magazine; Ralph Santos, Telenews; Tom R. Phillips, St. Louis Post-Dispatch; Mark Nevils, Boeing Airplane Company public relations; and Charles Gridley, syndicated columnist.

Five writers accompanied the 306th to England: Jack Wecker and J. B. Brierly, Boeing Airplane Company; Frank Harvey and Bob Smallman of Argosy Magazine; and Joe Harsch, NBC-BBC.

From Headquarters, United States Air Force came Colonel Jim Dowling, Major Victor Irons, Major William Lookadoo, escort officer, and Staff Sergeant Richard P. Stapleton, who represented the Air Pictorial Service.

At the press briefing that preceded the actual movement of the B-47's from MacDill, General Armstrong emphasized that the mass crossing was "no trick, just a regular training mission carried out by a completely modern, combat-equipped bomber wing."[41]

Considerable civic pride was voiced by both Tampa newspapers in the 306th's achievements.[42] Said the afternoon paper:

> "Probably no aviation event in recent times has demonstrated in a more conclusive fashion the vast advance made by the aviation industry than the current 'hop' to England by 45 of MacDill Air Force Base's awesome B-47s.

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41. Daily Times (Tampa, Fla.), June 5, 1953.
42. Ibid, June 5, 1953.

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"These faster-than-sound planes constructed to carry America's most destructive bombs, swept non-stop across the Atlantic in just a little more than five and a half hours with three of the first 15 planes to make the crossing for protracted maneuvers bettering the existing speed record.

"Two more of the B-47s topped the Atlantic crossing record by the time the whole group was based in England.

"And it was only 26 years ago that a brave aviator in a single-engined monoplane tackled for the first time the non-stop flight across the Atlantic from New York to Paris and made it in 33 hours to electrify the aviation industry and put all America in the air.

"The people in the Tampa Bay area have watched the B-47 develop, a giant powerhouse which awed even the pilots who flew it and the airmen at the base at the southern tip of the Interbay peninsula. These residents and airmen have marveled at the throbbing power and the highly competent look and behavior of the B-47. They have watched as the Air Force gave it tests and proved that the B-47 is a superior plane.

"Now the world on the other side of the Atlantic will get a look at the American B-47, particularly that part of the world which has demonstrated time after time that it is interested in forcing trouble in Europe and Asia.

"There were few in the Tampa Bay area who were surprised when the B-47s topped the old crossing record on the way to the maneuvers. The surprise was, rather, that more of them did not top the record, although the current mass crossing was not intended as a concerted effort to smash records, but as a routine training flight."

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Commented the morning newspaper:

"MacDill Field fliers won a doubleheader Sunday.

"They completed, safely, the first non-stop mass flight of jet planes across the Atlantic. And in the process they set a brand-new speed record from the United States to England - 5 hours and 22 minutes, or about as long as it takes to go by commercial airliner from Tampa to New York.

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43. Morning Tribune (Tampa, Fla.), June 8, 1953.

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"This flight of the 45 B-47's provides a couple of things for us to think about.

"It shows that the short space between midnight and dawn now is sufficient time for a fleet of planes to deliver the atom bomb to Europe - or from Europe to the United States. And, on the brighter side, it foretells the time-saving miracles the jet plane one day will bring to commercial transportation.

"Tampans might keep both these thoughts in mind the next time they are inclined to grumble about the thunder from the B-47's passing over from MacDill Field."

More detailed information concerning the deployment of the 306th Wing may be found in the May, 1953, history of that unit, and in subsequent editions.

MacDill repeated its April win[44] and became the first base within the Command to win the Base-of-the-Month trophy in the Strategic Air Command's Safe Aircraft for '53 campaign.[45] The May achievement boosted MacDill's annual standing from fourth spot in April to third in May. Flying safety activities at this base have received added emphasis under Brigadier General H. K. Mooney, 6th Air Division Commander, who is also president of the base Flying Safety Committee. This board, which meets monthly, consists of General Mooney, Colonel Elliott Vandevanter, Jr., 306th Bomb Wing Commander; Colonel Michael N. W. McCoy, 306th Bomb Wing Commander; and Colonel B. H. Merchant, 809th Air Base Group Commander; plus Colonel

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44. History, 6th Air Division, May 1953, page 45.
45. The Airman (MacDill AFB, Fla.), June 26, 1953.

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R. Howard Lackay, Division Surgeon; Major John H. Windsor, Air Provost Marshal; and flying safety officers. Special emphasis is placed by the committee on methods of preventing accidents, and all mishaps are reviewed thoroughly as to causes, effects, and methods of prevention.

In recognition of the May achievement, General Mooney said:[46]

"For flying safety achievements, this command has had the honor of receiving the SAC Flying Safety Trophy for the past two consecutive months, first in April and again in May.

"MacDill holds third place in the SAC yearly standings, with Fairchild in first place, and Lake Charles in second place. The mid-point of the contest was July 1.

"Flying Safety does not stop at the flight line, with the personnel who fly and maintain the aircraft, but is a function of everyone on the base. The personnel who refuel, the men who process supplies, the mess sergeant who feeds the personnel, the communications personnel, Air Police, Firemen, and all others contribute to Flying Safety. Without the efforts of all, the receipt of these awards would not be possible.

"Little things go to make accidents, the screwdriver that's dropped can cause a tire to blow-out on landing; the rag left near the intake of a jet engine can and has caused accidents. Small things also prevent accidents; the re-checking of a fitting to insure tightness; a few minutes work to replace a worn part; even the returning of a Coke bottle to its rack rather than carelessly throwing it on the flight line.

"MacDill can win the honor of being the Flying Safety base of the year by flying more accident-free hours than any other SAC base. To win this honor each of us must renew his efforts to think and practice flight safety during the next six months.

"The goal of our flying safety program should be to make everyone conscious of the big and little things that lead to accidents and how to prevent them.

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46. The Airman (MacDill AFB, Fla.), July 3, 1953.

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"I want to thank each of you for the efforts which enabled MacDill to win the last two awards. Let's make saving lives and airplanes our hobby and win the Flying Safety Trophy for the whole year."

The "longest and most extensive formation flight ever undertaken by B-47 Stratojets"[47] was made by the 305th Bomb Wing on 30 June when nine aircraft flew a low-level salute to retiring Air Force Chief of Staff Hoyt S. Vandenberg as he attended retirement ceremonies at Bolling Air Force Base, D. C. The jet bombers, led by Colonel Elliott Vandevanter, Jr., 305th Commander, swept over the reviewing stand at 1,000 feet.

The 309th Fighter Squadron of the 31st Strategic Fighter Wing, Turner Air Force Base, Georgia, arrived at MacDill on 13 June to perform a month's transition gunnery training at the Avon Park Air Force Base gunnery range. Two sister squadrons, the 307th and 308th are scheduled to rotate in July and August for the same purpose. The units are using the housing and other facilities of the departed 306th Bomb Wing.[48]

A new radar system that will give the Civil Aeronautics Administration (CAA) control over all military and commercial

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47. Ibid.
48. The Airman (MacDill AFB, Fla.), June 19, 1953.

0028

aircraft within 50 miles of Tampa began testing and proving operations 17 June. At the end of the 90-day period, full operations will begin. Installation of the radar traffic control center (RATCC) required 18 months.

According to F. A. Brumer, CAA head in the Tampa area, and who with Colonel Vandevanter, 6th Air Division Commander, made the joint announcement, the new system will expedite the landing of traffic in bad weather and increase flying safety. Where, at the present time, military and civilian aircraft must follow designated landing patterns, the controllers, under the RATCC, will be able to direct the traffic from the radarscopes which show the position of all aircraft within the 50-mile radius.

For take-offs, the system works in reverse with the controllers mapping routes for departing aircraft that will keep them clear of other traffic in the area. The separation is maintained by height levels and horizontally on the same levels.

The new system is coordinated with the MacDill Ground Controlled Approach (GCA) and the Instrument Landing System (ILS) at the Tampa International Airport. Reaching eastward to Bartow, southward to 15 miles south of Sarasota and north to between Brooksville and Homosassa, the new system will require 35 men to operate it on a 24-hour basis. Ten of the men will be MacDill GCA operators, and

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the remainder of the personnel will be recruited from CAA areas in the South.

This facility is the first of its kind in the world, according to Lieutenant Colonel Robert D. Easters, 1928th AACS Squadron Commander, who was in charge of the actual installation. He also noted that the console operating cabinets were built to order for the RATCC which is located next to the Control Tower. In addition to the Tower, the RATCC uses a search radar across MacDill, a precision radar unit adjacent to the main runway, a remote radio transmitter on Gandy Boulevard, and a remote radio receiver located near the base ammunition dump.[49] Representatives from the 1st I&M AACS Squadron, Tinker Air Force Base, Oklahoma, determined after a series of tests that a 60-kw generator will be required for emergency power, and a similar generator would be needed for night lighting plus air conditioning of the RATCC and the Control Tower.[50]

The system will control, in addition to MacDill and Tampa International Airport, the Peter O. Knight (light aircraft) airport in Tampa, Pinellas County Airport, and Albert Whitted Field at St. Petersburg which is used by the Coast Guard.

The first of two Air Force Reserve Officers Training Corps

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49. Morning Tribune (Tampa, Fla.), June 17, 1953.
50. Daily Journal, Hq 809th ABGp, 2 June, 1953.

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(AFROTC) summer camps at MacDill was opened officially 15 June[51] with Lieutenant Colonel David J. Nolan, Headquarters, 6th Air Division, as the Camp Commander.[52] The first encampment was composed of 250 juniors and seniors from 12 Southern universities and colleges.[53] The students began arriving the afternoon of 20 June.[54]

The schedule was divided into 63 phases of instruction that[55] lasts four weeks and includes such major categories as leadership, drill, physical conditioning, administration, logistics, operations, and similar subjects. The future Air Force officers toured and/or visited almost every major section on the base to gain firsthand knowledge of the mission and activities of each. The second encampment is scheduled to start about 26 July.[56]

Take-offs and landings during the month totaled 4,694 as compared to 5,185 for May.[57] The following is a breakdown of the number of aircraft that cleared through MacDill during June:

Total number of local clearances:	724
Total number of National Military Establishment (NME) 175 clearances:	833
Total number of flight plans filed:	1557

51. GO 1, Hq 6AD AFROTC Summer Camp, 15 June 1953. Exhibit 12.
52. GO 2, Hq 6AD AFROTC Summer Camp, 15 June 1953. Exhibit 13.
53. History, 6th Air Division, May 1953, pp 45-46.
54. Morning Tribune (Tampa, Fla.), June 20, 1953.
55. See schedule, Exhibit 14.
56. The Airman (MacDill AFB, Fla.), June 12, 1953.
57. History, 6th Air Division, May 1953, page 48.

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The average flying time per non-tactical aircraft was:

B-25	- 216.4	C-45	- 107.5
C-47	- 187.5	T-6	- 5.0

Total - 516.4

The breakdown of flying time by type aircraft for the Air Base Group Rating System was:

Hours Flown	Programmed Time	Hours Over-Time
B-25 - 216 hours	213.3 hours	2.8 Hours
C-45 - 108 hours	91.2 hours	16.8 Hours

The C-45 programmed time for June was lowered because two of the assigned aircraft were out of commission for about 15 hours due to technical order compliance modifications. One C-47 was returned after being reconditioned at Ontario, California, and another is expected in August.

Transient Alert parked and serviced 360 transient aircraft. Of this total, 80 had minor maintenance performed, and eight required major work. This section was augmented by three radio mechanics, to bring the strength to 19 airmen.

The daily average number of telephone calls handled by the automatic equipment was 39,472. Number of telephone work orders totaled 256, and there were 285 cases of telephone malfunctions.

0032

Traffic handled by the Base Communications Center during June:

	Sent	Received
AIRCOMNET	3566	4972
SACCOMNET	1970	1462
Airways Pony Circuit	320	1934
Western Union	452	821
Total	6308	9189

The following is a summary of traffic transacted by the Radio Operations Section:

Point-to-point:

Sent AFX	2 messages	Groups 18
Received AFX	16 messages	Groups 535

Avon Park Phone Patch:

Air-to-ground sent and received 2 messages, Groups 2

During the month, the Military Affiliate Radio Station (MARS) AF K4FAK originated 27 messages, received 26, relayed 26, and made 26 phone patches.

The Cryptographic Section processed a total of 1092 messages: 484 were received, and 608 transmitted.

Base Photographic Laboratory production for June as compared to the previous month:

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	May	June
Prints 4 x 5	3,360	1,440
Prints 8 x 10	11,464	6,145
Prints 20 x 24	92	340
Identification photos (35mm)	6,211	3,708
Negatives 4 x 5	859	632
Negatives 8 x 10	579	296
Negatives 20 x 24	251	112
35mm aerial footage	11,465 ft.	11,015 ft.
9 x 9 aerial roll film	4,390 ft.	3,560 ft.

Unless otherwise indicated, material contained in this Chapter was compiled from the June, 1953 history of the 809th Operations Squadron.

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CHAPTER FOUR

FACILITIES

Work began the middle of the month on the installation of ventilation systems in 14 barracks with the cost being defrayed from the $29,352.96 profit realized by the National Sports Car Races held 21 February for the benefit of the MacDill Airmen's Living Improvement Fund.[58] Five barracks in the 809th Air Base Group, four each in the 305th and 306th Bomb Wings, and one in the 305th-306th Medical Groups were to receive the improvement. The number of

58. History, 6th Air Division, May 1953, pp 70-71.

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barracks for each unit was allocated on the basis of authorized strength. Cost of the project was estimated at an average of $1,500 per building. Contract for the job was awarded to the Durant Brothers Air-Conditioning and Refrigeration Company of Tampa.[59]

A total of 19,469 pounds of excess B-29 and B-50 equipment[60] was shipped to various Air Materiel Command Depots during the month.[61]

The critical water shortage which plagued MacDill and Tampa during May[62] was declared ended on 12 June.[63]

Purchasing and Contracting opened bids on 25 June for the repair and resurfacing of the road from the Hospital to Base Flight maintenance area. Bids were opened also on the installation of equipment and the construction of lean-to's in six dining halls. On the same date, P&C wrote supplemental agreements for additional siding on 122 buildings, and for the storm drainage outfall.[64]

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59. The Airman (MacDill AFB, Fla.), June 12, 1953.
60. History, 6th Air Division, May 1953, page 55.
61. Daily Journal, Hq 809th ABGp, 25 June 1953.
62. History, 6th Air Division, May 1953, pp 52-54.
63. Daily Bulletin No. 112, Hq 809th ABGp, 12 June 1953.
64. Daily Journal, Hq 809th ABGp, 25 June 1953.

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CHAPTER FIVE

USAF HOSPITAL

Command of the USAF Hospital was assumed in June by Colonel M.F. Regner due to the departure of Colonel R. Howard Lackay with the 306th Bomb Wing on 90 days temporary duty to England.

Also deployed were four flight surgeons: Major George D. Drury, Major George C. Jernigan, Captain Robert W. Jorner, and First Lieutenant Howard L. Kanotr; a prosthodontist, Lieutenant Colonel Maurice J. Healey; the hospital adjutant, First Lieutenant William A. Ables, Jr., and 18 airmen.

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Because of the acute shortage of medical personnel[65] it became necessary for the medical services to request, particularly through the medium of the various units' orderly rooms, that personnel and their dependents refrain from requesting medical attention for minor ailments that could be treated satisfactorily by home remedies. In order to provide treatment for patients with valid complaints, medical personnel could not be encumbered by giving unnecessary attention to minor ills at the Out-Patient Clinic. Failure to obtain full cooperation could result in the inability of patients with illnesses that required medical attention to secure such aid; and lack of cooperation would result in the whole or partial curtailment of medical service for dependents and non-active duty personnel. These new stresses applied particularly in the field of children's ailments. Full medical treatment continued to be provided for active duty personnel with no change in policy or service.

Some misunderstandings occurred between the MacDill Hospital and smaller units in the Florida area which are serviced by the local facility relative to the admission of personnel from these units. In the past, an excellent agreement existed whereby both military and non-military personnel were referred to the MacDill Hospital on an out-patient basis by previous appointment, and the decision was then

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65. History, 6th Air Division, May 1953, page 9.

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made as to whether hospitalization is required. Recently, however, several patients were transferred to MacDill, through the Armed Services Medical Regulating Officer, for disease entities which the local hospital is not staffed to treat. These situations were due apparently to miscoding of the individual case by the sending unit, as it was noted that a large percentage of the cases had not been worked thoroughly prior to transfer. Since it is the policy of the MacDill hospital to treat as many cases as possible on an out-patient basis and release hospitalized personnel to duty as quickly as conditions permit and thus preserve manpower requirements and reduce the non-effective rate, the recommendation was made that sending units screen their cases more carefully and that as many as possible be referred as out-patients on a definite appointment basis; thus permitting the receiving unit to make the decision relative to admittance.

The Out-Patient Service treated a total of 12,749 military and civilian patients during the month: 5,477 military and 5,962 civilian.

Admissions to the Hospital during the four-week period totaled 269 - 87 military and 182 non-military patients. This total does not include 81 newborn infants. Fifteen military patients were admitted by transfer from other stations. Eleven patients were transferred to

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other hospitals for further treatment and disposition. One of these patients was Captain Wilbur D. Quillen, medical officer on duty with the Obstetrical and Gynecological Section, who was transferred to Walter Reed Army Hospital, Washington, D. C., on 9 June with "diagnosis undetermined. Suspect brain tumor."

Five deaths occurred during the month. Two were infants, stillborn; the third was due to congenital heart disease; the fourth was the result of a motorcycle accident;[66] and the fifth was a suicide.[67]

There were 120 patients admitted to Surgical Service. Elective surgery totaled 36 major and 84 minor operations. In addition, nine major emergency and 17 minor emergency operations were performed. Fifteen diagnostic procedures were accomplished. One case of operative complication occurred. Two interesting cases were admitted: one was that of a 19-year-old white male airman from the USAF Hospital at Travis Air Force Base, California, with a diagnosis of "carcinoma of prostate gland with widespread metastases;" the second was that of a 19-year-old MacDill airman who reported on sick call complaining of pain in the lower abdomen. On examination, a mass was felt in the rectum which, on initial examination, appeared to be carcinoma. The patient was admitted and the mass removed en toto. Upon cutting, this structure was found to contain some cysts, but the exact nature of the

66. Chapter I, pp 2-3.
67. Chapter II, pp 7-8.

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lesion was not apparent upon gross examination. It was the impression that it may have been some embryonal structure. The patient did well postoperatively and had no other complaints.

During the past two months, three cases reported to the hospital with lesions of the lower rectum and pelvis in young male airmen between the ages of 19 and 22. In view of this, it was recommended that digital rectal examinations be required for all personnel, regardless of age, on both induction and annual physical examinations.

There were 176 patients, including 81 newborn infants, admitted to the Obstetrical and Gynecological Service. The Prenatal Clinic reported 777 expected deliveries, of which 111 were new obstetrical cases. The Gynecology Section reported 248 gynecological examinations, 97 post-partum, and 24 reexaminations.

Fifty-four patients were admitted to the Medical Service. No diseases of unusually high incidence occurred.

The Clinical Laboratory performed 10,506 tests during June. Of the total, 49 percent were performed on out-patients, and 51 percent on in-patients. With the separation from the service of Captain Thomas H. Greiwe, Pathologist, routine pathological requests were being forwarded to the Third Army Medical Laboratory, Fort McPherson, Georgia, for examination. The Laboratory was reorganized during the month with the joining of the Hematology Section, Blood Bank, and

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Serology Section under the direction of Mr. Leroy Miles, Civilian Medical Technologist. Water analysis was placed under the Bacteriology Section headed by Mr. William Blum.

The Blood Bank performed 78 crossmatches and 47 pints of blood were used by the hospital during the month. The Clinical Laboratory participated in the monthly proficiency studies conducted by the Third Army Medical Laboratory, and obtained excellent results.

X-Ray Service accomplished 1458 radiographic and fluoroscopic examinations. Film used amounted to 3155 pieces. No unusual findings were reported.

Average daily rations served by the Hospital Food Service totaled 257 - 232 regular diets and 25 special diets. The average daily rations served to patients in wards were 47 regular diets and 24 specials. Average daily rations served to patients in dining rooms was 14 regular diets and two special diets.

The Aero-Medical Service accomplished a total of 438 (all types) examinations, including physicals performed on AFROTC cadets. Sixty-eight annual physicals were performed. One hundred seventy-five audiometer tests were given to personnel working on the Flight Line. Patients examined at the Flight Surgeon's Office and Line Dispensary amounted to 825. There were 103 officer interval clearances accomplished; four officers were grounded, and six cleared from that

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status. Four airmen were grounded, and four cleared during June.

During in-flight training, six flights were accomplished, with a total of 19 hours. One lecture on "Sound Hazards," of one hour duration was attended by 50 students. In addition, a lecture on "Noise and Accoustic Trauma Relative to B-47 Operation" was given.

Captain Galen H. Pittman, Aviation Physiologist, conducted a survey of the 305th Bomb Wing Personal Equipment Section on 25 June in reference to the A-13A Oxygen Mask. The situation was critical as the Personal Equipment Section was unable to requisition the necessary sizes of the mask through normal supply channels. Flying personnel had no alternative but to use an improper mask fit, and in many cases this equipment was defective. In the event of a sudden loss of cabin pressure at high altitude, the safety of the personnel with defective masks would be highly jeopardized. The medium size mask was most in need, and had been back-ordered for five months. Other size masks, in many cases, were defective and needed replacement.

Approximately 352 outgoing dental clearances were accomplished and 626 active duty military personnel were placed in Class One by treatment during the month. All prostheses inserted by the Dental Service were fabricated at this station except four which were constructed at the Central Dental Laboratory. At the time of departure of the 306th Bomb Wing, the entire unit was 81.49 percent

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in dental Class One.

While awaiting their turn in the chair, Dental Clinic patients were given a pamphlet to read concerning "preventive dentistry."[68]

Except as otherwise indicated, all material contained in this Chapter was prepared by the USAF Hospital Historian.

68. Rpt, "Preventive Dentistry Program," prep by Major Jay P. Lane, USAF (DC), Chief of Preventive Dentistry, MacDill AFB, Fla. Exhibit 15.

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CHAPTER SIX

MISCELLANEOUS

The 740th Air Force Band participated in 21 engagements, and the orchestra played at 14 activities, according to Second Lieutenant Bartley F. Flaherty, Commander.

With the deployment of the 306th Bomb Wing to England, the MacDill baseball Hawks ended the 1953 season. Their record was 11-14.[69] Most of the players were 306th personnel.

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69. The Airman (MacDill AFB, Fla.), June 19, 1953.

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HEADQUARTERS
6TH AIR DIVISION
MacDILL AIR FORCE BASE, FLORIDA

ROSTER OF PERSONNEL
1 JUNE 1953

NAME	HOME ADDRESS	DY PHONE	HOME PHONE
BRIGADIER GENERAL H. K. MOONEY COMMANDING GENERAL 6TH ADIV	103 STAFF LOOP	20-311	39-291
COLONEL W. E. CREER DIRECTOR OF OPERATIONS	6 SECORD DR.	23-011	60-3853
COLONEL R. E. KIMMEL DIRECTOR OF MATERIEL	6 STAFF LOOP	21-011	20-231
LT. COL. F. R. BERTERO DIRECTOR OF PERSONNEL	BOQ 396 ROOM #6	21-011	27-211
LT. COL. E. L. BISHOP DEPUTY DIRECTOR OF OPERATIONS	8101 BAYSHORE DR.	24-111	60-3114
MAJOR. E. E. MATTHEWS TACTICAL OPERATIONS OFFICER	8007 BAYSHORE DR.	24-021	60-2312
MAJOR. W. H. PATTON ASST DIRECTOR OF MATERIEL	3013 MEADOWS ST # TAMPA	39-041	NONE
MAJOR N. S. SMITH AIDE - DE - CAMP	8111 BAYSHORE DR.	20-111	60-2514
MAJOR B. J. MONNERLYN ADJUTANT	6220 FOSTER AVE # TAMPA	27-111	63-4624

(#) ALL HOME ADDRESSES ON THE BASE UNLESS OTHERWISE INDICATED.

B. J. MONNERLYN
MAJOR, USAF
ADJUTANT

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"B"

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HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

ROSTER OF KEY PERSONNEL
1 July 1963

NAME	*HOME ADDRESS	DUTY PHONE	HOME PHONE
#COLONEL B. H. MERCHANT BASE COMMANDER	4 Staff Loop	31-111	36-271
#LT COL T. G. SAFFORD DEPUTY BASE COMMANDER	8313 Bayshore Dr.	36-021	60-2331
#MAJOR B. J. MUNNERLYN BASE ADJUTANT	6220 Foster Ave. Tampa	27-111	63-4624
#WOJG C. A. WHITTLE ASST BASE ADJUTANT	BOQ 368 Apt #3	27-111	29-221
#LT COL W. B. HOYNES DIRECTOR OF PERSONNEL	5 Secord Dr.	31-031	60-2303
MAJOR A. J. DILUCIDO MIL PERSONNEL OFFICER	8207 Bayshore Dr. Apt #4	35-611	60-3351
#LT COL L. J. B. MESTIER JR DIRECTOR OF OPERATIONS	4 Garden Dr.	32-501	60-2223
MAJOR R. H. HALL ASST DIR OF OPERATIONS	4104 El Prado Blvd Tampa	24-341	62-5182
MAJOR S. L. ALMON DIRECTOR OF MATERIEL	3510 Vasconia Tampa	28-071	62-5754
#MAJOR J. A. WAITS AIR INSTALLATIONS OFFICER	3213 Harbor View Tampa	27-341	61-3562
#MAJOR H. C. OAKES BASE COMPTROLLER	3 Hillsborough Loop	25-301	60-2061
#LT COL A. A. KELSEY BASE CHAPLAIN	32 Garden Dr.	26-061	60-2151
#1ST LT J. THOMAS PERSONNEL AFFAIRS	5502 Branch Ave Tampa	25-061	32-9901
MAJOR I. PESKOE BASE LEGAL	1 Bridges Loop Apt #2	25-372	60-2373
#2ND LT D. A. HARRIS INFO SERVICE OFFICER	BOQ 408 Room 4	22-311	36-211

#MAJOR J. H. WINDSOR AIR PROVOST MARSHAL C.O. 809TH AIR POLICE SQ	4 Bridges Loop Apt #6	25-191	60-2833
#MAJOR C. P. MONTGOMERY TRANSPORTATION OFFICER	BOQ 368 Room 11	38-011	55-211
#LT COL R. N. BAILEY C.O. HQ SQ SECTION	106 S. Mantanzas Tampa	34-021	85-0732
CAPT J. J. KARLOMAS C.O. SUPPLY SQ	4211 Vasconia Tampa	32-031	63-1531
MAJOR H. M. CHEW C.O. MTR VEH SQ	15 Secord Dr. Apt #6	39-311	60-3142
CAPT G. P. FOSTER C.O. FOOD SV SQ	3616 Omar St Tampa	25-021	85-2841
MAJOR H. P. KILLINGSWORTH DEPUTY SQ COMMANDER OPNS SQ	6208 Foster Ave Tampa	34-791	None
M/SGT M. J. WOMACK BASE SGT MAJOR	1004 Peninsular St. Tampa	39-321	28-7071

(*) All home addresses on the base unless otherwise indicated.
(#) Indicates officers on alert as designated by 809th Standing Directive No. 11-2 dtd 7 October 1952.

B. J. MUNNERLYN
Major, USAF
Adjutant

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Tampa Daily Times

APPENDIX "A"

EXHIBIT 1

— RESTRICTED —

AIR BASE GROUP

SAC RATING SYSTEM

SCORES PREDICTED BY:

MACDILL A.F.B., FLA.

FOR

1953

SECURITY INFORMATION

PREPARED BY:
BASE COMPTROLLER

RCS: 2AF-CO-C2

— RESTRICTED —

FOREWORD

This detailed analysis of areas rated under the SAC Air Base Group Rating System was prepared by the Base Comptroller and provides predicted scores, graphic representation and appropriate analytical comments for the Commander and Staff. The Official SAC Scores for the previous month are compared with predicted scores for the current month, indicating point deviations and analysis of regression in the various areas.

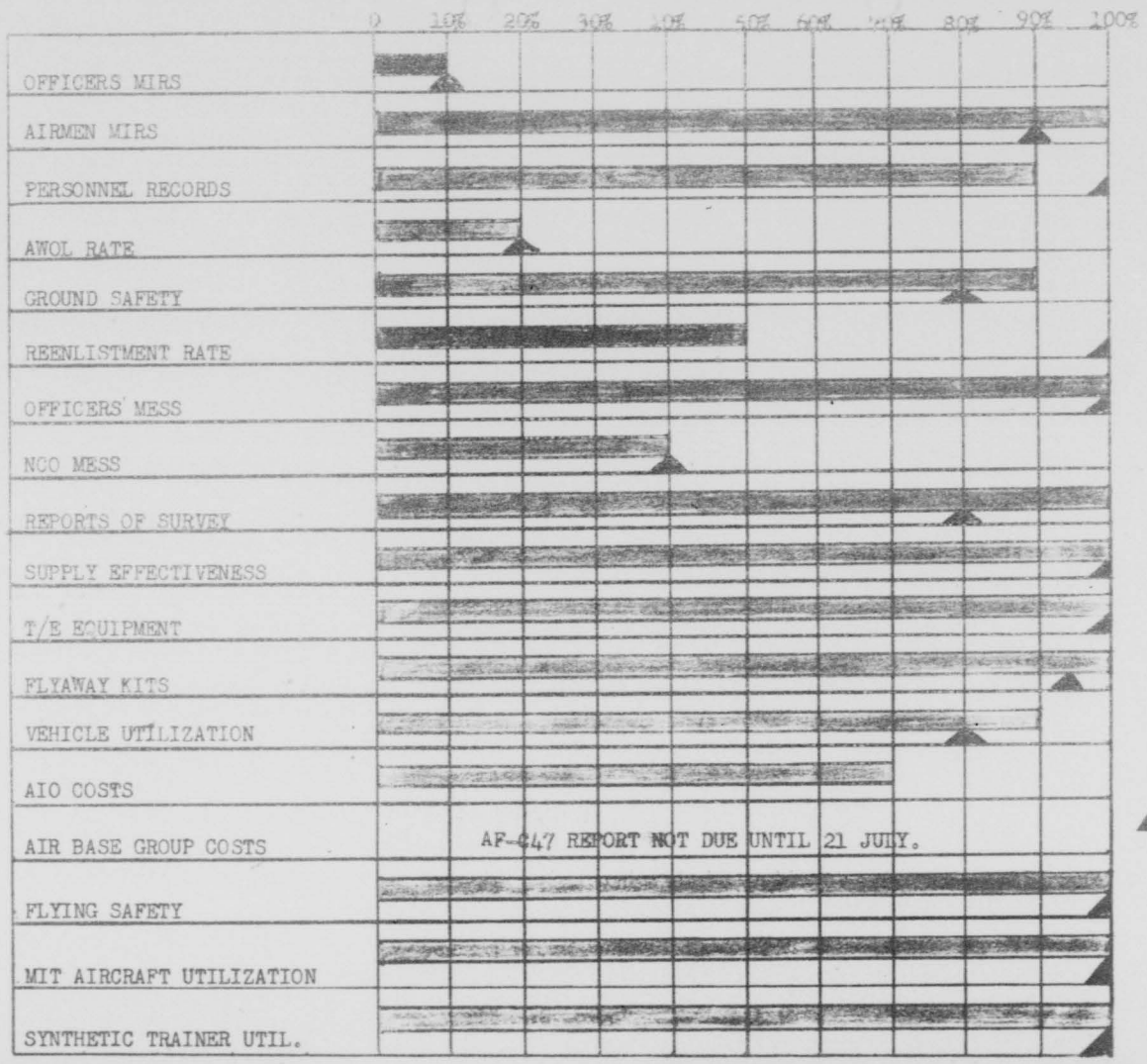
In areas where 100% of the maximum score was achieved no analytical comment was made.

Graphic representation of performance for the current month is provided, as well as comparison columns indicating previous month's official SAC percentage of maximum score and current month's predicted MacDill percentage of maximum score.

H. C. OAKES
Major, USAF
Base Comptroller

RESTRICTED

JUNE 1953 - 809TH AIR BASE GROUP SAC MANAGEMENT CONTROL PERCENTAGES



Bar represents percentage predicted in June.

▲ Represents percentage scored in May.

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809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
JUNE 1953

15 July 1953

	MAY MAXIMUM SCORE	SAC MAY % MAX SCORE	SAC MAY SCORE	JUNE MAXIMUM SCORE	PREDICTED JUNE % MAX SCORE	PREDICTED JUNE SCORE
Manning:						
Officers MIRS	20	10	2	20	10	2
Airmen MIRS	80	90	72	80	100	80
Personnel Records	50	100	50	50	90	45
AWOL Rate	50	20	10	50	20	10
Ground Safety	70	80	56	70	90	63
Reenlistment Rate	50	100	50	50	50	25
Messes:						
Officers' Mess	25	100	25	25	100	25
NCO Mess	25	40	10	25	40	10
Reports of Survey	60	80	48	60	100	60
Supply Effectiveness	120	100	120	100	100	100
T/E Equipment, Air Base Group	20	100	20	20	100	20
Flyaway Kits	50	94	47	60	100	60
Vehicle Utilization	70	80	56	70	90	63
Air Installations	80	50	40	NA	NA	NA
Air Base Group Costs	NA	NA	NA	80	NR	NR
AIO Costs-% Incid. to Maint.	NA	NA	NA	60	70	42
Flying Safety	70	100	70	70	100	70
MIT Aircraft Utilization	60	100	60	60	100	60
Synthetic Trainer Utilization	50	NR	NR	50	100	50
Physical Conditioning Util.	50	100	50	NA	NA	NA
TOTAL SCORE	1000		*786	1000		**785
PERCENTAGE OF TOTAL SCORE			83			85

NA- Not Applicable
NR- No Report
* Total Item Weight 950
** Total Item Weight 920

809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
JUNE 1953

15 July 1953

	MAXIMUM SCORE	SAC MAY SCORE	PREDICTED JUNE SCORE	POINT CHANGE	COMMENTS
Manning: Officers MIRS	20	2	2	NC	There were 119 spaces manned in required specialties out of 164 authorized for a 72.6% manning as compared to 105 manned out of 159 authorized in May (66.0% manning). There were shortages in AFSCs 3034, Communication Officer, 62000, Food Service Superintendent, 7024 Administrative Officer, and 7724, Air Police Officer. With an officer assigned strength in June of 144, the highest possible score that could have been attained was 60% of the maximum.
Airmen MIRS	80	72	80	+8	100% of maximum score attained. There were 2,326 Airmen MIRS out of 2,490 authorized.
Personnel Records	50	50	45	-5	Officer unknowns increased from 2 in May to 4 in June for a 99.78% completeness, or 90% of the maximum score. Airmen unknowns likewise increased, from 30 to 43, for a 99.88% completeness, which still remained in the 100% bracket.
AWOL Rate	50	10	10	NC	There were 20 AWOLs in June for a three-month total of 52, the same as the May three-month figure. The rate was 5.4 per thousand for 20% of the maximum score, or 10 points. There have been 6 AWOLs through 10 July. If there are no more than 12 AWOLs in July, the July score will increase to 30% of the maximum score, or 15 points.

809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
JUNE 1953

15 July 1953

	MAXIMUM SCORE	SAC MAY SCORE	PREDICTED JUNE SCORE	POINT CHANGE	COMMENTS
Ground Safety	70	56	63	+7	A Ground Safety Index of 5.02 combined with an Accident Cost Index of $.83 resulted in attainment of 90% of the maximum score. The Accident Cost Index ($.83) was well within the optimum, but the Ground Safety Index (5.02) prevented attainment of 100% score. If the June rate of Military Accidents is continued in July, all other factors remaining the same, July achievement will increase to 100% of the maximum score.
Reenlistment Rate	50	50	25	-25	There were six immediate reenlistments out of 14 regular terminations whose ETS occurred in June. This resulted in a 42.9% reenlistment rate for 50% of the maximum score, or 25 points.
Messes:					
Officers' Mess	25	25	25	NC	100% of maximum score attained.
NCO Mess	25	10	10	NC	Nine points were attained under the SAC "Financial Operating Efficiency Index" for 40% of the maximum score. Weak areas were again Factor 2, Salary Expense, which was $640 over the required 30% of sales, Factor 7 (Net Profit or Loss from Operations before Dues) and Factor 8 (Net Profit or Loss from Operations before Dues-Year to Date).

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809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
JUNE 1953

15 July 1953

	MAXIMUM SCORE	SAC MAY SCORE	PREDICTED JUNE SCORE	POINT CHANGE	COMMENTS
Reports of Survey	60	48	60	/12	100% of maximum score attained.
Supply Effectiveness	100	120	100	-20	100% of maximum score attained in both May and June. Maximum score was reduced from 120 in May to 100 in June by the SAC Management Control System - Air Base Group.
T/E Equipment	20	20	20	NC	100% of maximum score attained.
Flyaway Kits	60	47	60	/13	100% of maximum score attained. Point increase is due in part to new scoring system. Percentage of completeness increased from 94 in May to 99 in June. The latter figure is based on two squadrons only since no figures are available for the 306th ARS which is TDY in the UK. B-47 Flyaway Kits are not included above since they were not listed on the latest SAC-E21 report. Station supply action on these Kits commenced in July, and the status should be reflected in the next SAC-E21 report.

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809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
JUNE 1953

15 July 1953

	MAXIMUM SCORE	SAC MAY SCORE	PREDICTED JUNE SCORE	POINT CHANGE	COMMENTS
Vehicle Utilization	70	56	63	+7	There were the same number of vehicles utilized in June as were utilized in May in every type except the Pickups. These were reduced from 103 in May to 93 in June. Although the average daily mileages of the Pickups and Stakes decreased slightly, the increases registered in mileages of the Sedans and Carryalls more than offset the decreases. The net result was an improvement in the weighted average % achieved, from 108 in May to 112 in June for 90% of the maximum score, or 63 points. The average daily mileages for May and June were as follows:

Group	Average Daily Mileage		Change
	May	June	
Sedan	59	68	+9
Carryall	50	75	+25
Pickup	59	57	-2
Stake	32	31	-1

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809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
JUNE 1953

15 July 1953

	MAXIMUM SCORE	SAC MAY SCORE	PREDICTED JUNE SCORE	POINT CHANGE	COMMENTS
Air Base Group Costs	80	NA	NR		No report received because of 10 day extension in submission date of AF-C47 report, Monthly Expense Summary Report. This area will be reported as soon as data is available.
AIO Costs - % Incid. to Maint.	60	NA	42	NA	The percent of AIO manageable resources expended on maintenance and repair incident to maintenance was 96.1 for 70% of the maximum score. This reflects the percent of available AIO manageable maintenance resources (3.9) expended on Class D "Project Type" work within approval authority of the installation commander. The dollar amount of the latter was $74,910 (cumulative fiscal year total). Maximum score would have been attained if the cost of minor construction, minor additions, alterations and deletions (accounts 09108.2a and 09108.3a) during the fiscal year had been limited to $57,087, as compared to the $74,910 actually expended.

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809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
June 1953

15 July 1953

	MAXIMUM SCORE	SAC MAY SCORE	PREDICTED JUNE SCORE	POINT CHANGE	COMMENTS
Flying Safety	70	70	70	NC	100% of maximum score attained.
MLT Aircraft Utilization	60	60	60	NC	100% of maximum score attained.
Synthetic Trainer Utilization	50	50	50	NC	100% of maximum score attained.

809TH AIR BASE GROUP SCORE
SAC MANAGEMENT CONTROL SYSTEM
JUNE 1953

22 July 1953

	MAXIMUM SCORE	SAC MAY SCORE	PREDICTED JUNE SCORE	POINT CHANGE
Air Base Group Costs	80	NA	16	NA

COMMENTS

The net cost for the Air Base Group for June was $1,311,497, while the base population was 9119. The Air Base Group support cost per capita was $143.82 as compared to the standard cost of $109.54, resulting in a performance index of 76 for 20% of the maximum score, or 16 points. A per capita cost of $94.43 would be necessary for 100% score. The June Air Base Group cost was affected by a $166,799 supply charge in Account 59000, USAF Training, on account of ammunition issued and target planes condemned at Avon Park. The ammunition alone amounted to approximately $107,000. Such issues of ammunition will not be charged to the Air Base Group after 1 July.

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EXHIBIT 2

REPORT OF PROCEEDINGS OF THE EXECUTIVE GROUND SAFETY COUNCIL

Headquarters
MacDill Air Force Base, Florida

Proceedings of a meeting of the Executive Ground Safety Council which convened at MacDill Air Force Base, Florida, under provisions of Second Air Force Regulation 32-2, dated 28 June 1952, and pursuant to Letter Order MCDCAG-28, dated 18 February 1953, Headquarters, 309th Air Base Group, MacDill Air Force Base, Florida.

The Council met pursuant to the foregoing order at Headquarters MacDill Air Force Base at 1400 hours, 15 June 1953.

Members present:

Lt Colonel Tom G. Sanford - Base Deputy Commander (Acting President)
Lt Colonel W. B. Hoynes - Base Personnel Staff Officer
Major John H. Windsor - Base Provost Marshal
Major S. L. Almon - Base Material Staff Officer
Capt W. E. Herberger - for Base Motor Transportation Officer
2nd Lt H. E. George Jr. - for CO, 305th Bomb Wing (H)
Mr. Frank Joseph - Base Fire Chief
Mr. Geo. R. White - Ground Safety Director (Recorder)

1. DISCUSSION:

a. Action taken on recommendations of 20 May minutes of Council is listed as follows:

(1) The Safe Wheels Goat was received on 25 May. The 305th A & E Squadron immediately assumed custody of the goat for recording the last wheeled accident (15 May) which resulted in a disabling injury.

(2) A letter was drafted for the 6th Air Division Commander's signature regarding our motorcycle accident experience and action required of Air Base and Wing Commanders.

(3) New Safe Wheels Committeesmembers were published on letter order, MCDCAG-104, dated 29 May.

(4) Air Base and Wing Adjutants were furnished a list of safety slogans on 29 May for publication on all leave orders.

(5) The Operations Officer has informed the Council that the parking of aircraft in vicinity of the flight line fire lane has been made a special subject and each Airdrome Officer will be instructed to closely monitor subject parking to insure that the fire lane is kept clear.

(6) The Air Installations Officer and Resident U.S. Engineer were notified of housekeeping conditions in vicinity of aircraft parking ramp and have taken appropriate action to insure that various sundry articles are not left where they may involve aircraft and vehicles in ground accidents.

b. Injury experience for the month of May was reviewed and charts were shown to explain a graphic picture of the overal military and civilian injury rate, government vehicle accident rate, and military injury rate of the 609th Air Base Group, 305th Bomb Wing (M), and 306th Bomb Wing (M).

c. A special study was presented to the council which reflected the accident and injury cost, January through May 1953, for the 609th Air Base Group and the three (3) wings. The study compared the Air Base Group and Wings accident cost with their percentage of exposure. The study further compared accident cost percent and exposure percentage between installations of the 2AF. (Chart Incl #1)

d. A picture of the Safe Wheels accident scoreboard, which is located across from the Division Annex was shown to the Council. The board has been modified to show how each squadron within the Air Base Group, 305th Bomb Wing (M), 306th Bomb Wing (M), and supporting organizations compared in May. Only injuries and accidents chargeable against Safe Wheels will be used in the scoring progess. The members were explained how points were deducted in the scoring system. It was explained that photographs were sent by ICM to each organization represented on the photograph.

e. The Council members were briefed on activities of the three (3) Safe Wheels committees and the SAC Safe Wheels progress report for the month of May were explained. MacDill placed ninth (9th) in the SAC fleet award and eleventh (11th) in the Safe Wheels award for the month of May. The scoring was based on five (5) injuries and one (1) fatality resulting from private vehicle accidents and one (1) reportable government vehicle accident. The referenced accidents were all recorded during the first fiftaen (15) days of May. The June record to date has been marred once by a private vehicle accident, off base, which will disable an airman of the Boat Flight for approximately one hundred fifty (150) days.

f. The 306th Bomb Wing (M) was announced as the winner again of the MacDill monthly Injury and Accident Safety Plaque. The 306th Wing has won the plaque for the fourth (4th) time in the last five (5) months.

g. The members were informed that a special parade has been scheduled for Wednesday the 17th of June. The parade will be lead by the 740th Air Force Band, playing the funeral march. The one (1) fatality will be represented by six (6) pallbearers carrying a casket. The nine (9) disabling injuries (four (4) of which occured in April) resulting from private vehicle accidents will be represented by personnel from the various squadrons. The nine (9) victims will be bandaged to represent the type of injury they received. The next in parade lineup will be the goat, led by someone from the squadron who has its custody at parade time. An Air Force ambulance and various other mobile equipment will bring up the rear.

h. The chairman expressed concern over the percentage of official Council members who have been sending personnel of lower ranks to represent them at each meeting. Decisions that could be made and specific action taken on various safety subjects has been handicapped by their absence.

i. The Council was informed that Bayshore Boulevard, embracing the Wherry Housing Section of MacDill Air Force Base is property of the base and action would be taken to improve the roadway surface and shoulders.

j. The chairman opened a discussion on officer responsibility in apprehending violators of unsafe driving practices observed in their daily travels. This responsibility must be assumed by all officers if a state of safety mindedness is to consistently improve on the base. This responsibility cannot be left solely to members of the Air Police Squadron.

2. RECOMMENDATIONS:

a. That each Council member spend some time between now and the next meeting seeking ways to improve our "Safe Wheels" campaign.

b. That the recorder furnish the chairman with a recap of the rank of personnel who have been representing official members of the Council during the last eighteen (18) months.

c. That the Base Materiel Staff Officer take immediate steps to improve the roadway condition of Bayshore Boulevard in the Wherry Housing Area.

d. Meeting adjourned 1530 hours.

/s/ W. D. HOYNES
W. D. HOYNES, LT. COLONEL, USAF
Member

/s/ GEO. R. WHITE
GEO. R. WHITE
Ground Safety Director
Recorder

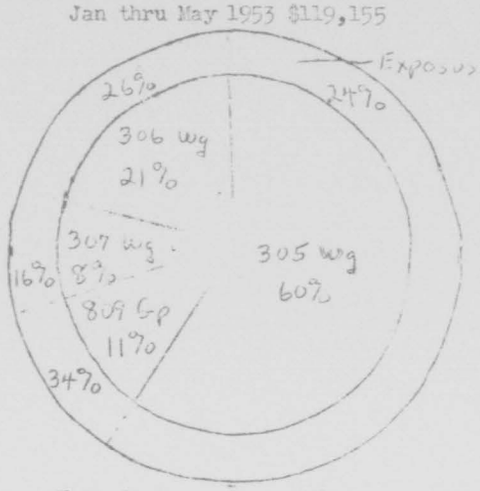
1 Incl
1. Chart

HEADQUARTERS MACDILL AIR FORCE BASE, FLORIDA, 22 June 1953

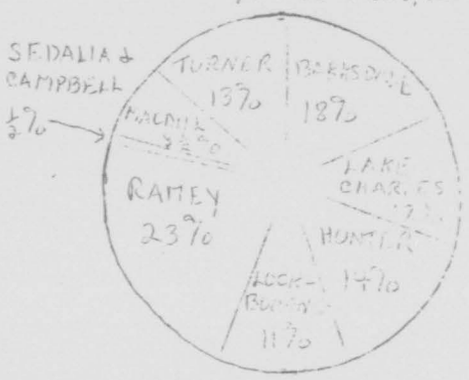
Approved:

/s/ B. H. MERCHANT
B. H. MERCHANT, COLONEL, USAF
Base Commander

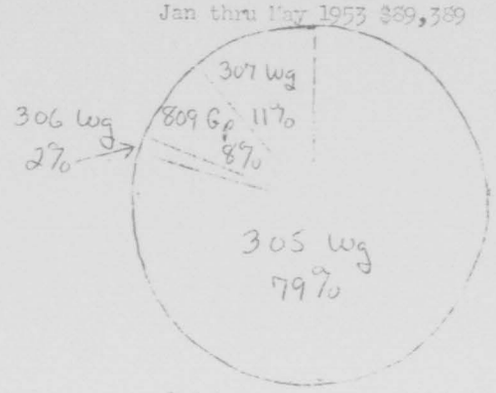
Total Cost of Accidents
MacDill AFB
Jan thru May 1953 $119,155



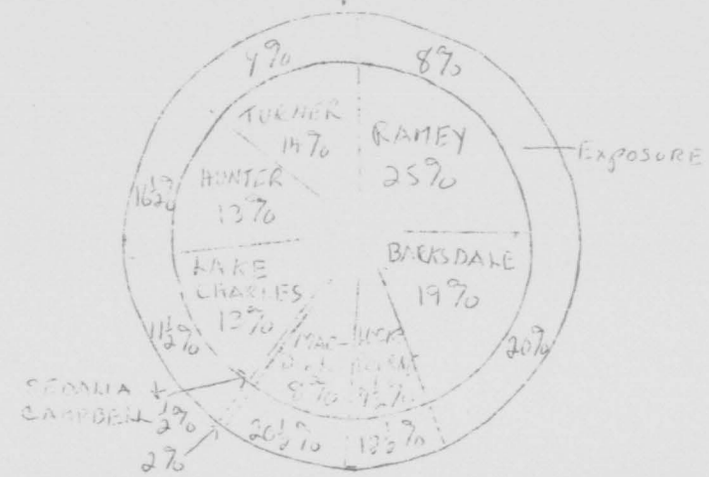
Total Cost of Accidents DAF
Jan thru Apr 1953 $653,401



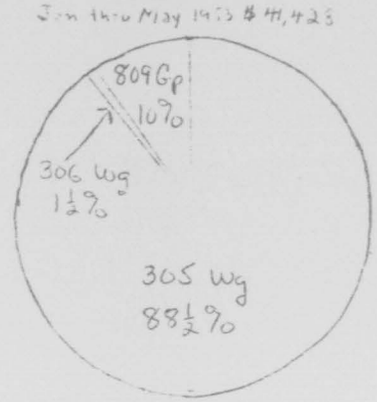
Military Injury Cost
MacDill AFB
Jan thru May 1953 $89,389



Military Injury Cost DAF
Jan thru Apr 1953 $597,652



Private Vehicle Injury Cost
MacDill AFB
Jan thru May 1953 $ 11,423



DAF Standing in SAC SAFE WHEELS
1 May thru 13 May 1953

Barksdale	32
MacDill	34
Lockbourne	24
Hunter	25
Turner	22
Lake Charles	20
Ramey	3
Campbell	14
Sedalia	13

EXHIBIT 3

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 11)

1 June 1953

Detachment 1, Hq 306th Bomb Wg is organized at MacDill AFB Fla eff 0001 hrs 10 June 1953.

Concurrent with organization, Detachment 1 is attached to 306th Med Gp 306th Bomb Wg this sta, for administration only.

Appropriate remark will be entered in the organizational status table of the morning report on the eff dt of organization, in accordance with Ch 2 SAC Manual 171-1.

Personnel and equipment will be furnished from sources under the control of the Commanding Officer, 306th Bomb Wg.

Authority: AFR 20-38 and SAC Reg 20-3.

BY COMMAND OF BRIGADIER GENERAL MOONEY:

OFFICIAL:

B. J. MUNNERLYN
Major, USAF
Adjutant General

B. J. MUNNERLYN
Major, USAF
Adjutant General

DISTRIBUTION: "D"
plus
2 cys CG 2AF

EXHIBIT 4

PROCEEDINGS OF MANAGEMENT IMPROVEMENT PROGRAM STEERING COMMITTEE

Headquarters 309th Air Base Group
MacDill Air Force Base, Florida
4 June 1953

The Steering Committee of the 309th Air Base Group Management Improvement Program met at 1300 hours, 4 June 1953.

MEMBERS PRESENT

Lt Col Tom G. Sanford, Deputy Base Commander (Chairman)
Maj Sam L. Almon, Base Materiel Officer
Maj Donald Moon, Deputy Air Installations Officer
Maj Ronald F. Hall, Base Operations & Training Officer
Maj Homer C. Gobes, Base Comptroller
Maj Anthony J. DiAucido, Base Military Personnel Officer
Maj Wilson W. Hoard, Asst Base Operations Officer
Capt Philip S. Dickey, Base Manpower & Organization Officer
2d Lt. Wm. C. Whitcomb, Asst Manpower & Organization Officer

MEMBERS ABSENT

None.

AGENDA

1. The Individual Procedures Subcommittee is 96 percent complete. There are 31 procedures remaining to be turned over to the Publications Subcommittee. This will be done by 15 June 1953. The guide to be followed in determining the number of individual procedures was determined. There will be one procedure for each person whose job is described by the procedure and in addition one for the supervisor, one for the squadron file and one for the Central File.

2. The Base Procedures Subcommittee is 90 percent complete. There are 47 procedures remaining to be turned over to the Publications Subcommittee.

3. The Publications Subcommittee is 60 percent complete. They have 71 percent of the Base Procedures and 50 percent of the Individual Procedures ready for printing. The committee lost two working days when they put aside the typing of procedures to type the 305th Bomb Wing Mobility Plan. The supply problem still remains critical. There is still a shortage of multilith mats. In addition the reproduction center is without a special reproduction fluid needed for the multilith machine. Majors Almon and Moon will resolve the supply problem. When the supply problem is settled the printing of the procedure will start. Procedures will have first priority at reproduction center when the 305th Bomb Wing Mobility Plan is completed. Major Turley sent 587 Tech Orders binders to the committee to be used to bind the Base Procedures. The cutter perfected to pre-drill holes in reams

EXHIBIT 4

PROCEEDINGS OF MANAGEMENT IMPROVEMENT PROGRAM STEERING COMMITTEE

Headquarters 809th Air Base Group
MacDill Air Force Base, Florida
4 June 1953

The Steering Committee of the 809th Air Base Group Management Improvement Program met at 1300 hours, 4 June 1953.

MEMBERS PRESENT

Lt Col Tom G. Sanford, Deputy Base Commander (Chairman)
Maj Sam L. Almon, Base Materiel Officer
Maj Donald Moon, Deputy Air Installations Officer
Maj Ronald F. Hall, Base Operations & Training Officer
Maj Homer C. Oakes, Base Comptroller
Maj Anthony J. DiLucido, Base Military Personnel Officer
Maj Wilson W. Hoard, Asst Base Operations Officer
Capt Philip S. Dickey, Base Manpower & Organization Officer
2d Lt. Wm. C. Whitcomb, Asst Manpower & Organization Officer

MEMBERS ABSENT

None.

AGENDA

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of paper broke after 58 reams had been drilled. If the cutter can not be replaced before the supply of three hole paper is exhausted the holes will be drilled in the paper after printing.

4. The revision to the Managers Report of Activity will include these two factors. In Column 7 the percentage of estimated training will reflect the ability of each person to perform the job assigned him. Column 15, Work Units Accomplished, will be adapted to reflect the cross-training within the section. It will be a percentage figure and be based on how capably the individual could perform the duties of the position above him in the job progression ladder.

5. The Steering Committee approved the idea of a Managers' Luncheon. The first luncheon was tentatively set for Thursday, 11 June at 1300 hours in the Officers' Mess. Everyone shown on the Managerial Category Chart is invited to this luncheon. Major Oakes will present the work measurement system used in the Finance Office. All fifth level managers will be asked to develop some form of work measurment for their activity. This initial measurement should be obtained within two weeks from date of luncheon. Major Alson will arrange the luncheon with the Officers Club and secure the approval of the Base Commander.

6. The next meeting of the Steering Committee is tentatively set for 10 June to consider the Managers' Luncheon. Members will be notified by phone as to time and place of meeting.

Tom G. Sanford

TOM G. SANFORD
Lt Colonel, USAF
Deputy Commander
(Chairman)

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EXHIBIT 5

Proceedings of Management Improvement Program Steering Committee

Headquarters 809th Air Base Group
MacDill Air Force Base, Florida
22 June 1953

The Steering Committee of the 809th Air Base Group Management Improvement Program met at 1300 hours, 18 June 1953.

MEMBERS PRESENT

Lt Col Tom C. Sanford, Deputy Commander
Maj Homer C. Oakes, Base Comptroller
Maj Ronald F. Hill, Base Operations and Training Officer
Maj Sam L. Almon, Base Materiel Officer
Maj Donald Moon, Deputy Air Installations Officer
2d Lt Wm. C. Whitcomb, Asst Base Manpower & Organization Officer

MEMBERS ABSENT

Maj Anthony J. DiLucido, Base Military Personnel Officer
Maj Wilson W. Howard, Asst Base Operations Officer
Captain Philip S. Dickey, Base Manpower & Organization Officer

AGENDA

1. The Individual and Base Procedures Subcommittees are 100 percent complete.

2. The Publications Subcommittee is 67 percent complete. All Base Procedures have been typed and 30 percent of them have been printed. It is estimated the binding of the Base Procedures will commence on 22 June. The holes in the paper will be manually punched as the experiment in drilling holes was unsuccessful. Seventy percent of the Individual Procedures have been typed. They will be printed after the Base Procedures. The multilith machine is operating 16 hours a day and is utilized in printing procedures for 12 of these hours.

3. The Managers Report of Activity will be revised. Lieutenants Bennitt and Whitcomb will prepare the draft of the instructions and report format for presentation at next meeting. A column for overtime will be included in report. Also as much of the Remarks Section as possible should be included in report format. This report will become a monthly report. The sections preparing it will show a breakdown of their activity by the branches organized under the section. Lt Col Sanford pointed out the need for each level manager handling report to hand carry it to his superior to permit a brief discussion on the report.

4. When the program is implemented in July all but the Program Evaluation Subcommittee will cease operation. This committee will continue to monitor the program for 90 days. It will be an individual as well as command responsibility to insure that procedures are kept current.

5. The Management Improvement Program will go into operation about 10 July. The entire program will be presented at this time. The initial send off will be in the form of a Managers Luncheon. Work measurement will be one point we will approach cautiously in our program. This subject cannot be accomplished immediately, rather it is a never ending project which must be followed carefully and subjected constantly to review. Final plans will be formulated at a later meeting.

6. The next meeting of the Steering Committee is scheduled for 0900 hours, 23 June in the Deputy Commander's office. Members will be notified by telephone when final date is set.

TOM G. SAMFORD
Lt Col, USAF
Deputy Commander
(Chairman)

0071

EXHIBIT 6

HEADQUARTERS 809TH AIR BASE GROUP
MacDill Air Force Base, Florida

30 June 1953

SUBJECT: Managers Report of Activity

TO: All Managers Concerned

1. PURPOSE: This letter establishes the Managers Report of Activity, RCS MCD-U1. Report period will commence 1 August 1953 and will be a monthly report with the as of date being the last day of the month.

2. RESPONSIBILITY: It will be the responsibility of the section manager (5th managerial level) to initiate this report. Functional administrators and staff heads will monitor reports channelled through them and add appropriate remarks.

3. Instructions for preparing the managers report of activity, MCD-U1 will be strictly complied with.

4. This report does not eliminate requirement for reporting under provisions of SAC Regulation 150-5.

5. Managers report of activity is assigned RCS: MCD-U1.

1 Incl.
Instructions for
Preparing MCD-U1

TOM G. SANFORD
Lt. Colonel, USAF
Deputy Commander

INSTRUCTIONS FOR PREPARING MCD-U1
MANAGERS REPORT OF ACTIVITY

1. Use of the Remarks Section is mandatory, so that constructive criticism and explanations of columnar entries may be presented.

a. The MCD-U1 will be prepared monthly as of 2400 hours the last day of each month. The report will be handcarried to the next higher level of supervision short of the Base Commander by the manager so he may discuss it with the manager to whom he is responsible. Action at the initiating level will be completed NLT the 5th working day after the as/of date and action at each managerial level above will be taken within 48 hours.

b. The report will be submitted in sufficient time to reach the Statistical Services Section, Base Comptroller's Office by 1100 hours on the fourteenth working day following the as/of date of the report.

c. The Statistical Services Section will forward the report to the Base Manpower Officer who will analyze all reports submitting his findings by ICM to the Base Commander. A copy of his analysis will be furnished each director and the Base Comptroller.

d. Reports will be prepared in sufficient copies to allow a copy for each higher level of management.

e. Report forms will be available through Base Publications and will be requisitioned in the regular manner.

f. Report will be type-written and double spaced between sub-elements.

g. Each managerial level will accumulate and evaluate all reports submitted by activities under his supervision. He will make appropriate comments pertaining to those reports on one ICM and will then attach all reports to the ICM and forward to the next higher managerial level. The second, third and fourth level manager will disseminate his comments to all managers directly responsible to him, thus aiding them in understanding what is being done by his supervisor to improve the overall managerial problem.

2. This information will be used as a guide in preparing the MCD-U1.

Incl 1

Instructions for Preparing MCD-U1 - (Cont'd)

a. Column 1 - Subordinate elements

(1) This column will be used to show a breakdown of your section into its sub-elements. Each one of these sections will have a line entry concerning information required in the other columns.

b. Column 2 - Personnel Authorized

(1) Show here the number of personnel authorized by official manning including civilians. These figures will be broken down to show T/O, T/D-L, overage authorizations approved by Base Manpower, and the total number authorized.

c. Column 3 - Average Number of Personnel Assigned

(1) Show average number of personnel including civilians assigned during the reporting period.

(2) Example - If for three days during a week there were 10 men assigned and then 2 men were transferred out leaving 8 men , then the average number assigned for the week would be 9 men.

d. Column 4 - Average Number Present for Duty

(1) Show the average number of personnel present for duty during the reporting period.

(2) Example - If 10 men are assigned to a section and one man is on leave and another is working out of the section, then the average number present for duty is 8 men.

(3) A person assigned but working elsewhere is not present forduty unless his work is productive for the section. Show where he is working and indicate authority therefor.

e. Column 5 - Percent Effective Manning - Officers

(1) Effective manning for officers is obtained by dividing the number of authorized officer AFSC's into the number of officers assigned.

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Instructions for Preparing MCD-U1 - (cont'd)

f. Column 6 - Percent Effective Manning - Airmen

(1) This percentage is obtained by dividing the number of authorized airmen AFSC's into the number of airmen assigned by primary AFSC. In the case of airmen, substitutions can be made by a higher AFSC for a lower level AFSC in the same career field.

g. Column 7 - Number of AWOL's

(1) Show the number of people who have gone AWOL during the reporting period; however, do not subtract a person who returns from AWOL status during the reporting period from the original AWOL number.

h. Column 8 - Percent of Job Performance

(1) Rate each individual's percent of estimated degree of ability to perform the job assigned him. Then add the percentages and divide by the number of individual's rated to find the average of the group. Show the average percentage in this column.

i. Column 9 - Manhours Authorized

(1) Show here the number of manhours authorized.

(2) Count 44 hours per week for military personnel and 40 hours per week for civilian personnel.

j. Column 10 - Manhours Assigned

(1) Show here the number of manhours assigned.

(2) Count 44 hours per week for military personnel and 40 hours per week for civilian personnel

k. Column 11 - Manhours Productive

(1) Show here the total manhours productive but do not include overtime.

(2) This figure can be obtained by subtracting the total manhours non-productive in columns 13 and 14 from manhours assigned in column 10.

0075

q. Column 17 - Percent of Estimated Training

(1) Rate the percent of estimated degree of each individual's ability to perform the duties of the position immediately above him. That is, how well qualified is he to take the next higher position of responsibility. Then add the percentages of the individuals rated and divide by the number rated to find the average for the group.

r. Column 18 - Work Units Accomplished

(1) Show here the total number of work units accomplished during the month by each subordinate element.

(2) In completing columns 18, 19 and 20 you should refer to the work unit measurement standards prepared and submitted by you for approval on 25 June 1953 or as subsequently revised. A daily log of work units produced should be maintained for each subordinate element and be totaled at the end of each month to ascertain the appropriate entry in Column 18.

(3) Example - Pertinent to Columns 18, 19 and 20.

Sub-Element	FSC	Work Unit	(1) 0-50	(2) 51-100	(3) 101-150
Graphic	99350	Charts	1	1	1
Presentation	99330		0	1	2

s. Column 19 - Standard Work Unit

(1) Enter in this column the work unit standard range wherein the number of actual units produced can be located.

(2) Example - Refer to par. r (3) above - If your unit produced 87 charts during the month, your entry in this column would read "51 to 100 charts".

t. Column 20 - Standard No. of Personnel Required

(1) Enter in this column the total number of personnel required to produce the actual number of work units accomplished, using your previously computed standard yard-stick.

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Instructions for Preparing MCD-U1 - (cont'd)

(2) Example - Again using the 87 charts as an example, your entry in this column should be "2". This does not necessarily mean that you had two people actually do the job since one or more personnel might have been assigned duty in the subordinate element. This figure then indicates:

(a) That you are properly manned.

(b) That you are short handed.

(c) That you are over-manned.

(d) That your work measurement standards are correct or need revision up or down (only actual experience will indicate necessary revisions).

0077

EXHIBIT 7

PROCEEDINGS OF MANAGEMENT IMPROVEMENT PROGRAM STEERING COMMITTEE

Headquarters 809th Air Base Group
MacDill Air Force Base, Florida
30 June 1953

The Steering Committee of the 809th Air Base Group Management Improvement Program met at 1300 hours, 25 June 1953.

MEMBERS PRESENT

Lt Col Tom G. Sanford, Deputy Commander (Chairman)
Maj Homer C. Oakes, Base Comptroller
Maj Donald Moon, Deputy Air Installations Officer
Maj Sam L. Almon, Base Materiel Officer
2d Lt Wm. C. Whitcomb, Asst Manpower & Orgn Officer

MEMBERS ABSENT

Maj Anthony J. DiLucido, Base Military Personnel Officer
Maj Ronald F. Hall, Base Operations & Training Officer
Maj Wilson W. Howard, Asst Base Operations Officer
Capt P. S. Dickey, Base Manpower & Orgn Officer

AGENDA

1. Major Moon displayed the Tech Order binders that will be used to hold the Base Procedures. He also presented the numerical and alphabetical indexes to the Base Procedures Manual. It is estimated that 40 Base Procedures are being printed during each 8 hour shift. There has been some delay in publication due to other printing priorities. Lt Col Sanford will meet with Majors Moon and Munnerlyn to resolve this problem. The target date is 10 July for Base Procedures implementation. All Base Procedures should be bound in their binders and ready for distribution on that date.

2. The issue of printing the Individual Procedures was discussed. No definite estimate was reached as to how long it will take to print these Individual Procedures. It was the opinion of the committee that the main factor at present is implementing the program and placing the Base Procedures in effect.

3. The Program Chart Booklet was presented. It was decided the MCD-U1 report format shown in booklet should be replaced with the new format that will be used when the monthly report goes into effect. Also the booklet should be bound with metal fasteners.

4. The MCD-U1 Managers Report of Activity was presented. The final revisions were discussed and all additions and deletions will be consolidated into a final draft by the Manpower Office. This will include the presentation of the chart booklet, discussion on the Managers Report of Activity and the implementation of the Base Procedures Manual.

5. A tentative date for the next Managers Luncheon is 10 Jul 53. At this time the Procedures phase of the Management Improvement Program will be presented. This will include the presentation of the chart booklet, discussion on the Managers Report of Activity and the Implementation of the Base Procedures Manual.

6. The next Steering Committee meeting is tentatively scheduled for 2 Jul 53 at 1300 hours. Members will be notified by telephone as to final time, date and location of meeting.

TOM C. SANFORD
Lt Col, USAF
Deputy Commander
(Chairman)

0079

EXHIBIT 8

CLINICAL RECORD COVER SHEET

Admission Notes	Ward	Type of Case	Last Name - First Name - M.I.
0445		X Inj	Moore Robert L
A: Yes			
N: No			

Sex	Religion	Prev Adm	Register No.	Service No.	Grade
M	P	X No	67 290	AO 1 911 769	1st Lt

Rating	Department	Orgn. and Branch of Service
Navigator (a)	USAF	366th Bm Sq, 305th Bm Wg

Flying Status
Yes

Name and address of emergency Addressee	Age	Race	Length of service
	24	Cau	4 years

F-B. A. Moore
2130 Chambliss St.
Cleveland, Tenn.

Date of admission	Source of admission
22 Jun 53	CRO

Admitting Officer
1st Lt Gottsch

Diagnoses

8255. Wound, missile, penetrating, of brain, 38 calibre bullet, point of entrance hard palate of mouth, point of exit posterior portion of right parietal bone, with involvement of nerve and arteries, alleged to have been self inflicted at approximately 0305 hours, 22 Jun 53, Room 101, Bldg 205 (6th Air Division Hq), MacDill AF Base, Fla., not performing duty, and on military reservation. LD: Formal Investigation.

Selected Administrative Data

(a) Observer, Bombardier
Year Birth: 1928
Never married

Days duration this facility
0

Nature of disposition	Date of disposition
Dead on arrival	22 Jun 53

Signature of attending physician
J. E. Gottsch, 1st Lt, USAF, MC

Clinical Record Cover Sheet
(continued)

Signature of Registrar or medical records officer
R. A. King, Jr., 1st Lt, USAF, MSC, Registrar

Name and location of medical treatment facility
USAF Hospital, MacDill AF Base, Fla.

Register number
67 290

"A CERTIFIED TRUE COPY"

D. A. Harris

D. A. HARRIS
2d Lt., USAF

EXHIBIT 9

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDCLC-250.4 1 July 1953

SUBJECT: Courts-Martial Trials - June 1953

TO: Commander
All Organizations
MacDill Air Force Base, Florida

There follows a list of the courts-martial trials held at MacDill Air Force Base, Florida, during the month of June 1953. This list is published for the information and guidance of all concerned and therefore should be DISPLAYED in a prominent place on all bulletin Boards.

GENERAL COURTS-MARTIAL

	GRADE	AGE	BRIEF OF OFFENSE	PREV CONV	SENTENCE
None.					

SPECIAL COURTS-MARTIAL

809th AP Sq 809th AB Gp					
1.	A/3C	17	Art 86 AWOL 38 days	0	CHL for 45 days, Forf $30/mo for a like peric
2.	A/B	19	Art 86 AWOL 38 days	1	CHL for 3 mos, Forf $28/mo for 2 mos.
.	A/B	19	Art 86 Fail to repair	4	BCD, CHL for 3 mos Forf $60/mo for 3 mos.
4.	A/B	24	Art 86 AWOL 37, 8, 15, & 3 days	0	CHL for 4 mos.
809th Fd Sv Sq					
5.	A/B	19	Art 86 & 134 Fail to Repair & Wrongful possession of pass.	2	BCD, CHL for 4 mos, Forf $33.20/mo for 4 mo
809th Instl Sq 809th AB Gp					
6.	A/3C	20	Art 86 AWOL 40 days	0	CHL for 2 mos, Forf $20/mo for 2 mos.
1928th AACS (Det-7)					
7.	A/B	23	Art 86 AWOL 4 days Art 134 Bad Checks (3 Specifications)	1	CHL for 4 mos.

SUMMARY COURTS-MARTIAL

809th AP Sq 809th AB Gp					
1.	A/B	19	Art 86 Fail ro repair	1	CHL 30 days Forf $55.
809th Instl Sq 809th AB Gp					
2.	A/B	23	Art 86 Fail to repair	2	CHL 30 days Forf $55.
3.	A/B	18	Art 92 Fail to obey	1	CHL 30 days Forf $55.
4.	A/B	19	Art 134 Carrying concealed Weapon	3	CHL 30 days Forf $55.

Hq 809th AB Gp, MacDill AFB, Fla, Courts-Martial Trials for June 53, dtd 1 July 53, cont'd

5.	A/3C	21	Art 92 Fail to obey	0	Rest for 30 days Forf $55.
6.	A/B	18	Art 86 AWOL 7 days	1	CHL 21 days Forf $38.
7.	A/B	19	Art 134 Unlawful Trans of Prisoner	1	CHL 30 days Forf $34.
8.	A/3C	21	Art 134 Out of Uniform	1	Reduced to A/B, Forf $25.
9.	A/B	20	Art 86 Fail to repair	1	CHL 15 days Forf $30.
10.	A/3C	18	Art 86 AWOL 18 days	0	CHL 30 days Forf $55.

809th Fd Sv Sq 809th AB Gp

11.	A/3C	20	Art 91 Disrespectful in language	3	Forf $55.
12	A/2C	31	Art 86 AWOL 9 days	0	CHL 27 days Forf $60.
13.	A/3C	19	Art 86 Fail to repair	1	CHL 30 days Forf $55.
14.	A/3C	19	Art 86 AWOL 20 days	0	CHL 30 days Forf $50.
5.	A/3C	17	Art 86 AWOL 17 days	0	CHL 30 days Forf $25.
16.	A/B	23	Art 86 Fail to repair	3	CHL 30 days Forf $55.

809th Mtr Veh Sq 809th AB Gp

17.	A/B	25	Art 86 AWOL 4 days	3	CHL 12 days Forf $24.
18.	A/1C	21	Art 86 Fail to repair	0	Red to A/3C, Restricted to Sq Area for 30 days Forf $30.
19.	A/B	33	Art 86 AWOL 10 days	1	CHL 30 days Forf $60.
0.	A/3C	17	Art 86 AWOL 20 days	0	CHL 15 days Forf $30.

809th Supply Sq 809th AB Gp

21.	A/B	19	Art 86 Fail to repair	2	CHL 30 days Forf $35.

306th Fld Maint Sq 306th 306th Bm Wg (M)

22.	A/B	22	Art 86 Fail to repair	1	Not Guilty
23.	A/B	22	Art 92 Derelict in Duty	1	CHL 30 days

305th Med Gp 305th Bm Wg (M)

24.	A/B	23	Art 86 Fail to repair	2	CHL 30 days Forf $35.

Hq 809th AB Gp, MacDill AFB, Fla, Courts-Martial Trials for June 53, dtd 1 July 53, Cont'd

306th Mod Gp 305th Bm Wg (M)

25.	A/2C	32	Art 86 AWOL 9 days	0	Red to A/3C Forf $70.

366th Bm Sq 305th Bm Wg (M)

26.	A/3C	20	Art 89 Disrespect toward his CO.		Not Guilty

368th Bm Sq 306th Bm Wg (M)

27.	A/2C	24	Art 86 Fail to repair	0	Reduced to A/B Forf $39.

Detachment #1 306th Bm Wg (M)

28.	A/2C	18	Art 86 Fail to repair	0	Restricted to Sq Area 30 days, Forf $44.

809th Ops Sq 809th AB Gp

29.	A/3C	24	Art 86 Fail to repair (2 counts)	1	CHL 25 days Forf $30.

BY ORDER OF THE COMMANDER:

B. J. MUMMERLYN
Major, USAF
Adjutant

DISTRIBUTION:

"D"

EXHIBIT 10

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

GENERAL ORDER)
NUMBER 12)

2 June 1953

Under the provisions of AFR 24-1, the undersigned hereby assumes command of the 6th Air Division, MacDill Air Force Base, Florida effective 1400 hours, this date.

E. VANDEVANTER JR
Colonel, USAF
Commanding

DISTRIBUTION: "D"
plus
2 cys CG 2AF

EXHIBIT 11

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

GENERAL ORDER)
NUMBER 14)

17 June 1953

Under the provisions of AFR 24-1, the undersigned hereby assumes command of the 6th Air Division, MacDill Air Force Base, Florida, effective 1830 hours, this date.

H. K. Mooney

H. K. MOONEY
Brigadier General, USAF
Commander

DISTRIBUTION:
D
Plus
2 cys CG 2AF

EXHBIT 12

HEADQUARTERS 6TH AIR DIVISION
AIR FORCE ROTC SUMMER CAMP
OFFICE OF THE CAMP COMMANDER
MacDill Air Force Base, Florida

15 June 1953

ACTIVATION

GENERAL ORDERS)

NUMBER 1)

Under the provisions of Section 47a (10 USC 441) and 47c (10 USC 443) of the National Defense Act of 3 June 1916 as amended and the Act of 15 June 1936 (32 USC 164A, 164B, 10 USC 455 a-b-c) as amended, the Air Force ROTC Summer Camp, MacDill Air Force Base, Florida, is activated effective 15 June 1953.

DAVID J. NOLAN
Lt Col, USAF
Camp Commander

Distribution: D

EXHIBIT 13

HEADQUARTERS 6TH AIR DIVISION
AIR FORCE ROTC SUMMER CAMP
OFFICE OF THE CAMP COMMANDER
MacDill Air Force Base, Florida

15 June 1953

ASSUMPTION OF COMMAND

GENERAL ORDERS)

NUMBER 2)

The undersigned hereby assumes command of the Air Force ROTC Summer Camp, MacDill AFB, Fla. Auth: AFR 24-1.

DAVID J. NOLAN
Lt Col USAF
Camp Commander

Distribution: D

EXHIBIT 14

FLIGHT "A" ELEMENTS 1, 2, 3, 4 WEEK OF: 22-27 June 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0700	Orientation	HFORL	SAC Organization	Organization of MacDill AFB	Security	Leadership and Drill	
0800	Physical	Processing	Chaplain	OSI	Security	Leadership and Drill	
0900	Physical	Cadet Regulations	Leadership and Drill	AIO	Physical Training	Leadership and Drill	
1000	Physical	Base Tour	Physical Training	AP	Free Time	Physical Training	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	Physical Examinations	Emergency Survival	Base Operations	Altitude Indoctrination	Maps and Charts		
1300	Physical Examinations	Emergency Survival	Base Operations	Altitude Indoctrination	Mission Planning		
1400	Physical Examinations	Emergency Survival	Weather	Leadership and Drill	Mission Planning		
1500	Physical Examinations	Emergency Survival	Weather	Free Time	Leadership and Drill		

FLIGHT "B" ELEMENTS 5, 6, 7, 8 WEEK OF: 22-27 June 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0700	Orientation	HFORL	SAC Organization and Mission	Organization of MacDill AFB	Security	Leadership and Drill	
0800	Physical Examination	Cadet Regulations	Physical Training	OSI	Security	Leadership and Drill	
0900	Physical Examination	Processing	Leadership and Drill	AIO	Altitude Indoctrination	Leadership and Drill	
1000	Physical Examination	Chaplain	Free Time	AP	Altitude Indoctrination	Physical Training	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	Physical Examination	Base Tour	Emergency Survival	Base Operations	KC - 97 MTD		
1300	Physical Examination	Leadership and Drill	Emergency Survival	Base Operations	KC - 97 MTD		
1400	Physical Examination	Physical Training	Emergency Survival	Weather	KC - 97 MTD		
1500	Physical Examination	Free Time	Emergency Survival	Weather	Physical Training		

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FLIGHT "C" ELEMENTS 9, 10, 11, 12 WEEK OF: 20-27 June 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0700	Orientation	HFORL	SAC Organization	Organization of MacDill AFB	Security	Leadership and Drill	
0800	Processing	Physical Examination	Physical Training	OSI	Security	Leadership and Drill	
0900	Cadet Regulations	Physical Examination	Altitude Indoctrination	AIO	Leadership and Drill	Leadership and Drill	
1000	Base Tour	Physical Examination	Altitude Indoctrination	AP	Physical Training	Physical Training	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	Emergency Survival	Physical Examination	Weather	Chaplain	Weapons Familiarization		
1300	Emergency Survival	Physical Examination	Weather	Leadership and Drill	Weapons Familiarization		
1400	Emergency Survival	Physical Examination	Base Operations	Free Time	Weapons Familiarization		
1500	Emergency Survival	Physical Examination	Base Operations	Free Time	Weapons Familiarization		

FLIGHT "D" ELEMENTS 13, 14, 15 & 16 WEEK OF: 22-27 June 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0700	Orientation	HFORL	SAC Organization	Organization of MacDill AFB	Security	Leadership and Drill	
0800	Cadet Regulations	Physical Examinations	Physical Training	OSI	Security	Leadership and Drill	
0900	Processing	Physical Examinations	Base Operations	AIO	Weather	Leadership and Drill	
1000	Chaplain	Physical Examinations	Base Operations	AP	Weather	Physical Training	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	Base Tour	Physical Examinations	Free Time	Emergency Survival	AACS Activities		
1300	Leadership and Drill	Physical Examinations	Leadership and Drill	Emergency Survival	AACS Activities		
1400	Physical Training	Physical Examinations	Altitude Indoctrination	Emergency Survival	AACS Activities		
1500	Free Time	Physical Examinations	Altitude Indoctrination	Emergency Survival	AACS Activities		

FLIGHT "E" ELEMENTS 17, 18, 19 & 20 WEEK OF: 22-27 June 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0700	Orientation	INFORL	SAC Organization	Organization of MacDill AFB	Security	Leadership and Drill	
0800	Base Tour	Leadership and Drill	Physical Examinations	OSI	Security	Leadership and Drill	
0900	Cadet Regulations	Leadership and Drill	Physical Examinations	AIO	40th AD "F" Sqdn.	Leadership and Drill	
1000	Processing	Free Time	Physical Examinations	AP	40th AD "F" Sqdn	Physcl Training	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	Base Operations	Chaplain	Physical Examinations	KC - 97 MTD	Emergency Survival		
1300	Base Operations	Physical Training	Physical Examinations	KC - 97 MTD	Emergency Survival		
1400	Weather	Physical Training	Physical Examinations	Altitude Indoctrination	Emergency Survival		
1500	Weather	Free Time	Physical Examinations	Altitude Indoctrination	Emergency Survival		

FLIGHT "F" ELEMENTS 21, 22, 23 & 24 WEEK OF: 22-27 June 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0700	Orientation	HFORL	SAC Organization	Organization of MacDill AFB	Security	Leadership and Drill	
0800	Chaplain	Physical Training	Physical Examinations	OSI	Security	Leadership and Drill	
0900	Base Tour	Altitude Indoctrination	Physical Examinations	AIO	Leadership and Drill	Leadership and Drill	
1000	Cadet Regulations	Altitude Indoctrination	Physical Examinations	AP	Free Time	Physical Training	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	Processing	Base Operations	Physical Examinations	Maps and Charts	Aircraft Maintenance		
1300	Leadership and Drill	Base Operations	Physical Examinations	Mission Planning	Aircraft Maintenance		
1400	Physical Training	Weather	Physical Examinations	Mission Planning	Aircraft Maintenance		
1500	Free Time	Weather	Physical Examinations	Physical Training	Aircraft Maintenance		

FLIGHT "A" ELEMENTS 1, 2, 3, & 4 — WEEK OF 29 June 53 - 4 July 53

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1, C-45 Orien. Flt., El. 2 Scand. Rm., El. 3 Food Ser. El. 4 Pt.	El. 1, 2, 3 & 4 Static Display	El. 1 & 2 Air crew Trainer, El. 3 Pt., El. 4 C-45 Orien. Flt.	El. 1, 2, 3 & 4 KC-97 Mobile Training Det.	El. 1 & 2 KC-97 Orien. Flt. El. 3 & 4 Air Crew Tr.	El. 1, 2, 3 & 4 LD&EC	
0800	El. 1 & 4 Pt., El. 2 Base Photo Lab, El. 3 Food Service	Same as above	El. 1 & 2 Air crew Tng., El. 3 Pt., El. 4 Pt.	Same as above	Same as above	Same as above	
0900	El. 1 LD&EC, El. 2 Pt, El. 3 Scand Rm, El. 4 Pt	Same as above	El. 1 & 2 Air crew Tng, El. 3 Pt., El. 4 LD&EC	Same as above	Same as above	Same as above	
1000	El. 1 LD&EC, El. 2 Pt, El. 3 Base Photo Lab., El. 4 Pt.	Same as above	Same as above	El. 1, 2, & 3 LD&EC. El. 4 Free	Same as above	El. 1, 2, 3 & 4 Pt.	
1100	El. 1, 2, 3 & 4 Lunch	Lunch	Lunch	Lunch	El. 1 & 2 KC-97 Orien. Flt. El. 3 & 4 Lunch	Lunch	
1200	El. 1 & 3 Pt, El. 2 C-45 Orien. Flt. El. 4 Scand Room.	El. 1, 2, 3 & 4 Crash & Fire Equipment	El. 1, 2, 3 & 4 LD&EC	El. 1, 2, 3 & 4 Aircraft Maint.	El. 1 & 2 Lunch El. 3 & 4 Air Base Group		
1300	El. 1, 2 & 3 Pt. El. 4 Base Photo Lab.	Same as above	Same as above	Same as above	El. 1 & 2 LD&EC El. 3 & 4 Air Base Group		
1400	El. 1 Scand. Room, El. 2 LD&EC, El. 3 Pt., El. 4 Food Service	El. 1, 2, 3 & 4 LD&EC	El. 1, 2, 3 & 4 Pt.	Same as above	El. 1 & 2 LD&EC El. 3 & 4 Spec. Services		
1500	El. 1 Base Photo Lab., El. 2 LD&EC El. 3 Pt., El. 4 Food Service.	Same as above	El. 1, 2, 3 & 4 Free Time	Same as above	El. 1 & 2 Pt. El. 3 & 4 Spec. Services		

FLIGHT "D" ELEMENTS 1, 2, 3 & 4 WEEK OF: 29 June - 4 July 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1, 2, 3 & 4 Maps & Charts	El. 1, 2, 3 & 4 Static Display	El. 1, 2, 3 & 4 Aircraft Maint.	El. 1 PT., El. 2 C-45 Orien. Flt., El. 3 & 4 Aircrew Trng.	El. 1 & 2 Inst. Trainer, El. 3 LD&EC, El. 4 C-45 Orien. Flt.	El. 1, 2, 3 & 4 LD&EC	
0800	El. 1, 2, 3 & 4 Mission Planning	Do	Do	El. 1 & 2 PT., El. 3 & 4 Aircrew Trainer	El. 1 & 2 Inst. Trainer, El. 3 LD&EC, El. 4 PT.	Do	
0900	Do	Do	Do	El. 1 Scand. Room, El. 2 LD&EC, El. 3 & 4 Aircrew Trainer	El. 1 & 2 Air-Craft Comm., El. 3 & 4 LD&EC	Do	
1000	El. 1, 2, 3 & 4 PT.	Do	Do	El. 1 Base Photo Lab., El. 2 LD&EC, El. 3 & 4 Aircrew Trainer	El. 1 & 2 Aircraft Comm., El. 3 PT., El. 4 LD&EC	El. 1, 2, 3 & 4 PT.	
1100	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3, & 4 Lunch	El. 1, 2, 3 & 4 Lunch	
1200	El. 1, 2, 3 & 4 KC-97 Mobile Trng. Detachment	El. 1, 2, 3 & 4 Crash & fire equipment	El. 1 C-45 Orien. Flt., El. 2 PT., El. 3 Scand. Room El. 4 LD&EC	El. 1 & 2 Aircrew Trainer, El. 3 C-45 Orien. Flt, El. 4 Food Services	El. 1, 2, 3 & 4 MACS Activities		
1300	Do	Do	El. 1, 2 & 4 PT., El. 3 Base Photo Lab.	El. 1 & 2 Aircrew Trainer, El. 3 Pt. El. 4 Food Services	Do		
1400	El. 1, 2, 3 & 4 Sqdn. Administration	El. 1, 2, 3 & 4 LD&EC	El. 1 LD&EC, El.2 Scand. Room, El.3 & 4 PT.	El. 1 & 2 Aircrew Trainer, El. 3 LD&EC, El. 4 Scand. Room	Do		
1500	Do	Do	El. 1 LD&EC, El.2 Base Photo Lab., El. 3 & 4 PT.	El. 1 & 2 Aircrew Trainer, El. 3 LD&EC, El. 4 Base Photo Lab.	Do		

FLIGHT "C" ELEMENTS 1,2,3,4, WEEK OF 29 June - 4 July 195[illegible]

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1,2,3,4 Fire Pistol Cal45	El. 1,2,3,4 Static Display	El. 1,2,3,4 40th AD Fighter Sqdn	El. 1,2,3,4 AACS Activities	El. 1,2,3,4 Maps and Charts	El. 1,2,3,4 Drill	
0800	do	do	do	dO	El. 1,2,3,4 Mission Planning	do	
0900	El., 1,2,3,4 Fire Carbine	do	El. 1,2,3,4 Drill	do	do	do	
1000	do	do	do	do	El. 1,2,3,4 P.T.	El. 1,2,3,4 P.T.	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	El. 1,2,3,4 Acft Maint	El. 1,2,3,4 Crash and Fire Equipment	El. 1,2,3,4 KC-97 Mobile Tng Det	El. 1,2,3,4 KC-97 Mobile Tng Det	El. 1 Fld Trng El. 2 P.T. El. 3&4 Aircrew Trainer		
1300	do	do	do	do	El. 1, Drill El. 2, P.T. El. 3&4 Aircrew Trainer		
1400	do	El. 1,2,3,4 Drill	do	El. 1,2,3,4 Sqdn Admin	El. 1, Drill El. 2, Sqdn Room El. 3&4 Aircrew Tmr		
1500	do	do	El. 1.2,3,4 Free Time	do	El. 1, P.T. El. 2 Photo Lab El. 3&4, Aircrew Trainer		

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FLIGHT "D" ELEMENTS 1, 2, 3 & 4 WEEK Of: 28 June - 4 July 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1, 2, 3 & 4 Aircraft Maint.	El. 1, 2, 3 & 4 Static Display	El. 1, 2, 3 & 4 KC-97 Mobile Tng. Det.	El. 1, 2, 3 & 4 Weapons Familar.	El. 1, 2, 3 & 4 KC-97 Mobile Tng. Det.	El. 1, 2, 3 & 4 LD&EC	
0800	Do	Do	Do	Do	Do	Do	
0900	Do	Do	Do	Do	El. 1, 2, 3 & 4 Sqdn. Admin.	Do	
1000	Do	Do	El. 1, 2, 3 & 4 PT.	Do	Do	El. 1, 2, 3 & 4 PT.	
1100	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	El. 1, 2, 3 & 4 Lunch	
1200	El. 1, 2, 3 & 4 Maps & Charts	El. 1, 2, 3 & 4 Crash & fire equipment	El. 1, 2, 3 & 4 B-47 Mobile Tng Detachment	El. 1, 2, 3 & 4 Firing 45 Cal. Pistol	El. 1 & 2 Air Craft Comm. El. 3 & 4 Instrument Trainer		
1300	El. 1, 2, 3 & 4 Mission Planning	Do	Do	Do	Do		
1400	Do	El. 1, 2, 3 & 4 LD&EC	El. 1, 2, 3 & 4 Air Police Operation	El. 1, 2, 3 & 4 Firing Carbine	El. 1 & 2 Instr. Trainer, El. 3 & 4 Aircraft Comm.		
1500	El. 1, 2, & 3 PT. El. 4 Free Time	Do	El. 1, 2, 3 & 4 Officer Problem 1st Duty Assign.	Do	Do		

FLIGHT "J" ELEMENTS 1, 2, 3, 4. 29 june to 4 july

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El.1&2 Aircrew Trainers El. 3&4 Flt KC-97	Static Display El. 1,2,3,4	El. 1,2,3,4 Maps and Charts	El. 1,2,3,4 Acft. Maint.	El. 1,2,3,4 Weapons Familiarization	El. 1,2,3,4 Drill	
0800	do	do	El. 1,2,3,4, Mission Planning	do	do	do	
0900	do	do	do	do	do	do	
1000	do	do	El. 1,2,3,4 P.T.	do	do	El. 1,2,3,4 P.T.	
1100	El. 1&2 Lunch El. 3&4 Flt KC-97	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	El. 1&2 Instrument Trainers El. 3&4 Lunch	Crash and Fire Equipment El. 1,2,3,4	El. 1,2,3,4 Sqdn. Admin.	El. 1,2,3,4 AACS Activities	El. 1,2,3,4 Fire Pistol Cal45		
1300	El. 1&2 Inst. Trainers El. 3&4 Drill	do	do	do	do		
1400	El. 1&2 Acft Maint. El. 3&4 Drill	El. 1,2,3,4 Drill	El.1,2,3,4 B-47 Mobile trng Det	do	El. 1,2,3,4 Fire Carbine		
1500	El. 1&2 Lunch Cont. El. 3&4 P.T.	do	do	do	do		

Flight "F" Elements 1,2,3,4 29 June to 4 July

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1,2,3,4 KC-97 Mobile tng Det	El. 1,2,3,4 Static Desplay	El. 1&2 Aircrew Trainers El.3&4 Flt KC-97	El. 1&2 Flt KC-97 El. 3&4 Inst. Trainers	El. 1,2,3,4 AACS Activites	El. 1,2,3,4 Drill	
0800	do	do	do	do	do	do	
0900	do	do	do	El. 1&2 KC-97 Flt El. 3&4 Acft Comm	do	do	
1000	El. 1,2,3,4 Drill	do	do	do	do	El. 1,2,3,4 P.T.	
1100	Lunch	Lunch	El. 1&2 Lunch El. 3&4 Flt KC-97	El. 1&2 Flt KC-97 El. 3&4 Lunch	Lunch	Lunch	
1200	El. 1,2,3,4 Emergency Survival	El. 1,2,3,4 Crash and Fire Equipment	El. 1&2 Inst. Trainers El. 3&4 Lunch	El. 1&2 Lunch El. 3&4 Air Base Group	El. 1,2,3,4 KC-97 Mobile Tng Det		
1300	do	do	El. 1&2 Inst. Trainers El. 3&4 Drill	El. 1&2 Drill El. 3&4 Air Base Group	do		
1400	do	El. 1,2,3,4 Drill	El. 1&2 Acft Comm El. 3&4 Drill	El. 1&2 Drill El. 3&4 Special Services	El. 1,2,3,4 Sqdn Admin		
1500	do	do	El. 1&2 Acft Comm El. 3&4 P.T.	El. 1&2 P.T. El. 3&4 Special Services	do		

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FLIGHT "A"	ELEMENTS 1,2,3,4				6July - 11 July '53		
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1,2,3,4 KC-97 Mobile Tng Det	El. 1,2,3,4 Weapons Familiarization	El. 1,2,3,4;40th AD Fighter Sqdn	El. 1,2,3,4 Air Instalations	El. 1&2 Inst Trainers El. 3&4 Acft Comm	El. 1,2,3,4, Drill	
0800	do	dO	do	do	do	do	
0900	El. 1,2,3,4 Sqdn Admin	do	El. 1,2,3,4 Drill	El. 1,2,3,4; B-47 Mobile Tng Det	El. 1&2 Acft Comm El. 3&4 Inst Trainers	do	
1000	do	do	do	do	do	El. 1,2,3,4, P.T.	
1100	Lunch	Lunch	Lunch	Lunch	Lunch		
1200	El. 1,2,3,4 AACS Activities	El. 1,2,3,4 Fire Pistol Cal. 45	El. 1,2,3,4; B-47 Mobile Tng Det	El. 1,2,3,4 A.P. Operations	El. 1&2 Supply El. 3&4 Free		
1300	do	dO	do	El. 1,2,3,4 Off Pblm's-1st Duty Assignment	El. 1&2 Supply El. 3&4 Legal		
1400	do	El. 1,2,3,4 Fire Carbine	do	El. 1&2 Special Services El. 3&4 Intell	El. 1&2 Free El. 3&4 Supply		
1500	do	do	El. 1,2,3,4 Storage & Dispen of Fuel.	El. I&2 Special Services El. 3&4 Wg Hq	El. 1&2 Legal El. 3&4 Supply		

FLIGHT "B" ELEMENTS 1,2,3,4 6 July - 11 July

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1,2,3,4 Weapons Familiarization	El. 1,2,3,4 40th AD Fighter Sqdn	El. 1,2,3,4; B-47 Mobile Tng Det	El. 1,2,3,4 Air Instalation	El. 1&2 Motor Vehicle Sq. El. 3&4 Supply	El. 1,2,3,4 Drill	
0800	do	do	do	do	do	do	
0900	do	El. 1,2,3,4;B-47 Mobile Tng Det	do	El. 1&2 Supply El. 3&4 Inst Trainers	El. 1&2 Base Comm El. 3&4 Legal	do	
1000	do	do	El. 1,2,3,4 Storage and dispensing fuel	do	El. 1&2 P.T. El. 3&4 Free Time	El. 1,2,3,4 P.T.	
1100	Lunch	Lunch	Lunch	Lunch	Lunch		
1200	El. 1,2,3,4 Fire Pistol Cal. 45	El. 1,2,3,4 Off Prob-lst Duty Assignment	El. 1, Free Time El. 2, P.T. El. 3&4 Special Services	El. 1&2 Legal El. 3&4 Acft Comm	El. 1&2 Med Gp El. 3&4 Radio Security Sqdn		
1300	do	El. 1,2,3,4 A.P. Operations	El. L&2 P.T. El. 3&4 Special Services	El. 1&2 Free Time El. 3&4 Acft Comm	El. 1&2 Med Gp El. 3&4 Free Time		
1400	El. 1,2,3,4 Fire Carbine	El. 1,2,3,4 P. T.	El. 1&2 Special Services El.3 Free Time El. 4 P.T.	El. 1,2,3,4 Drill	El. 1&2 Radio Security Sqdn El. 3&4 Med Gp		
1500	do	do	El. 1&2 Special Services El. 3&4 Free Time	do	El. 1&2 Free Time El. 3&4 Med Gp		

FLIGHT "C" ELEMENTS 1,2,3,4 6 July - 11 July '53

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1, P.T. El. 2, Flt C-45 El. 3&4 Inst Trnrs	El. 1&2 Spec Serv El. 3, P.T. El. 4 Flt C-45	El. 1&2 Free Time El.3&4 Flt KC-97	El. 1&2 Aircrew Trainer El. 3&4 AB Gp	El. 1&2, Flt KC97 El. 3&4, Free Time	Drill	
0800	El. 1&2 P.T. El. 3&4 Inst Trainers	El. 1&2 Special Services El. 3&4 P.T.	El. 1&2 Free Time El. 3&4 Flt KC-97	do	do	Drill	
0900	El. 1, Scan Room El. 2, Drill El. 3&4 Acft Comm	El. 1&2 Supply El. 3, Scan Room El. 4, Drill	El. 1 Food Serv El. 2, Drill El. 3&4 Flt KC-97	El. 1&2, Aircrew Trainer El. 3&4, Drill	El. 1&2, Flt KC97 El. 3&4, Supply	Drill	
1000	El. 1, Base Photo El. 2, Drill El. 3&4 Acft Comm	El. 1&2 Supply El. 3, Base Photo El. 4, Drill	do	do	El. 1&2, Flt KC97 El. 3&4, Supply	P. T.	
1100	Lunch	Lunch	El. 1&2 Lunch El. 3&4 Flt KC-97	Lunch	El. 1&2, Flt KC97 El. 3&4, Lunch	Lunch	
1200	El. 1&2 Inst Trainers El.3, Flt C-45 El. 4, Food Serv	B-47 Mobile Tng Det	El. 1 P. T. El. 2 Food Serv El. 3&4 Lunch	B-47 Mobile Training Detachment	El. 1&2, Lunch El. 3&4, P. T.		
1300	El. 1&2 Inst Trainers El. 3 P. T. El. 4 Food Serv	do	El. 1, 3&4, Drill El. 2, Food Serv	do	Drill		
1400	El. 1&2 Acft Comm El. 3, Drill El. 4, Scan Room	do	El. 1, 3&4, Drill El. 2, P. T.	Air Police Operation	do		
1500	El. 1&2 Acft Comm El. 3, Drill El. 4, Base Photo	Storage and Dispensing of Fuel	P. T.	Officer's problems, 1st duty assignment	El. 1, 2&3, P. T. El. 4, Free Time		

Flight "D" Elements 1, 2, 3 &4 6 July - 11 July 1953

Hours	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	40th Air Div Ftr Squadron	El. 1&2, Aircrew Trainers El. 3&4, Flt KC97	El. 1, Food Serv El. 2, Flt C-45 El. 3&4, A/C Trnr	El. 1&2, Flt KC97 El. 3, Food Serv El. 4, Flt C-45	El. 1&2, Free El. 3&4, P. T.	Drill	
0800	do	do	El. 1, Food Serv El. 2, P. T. El. 3&4, A/C Trnr	El. 1&2, Flt KC97 El. 3, Food Serv El. 4, P. T.	do	Drill	
0900	Drill	do	El. 1, Scan Room El. 2, Drill El. 3&4, A/C Trnr	El. 1&2, Flt KC97 El. 3, Scan Room El. 4, Drill	El. 1&2, Drill El. 3&4, Free	Drill	
1000	do	do	El. 1, Base Photo El. 2, Drill El. 3&4, A/C Trnr	El. 1&2, Flt KC97 El. 3, Base Photo El. 4, Drill	do	P. T.	
1100	Lunch	El. 1&2, Lunch El. 3&4, Flt KC97	Lunch	El. 1&2, Flt KC97 El. 3&4, Lunch	Lunch	Lunch	
1200	B-47 Mobile Tng Detachment	El. 1, Flt C-45 El. 2, Food Serv El. 3&4, Lunch	El. 1&2, Spec Sv El. 3, Flt C-45 El. 4, Food Serv	El. 1&2, Lunch El. 3&4, P. T.	El. 1&2, Intell El. 3&4, Wing Hq		
1300	do	El. 1, P. T. El. 2, Food Serv El. 3&4, Drill	El. 1&2, Spec Sv El. 3, P. T. El. 4, Food Serv	El. 1&2, Drill El. 3&4, P. T.	El. 1&2, Wing Hq El. 3&4, Intell		
1400	do	El. 1,3&4, Drill El. 2, Scan Room	El. 1&2, Supply El. 3, P. T. El. 4, Scan Room	El. 1&2, Drill El. 3&4, Supply	Drill		
1500	Storage & Dispensing of Fuel	El. 1, Drill El. 2, Base Photo El. 3&4, P. T.	El. 1&2, Supply El. 3, Free Time El. 4, Base Photo	El. 1&2, P. T. El. 3&4, Supply	'do'		

Flight "E" Elements 1, 2, 3 &4 — 6 July - 11 July 1953

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1&2, Flt KC97 El. 3&4, A/C Comm	KC97 Mobile Tng Detachment	Air Installations	B-47 Mobile Tng Detachment	El. 1&3, Drill El. 2, Flt C-45 El. 4, Food Serv	Drill	
0800	do	do	do	do	El. 1&3, Drill El. 2, P. T. El. 4, Food Serv	do	
0900	El. 1&2, Flt KC97 El. 3&4, Inst Trnr	P. T.	El. 1&2, Spec Sv El. 3&4, Supply	do	El. 1&3, P. T. El. 2, Drill El. 4, Scan Room	do	
1000	do	do	do	Storage & Dispensing of Fuel	El. 1&3, P. T. El. 2, Drill El. 4, Base Photo	P. T.	
1100	El. 1&2, Flt KC97 El. 3, Lunch El. 4, Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	El. 1&2, Lunch El. 3, Scan Room El. 4, P. T.	Air Police Operation	El. 1, Scan Room El. 2, 3&4, Free	El. 1, Flt C-45 El. 2, Food Serv El. 3&4, A/C Trnr	El. 1&2, Free El. 3, Flt C-45 El. 4, P. T.		
1300	El. 1&2&4 Drill El. 3, Base Photo	Officer's Problems, 1st duty Assignment	El. 1, Base Photo El. 2, 3&4, Free	El. 1, P. T. El. 2, Food Serv El. 3&4, A/C Trnr	El. 1&2, Free El. 3&4, P. T.		
1400	El. 1, 2&4, Drill El. 3, Food Serv	El. 1&2, P. T. El. 3&4, Drill	El. 1, Food Serv El. 2, 3&4, P. T.	El. 1, Drill El. 2, Scan Room El. 3&4, A/c Trnr	Drill		
1500	El. 1,2&4, P. T. El. 3, Food Serv	El. 1, 3&4, Free El. 2, P. T.	do	El. 1, Drill El. 2, Base Photo El. 3&4, A/C Trng	do		

FLIGHT "F" [illegible] 1,2,3,4 [illegible] of 6 July - 11 July 1953

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	Weapons Familiarization	Drill	Air Instalations	El.1 Scan Room El. 2 P.T. El. 3&4 Supply	B-47 Mobile Tng Det	Drill	
0800	do	do	do	El. 1 Base Photo El. 2, P.T. El. 3&4 Supply	do	Drill	
0900	dO	P. T.	A.P. Operations	El. 1,Food Serv El. 2, Drill El. 3&4 Free Time	El. 1,3,4; Drill El. 2, Food Service.	Drill	
1000	do	do	Off Problems 1st Duty Assignment	El. 1, Food Serv El, 2,3,4 Free Time	do	P. T.	
1100	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
1200	Fireing Pistol Cal. 45	40th AD Fighter Squadron	El. 1&2,Supply El. 3&4 Aircrew Trainers	B-47 Mobile Tng Det	El. 1, P.T. El. 2, Scan Room El. 3, Food Serv El. 4, Base Photo		
1300	do	do	do	do	El. 1, P.T. El. 2, Base Photo El. 3, Food Serv El. 4, Scan Room		
1400	Firing Carbine	Drill	El. 1&2 Free Time El. 3&4 Aircrew Trainers	do	El. 1&2 Intell El. 3, Scan Room El. 4, Food Serv		
1500	do	Free Time	El. 1&2 Free Time El. 3&4 Aircrew Trainers	Storage & Despensing of Fuel	El. 1&2 [illegible] El. [illegible] El. [illegible]		

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FLIGHT "A"	ELEMENTS 1,2,3,4					13 July-18 July '53	
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1, Judo El. 2, P.T. El. 3,4 Motor Vh	P.T.	El. 1&2, A3Gp El. 3&4 Flt KC-97	El. 1,4 P.T. El. 2, Food Serv El. 3, Flt C-45	HFORL Exam	Turn Clothing & Equip	
0800	El. 1&2 Base Comm El. 3&4 Motor Vehicle Sqdn	El. 1, 2, Patrol El. 3, Free Time El. 4, Judo	do	El. 1,3,4 P.T. El. 2, Food Serv	Strategic Eval Sqdn	Free Time	
0900	El. 1&2 Motor VSq El. 3&4 Base Comm	El. 1,2 Wg Hq El. 3&4 Drill	El. 1&2 Drill El. 3&4 Flt KC-97	Water Rescue	Camp Commander	Collect Pay	
1000	El.1&2 Motor VSq El. 3&4 Drill	El. 1&2 Drill El. 3&4 Drill	do	do	do	Sign Out	
1100	Lunch	Lunch	El. 1&2 Lunch El. 3&4 Flt KC-97	Lunch	Lunch		
1200	El. 1&2 Med Gp El. 3&4 Radio Security Sqdn	P.T.	El. 1&2 P.T. El. 3&4 Lunch	Air Force As a Career	Grad Ceremonies Drill		
1300	El. 1&2 Med Gp El. 3&4 Free Time	El. 1, Food Serv El. 2, Judo El. 3&4 P.T.	El. 1&2 P.T. El. 3&4 Drill	Wing Comptroller	do		
1400	El. 1&2 Radio Security Sqdn El. 3&4 Med Gp	El. 1, Food Serv El. 2&4 P.T. El. 3, Judo	do	do	Free Time		
1500	El. 1&2 Free Time El. 3&4 Med Gp	El. 1&2 Free Time El. 3, Drill El. 4, P.T.	Personal Affairs	Drill	Free Time		

FLIGHT "B"	ELEMENTS 1,2,3,4					13 July - 18 July '53	
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1, Free time El. 2, Drill El. 3&4 KC-97 Flt	El. 1&2 Flt KC-97 El. 3&4 Motor VSq	El. 1&3 P.T. El. 2&4 Drill	Water Rescue	HFORL Exams	Turn in Clothing And Equipment	
0800	El. 1, Judo El. 2, Drill El. 3&4 Flt KC-97	do	El. 1&2 Intell El. 3&4 Wg Hq	do	Strategic Eval Sqdn	Free Time	
0900	El. 1, Drill El. 2, Judo El. 3&4 Flt KC-97	El. 1&2 Flt KC-97 El. 3&4 Base Comm	El. 1&2 Wg Hq El. 3&4 Intell	Personal Affairs	Camp Commander	Collect Pay	
1000	El. 1, Drill El. 2, Free Time El. 3&4 Flt KC-97	El. 1&2, Flt KC97 El. 3, Drill El. 4, Drill	El. 1,2 Drill El. 3&4 P.T.	El. 1&2,4, P.T. El. 3, Free Time	do	Sign Out	
1100	El. 1&2 Lunch El. 3&4 Flt KC-97	El. 1&2, Flt KC97 El. 3&4 Lunch	Lunch	Lunch	Lunch		
1200	El. 1, Food Serv El. 2, Free Time El. 3&4 Lunch	El. 1&2 Lunch El. 3, Drill El. 4, Free Time	El. 1, Drill El. 2,3,4 P.T.	Air Force as a Career	Grad Cerimonies Drill		
1300	El. 1, Food Serv El. 2,3,4 Drill	El. 1&2 Drill El. 3&4 ABGp	El. 1&2 ABGp El. 3, P.T. El. 4 Judo	Wing Comptroller	do		
1400	El. 1,3,4 Drill El. 2, Food Serv	do	El. 1&2 ABGp El. 3, Food Serv El. 4, Drill	do	Free Time		
1500	El. 1, Drill El. ,3,4 P.T. El. 2, Food Serv	El. 1&2 P.T. El. 3, Judo El. 4, Drill	El. 1, P.T. El. 2&4 Drill El. 3, Food Serv	Drill	do		

FLIGHT "C"	ELEMENTS 1,2,3,4				13 July - 18 July '53		
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	Air Instalations	El. 1&2 Med Gp El. 3&4 Radio Security Sqdn	Water Rescue	P.T.	HFORL EXAM	Collect Pay	
0800	do	El. 1&2 Med Gp El. 3&4 Free Time	do	do	Strategic Eval Sqdn	Turn in Clothing and Equipment	
0900	El. 1,2,4 Drill El. 3, Food Serv	El. 1&2 Radio Security Sqdn El. 3&4 Med Gp	El. 1&2 ABGp El. 3, Free Time El. 4,Judo	do	Camp Commander	Free Time	
1000	do	El. 1&2 Free Time El. 3&4 Med Gp	El. 1&2, ABGp El. 3, Judo El. 4, Free Time	Personal Affairs	do	Sign out	
1100	Lunch	Lunch	Lunch	Lunch	Lunch		
1200	El. 1&2 Motor VSq El. 3&4 P.T.	El. 1&2 Intell El. 3&4 Wg Hq	El. 1&2 Drill El. 3&4 Special Services	Air Force As a career	Grad Cerimonies Drill		
1300	El. 1&2 Motor VSq El. 3&4 Base Comm	El. 1&2 Wg Hq El. 3&4 Intell	do	Wing Comptroller	do		
1400	El. 1&2 Base Comm El. 3&4 Motor VSq	P.T.	El. 1, Judo El. 2&4 P.T. El. 3, Drill	do	Free Time		
1500	El. 1, P.T. El. 2, Free Time El. 3&4 Motor VSq	do	El. 1, Free Time El. 2, Judo El. 3, Drill El. 4, P.T.	Drill	Free Time		

FLIGHT "D"	ELEMENTS 1,2,3,4					13 July - 18 July '53	
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	Air Installations	El. 1 Judo El. 2, Free Time El. 3&4 ABGp	El. 1&2 Med Gp El. 3,4 Raido Security Sqdn	Personal Affairs	HFORL Exam	Collect Pay	
0800	do	El. 1&2 Base Comm El. 3&4 ABGp	El. 1&2 Med Gp El. 3&4 Free Time	El. 1 Free Time El. 2, Judo El. 3&4 Drill	Strategic Eval Sqdn	Turn in Clothing and Equipment	
0900	El. 1&2 ABGp El. 3&4 P.T.	El. 1&2 Motor VSq El. 3, Drill El. 4, P.T.	El. 1&2 Radio Security Sqdn El. 3&4 Med Gp	El. 1,2,4 P.T. El. 3, Judo	Camp Commander	Free Time	
1000	do	El. 1&2 Motor VSq El. 3, Drill El. 4, Judo	El. 1&2 Free El. 3&4 Med Gp	El. 1,2,4 P.T. El. 3, Free Time	do	Sign Out	
1100	Lunch	Lunch	Lunch	Lunch	Lunch		
1200	El. 1&2 P.T. El. 3&4 Special Services	El. 1&2 P.T. El. 3&4 Motor VSq	Water Rescue	Air Force As a Career	Grad Cerimonies Drill		
1300	do	do	do	Wing Comptroller	do		
1400	Drill	El. 1&2 P.T. El. 3&4 Base Comm	El. 1,2,3 P.T. El. 4, Drill	do	Free Time		
1500	do	El. 1, Free Time El. 2,3,4 Drill	do	Drill	do		

FLIGHT "E"	ELEMENTS 1,2,3,4			13 July - 18 July '53			
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1&2 Supply El. 3, Free Time El. 4, Flt C-45	El. 1&2 Intell El. 3&4 Special Services	El. 1, P.T. El. 2, Judo El. 3&4 Motor VSq	El. 1, Free Time El. 2, Drill 3-Judo; 4-P.T.	HFORL Exam	Free Time	
0800	El. 1&2 Supply El. 3,4, P.T.	El. 1&2 Wg Hq El. 3&4 Special Services	El. 1&2 P.T. El. 3&4 Motor VSq	Personal Affairs	Strategic Eval Squadron	Collect Pay	
0900	Drill	El. 1, Judo El. 2, P.T. El. 3&4 Drill	Water Rescue	El. 1, P.T. El. 2,3,4 Drill	Camp Commander	Turn in Clothing and Equipment	
1000	do	Drill	do	Drill	do	Sign Out	
1100	Lunch	Lunch	Lunch	Lunch	Lunch		
1200	El. 1&2 P.T. El. 3&4 ABGp	El. 1&2 Drill El. 3&4 Base Comm	El. 1&2 Med Gp El. 3&4 Radio Security Sqdn	Air Force as a Career	Grad Cerimonies Drill		
1300	do	El. 1&2 Base Comm El. 3&4 P.T.	El. 1&2 Med Gp El. 3&4 Free Time	Wing Comptroller	do		
1400	El. 1&2 ABGp El. 3&4 P.T.	El. 1&2 Motor VSq El. 3&4 Intell	El. 1&2 Radio Security El. 3&4 Med Gp	do	Free Time		
1500	El. 1&2, ABGp El. 3, P.T. El. 4, Judo	El. 1&2 Motor VSq El. 3&4 Wg Hq	El. 1&2 Free Time El. 3&4 Med Gp	Drill	do		

FLIGHT "F"	ELEMENTS 1,2,3,4			13 Jun - 18 July '53			
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	REMARKS
0700	El. 1&2 ABGp El. 3&4 Drill	El. 1, P.T. El. 2, Flt C-45 El. 3&4 Base Comm	El. 1,2,3 Drill El. 4, Flt C-45	El. 1&2 Med Gp El. 3&4 Radio Security Sqdn	HFORL Exam	Free Time	
0800	El. 1&2 ABGp El. 3&4 Intell	P.T.	El. 1&2, Base Comm El. 3&4 P.T.	El. 1&2 Med Gp El. 3&4 Free Time	Strategic Eval Sqdn	Collect Pay	
0900	El. 1&2 Special Services El. 3&4 Wg Hq	Drill	El. 1&2 Motor VSq El. 3, P.T. El. 4, Drill	El. 1&2 Radio Security Sqdn El. 3&4 Med Gp	Camp Commander	Turn in clothing and Equip	
1000	El. 1&2 Special Services El. 3&4 P.T.	El. 1,2,3 Drill El. 4, Free Time	do	El. 1&2 Free Time El. 3&4 Med Gp	do	Sign Out	
1100	Lunch	Lunch	Lunch	Lunch	Lunch		
1200	El. 1, Flt C-45 El. 2, Judo El. 3&4 P.T.	El. 1, Judo El. 2, Free Time El. 3, Flt C-45 El. 4, P.T.	El. 1, P.T. El. 2, Drill El. 3&4 Motor VSq	Air Force as a Career	Grad Cerimonies Drill		
1300	El. 1,2,4 P.T. El. 3, Judo	P.T.	do	Wing Comptroller	do		
1400	El. 1, Drill El. 2,3 P.T. El. 4, Judo	do	Water Rescue	do	Free time		
1500	El. 1, Drill El. 2,4 P.T. El. 3, Free Time	Personal Affairs	do	Drill	do		

EXHIBIT 15

PREVENTIVE DENTISTRY PROGRAM

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MacDill Air Force Base, Florida

CONTENTS

1. Preface

2. Introduction

3. Preventive Dentistry Program:

A. Phase No. 1 Dental Health Program:

a. Oral Hygiene

b. Dental Caries

B. Phase No. 2 Adequate Periodic Dental Examination

C. Phase No. 3 Adequate Dental Attention

4. Bibliography

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PREFACE

The following information on Preventive Dentistry is presented as a Dental Health Program. The information is limited to those facts and suggestions which can be covered effectively in a twenty minute lecture.

This program is concerned with preventing dental and associated diseases. It is designed to be educational, to encourage periodic dental examinations, to allay fear of dental attention, and to establish pain prevention and Preventive Dentistry as a standard procedure.

The primary purpose of this presentation is to acquaint all MacDill Air Force Base personnel with its beneficial possibilities and to encourage cooperative participation.

INTRODUCTION

WHAT IS PREVENTIVE DENTISTRY?

All of us have some idea as to what dentistry is. [illegible] our purposes it is mainly concerned with restoring and maintaining all structures, teeth, jaws and investing tissues in the mouth in a state of normal health.

Prevention:

According to the dictionary, its meaning is "to keep from happening". To keep what from happening? You know that many persons appear too late for dental attention. They are forced to seek relief because they are in pain. Why suffer needless pain, loss of sleep, and probable loss of several teeth when that can be prevented?

The Preventive Dentistry Program objectives are:

1. To prevent all toothaches caused by tooth decay.
2. To provide painless dentistry.
3. To keep you in good dental health.

Why haven't we started this program sooner? As stated in an official publication "dental personnel were faced with an overwhelming dental [illegible]. "It is normal dental procedure to give priority to the treatment of acute and subacute conditions likely to interfere with the proper performance of duty. The restoration of broken down and missing teeth constitutes the bulk of the dental work and can be accomplished only over a period of time."

A recent study of dental records reveals a trend away from [illegible] and provisional dental care to preventive dentistry. In line with this trend a Chief of Preventive Dentistry has been appointed and regulations have been published for the accomplishment of his work (paragraph 42, AR Manual 169-13).

A co-ordinated Preventive Dentistry Program employing every scientific [illegible] will be established to develop maximum effectiveness of the United States Air Force Dental Services.

PREVENTIVE DENTISTRY PROGRAM

The Program of Preventive Dentistry in the United States Air Force is based on the same fundamental principles as pertain to preventive dentistry in any other military or civilian population. Differences in the practice of preventive dentistry arise from the special characteristics of the population groups in the Air Force. More than 50% of the personnel are young adults between the ages of 18 - 30. Certain preventive measures such as are prescribed for pre-school children are not indicated here. However, the mission of the Preventive Dentistry Program is similar in its objectives, that is, to prevent dental diseases and injuries and to maintain dental health. With that in mind the program has been organized into three functional phases:

1. Dental Health Education:
   a. Indoctrination of personnel: An opportunity to teach each patient to care for his mouth and to develop a real interest in his own dental health.
   b. Oral Hygiene.
   c. Dental Caries.

2. Adequate Periodic Dental Examinations.

3. Dental Attention.

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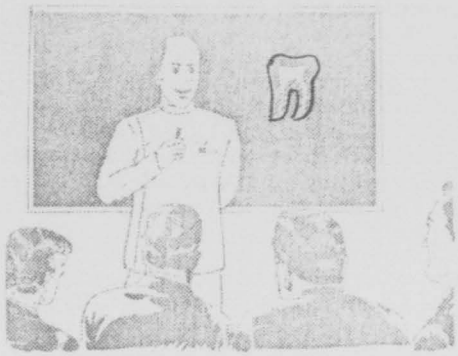
PHASE NO. I

DENTAL HEALTH EDUCATION



A basic knowledge of dentistry, like a basic knowledge of general health and hygiene, is a fundamental help in the fight for the prevention of injury and disease. Fortunately, most mouth diseases or injuries can to a large extent be prevented. Those that do occur, if recognized and treated early, can be successfully remedied.

Oral Hygiene:

Do you know that gum diseases are the major cause of the early loss of teeth, as well as being injurious to your general health? Yet it is so easy to keep your gums healthy, provided your general health is good. Simply comply with the following information:

There are many methods you can use to brush your teeth. Some are correct, but many are not worth the time spent on them. How about ONE good technique?

1. Select a small tooth brush with which you can reach all the tooth surfaces and gums, preferably one with two rows of medium-hard bristles, all the same length. Hard bristles bruise the gums.

2. Look into a mirror and see yourself place the toothbrush bristles directly on the gums and between the teeth. The bristles are jiggled firmly in a rotary motion. (Count to eight in this position). Then sweep away from the gums on the finishing stroke. Easy, isn't it? Try it again, bristles on gum tissue, gently, don't hurt yourself. Rotate in place,

then sweep away, the bristles passing over and between the teeth. Get the idea?

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3. Look in your mirror when you brush your teeth, following a definite routine. Start on your back teeth, using the same technique as above, and work your way around the rest of your teeth, section by section. Do not skip around. Next, brush the tongue side of all your teeth, upper and lower. Brush the biting surfaces too. In this way you will remove any food debris which has collected under the gums and between the teeth. You will be massaging your gums as well as brushing your teeth.

4. Brush your teeth immediately after each meal and rinse several times with each brushing. A real good brushing job takes about three minutes after you master the technique.

5. Your teeth will look clean and feel slick. Your gums will be tingling, healthy and firm.

After the teeth have been thoroughly brushed, take a minute to clean the tongue. Stick it out as far as possible and sweep forward with your toothbrush. This may cause gagging at first, but as a rule, after a few attempts, most of the gagging can can be controlled. Brush the tongue several times for on its surface are accumulated food and other substances which produce mouth odors.

Now gently pass dental floss between the teeth to remove any foreign matter which was not removed by brushing. This should be done at least once a day. Be careful, do not permit the floss to snap onto the gums causing them to hemorrhage and to swell. Injury of this type, if allowed to happen often, can cause permanent damage to the gums. Toothpicks, too, should be carefully used, if at all. Toothpicks made of gold, ivory, wood and other materials have been used for centuries to relieve discomfort caused by the pressure of food wedged between the teeth. Toothpicks made of wood or pieces of straw, or a shaved stick used as a substitute, often

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often break off, leaving a splinter or foreign body in the gums. This produces a bloody swelling in the area and discomfort until removed.

Next, we must consider the type of dentifrice to be used. Any of the common dentifrices on the market are suitable, if you like the particular taste and you consider the dentifrice only as an aid to be used with your toothbrush to clean your teeth or remove stains. Some dentifrices contain very abrasive ingredients which give them superior cleaning and stain removing qualities. According to a recent report of the National Bureau of Standards, ten out of twenty-five popular toothpastes were found to be harmful when abrasion tests were applied. Continued use of these dentifrices will wear down the enamel so that the teeth are sensitive and unsightly. Consult your dental officer for help in this matter.

Bleeding, inflamed and sore gums are the most easily recognized dental troubles. Some of these lesions are caused by calculus (tartar), food impactions, sharp bones, hot food irritants, or by using the wrong method when brushing the teeth. Knowing about this is a help in the prevention of trouble. Furthermore, seeking dental attention at the earliest moment you become aware of trouble can prevent further injury and permanent damage to the delicate tissues of the mouth.

"Another common mouth disease is trench mouth or Vincent's stomatitis. This is probably a communicable disease that may be contracted by drinking from bottles or glasses used by infected persons, taking a drag from a cigarette smoked previously by such a person, or from close contact with infected individuals. The common early signs are bleeding gums, unpleasant taste in the mouth and a smarting or tingling sensation of the gums when eating acid or hot foods. Unless recognized and treated immediately, Vincent's stomatitis may progress to the point of involving the throat, the floor of the mouth (underneath the tongue) and tonsils." This condition is not to be ignored.

0120

"Another common mouth disease is pyorrhea or peridontoclasia. This disease is responsible for the loss of many teeth. The early signs are inflammation of long standing (chronic), bleeding gums, and looseness of teeth. Early treatment is of the utmost importance and only a dental officer can successfully treat this disease."

A Final Note on Oral Hygiene:

The purpose of tooth brushing is to massage the gums and to remove food deposits which collect on the necks of teeth and in between the teeth. It is advisable to clean your teeth as soon as possible after eating. If brushing cannot be done at the moment, then several vigorous rinsings will do.

The Medical Department carefully plans for your food needs so that a nutritional balance is maintained, but some foods obtainable outside the mess hall, such as candy, chewing gum and cola drinks, tend to ferment or break down into tooth eating acid. Rinsing thoroughly after eating is a wise precaution.

It is also well to remember that a dentifrice is recommended only for its taste and ability to remove stains. There is no toothpaste, toothpowder, liquid dentifrice, chemical or antiseptic material prepared for home use that will harden the gums, cure pyorrhea or cure tooth decay.

0121

DENTAL CARIES

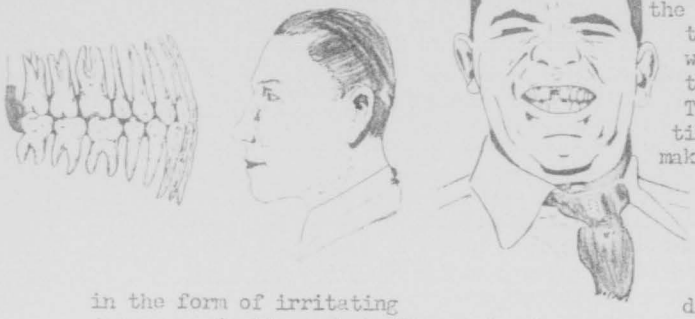
Dental caries or tooth decay is one of the oldest and most common diseases known to man. Progress in dentistry has made it possible for caries to be controlled.

Caries can be controlled. How do we do it? Simply be on the lookout for tooth decay. Your dental officer will be happy to help you. Small cavities are easy and painless to drill and fill. Furthermore, a tooth with two or three small fillings is usually healthier than one with one large filling. However, if you neglect that little filling and the decay progresses so far that it infects the nerve, you have bargained for trouble. This trouble is insidious, it is often present without any warning pain. The infection from the tooth is carried around the blood stream. This may result in infectious arthritis, neuritis, heart trouble, and also general debility, fatigue, drowsiness, loss of weight, headaches and reduced resistance to infection.

Often, however, when cavities are allowed to become large and infect the pulp (nerve), a most excruciating pain results - commonly known as a toothache. If you have ever had one you will never forget the sharp and piercing pain. It may not only be felt in the diseased tooth, but also in the ear, or in the opposite jaw, or even in the top of the head. The pain may vary from a sharp, stabbing pain, to throbbing, like a beat, to persist until it is bearable. Extraction is usually the only treatment which will relieve this pain.

0122

The loss of one or more teeth affects you in many ways. It changes your looks, at first showing gaping holes when you talk or smile; then as the teeth shift and change from their original positions and later need to be extracted, the shape of the face changes too. The space in the mouth which used to be occupied by the teeth is now vacant. The lower jaw shuts more tightly with the upper jaw, making the chin, nose and ears appear much larger and often causes partial deafness and vague head and facial pains. These symptoms may appear gradually in the form of irritating discomfort in the joint of the jaw, or a feeling of stuffiness in the ears.



Loss of teeth also affects your eating habits. The normal mouth is fully equipped with teeth - a complex machine used to chew and properly prepare food so that all the nourishment may be taken up by the body. Missing teeth, or teeth made painfully sensitive by tooth decay or pulp infection, make chewing of food almost impossible. Digestion is a process that begins in the mouth, and those who cannot chew their food properly usually have indigestion as soon as the food starts its journey into the body. These persons not only lose the joy of living because most of the cause of indigestion, but are irritable and tired most of the time.

Must you lose your teeth? Modern dentistry has made great strides in its ability to keep the teeth and mouth healthy. Methods of control and treatment are so advanced that there is no reason for a toothache. We have a Preventive Dentistry

0123

Program. Our target is to prevent toothaches, loss of teeth, misshapen facial appearance, faulty speech, bad health, tiredness and irritability and even a warped personality.

Your own teeth are a precious heritage---give them the attention they so richly deserve.

0124

PHASE NO. 2

PERIODIC DENTAL EXAMINATIONS

All personnel will be requested to appear for periodic dental surveys. The dental officer will perform a Type 2 Routine Examination (AFM 160-13, paragraph 25), cavities or any other oral defects will be noted on your Dental Health Record (AF Form 30), and you will be classified accordingly (AFM 160-13, paragraph 26).

A dental appointment will be made at the earliest possible date and not later than ten days after the examination.

PHASE NO. 3

DENTAL ATTENTION

The present program objectives include an annual oral prophylaxis for each military person, oral hygiene improvements, and better understanding of the benefits available through adequate dental attention.

Written instructions on how to brush your teeth are available ("Here's How to Brush Your Teeth", instruction sheets). All necessary dentistry will be accomplished. Decayed teeth will be restored to normal health. The Dental Service will provide the very best treatment possible.

Preventive dentistry encompasses activities for the prevention of disease and the promotion of health. It is your direct responsibility to get the most out of this program by giving it your utmost cooperation. Keep your appointments, follow the advice given, and help the dentist to help you.

Controlled prevention of dental diseases is recognized and emphasized as an important part of any Dental Health Program. But fear of a dentist, painful treatments and toothaches have long been major problems. There is no longer any reason why this should be so. Modern dentistry has made it possible to perform all dental operations painlessly. Advances made in dentistry make it possible to check and control dental diseases successfully.

0126

As stated by Brigadier General Marvin L. Kennebeck, Chief of Dental Division, United States Air Force "In closing, I wish to impress upon you again the importance of oral health from the standpoint of your efficiency as a member of the Air Force. Do not neglect your mouth. Your general health and your effectiveness as an important part of our Air Force is dependent upon good oral hygiene."

0127

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APPENDIX "B"

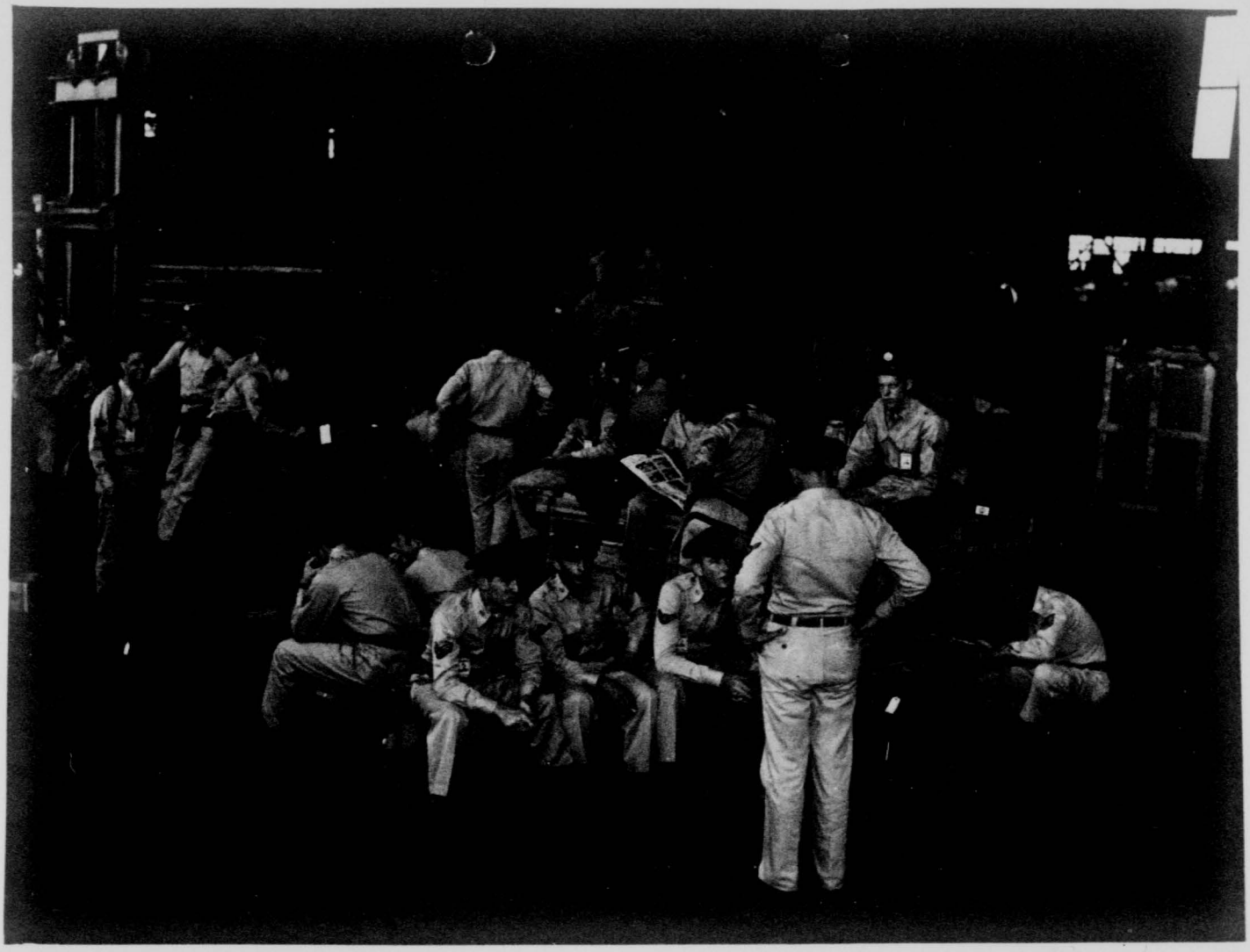
BRIGADIER GENERAL H. K. MOONEY (left), 6th Air Division Commander, explains plans for a two-day inspection tour of MacDill and its B-47 Stratojets to a group of aviation writers representing newspapers, magazines, radio and television. Seated at the far left is Major General Frank A. Armstrong, Jr., Second Air Force Commander. The writers were interested primarily in the deployment of the 306th Bomb Wing to England for 90 days temporary duty.

EASTERN
ZEBRA

CAPTAIN JACK HARPER, in Cherokee Indian headdress, looks at the name "Sa-Gua" which means "first" in tribal language, and which has been applied to one of the 369th "Fitin' Bitin'" Bomb Squadron's B-47's. Captain Harper, navigator of the aircraft, is part Cherokee. "Sa-Gua" was one of 45 306th Bomb Wing Stratojets which departed in June for 90 days temporary duty in England.

SA-GUA
U.S.AIR FORCE MODEL B-47B-46-BW
A.F.SERIAL NO.51-2291A
CREW WEIGHT 750 LBS.
UNITED ST

"HURRY UP AND . . . " Officers and airmen of the supporting elements of the 306th Bomb Wing gather in Hangar Four awaiting transportation that will carry them to England for 90 days temporary duty. Note the full field equipment, sans helmets.



A PORTION OF THE 45 B-47's of the 306th Bomb Wing poise on the flight line prior to flying to Fairford, England, 3-6 June, for 90 days temporary duty.

APPENDIX "C"

MACDILL STATISTICAL SUMMARY-PART I

STATION STRENGTH SHEET

FOR PERIOD 1 through 30 JUNE 1953

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PFD & PNFD	(F) AVG ASGD	(G) AVG PHY PRESENT
Hq 6th Air Div	OFF	10	16		11	15	9
	AMN	7	10		9	10	10
	CIV	3	3				
Hq 809th AB Gp	OFF	54	58	17	56	59	63
	AMN	215	365	13	316	354	314
	CIV	81	72				
809th Supply Sq	OFF	14	8		5	9	6
	AMN	383	458	5	341	457	351
	CIV	142	139				
809th Mtr Veh Sq	OFF	5	5		3	5	3
	AMN	201	364	3	258	358	259
	CIV	13	14				
809th AP Sq	OFF	14	12		8	10	6
	AMN	449	471		283	475	322
	CIV	1	1				
809th Instl Sq	OFF	8	6		5	5	5
	AMN	299	378		308	371	313
	CIV	169	172				
809th Fd Sv Sq	OFF	7	3		2	3	3
	AMN	372	565		417	563	442
809th Oprs Sq	OFF	37	34	1	26	33	24
	AMN	422	476	4	395	462	397
	CIV	26	23				
98th Air Reflg	OFF	85	56		44	53	46
Sq	AMN	229	224		192	202	183
8th Crash	OFF	8	2		2	2	2
Boat Flt	AMN	77	112		105	111	100
TOTAL 809TH	OFF	242	200	18	162	194	167
ABG	AMN	2654	3423	25	2624	3363	2691
	CIV	435	424				
740th AF Band	OFF	1	0		0	0	0
	AMN	34	34		31	34	29
7th ALT Chamber	OFF	1	1		1	1	1
Indoc Flt	AMN	11	15		14	15	12
Hq 305th BH WG	OFF	45	48		36	48	35
	AMN	106	116		105	117	102
	CIV	3	3				
364th Bm Sq	OFF	66	58		41	59	44
	AMN	106	119		108	114	99
365th Bm Sq	OFF	66	62		52	63	50
	AMN	106	114		106	117	104
366th Bm Sq	OFF	66	57		47	59	50
	AMN	106	130		111	125	108
305th A&E	OFF	14	11		8	11	9
Maint Sq	AMN	370	339		266	343	263
305th Field	OFF	7	5		5	5	4
Maint Sq	AMN	423	385		334	380	333
305th Periodic	OFF	5	4		4	5	4
Maint Sq	AMN	227	196		181	202	184
305th Air Ref	OFF	85	78		69	81	67
Sq	AMN	229	269		247	275	240
305th Med Gp	OFF	27	36		26	36	29
	AMN	98	97		87	95	83
TOTAL 305TH	OFF	381	359		288	347	292
BOMB WING	AMN	1771	1765		1545	1768	1516
	CIV	3	3				

RESTRICTED

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PFD & PNFD	(F) AVG ASGD	(G) AVG PHY PRESENT
*Hq 306th	OFF	45	54		14	54	36
Bm Wg	AMN	106	121		60	120	94
	CIV	3	3				
*367th Bm Sq	OFF	66	61		4	62	22
	AMN	106	123		35	123	65
*368th Bm Sq	OFF	66	61		4	61	20
	AMN	106	120		23	121	63
*369th Bm Sq	OFF	66	59		3	59	20
	AMN	106	113		18	114	53
306th M&E	OFF	13	14		5	15	7
Maint Sq	AMN	337	352		96	351	158
	CIV	15	8				
*306th Field	OFF	7	8		3	9	5
Maint Sq	AMN	349	406		153	411	260
	CIV	44	62				
*306th Periodic	OFF	5	5		2	5	4
Maint Sq	AMN	181	203		108	204	141
*306th Air Ref	OFF	85	78		6	78	26
Sq	AMN	229	232		28	233	94
306th Avn Sq	OFF	15	15		11	16	11
	AMN	33	39		34	37	32
306th Med Gp	OFF	72	51	31	60	55	57
	AMN	207	207	336	466	211	379
	CIV	55	53				
*TOTAL 306TH	OFF	440	406	31	112	414	208
BOMB WING	AMN	1760	1916	336	1021	1925	1339
	CIV	117	126				
TOTAL 307TH AEG	OFF	1	8		8	8	6
	AMN	4	8		8	8	8
SPECIAL MISSION UNITS							
Det "21" 3944th	OFF	4	3		2	3	2
Radar Scor Sq	AMN	30	31		29	31	29
3908th Strat	OFF	16	26		12	26	12
Eval Sq	AMN	47	45		25	46	24
	CIV	1	1				
TOTAL SAC ORGNS	OFF	1086	1003	49	585	1013	690
	AMN	6311	7237	361	5297	7190	5648
	CIV	556	554				
Det 1, 26	OFF	12	13	1	11	12	10
Weather Sq	AMN	28	24		21	24	21
Hq 1928 AACS Sq	OFF	13	10	1	7	10	8
	AMN	120	180	4	150	179	148
	CIV	6	6				
Det 3, 136 Comm	OFF	2	2		2	2	2
	AMN	47	55		50	49	47
C-97-2 Mobile	OFF	1	1		1	1	1
	AMN	21	21		21	19	18
B-47 Mobile	OFF	1	1		1	1	1
Tng Unit	AMN	17	12	12	18	13	20
7th OSI	CIV	6	5				
TOTAL NON-SAC	OFF	29	27	2	22	26	22
ORGANIZATIONS	AMN	233	292	16	260	284	254
	CIV	12	11				
TOTAL MACDILL	OFF	1115	1030	51	607	1039	712
AFB	AMN	6544	7529	377	5557	7474	5902
	CIV	568	565				
GRAND TOTALS		8227	9124	428	6164	8513	6614

* ALL FIGURES, OTHER THAN AUTHORIZATIONS ARE AS OF 9 JUNE 1953

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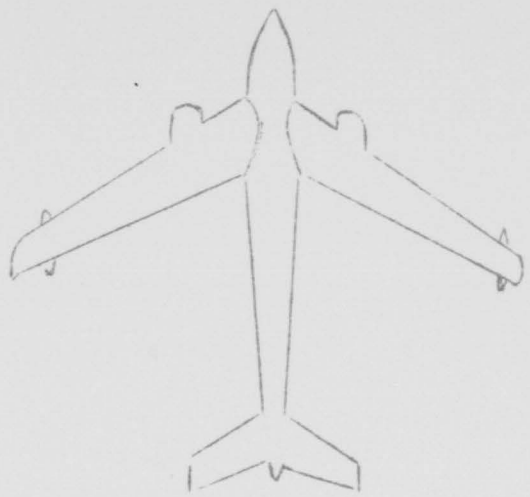
Statistical Summary



PART II

JUN 1953

MACDILL AIR FORCE BASE FLORIDA

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STATISTICAL SUMMARY - JUNE 1953

ORGANIZATION	PERSONNEL																						REPORTS	
	Strength	Punished A-15		Summary C. M.		Special C. M.		A W O L				Traffic Violations			Air Police Arrests			V.D.		Ground Accidents			M.R.	M.R.
		No.	Rate	No.	Rate	No.	Rate	No. Going in June	Rate	AWOL on 30 June	Man Days Lost	On Base Moving	Off Base Moving	Combined Rate	Drunkeness	Misc.	Combined Rate	No.	Rate	Non-disabling	Disabling	Disabling Accident Rate	Late	Err.
Hq 6th Air.Div.	25	0	0	0	0	0	0	0	0	0	0	1	0	40	0	0	0	0	0	0	0	0	0	0
809th A.B. Gp.	3302	45	13.6	22	6.7	6	1.8	20	6.1	7	233	19	15	10.3	15	40	16.7	7	2.1	6	2	.61	2	2
Hq.809th A.B.Gp	413	3	7.2	0	0	0	0	1	2.4	0	2	4	0	9.7	1	5	14.5	0	0	1	1	2.4	0	0
809th Supply Sq	466	10	21.5	1	2.1	0	0	2	4.3	1	19	0	1	2.1	4	8	25.7	0	0	0	0	0	0	0
809th Mtr.Veh.Sq	363	2	5.5	4	11.0	0	0	4	11.0	0	33	5	3	22.0	5	7	33.1	1	2.8	1	0	0	0	0
809th A.P.Sq.	485	1	2.1	1	2.1	4	8.2	0	0	0	0	2	0	4.1	1	0	2.1	1	2.1	0	0	0	0	0
809th Instl.Sq.	376	15	39.9	9	23.9	1	2.7	3	8.0	1	48	3	4	18.6	1	7	21.3	1	2.7	2	0	0	2	2
809th Food Sv.Sq	566	13	23.0	6	10.6	1	1.8	8	14.1	4	100	1	3	7.1	2	5	12.4	3	5.3	1	0	0	0	0
809th Opns. Sq.	495	1	2.0	1	2.0	0	0	1	2.0	1	25	4	4	16.2	1	8	18.2	1	2.0	1	0	0	0	0
8th Crash R.Flt	113	0	0	0	0	0	0	1	8.8	0	6	0	0	0	0	0	0	0	0	0	1	8.8	0	0
305th Bomb Wg.	2135	2	.94	2	.94	0	0	1	.47	1	20	25	1	12.2	6	70	35.6	1	.47	0	1	.47	0	4
Hq.305th Bm Wg.	165	0	0	0	0	0	0	0	0	0	0	5	0	30.3	0	2	12.1	0	0	0	0	0	0	1
364th Bomb Sq.	173	0	0	0	0	0	0	0	0	0	0	4	0	23.1	0	8	46.2	0	0	0	0	0	0	0
365th Bomb Sq.	180	1	5.6	0	0	0	0	1	5.6	1	20	0	0	0	0	8	44.4	0	0	0	1	5.6	0	0

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STATISTICAL SUMMARY - JUNE 1953 —

ORGANIZATION	PERSONNEL																		REPORTS	
	Strength	Punished A-15		Summary C.M.		Special C.M.		AWOL				Traffic Violations			Air Police Arrests			V.D.		Ground Accidents			M.R. Late	M.R. Err.
		No.	Rate	No.	Rate	No.	Rate	No. Going in Jun	Rate	AWOL on Jun. 30	Man Days Lost	On Base Moving	Off Base Moving	Combined Rate	Drunkeness	Misc.	Combined Rate	No.	Rate	Non-disabling	Disabling	Disabling Accident Rate		
366th Bomb Sq.	184	1	5.4	1	5.4	0	0	0	0	0	0	3	0	16.3	1	7	43.4	0	0	0	0	0	0	0
305th A&E Sq.	354	0	0	0	0	0	0	0	0	0	0	4	0	11.3	2	12	39.5	0	0	0	0	0	0	0
305th Field Maint.	385	0	0	0	0	0	0	0	0	0	0	2	0	5.2	1	14	38.9	1	2.6	0	0	0	0	0
305th Per. Maint.	207	0	0	0	0	0	0	0	0	0	0	1	0	4.8	1	2	14.5	0	0	0	0	0	0	1
305th Air Ref.Sq.	356	0	0	0	0	0	0	0	0	0	0	6	0	16.9	1	16	47.8	0	0	0	0	0	0	1
305th Med. Gp.	131	0	0	1	7.6	0	0	0	0	0	0	0	1	7.6	0	1	7.6	0	0	0	0	0	0	1
306th Bomb Wg.	2339	0	0	5	2.1	0	0	3	1.3	1	32	4	1	2.1	4	18	9.4	2	.86	1	1	.43	0	0
Hq.306th Bm Wg.	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.7	0	0	0	1	5.7	0	0
367th Bm. Sq.	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.4	2	10.8	0	0	0	0	0
368th Bomb Sq.	182	0	0	1	5.5	0	0	0	0	0	0	1	0	5.5	0	0	0	0	0	1	0	5.5	0	0
369th Bomb Sq.	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
306th A&E Sq.	366	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	13.7	0	0	0	0	0	0	0
306th Field Maint.	420	0	0	3	7.1	0	0	0	0	0	0	1	0	2.4	2	5	16.7	0	0	0	0	0	0	0
306th Per. Maint.	209	0	0	0	0	0	0	0	0	0	0	1	0	4.8	0	1	4.8	0	0	0	0	0	0	0
306th Air Ref.Sq.	311	0	0	0	0	0	0	1	3.2	0	2	0	0	0	0	3	9.6	0	0	0	0	0	0	0
306th Aviation Sq	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	18.9	0	0	0	0	0	0	0
306th Med. Gp	266	0	0	1	3.8	0	0	2	7.5	1	30	1	1	7.5	0	3	11.2	0	0	0	0	0	0	0
307th Air Base Gp.	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Det.21,3944th U.Rpd	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	29.4	0	0	0	0	0	0	0
3908th S.E. Sq.	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

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ORGANIZATION	Strength	PERSONNEL: Punished A-15 No.	Punished A-15 Rate	Summary C.M. No.	Summary C.M. Rate	Special C.M. No.	Special C.M. Rate	A W O L: No. Going in June	A W O L Rate	AWOL on Jun30	Man Days Lost	Traffic Violations: On Base Moving	Off Base Moving	Combined Rate	Air Police Arrests: Drunkenness	Misc.	Combined Rate	V.D. No.	V.D. Rate	Ground Accidents: Non-disabling	Disabling	Disabling Accident Rate	REPORTS: M.R. Late	M.R. Err.
7th Alt Cmb Ind.Flt	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
740th A.F. Band	34	0	0	0	0	0	0	0	0	0	0	0	1	29.4	0	0	0	0	0	0	0	0	0	0
98th A.F.S.	255	2	7.8	0	0	0	0	0	0	0	0	1	2	11.8	1	11	47.1	0	0	0	1	3.9	1	1
Total SAC Orgns	8203	49	5.9	29	3.5	6	.73	24	2.9	9	295	50	20	8.5	26	140	20.2	10	1.2	8	5	1.6	3	7
Wea.Det.26-1	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1928th AACS Sq.	189	3	15.9	0	0	1	5.3	0	0	0	0	3	0	15.9	0	0	0	1	5.3	0	0	0	0	0
Det.3.136 Comm.	51	0	0	0	0	0	0	0	0	0	0	2	0	39.2	0	0	0	0	0	0	0	0	0	0
C-97-2 Mob.TrgU	20	1	50.0	0	0	0	0	0	0	0	0	0	1	50.0	0	0	0	0	0	0	0	0	0	0
B-47-5 Mob.TrgU	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Tenants	310	4	12.9	0	0	1	3.2	0	0	0	0	5	1	19.4	0	0	0	1	3.2	0	0	0	0	0
MACDILL TOTAL	8513	53	6.2	29	3.4	7	.82	24	2.8	9	295	55	21	8.9	26	140	19.5	11	1.3	8	5	1.5	3	7

REMARKS: There were no General Courts-Martial in June.
306th Bomb Wing figures are for the entire Wing before its departure and for personnel in remaining squadrons and detachments since departure of Wing to TDY location.
The Venereal Disease figures are for the period 28 May through 24 June. All other rates are computed on the calendar month basis. All rates except Ground Accidents are based on the number of cases per 1000 of monthly average assigned military personnel. Ground Accident rates are based on the number of disabling injuries per 100,000 Mandays of assigned personnel. Only accidents in which at least one Manday is lost are considered as disabling injuries.

SOURCES: Report of Punishment under Article 15, Base Legal Office, Air Provost Marshal, Hospital Venereal Disease Control Office, Ground Safety Office, AF Form 183(Morning Report), Form 110A, Form 110D, Flying Safety Office.

ORGANIZATION	TYPE	NUMBER OF AIRCRAFT			Number of Landings	NUMBER OF HOURS FLYING			% of Time in Comm. Util.	% OF TIME AIRCRAFT ON HAND				PURPOSE OF FLIGHT				Accidents	Total Gallons Fuel Issued
		Average No.	On Hand at E. O. M.	Total Hrs on Hand		TOTAL	Avg Hrs Flying Per A/C	Hrs Night Flying		In Commission	AOCP	T/O Compliance	AOC Other Reasons	Familiarization	Operational	Administrative	Other		
305TH BOMB WING	KC-97	32.1	39	23095	168	665	20.7	170	37.9	76.0	4.7	0	19.3	0.5	57.7	19.9	21.9	0	312932
	B-47	51.3	51	36971	941	1628	31.7	354	5.7	77.0	1.4	0	21.6	0	92.6	0.1	7.3	1	2636800
	T-33	9	9	6480	277	211	23.4	22	4.3	74.4	6.7	0.4	18.5	0	84.8	11.4	3.8	0	75241
	C-47	1.7	2	1211	85	187	110.0	40	17.9	86.1	0	0	13.9	2.1	0	94.7	3.2	0	17920
306TH BOMB WING	B-47	8.6	3	6216	2	8	.93	0	.16	78.6	2.3	0	19.1	0	0	0	100	0	9603
	KC-97	3.8	0	2769	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
	T-33	9	9	6480	172	192	21.3	29	3.7	78.3	17.9	0	3.8	10.4	72.4	16.1	1.1	0	51153
	C-47	1	1	720	0	0	0	0	0	0	76.7	0	23.3	0	0	0	0	0	0
809TH AIR BASE GROUP	B-25	4	4	2880	153	223	55.8	60	16.6	46.7	20.8	0	32.5	38.1	0	56.1	5.8	0	31324
	C-45	1.8	3	1301	60	108	60	18	14.8	56.0	3.6	0	40.4	4.6	0	63	32.4	0	3814
	T-6	5	5	3600	3	5	1	0	10.4	1.3	0	0	98.7	80	0	0	20	0	64
	L-16	2	2	1440	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0
98TH AIR REFUELING SQ	KC-97	9.5	11	6821	39	96	10.1	8	2.8	49.1	25.3	0	25.6	15.6	68.8	0	15.6	0	33401

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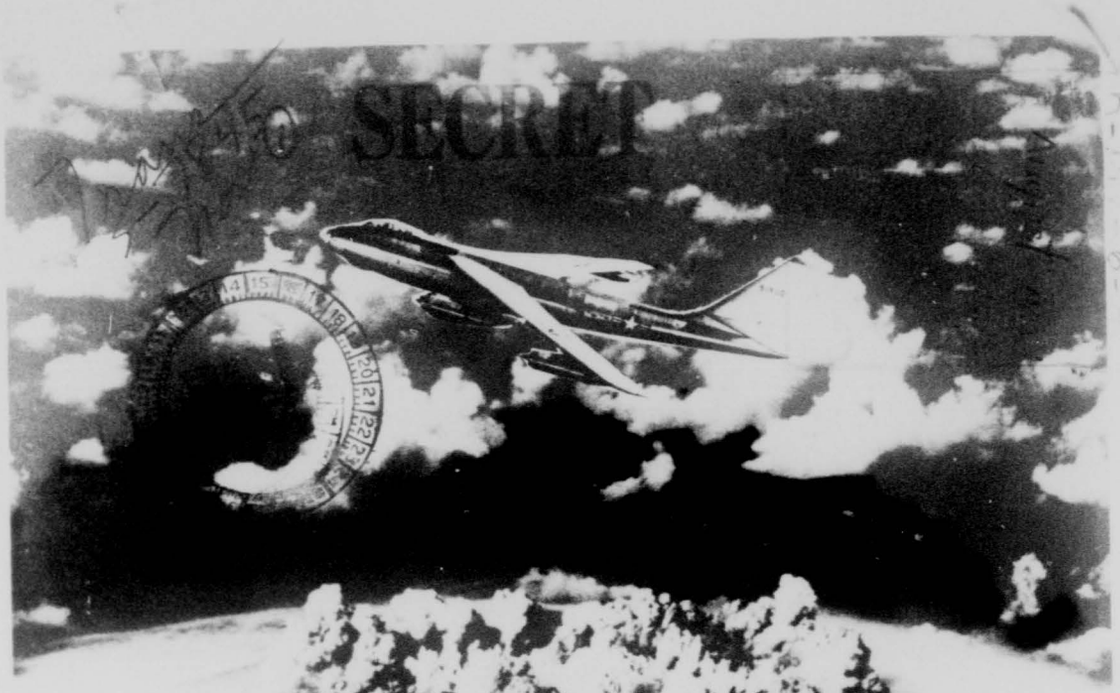
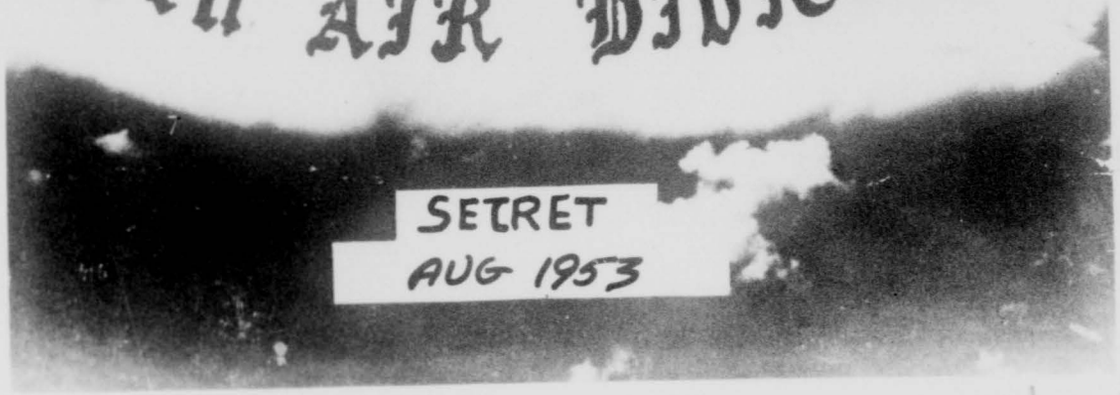


HISTORY

6th AIR DIVISION



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August 1953

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Secret
Comdr 6 A Div
Name: B.A. Johnson
Date: 27 Oct 53

HISTORY

4TH AIR DIVISION

Including

809th Air Base Group
MacDill Air Force Base

Florida

1 - August - 31

1953

B.A. Johnson
Division Historical Officer
2d Lt. B. A. Johnson

B.A. Johnson
for and in the absence of
Division Historian
M/Sgt. S. E. Wickam

B.H. Merchant
B. H. MERCHANT
Colonel, USAF
Commander

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APPENDIX

"A" Documents Arranged As Exhibits

"B" Photographs

"C" Statistical Reports

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CHRONOLOGY OF MAJOR EVENTS

August - "Westinghouse 20 KVA Alternators, B-47 Aircraft (EX-164)" completed by CES.

4 August - STR No. 10 submitted to SAC on "Remote Radar Indicator ID-138 to Co-pilot's Position: (EX-44)" by CES Project Officer.

4 August - Colonel Elliott Vandeventer, Jr., established speed record on non-stop flight from Fairford, England, to MacDill AFB, Florida.

6 August - Second dyno-fogging machine received at MacDill AFB, Florida.

7 August - 809th Air Base Group Survey Team returned to MacDill AFB, Florida, from U. K.

11 August - U. S. Representative Albert H. Bosch, Fifth District of New York, made an informal visit to MacDill AFB, Florida.

11 August - Three-man team from Atlanta, Georgia, branch of the General Accounting Office and three men from Tampa branch reported to chairman of MacDill "Committee 65" to conduct a survey of cases.

12 August - Colonel William E. Greer, Director of Operations, Hqs, 6th Air Division, reassigned to Hqs, 305th Bomb Wing.

13 August - Monthly meeting of members of Executive Ground Safety Council.

18 August - 8th Crash Rescue Boat Flight reorganized.

20 August - Major Norman S. Smith, Aide-de-Camp to Brigadier General H. K. Mooney, transferred to 38th Air Division, Hunter AFB, Georgia.

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CHRONOLOGY OF MAJOR EVENTS
(Continued)

21 August - Major Donald B. Moon, Air Installations Officer, transferred to 3206th Personnel Processing Squadron, Camp Kilmer, New Jersey, for subsequent assignment to 3906th Air Base Group, APO 117, % Postmaster, New York, New York.

23 August - Five B-47's fly "'Lost Buddy' formation" over Unknown Soldier's Tomb in Arlington National Cemetery, Washington, D. C.

24 August - 1st Lt. Everette Taylor assumes position of Aide-de-Camp to Brigadier General H. K. Mooney.

24 August - Major Wilson W. Howard assumes duties of Information Services Officer.

25 August - Lt. Colonel Alfred . Kelsey (Base Chaplain) departed for new position as Base Chaplain at Elmendorf AFB, Alaska.

27 August - Airfield Pavement Inventory Series report submitted to SAC.

30 August - Thirty-four (34) civilian employees scheduled for separation or 10 Sep from MacDill Air Force Base, Florida, on RIF.

31 August - Awards made to one (1) officer and four (4) airman by Brigadier General H. K. Mooney for management improvement suggestions.

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CHAPTER ONE

ADMINISTRATION and PERSONNEL

The sound and sight of B-47 Stratojet medium bombers flying over Tampa brought vacationing United States Representative Albert H. Bosch, Fifth District of New York, to MacDill Air Force Base on 11 August for an informal visit that lasted from 1000 until 1500 hours. Congressman Bosch was accompanied by his wife and two daughters. The distinguished visitor said that he was interested in acquainting himself with MacDill operations. He was accompanied

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at all times by either Colonel Elliott Vandeventer, Jr., Acting Commander of the 6th Air Division, or Colonel E. H. Merchant, Commander of the 809th Air Base Group, who were the senior officers present.

The Congressman was briefed on the missions of Strategic Air Command (SAC) and the 6th Air Division. He was given a personally conducted tour by either Colonel Vandeventer or Colonel Merchant of the flight line, maintenance facilities, engine build-up, flight simulators, control rooms, supply activities, and housing. In response to his questions, Mr. Bosch was informed that the principal requirements at MacDill were those of additional warehousing facilities and permanent barracks.

He expressed complete satisfaction with the tour and briefing, and said that the information he acquired would assist him greatly in reaching decisions on future problems concerning the Air Force. Congressman Bosch made no criticism whatsoever.[1]

A formal Congressional visit was expected during the second and third weeks of November, according to information relayed from the Department of the Air Force. Congressman Harry R. Sheppard, from the 32th District of California, who is accompanied by his wife, began a personal inspection tour in August of various SAC bases.

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1. Ltr., Hq 6 AD to Comdr, SAC, "Report of Congressional Visit," MCDCCO 333, 13 August 1953.

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Mr. Shepard, who is a member of the House Appropriations Committee, is inspecting the installations to assure himself that "the funds appropriated by Congress for national defense are being spent wisely."[2]

On 31 August, a three-man team from the Atlanta, Georgia, branch of the General Accounting Office, supplemented by three men from the Tampa branch, reported to the chairman of MacDill "Committee 55"[3] to conduct a survey of cases before the Committee.

(This investigative group of officers was organized per a directive from SAC to determine the legality of dependent travel payments made to officers and non-commissioned officers who served on periods of indefinite temporary duty with Far East Air Force (FEAF) Bomber Command units, i.e., 307th Bomb Wing, 98th Bomb Wing, etc.[4])

A query was made by this historian of the Base Comptroller concerning the activities of the GAO team, and allied information such as: (1) total number of cases awaiting courts-martial action as of 31 August, total number of cases undergoing investigation by Committee 55 and/or the Office of Special Investigations (OSI), the total number of cases awaiting preliminary scrutiny by the

2. TWX, Hq SAC to Comdr 6AD, CS 20683, 19 August 1953. Exhibit 1.
3. History, 6th Air Division, February 1953, page 10.
4. Ltr, Hq SAC to CG 6AD, "Dependent Travel Claims Indefinite TSY (FEAF)," CCP 240, 10 November 1952.

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Committee; disposition of those individuals who had admitted their error; disposition of those individuals who, after being faced with evidence of having been reimbursed erroneously for dependent travel that was never performed or which travel was of a "vacation" nature, i.e. travel was executed between MacDill-Tampa for only a few weeks, and dependents returned to local address prior to the return of the serviceman to MacDill, insisted on their innocence; and the total amount of money which investigation showed (as of 31 August) was paid erroneously, and the total amount collected by means of pay stoppages as of that date.[5]

These questions arose as the result of informal, but confidential, conversations with three non-commissioned officers of Headquarters Squadron Section, 809th Air Base Group who were involved in the erroneous collection of dependent travel pay. According to their statements to this historian, they readily admitted their guilt before the Committee as to wrongfully receiving reimbursement when they knew at the time of collection that the alleged travel was not performed in accordance with applicable regulations. They then signed sworn statements to that effect, and made immediate arrangements to repay the United States by means of monthly pay stoppages. As of August payday, these men had made full reimbursement to the government; however, they had not received any disciplinary action although they faced possible General Courts-Martial action.

5. Disp Form, 64D Historical Officer to Base Comptroller, "Request for Historical Information," 23 Sept 1953, MCDCAG 310. Exhibit 2.

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The Base Comptroller's reply was ambiguous:[6]

". . . They (members of the GAO team) did not explain their mission. (Underscoring by the Comptroller) However, from observation they appear to be interested in the number of cases involved, the probable cause of the cases, the action taken to effect collection, the local interpretation of orders and regulations regarding entitlement to reimbursement, and a detailed record of all cases having been processed or to be processed by Committee 55. They are in no way connected with Committee 55.

"Due to the thorough and repeated examinations of the files of this Committee it is considered impossible to render a factual report of progress as of 31 August 1953 nor can one be rendered at least for 30 days after this team completes their review because it will require that much time to reassemble our files into some semblance of order. They have not given me a target date when they expect to depart.

"Due to the fact that the Base Provost Marshal, Office of Special Investigations, and the General Accounting Office are each attempting to report the same information requested in basic comment, I foresee considerable variance of information reaching higher hq., therefore I prefer to submit correct information rather than 'questimates.'

"This office will submit a full report at the earliest possible date."

On 16 July, 1953, the Base Comptroller reported to Headquarters Second Air Force that there were 513 cases in progress at the beginning of the reporting period; 146 new cases opened during the month; 319 cases wherein no fraud had been detected; no cases wherein fraud had been detected; 19 cases had been referred to the OSI; and there were 328 cases in progress as of the date of the report.[7]

Further investigation disclosed that as of about 7 August,

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6. Ibid, Comment No. 2 from Base Comptroller, 25 Sept, 1953. Exhibit 2.
7. Ltr, Hq 6AD to Comdr 2AF (Attn: Comptroller), "Progress Report of MacDill Committee 55 (RCS: SAC-U33)," 16 July 1953, MFDK 240.

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about $11,136.74 had been paid erroneously (according to preliminary survey) to 83 individuals: 41 master sergeants, 23 technical sergeants, 10 staff sergeants, six captains, one second lieutenant, one first lieutenant, and one major.[8] The amount of money refunded by these individuals to the government was undetermined.

A switch in B-47 Mobile Training Detachments was forecast to occur "at the earliest practicable date" after 15 September, 1953, with B-47-7 Detachment and B-47-E4 Detachment of the 3496th Mobile Training Squadron (Bombardment) scheduled to transfer to Chanute Air Force Base, Ill. The applicable training of 305th and 306th Bomb Wing technicians at MacDill was to be assumed by Mobile Training Detachments B-47-5 and B-47-E5 upon movement from Pinecastle Air Force Base, Orlando, Fla., shortly after 15 September.[9]

The 8th Crash Rescue Boat Flight was reorganized effective 18 August[10] with an authorized strength of eight warrant officers and 100 airmen.[11]

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8. Ltr, Hq 809th ABGp (Air Police Operations) to Comdr 2 AF, "MD/FE-53-130 RCS: AF-Y13 (SAC-1) (Part I A)," MCDCPM 333.5 23 July 1953; Ltr, Hq 809th ABGp (Air Provost Marshal) to Comdr 2 AF, "Monthly Air Provost Marshal Status Report, and Final Monthly Report RCS: AF-Y13 (SAC-1) (Part II A)," 7 Aug 1953, MCDCPM 319.
9. Ltr, D/F to Comdr Air Training Command, Scott AFB, Ill., "Movement Directive B-47-7 and B-47-E4 Detachments, 3496th Mobile Training Sq (Comb)," 13 Aug 1953, AFOOP-OC 370.5 (Uncl); Ltr, D/F to Comdr ATC, Scott AFB, Ill, "Movement Directive B-47-5 and B-47E5 Dets., etc.," same date and same file number.
10. GO 56, Hq SAC, 9 July 1953.
11. History 6th Air Division, July 1953, page 2.

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The 98th Air Refueling Squadron which had been attached to Second Air Force and to 6th Air Division in April, 1953,[12] was assigned to both commands effective 1 July, 1953.[13]

Headquarters, Second Air Force authorized these fund expenditures during July and August, 1953, pending receipt of the formal funding program for Fiscal Year 1954, according to Major Homer C. Ockes, Base Comptroller:[14]

P 458 Funds (Base)

Authorized 1 July - 31 August 1953			$265,000
July obligations	$277,000		
Less S/C funded 01 and 02	166,500		
Total base obligations	$110,500		- 110,500
Maximum amount to be obligated			$154,500

P 478 Funds (Hospital)

Authorized 1 July - 31 August 1953			$ 58,700
July obligations	$ 39,800		
Less S/C funded 01 and 02	19,800		
Total base obligations	$ 20,000		-20,000
		(Maximum amt to be obligated)	$ 38,700

MacDill achieved 78 percent of the maximum score obtainable for July, 1953, under the provisions of the Strategic Air Command

12. History 6th Air Division, April, 1953, page 11.
13. GO 17, Hq 6th AD, 14 August 1953. Exhibit 4.
14. Daily Journal, Hq 809th APGp, 12 August 1953.

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(SAC) Management Control System, Air Base Groups.[15] The predicted score for August, as prepared by the Base Comptroller is 81 percent of the maximum amount.[16]

Members of the Executive Ground Safety Council were advised at the monthly meeting of 13 August of the base's standing in Second Air Force of the cost of all accidents, injuries and fatalities during the period of January through June, 1953. MacDill had a cost of $30.32. The overall saving during this period was $90,725.[17]

Two directives were distributed during the month by the Base Comptroller's Office pertaining to the processing instructions relative to pay and allowances,[18] and Finance mobilization procedure.[19]

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15. Ltr, Hq SAC to Comdrs, Air Base Groups, "SAC Management Control Statement, Air Base Groups - July 1953," 27 August 1953, COA 373. Exhibit 5.
16. Rpt, "Predicted Scores, August 1953, 869th Air Base Group, MacDill AFB, Fla., - SAC Management Control System, Air Base Group," August 1953, prep by Base Comptroller. Exhibit 6.
17. Rpt, "Proceedings of Ground Safety Council," August 1953, prep by Executive Committee of the Ground Safety Council, Flying Safety Division, Hq 6th AD, August 1953. Exhibit 7.
18. Ltr, Hq 6th AD to Distribution "D," "Processing Instructions Relative to Pay and Allowances," 12 August 1953, MCDKAD .008. Exhibit 8.
19. Ltr, Hq 6th AD to Distribution "D," "Mobilization Procedure - Finance," 12 August 1953, MCDKAD .008. Exhibit 9.

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Approximately 650 airmen and thirteen officers would be needed from 809th Air Base Group resources to support the 305th Bomb Wing in its 90-day period of temporary duty in England which was scheduled to begin around the first of September, 1953.[20] These support figures were obtained by an 809th Air Base Group Survey Team composed of Colonel B. H. Merchant, Group Commander; Lieutenant Colonel William F. Hoynes, Director of Personnel; and Captain Phillip F. Dickey, Manpower Officer, all of who departed MacDill on 26 July and returned on 7 August.

According to a memorandum that was written at the completion of the journey,[21] Colonel Hoynes found that squadron commanders of the 3900th Air Base Group at Royal Air Force Station Brize Norton, England, scheduled destination of the 305th, were totally unfamiliar with requirements that would be needed to support a B-47 wing on rotation. After it had been determined that the 3900th was unable to properly support the 305th Wing with the numbers and AFSC's requested by Wing squadron commanders, the decision was made to use the numbers of personnel and AFSC's listed in the 305th's Mobility Plan that is based on SAC Manual 400-1. A one-wing Table of Organization (T/O) was used to determine the required AFSC's in the preparation of the mobility plan. The 3900th squadron commanders agreed to accept the plan, with 20 officer

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20. History 6th Air Division, July 1953, page 10.
21. Memo, D/Pers to Comdr, 809th ABGp, 6 Aug 1953. Exhibit 10.

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deletions that were necessary because of either non-availability within the 3920th, or that no requirement existed within the 809th. The overall plan was accepted by the Commander of the 3920th, provided that the total number of personnel to be furnished would bring the strength to the amount required by SAC Manual 400-1.

As the Air Force-wide "reduction in force" commonly referred to as "RIF" gained momentum from the preceding month,[22] a total of 85 officers were released from active duty, both on a voluntary and involuntary status: 33 first lieutenants, 19 second lieutenants, 16 captains, 11 majors, four warrant officers, and two lieutenant colonels. Of this number, about 62 were 6th Air Division unit personnel.

When announcement was made of the policy of early release for airmen who had completed three years or more of active military service, a total of 379 enlisted personnel submitted their applications for separation. The 809th Air Base Group had 295 requests, the 305th Bomb Wing had 56, the 306th Wing had 46 (exclusive of airmen on TDY), and tenant units had two applications.[23]

While the early release of officers and airmen was initiated and progressed with the minimum of discord, the reduction of civilian employes[24] brought forth vehement protests. A group of 30 men who

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22. History 6th Air Division, July 1953, page 4.
23. The Airman (MacDill AFB, Fla.), 28 August 1953.
24. History 6th Air Division, July 1953, pp 5-6.

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were faced with termination of employment on 31 August appealed to United States Senators Spessard L. Holland and George Smathers, and to United States Representative Courtney Campbell. Headquarters, Strategic Air Command replied to the consequent Congressional inquiry by explaining that ". . . the overage positions occupied by incumbents are blocking employment in critical areas elsewhere in the command. Since it is apparent that little progress would be achieved by further attrition efforts, MacDill was directed on 14 May to accomplish final reduction by RIF to a strength of 30 by 31 August. Regret inconvenience to individuals concerned . . ."[25] MacDill was then notified to "proceed w/RIF as directed."[26] At month's end, approximately 34 civilian employes were scheduled for separation by either 30 August or 10 September.

Colonel William E. Creer, Director of Operations for Headquarters, 6th Air Division since February, was reassigned to Headquarters, 305th Bomb Wing effective 12 August, 1953.[27] The post at Air Division remained temporarily vacant at month's end.

Major Norman S. Smith, Aide-de-Camp to Brigadier General M. K. Mooney, 6th Air Division Commander, was transferred to the 38th Air Division, Hunter Air Force Base, Georgia, effective 20 August.[28]

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25. TWX, Hq SAC to Director of Legislation & Liaison, OSAF (cc to Comdr 6AD) DPLM 20637, 19 Aug 1953. Exhibit 11.
26. TWX, Hq SAC to Comdr 2 AF (info to Comdr 6AD), DPLMD 20425, 19 Aug 1953.
27. SO 203, Hq 6 AD, 7 Aug 1953, par 21.
28. SO 202, Hq 6 AD, 6 Aug 1953, par 20.

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Replacing Major Smith, as of 24 August, was First Lieutenant Everette Taylor, who arrived from the 3rd Strategic Support Squadron, Barksdale Air Force Base, Louisiana. Lieutenant Taylor was graduated from the United States Military Academy, West Point, New York, in 1951. Prior to this attendance, he spent two years at the University of Alabama (1946-47) where his major course was journalism, with a minor in English. He was originally commissioned in December, 1943, upon completion of navigation training. He completed bombardier school in February, 1944, and flew as a navigator-bombardier with the 490th Bombardment Squadron - a B-25 outfit - in the China-Burma-India theater from 1944 to 1945. He completed pilot training on 9 August, 1952. He has totaled 800 hours as a navigator-bombardier, and 500 hours as a pilot.[30]

Base Chaplain (Lt. Col.) Alfred A. Kelsey departed 25 August for the Alaskan Air Command where he is scheduled to become Base Chaplain at Elmendorf Air Force Base.[31] His replacement at MacDill is Lieutenant Colonel Charles L. Lock who is scheduled to arrive from Headquarters, 810th Air Division, Biggs Air Force Base, Texas, on 10 September.[32]

Major Donald B. Moon, Air Installations Officer, was transferred

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29. GO 18, Hq 6 AD, 24 Aug 1953. Exhibit 12.
30. See photograph, Appendix "B."
31. SO 202, Hq 6 AD, 6 Aug 1953, par 21.
32. SO 207, Hq 6 AD, 12 Aug 1953, par 8.

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on 21 August to the 2025th Personnel Processing Group, Camp Kilmer, New Jersey, for subsequent assignment to the 3906th Air Base Group, APO 117, c/o Postmaster, New York.[33]

Assuming the duties as Air Installations Officer for MacDill is Major Robert George Williams, who began his military career with the Royal Canadian Air Force (RCAF). He enlisted in the RCAF on 18 December, 1940 at Hamilton, Ontario, and entered elementary (primary) flying training at Dunville, Ontario. After progressing from basic and advance flying at Montrose, Scotland, he was graduated from the flying school at Hardin, Wales, as a Sergeant-Pilot. He transferred to the United States Army Air Forces in September, 1942, and received a direct commission. He flew with the 334th, 347th, and 335th Fighter Squadrons in the European Theater prior to being shot down on 22 March, 1944. He was taken prisoner by German forces and remained as a prisoner of war until 16 May, 1945.

He graduated from the Air Tactical School, Tyndall Air Force Base, Florida, in 1947; USAFIT-MTO Staff Engineer course in August, 1948; Atomic Energy Course, Keesler Air Force Base, Miss., in December, 1949, and from the Supply Officer General Course, Lowry Air Force Base, Colorado, in November, 1950.

From 16 August, 1950, to 12 April, 1953, Major Williams was Air Installations Officer at APO 81. His permanent rank is captain.

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33. SO 203, Hq 6 AD, 7 Aug 1953, par 33.

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Duties of Information Services Officer were assumed 24 August by Major Wilson W. Howard upon the relief from active duty of Second Lieutenant David A. Harris who had been named to that staff position in April, 1953.[34]

Major Howard, whose primary duty is that of Assistant Base Operations Officer, arrived at MacDill on 11 December, 1951, from Randolph Air Force Base, Texas, where he attended B-29 Combat Crew Training. He was commissioned originally on 7 July, 1943, on graduating from a bombardier school at Roswell, New Mexico. This was followed by graduation from a flight engineer school in October, 1943, at Smoky Hill Air Force Base, Saline, Kansas. He flew 50 combat missions as a bombardier with the 483rd Bomb Group (B-17) based at Foggia, Italy. He was 2,000 hours as a bombardier. He graduated from the Special Weapons course at Sandia, New Mexico in 1948, and from advanced pilot training, Enid Air Force Base, Oklahoma, in 1951. His permanent rank is Captain, dating from July, 1950, and he received his majority on 1 September, 1951. Major Howard received a Bachelor of Science degree from Kansas State Teachers College, Pittsburg, Kansas, in 1942.[35]

Succeeding Lieutenant Harris as 6th Air Division Historical Officer is Second Lieutenant Byrdelle A. Johnson (WAF), whose primary duty is that of Assistant Base Adjutant. She arrived at MacDill

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34. History, 6th Air Division, April 1953, page 21.
35. See photograph, Appendix "B."

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on 31 December, 1952, after graduating from Officers Candidate School, Lackland Air Force Base, Texas, on 12 December. Lieutenant Johnson attended the Milwaukee, Wisconsin, Business University from June, 1948 to June, 1949, and the Milwaukee Vocational School (business course) from September, 1949 to April, 1950. At the present time she is studying for a Bachelor's Degree in Business Administration at Florida Southern College, Lakeland, Florida, via the MacDill College of Opportunity.[36]

Promotions for 6th Air Division units (excluding the 306th Bomb Wing) for the month of August totaled 54: 32 airmen in the 809th Air Base Group, 18 in the 305th Bomb Wing, and four in the USAF Hospital.[37]

In addition to the separation of 85 officers, as noted on page 10 of this report, 68 airmen were discharged during the month.

Sixteen airmen reenlisted during August, 1953.

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36. History 6th Air Division, February 1953, pp 22-27.
37. The Airman (MacDill AFB, Fla.), 14 August 1953.

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Strength figures for August, 1953:

SAC Units	Auth	Asgd	Atchd
Officers	1086	999	64
Airmen	6097	7590	418
Civilians	520	524	
Non-SAC Units			
Officers	29	26	1
Airmen	233	352	3
Civilians	12	11	
Total Units			
Officers	1115	1025	65
Airmen	6330	7942	421
Civilians	532	535	
Grand Totals	8177	9502	486

38. Rpt, "MacDill Statistical Summary - Part I," for period 1 through 31 August, 1953, prep by Base Stat Svs Office. See Appendix "C."

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CHAPTER TWO

OPERATIONS and TRAINING

Two B-47 Stratojets of the 306th "Can Do" Bomb Wing which established new unofficial speed marks from North America to the United Kingdom on 28 July, 1953,[39] blazed new trails on their return to the United States on 2 August, 1953.[40] Colonel Elliott Vandevanter, Jr., Wing Commander, flew non-stop from Fairford, England, to MacDill in the unofficial time of nine hours, 53 minutes. The average unofficial speed for the approximate 4,460 miles was computed at 454 land miles

39. History 6th Air Division, July 1953, pp 9-10.
40. Morning Tribune (Tampa, Fla.), August 5, 1953.

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per hour. A 306th Bomb Wing Air Refueling Squadron KC-97 refueled the B-47 over Ireland. In time on the clock, the trip was made in about four hours, sun time, as the crew gained six hours enroute. Flying with Colonel Vandevanter were Lieutenant Colonel Robert E. Michie, pilot; Major William W. Richards, Jr., observer; and Mr. Wesley Price, staff writer for the Saturday Evening Post.

The second B-47, commanded by Lieutenant Colonel James M. Smith, was scheduled to fly direct to Tampa, but landed instead at Hunter Air Force Base, Georgia, after a flight of (unofficial time) of nine hours, 06 minutes from Fairford. Its unofficial average speed for the 4,151 miles was 440 miles per hour. [1]

Both Stratojets reportedly flew a "great circle" route to the Southeastern seaboard: it put them across Newfoundland at Bonavista Bay, over Cape Breton Island, and down the east coast of Nova Scotia. [2]

Accompanying Colonel Smith were Lieutenant Colonel Don Frank, pilot; Major A. E. Dawson, observer; and Mr. Vern Haughland, Associated Press aviation writer. [3]

Colonel Vandevanter, when interviewed by newsmen the day after the historic flight, said: [4]

> "'While the speed of the flight is unimportant, the fact that we made it shows that the route is feasible. If it can be done this way, it can be done the other way. It puts us that much farther ahead in doing our business if the bell should ring. If we can do it with one plane, we can do it with 45. It makes our Air Force that more mobile.'"

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1. Daily Times (Tampa, Fla.), August 5, 1953.
2. Ibid.
3. History 6th Air Division, July 1953, page 10.
4. Morning Tribune (Tampa, Fla.), August 5, 1953.

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Both crossings of the Atlantic were made to survey routes that will be followed by the 305th Bomb Wing when it replaces the sister 306th Bomb Wing in England under the Strategic Air Command rotational policy.[45] The simultaneous two-way move of the Wings was scheduled for early September.[46]

Speaking of the London-Tampa crossing, the Tampa Daily Times observed:[47]

> "To Americans who have had trouble becoming accustomed to the exploits of one plane before another usurps the spotlight, the accomplishments of the fabulous B-47s are in a class by themselves.
>
> "The overshadowing fact, however, remains that while Europe is within easy bombing range of American B-47s based in this country, European-based bombers would also be only hours away from the industrial heartland of America.
>
> "The closeness of enemy bombers to key American industrial centers cannot be ignored. It is the duty of those who have blocked adequate civil defense preparations to re-appraise the need for such measures in the light of the MacDill B-47 flights."

The Tampa Morning Tribune said: " . . . These MacDill Air Force Base Stratojets and their capable pilots and crews have made aviation history and the achievement stands out in the record of man's mastery of the air."[48]

Five B-47's of the 305th Bomb Wing teamed with eight F-84's from Langley Air Force Base, Virginia, on 13 August to fly a "'lost buddy' formation" over the Unknown Soldier's tomb in Arlington

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45. History 6th Air Division, May 1953, pp 22-37.
46. The Airman (MacDill AFB, Fla.), August 28, 1953.
47. Editorial, "Almost Every World City Within Jet Bomber Range," Tampa Daily Times, August 5, 1953.
48. Editorial, "Record-Breaking Flights," Tampa Morning Tribune, August 6, 1953.

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National Cemetery, Washington, D. C. The flight also honored the memory of the late General of the Air Force Henry H. (Hap) Arnold, war-time chief of the Army Air Forces, and the late General Muir Fairchild, former Vice Chief of Staff, United States Air Force.

The jet bombers and fighters arrived over the cemetery at 0940 EST, just as Arthur F. Kelly, chairman of the board of the Air Force Association (AFA), completed the laying of a wreath on General Arnold's tomb. A few moments earlier, a similar wreath had been placed on General Fairchild's grave, nearby.[49]

Headquarters, 6th Air Division seconded the objection made by Colonel Michael N. W. McCoy, 306th Bomb Wing Commander, to the directive from Headquarters, Strategic Air Command, Offutt Air Force Base, Omaha, Nebraska, that prohibited the execution of touch and go landings in F-47 aircraft unless performed under the supervision of a qualified instructor pilot. In a letter to Headquarters, Second Air Force, Barksdale Air Force Base, Louisiana, Colonel McCoy gave several reasons that he considered made such curtailment of touch and go landings quite undesirable from a flying safety viewpoint. He pointed out that a sufficient number of full stop landings, using the drag parachute, cannot be made during the period of normal training to insure the necessary[50]

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49. Morning Tribune (Tampa, Fla.), August 24, 1953.
50. Ltr, Hq 306th Bomb Wing to Comdr 2AF, "Touch and Go Landings - F-47 Aircraft," 14 Aug 1953, CDCD 360. Exhibit 13.

proficiency by both the pilot and co-pilot. Full stop landings each time require the installation of a drag chute by ground crews. With the B-47's engines running, such installation subjects the men to both the dangers of jet blast and breathing of excessive amounts of carbon monoxide gas. Although the engines can be shut down during the installation of the drag chute, this procedure requires the necessary restarting of the power plants and consequent consumption of an excessive amount of time. Colonel McCoy also stated that, "Proficiency in full stop landings without the use of the drag chute is desirable." He said further that the landings should be practiced from time to time on runways that were not less than 10,000 feet and that had smooth overruns. It would not be considered desirable, "to practice full stop, no chute landings at some overseas bases." Fairford, England, at which site the 306th was performing 90 days temporary duty under the SAC rotational policy for bombardment wings,[51] was not considered desirable for full stop, no chute landings because of the poor condition of the runways, and the unevenness of the overruns.

Colonel McCoy also was of the opinion that, "Proficiency in touch and go landings is most desirable in order that the pilots acquire and maintain the necessary judgement to decide whether or not to go around when a landing is long or fast and stopping is questionable."

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51. Reference footnote 45.

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The fact was acknowledged that touch and go landings performed in propeller-driven aircraft are somewhat hazardous because of the possibility of failure to correctly manipulate flaps, propeller RPM, and other controls; however, the only control movement in a B-47 during this type of landing is the throttle.

Furthermore, Colonel McCoy contended that the use of B-47 instructor pilots to supervise subject type landings would curtail their flying as aircraft commanders with their own crews. He recommended that qualified B-47 commanders with 100 hours first pilot time be permitted to practice touch and go landings.

Second Air Force agreed that the curtailment of touch and go landings would handicap the 306th in maintaining pilot proficiency, and a request was made of SAC to reconsider their decision; but SAC remained firm in the directive. An accident at Lockbourne Air Force Base, Ohio, and an incident at Tinker Air Force Base, Oklahoma, wherein a SAC B-47 ran off the end of a runway, were the reasons for the establishment of the policy that drag chutes will be used on all full stop landings. Second, in its indorsement,[52] recommended to the 306th that the aircraft commander complete a full stop during the pilot proficiency missions, and that the co-pilot be given a full stop landing on some other flight.

Although Headquarters, 6th Air Division directed the 306th to follow the SAC directive, concurrence with the Wing's stand on

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55. 1st Ind, Hq 2 AF to Comdr, 6th AD, 2 Sept 1953 to ltr, Hq 306th Bomb Wg to Comdr 2 AF, "Touch and Go Landings - B-47 Aircraft," 14 August 1953, 2AFOTA 369.1, Exhibit 13A.

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touch and go landings was expressed. During the 306th's stay in England, Division had "debated" unsuccessfully the restriction with Headquarters, Second Air Force. Division recommended to the Wing [53] "that, at every opportunity, the case be reopened."

On 10 April, 1953, SAC forwarded to 6th Air Division, via Second Air Force, an Air Training Command proposed celestial navigation sight reduction procedure applicable to jet aircraft. [54] Results of the tests made by three Aircraft Observers of the 306th Bomb Wing were not favorable to the proposed method, with four disadvantages outweighing three improvements over the present procedure. The observers agreed that: (1) the tables are accurate and permit the observer to obtain rapidly precision fixes; (2) the pre-flight use of the tables is fast and simple; (3) the observer needs to enter the Air Almanac one time only.

Disadvantages to the use of the tables are: (1) That the use in-flight requires a lengthy addition and subtraction process, and interpolation is required several times before an observation can be made, thus increasing the chance for error in the solution of a fix; (2) the tables do not give any distinct time saving, or more rapid fixing features over the present authorized methods; (3) the tables have not worked out but for a narrow band of Northern Latitude

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53. 2nd Ind, Hq 6th AD to Comdr 306th Bomb Wg, 8 Sept 1953, to ltr, Hq 306th Bomb Wg to Comdr 2 AF, "Touch and Go Landings - B-47 Aircraft," 17 August 1953, DOP 360. Exhibit 13B.

54. Ltr, Hq SAC to CG 2 AF, 10 April 1953, "Evaluation of Time Difference Sight Reduction Tables," DOMF 360. Exhibit 14; 1st Ind, Hq 2 AF to CG 6th AD, same letter, 16 April 1953, Exhibit 14A.

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48°N - 59°N, and there are not latitudes in which normal flying training is performed; (4) the selection of stars in the tables is limited, and at times, the cuts given by the stars are not in keeping with good navigational procedures.

Finally, Division believed that the cost of acquiring, developing, and producing the tables would not be justified, in view of the glaring disadvantages to the proposed method.[55]

Headquarters, Strategic Air Command was in general agreement with the recommendations made by Major John W. Barnes, Headquarters, 306th Bomb Wing, Senior Controller of a Command Post Exercise (CPX) conducted by 6th Air Division personnel at Westover Air Force Base, Massachusetts, 8 - 14 March, 1953. In reply to the recommendation that on-line cryptographic equipment be produced for Westover, SAC stated that such facilities, plus a SACCOMNET termination are programmed for the New England facility and will be activated when Westover becomes a SAC installation.[56] It was believed that the recommendation of the Senior Controller that control teams be composed of three rated officers and three operations specialists,

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55. 2nd Ind, Hq 6th AD to Comdr 2 AF, 24 July 1953 to ltr, Hq SAC to CG 2 AF, "Evaluation of Time Difference Sight Reduction Tables," 10 April 1953, DOP 360. Exhibit 14B.

56. 1st Ind, Hq SAC to Comdr 2 AF, 23 July 1953 to ltr, Hq 2 AF to CG SAC, "Final Mission Reports - March CPX," 28 April 1953, DOCOR 311. Exhibit 15; 2nd Ind, Hq 2 AF to Comdr 6th AD, 30 July 1953, to above ind, 2ABOSP 319.1. Exhibit 15A.

plus a number of communications personnel as agreed upon by the dispatching and receiving units each time the exercise was ordered, was covered in the republication of the pertinent regulation (SAC Regulation 55-16, Operations, "SAC Operations Control Teams," 8 April, 1953). SAC also agreed to review, per recommendation, their Regulation 55-11, Operations, "Reports to be Submitted by Strategic Air Command Units Accomplishing Flights Outside the United States," 20 May, 1952, for its applicability to the Atlantic Division of the Military Air Transport Service (MATS). The Senior Controller during the March exercise recommended that this action be taken in view of the statement by the staff communication officer of the Atlantic Division to the effect that his headquarters was an unnecessary addressee.

Headquarters, Second Air Force did not accept all the views or recommendations of the Senior Controller.[57] For example, the Senior Controller believed that teletype operators, rather than cryptographic technicians, should augment the control team; this opinion was based upon the situation in March whereby a shortage of teletype operators existed, but an overage existed in crypto technicians; yet the team was directed to take two crypto men on the exercise. Second Air Force considered "the present number of operations personnel adequate to perform the duties required

57. Ltr, Hq 2 AF to CG SAC, "Final Mission Reports - March CPX," 28 April 1953, 2AFOEB 319.1. Exhibit 15B.

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under SAC Operations Plan 40-53," despite the Senior Controller's recommendation that "future teams be composed of three rated officers and three operations specialist airmen. This will result in around the clock coverage by one officer and one airman at all times. Augmentation for Base Communications should be over and above these six people."

However, Second Air Force did agree to the view that the assignment of a communication officer was unwarranted, since the necessary communication procedures attendant to a CPX are well known to AACS personnel, and are easily explained to operations people. Second also agreed that perhaps the Atlantic (ATLD) of MATS should not be listed as an action addressee on route and support reports.

Headquarters, 6th Air Division had no comment either upon the basic report, or the replies from each of the higher headquarters.[58] The 306th Bomb Wing, of course, concurred in the recommendations made by the Senior Controller.[59]

According to the basic report by Major John W. Barnes, Senior Controller, on the exercise, the communications-electronics facilities available at Westover AFB, Mass. during the CPX, 8 - 14 March, consisted of two transmission channels to JEP (Washington), three reception channels from JEP (Washington), a TWX line (through the telephone company in Springfield, Mass. (Chicopee 562)), a Western Union

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58. 2nd Ind, Hq 6th AD to CG 2 AF, 20 April 1953 to ltr, Hq 306th Bomb Wing to CG 2 AF, "Report of CPX Exercise," 31 March 1953, DOP 341. Exhibit 15C;
59. 1st Ind, Hq 306th Bomb Wing, 4 April 1953 to same ltr, CAGD 341. Exhibit 15D.

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emergency line, and "off-line" cryptographic devices. During the exercise, 22 messages were received from Second Air Force, and 27 from SAC; the elapsed time (from originators file time to the time the message was received by the controller) was 1:21 for 2AF messages, and 2:01 for SAC. The average elapsed time for all incoming messages was 1:52.[60]

The doldrums that had all but stagnated the bombing and gunnery facilities at Avon Park Air Force Base, Florida,[61] would shortly become something of a pleasant memory to the personnel thereat, according to the plans released by higher headquarters for the establishment of B-36 and B-47 gunnery at the MacDill satellite base.

In accordance with SAC directives, relayed by Second Air Force, a B-36 gunnery system was to be shipped to MacDill; one portion of the equipment would be installed on the Avon Park OQ Range, and the remainder would be shipped to the 72nd Strategic Reconnaissance Wing (B-36) for use as a training mockup. Three airman technicians from the 72nd at Ramey Air Force Base, Puerto Rico, were to be placed at this command's disposal for the necessary checking, segregating, and installing of the required equipment. There was also a probability that one airman gunner experienced in B-36 gunnery and OQ range operation could be placed at the services of MacDill, should he be

60. Ltr, Hq 306th Bomb Wing to CG SAC, through CO 306th Bomb Wing, CG 6th AD, CG 2 AF, "Report of CPX Exercise," 21 March, 1953, ODCTD 341. Exhibit SECURITY

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needed.

Of the five turrets scheduled to arrive, two, which were to be specified by the 72nd, and complete with sights, computers, etc., were to be shipped to that unit; the remaining three, including the tail system, but excluding the nose system, were to be installed on the Avon Park OQ Range. If necessary, this equipment would replace the existing B-29 equipment. The remainder of the paraphernalia would be stored at MacDill, pending further instructions from Headquarters, Second Air Force.

The systems were to be installed as nearly as possible in the same configuration as to the position in the B-36.[61]

Headquarters, Second Air Force, reiterating a previous directive, emphasized that the Avon Park OQ Range "must be made fully capable of supporting both B-4 and A-5 System O Q Gunnery without further delay."[63] That command, in order that it could properly schedule use of the range, and to provide assistance where required, to support the facility, requested that a weekly report (as of 2400 hours each Thursday) be transmitted by electrical means (TWX) each Friday. The report would include the number of A-5 (B-47) Systems fully operational; the number of B-4 (B-47) Systems fully operational; the number of A-5 Systems not fully operational, the reasons therefore, and the action taken by 6th Air Division to place the systems into

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61. Ltr, Hq 2 AF to Comdr 6th AD, "B-36 Gunnery Equipment for Avon Park OQ Range," 20 August 1953, 2AFOTA 353.
62. Ltr, Hq 2 AF to CG 6th AD, "OQ Range B-47 Turret Systems," 16 March 1953, 2AFMWA 452.26.
63. Ltr, Hq 2 AF to Comdr 6th AD, "Support of B-47 Type OQ Exercises at Avon Park OQ Range," 21 August 1953, 2AFOTA 353.

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operation; the number of B-4 systems not fully operational and action taken to remedy that situation; and the action which Division would wish that Second Air Force would take to place the A-5 and B-4 Systems into operation.

An unexpected difficulty arose in the procurement of ground ultra-high frequency (UHF) equipment for air-ground use at Avon Park. Two-channel Navy-Marine equipment, which was no longer required for interim AACS UHF Control Tower facilities, was available at MacDill. Headquarters, 1800th AACS Wing, Tinker Air Force Base, Oklahoma, in response to a query, advised that AACS did not have the authority to transfer Navy equipment to other than AACS-operated Air Force facilities. Upon receipt of this information, Second Air Force requested assistance from SAC in getting the UHF equipment for Avon Park.[64]

Headquarters, 6th Air Division, in a letter to Second Air Force, "foresees a requirement for a planned program for the establishment and utilization of bombing and gunnery ranges at Avon Park."[65] Division was of the opinion that requirements exist with Second for three types of ranges: air-to-ground fighter gunnery, air-to-ground fighter rocket, and fighter bombing, plus a resolution target utilizing an off-set aiming point (OAP) and visual bombing targets

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64. TWX, Hq 2 AF to Comdr SAC (info Comdr 6th AD) 2AFOOC 3412, 26 August 1953, J3DL 1180.
65. Ltr, Hq 6th AD to Comdr 2 AF, "Proposed Plan for Ranges at Avon Park," 24 August 1953, no file. Exhibit 16.

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for P-47 aircraft using an OAP.

The air-to-ground gunnery target would remain in its present location, as it is serviceable and is used daily by fighters from Turner Air Force Base, Albany, Georgia; however the target will require some modification. The rocketry target would be erected in the area adjacent to the gunnery target. Although the present one would be used as a bombing target for fighters, it could be modified as circumstances required. In the event that the present location was not acceptable, the release could be made in the northeast area of the reservation, thus isolating the fighter aircraft into one general area. Under normal operating procedure, it was anticipated that fighters would first bomb, then fire on the air-to-ground range, with the mobile CRW equipment on the gunnery range acting as control. Scoring by triangulation was not programmed for the bombing target.

The resolution target would be located in the southeast quadrant of the Avon Park reservation, and aircraft would use the same reflector as an OAP that the bombing aircraft would use when bombing on the visual target. The IP would be located in the Lake Okeechobee area, thus allowing runs to be made over a sparsely populated area.

The visual bombing target would be located in the central part of the range, using the one reflector as an OAP. The target would have a scoring capability. Division officials were planning at the time to use triangulation, as it could be put into operation in the

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shortest possible time.

The Division recommended that the entire project be divided into two parts: the first would be the fighter ranges, and the second the visual bombing and resolution target. This recommendation was made because fighters would be able to operate with the present equipment at Avon Park, and both the visual and resolution targets would require a reflector. Further suggestion was made that the fighter ranges should be surveyed by a qualified fighter pilot who would use as a guide, the targets previously mentioned. Specific recommendations as to work required would be accomplished after Turner Air Force Base units completed their current gunnery program. With Second Air Force's concurrence, 4th Air Division would not take any further action on the present gunnery ranges.

Part two of the project, the visual and resolution targets, would be undertaken by Division. With approval of Second Air Force, Division would: develop, manufacture, and install a suitable reflector target; would build a resolution target, and would erect a visual target and incorporate a method of scoring.

Before the program could be completed, certain information was needed from Second Air Force. Referring to the resolution target, what would be the maximum distance a flash bomb, failing to detonate in the air, would fall short of the target? This data was required in order to place the target far enough within the reservation to

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insure a "dud" falling on government property. Additional data needed in reference to the resolution target: confirmation of the Lake Okeechobee area as being suitable for an IP; layout of the resolution target in relation to the course from the IP; any objections to mounting the reflector in this particular target complex. At the time of the request, subject mounting seemed to be advantageous as the area would give little or no return. One of the largest problems was the development of a reflector that would overcome the ground return from the foliage in the area.

As the one reflector would have the capability of serving two visual targets, the question was raised as to whether plans had been made for more than one visual target. The visual target would have a capability for two patterns, or twice the number of aircraft on the range at the same time. This information was needed to properly locate the target and spotting towers. The program would require offset for visual bombing; and the operator, when within visual sighting range, would have to switch from offset to direct, provided that Second had no objection to such procedure. The only alternative would be to make a reflector for each target, including the resolution target. Such a method, Division believed, would be conducive to gross errors, non-scorable bombs, cost and time.

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Permission was granted by 6th Air Division Headquarters to the 35th Air Division (Defense), Dobbins Air Force Base, Marietta, Georgia, to use MacDill facilities for the recovery of fighter aircraft that might become scrambled due to weather and other reasons while on air defense exercises or combat missions. Approximately one air defense exercise is conducted quarterly by the 35th and lasts one or two days. It was expected that about four would be the maximum number of aircraft using MacDill facilities at any one time. The 35th agreed to contact 6th Air Division prior to the aircraft's arrival during the exercises if expeditious handling of the aircraft by MacDill personnel would be needed. Additional information was expected to arrive next month from the 35th Air Division.[66]

Final preparations were being made at month's end toward placing into active operation a program that was conceived in January, 1952. Termed "Project Jet Stream," the program will consist of a thorough study of meteorological phenomena near the tropopause. The project will be of long duration, with the flight portion alone requiring at least two years, using B-47 aircraft.

Firm planning of Jet Stream began in August, 1952, with a series of conferences among personnel of the 6th Air Division, 306th Bomb Wing, Air Weather Service Headquarters, and the Air Force Cambridge Research Center. Before actual operations could begin, it was

66. Ltr, Hq 35th AD to Comdr 6th AD, "Clearance of Fighter Aircraft," 31 August 1953, DCO 373.6.

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that final arrangements be coordinated between 6th Air Division and the 306th Bomb Wing regarding aircraft, personnel, and logistics. Accordingly, Division requested Wing's views on:

The assignment of the project aircraft B-47 Serial Number 51-2049 to the 306th for manning and maintenance purposes.

Division understood that Lieutenant Colonel Henry L. Mead, Headquarters, 6th Air Division, and Major Dwight C. Van Atta, Headquarters, 306th Bomb Wing, had been assigned primary duty as observer and aircraft commander respectively, with Jet Stream. According to Mr. Robert Redos, resident representative of the Air Force Cambridge Research Center (AFCRC), these assignment will require full time duty of the individuals with the project. The co-pilot, who is scheduled to come from 306th Wing resources, should not, according to Mr. Redos, be assigned to the Wing as a staff officer, since the third crew member will be required full time for mission planning and detailed analysis. Division recommended that a pilot with the AFSC of 1234 be selected for the position and that Major Van Atta qualify him in accordance with SAC Regulation 51-19, Supplement XIII, paragraph 3b (Flying Training, "Minimum Requirements for Initial Check Out of Individual Aircrew Members in B-47 Type Aircraft") 12 January, 1953, as amended. During the interim of check-out of the selected pilot, Wing Staff personnel could fly as co-pilot. Division pointed out that one of the major points in

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requiring the full time service of a co-pilot is that this individual will be responsible for the recording of the majority of the data, and will make a voice recording of the flight while airborne and will be required to be present during the transcribing process.

As it is indicated that the flight portion of the project will require two years, Division believed that the present system of placing the officers concerned on special duty would not be advantageous to the Wing. Subject officers would be reported by the 306th, but would not be available for duty; therefore they could not assume their portion of the Wing's workload required by the Table of Organization vacancy. Division recommended that the 306th Director of Personnel investigate the possibility of placing the officers on a permanent change of assignment (PCA) to ARDC (Project Jet Stream). In the event this action would not be feasible, the officers could be assigned to Headquarters, 6th Air Division, in the same way that the SAC In-Flight Refueling Teams are assigned.

Division further recommended that Jet Stream be assigned to a bomb squadron within the Wing for logistical support and administration. Thus, the unit to which the project was assigned could use that authority for requisitioning supplies as outlined in paragraph 59d of Air Force Manual 67-1.

Project Jet Stream offices were scheduled to be near the Base Weather Station in space provided by the 809th Air Base Group.[67]

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67. Ltr, Hq 6th AD to Comdr 306th Bomb Wg, "Project Jet Stream," 26 August 1953, DCP 319.1. Exhibit 17.

The purpose, background, and technical approach of Project Jet Stream was inclosed in report to Brigadier General H. K. Mooney, 4th Air Division Commander, from Major General R. C. Maude, Commander of the Air Force Cambridge Research Center.[68] In addition, the latter requested advice on matters pertaining to the project.

The beginning of firm action on Jet Stream began in August, 1953, when Major O. J. Tibbets, Project Scientist, secured an agreement from Colonel Michael N. W. McCoy, 306th Bomb Wing Commander that his wing would maintain and man the project's B-47, and to provide space for special weather equipment.

Delivery of Jet Stream's B-47 was delayed because of necessary K-system modification and continuing maintenance problems; however all project equipment had been installed and the aircraft's arrival at MacDill for research flights depended solely upon the solution of aircraft equipment failures.

As stated heretofore, Project Jet Stream was initiated for the purpose of "studying meteorological phenomena near the tropopause." (This technical noun is akin to tropopsphere, which is "layer of the atmorphere between the earth and stratosphere, within which there is a steady fall of temperature with increasing altitude. Most cloud formations occur (here).)[69] According to

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68. Ltr, Hq ARDC to Comdr 4th AD, "Project Jet Stream, RDO 114-33," 4 August 1953, no file. Exhibit 17A.
69. Thorndike-Barnhart Comprehensive Desk Dictionary (Garden City, New York) (1951), page 875.

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AFCRC, "it is hoped that these studies will ultimately contribute to the improvement of forecasting for USAF aircraft and missiles currently in use or under development." The more immediate, and specific mission of Jet Stream will be the collection of measurements of atmospheric elements, particularly of wind, that affect the operation of B-47 aircraft.[70]

Standard methods of weather observation are not sufficiently frequent in time or space nor sufficiently accurate to provide information that is needed to improve significantly the forecasting of meteorological elements that affect the operation of jet aircraft such as the B-47. This statement is particularly true of high level operation, i.e., above 30,000 feet. The present network of upper air observations is inadequate for the marking of details of jet streams which appear to be so narrow that at times they may exist and not be detected by the present network. Furthermore, the present data grid is too dense to detect any fine structure that may exist within a jet stream. Also, in instances where the observing network is in the vicinity of the jet stream, winds are so strong that the balloons are often carried out of range of the observing equipment before adequate data are obtained. Another possible factor is that due to the great amounts of shear in the wind, the balloons may tend to avoid areas of highest winds, with the result that maximum winds

70. Rpt, "Project Jet Stream," prepared by Hq. AFCRC, 22 July, 1953. Exhibit 17B.

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are never observed. Similar situations exist concerning contrails, clear-air turbulence, and like operationally important phenomena. It is now possible, since the development of high altitude aircraft with more accurate navigational equipment such as the K system and the APN-66, to collect such data required for a thorough study of the upper atmosphere, and more particularly, the jet streams.

The requirement for Project Jet Stream stemmed from a Specific Item Report (SIR) made in January, 1958, by the B-47 Operational Engineering Section of 6th Air Division. Contents of that report will be discussed later.

The need for a test program to collect weather data by aircraft above 36,000 feet resulted in Strategic Air Command's request that such a program be divided into two components: immediate forecasting for B-47 flights, which resulted in the establishment of "Project Black Sheep" under the jurisdiction of Air Weather Service, and the longer range requirement for improving the method of prediction, which resulted in "Jet Stream."

MacDill Air Force Base was selected as the site for the latter project because of meteorological and climatological conditions; crewing and maintenance of the necessary B-47 aircraft; and because the sister "Black Sheep" was initiated there.

Air Force Cambridge Research Center has equipped their B-47 with the finest instruments available, and they intend to fly the aircraft as frequently as possible for a two-year period to obtain

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observations of the various meteorological elements with maximum accuracy. This data will be subjected to whatever synoptic (general), statistical, or mathematical analysis necessary to solve the problems of determining the meteorological conditions near the tropopause, and methods of forecasting them. The study of data was scheduled to proceed concurrently with the observations. Results obtained in the early stages of the project will probably cause revisions in the detailed flight plans and methods of observations to be employed in the later phases. ARDC expressed the hope that "these data will not only provide a sample of heretofore missing information, but will serve also as a standard against which to check measurements from other sources." It is this expectation that requires concentration on the quality of the observations and measurements that will be provided by the B-47 flights. It was emphasized that since quantity "is an obviously unrealistic expectation," quality, means, and methods should, and will, be devised for marking more accurate analyses of the upper air from the present networks of observation.

Unless these hopes and expectations exist and are maintained, the practical aspirations of the project would be futile, since there appears to be little or no chance within the immediate foreseeable future of getting a regular network of observations comparable in detail to those that will be made from the B-47 flights.

The Research Center warned against early optimism. "In this project, we are in a very real sense attempting to push back an

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important frontier of meteorological knowledge. It is impossible to foresee all the scientific and technological obstacles which may be encountered."

The pioneers' vehicle, B-47 2049, is equipped with six special meteorological instruments: Vortex thermometer NX-3, Aerograph (Kolsman type) KS-4, Dew point hygrometer, Lapse time camera, Voice recorder (AN/[illegible]), and Accelerometer. The Vortex thermometer, according to AFCRC, is the best temperature measuring device available. Purpose of the aerograph is to record temperature, pressure, and humidity. The dew point hygrometer is considered to be the best humidity-measuring instrument available, especially for high altitude work. These instruments, combined with other standard equipment of the aircraft, will provide cross-checks to determine the accuracy of the measurements. Contrails, clouds, any other phenomena that the weather observers or other crew members believe valuable to the study will be recorded by the lapse-time camera. The crew's "on the spot" impressions will be recorded on the voice recorder. The accelerometer is an NACA instrument, similar to those installed on many MacDill aircraft. NACA is responsible for the instrument's installation and maintenance. Records obtained through use of this device will be turned over to NACA for analyses and the study of turbulence as it affect aircraft structure; upon completion of these studies, the records will be forwarded to the Atmospheric Analysis Laboratory for additional research on the meteorological

phases of the phenomenon.

"Jet Stream" B-47 equipment includes the new "Blue Square" K-system that will permit rapid, frequent, and accurate measurements of the winds at high altitude. Hope was expressed by the Research Center that the observations of wind will be made at most frequent intervals, as permitted by the equipment.

Project Scientist is Major C. F. Tibbets. He is responsible for the instrumentation and observational phase of the program. Dr. William K. Widger, Jr., is in charge of the analysis and research phases, and of the technical studies that will be performed within the laboratory, and under contract with Texas A & M University. Field Director of "Jet Stream" is Mr. Robert Rados, whose duties will be to designate the missions and flight plans within safety limits of the operation. He will be responsible for scheduling the tracks to be flown, including both times and altitudes within the aircraft's capability.

Headquarters, 6th Air Division will review and concur in the flight plans, and where necessary veto, to insure that the planned missions can be undertaken safely.

Mr. Rados will also supervise the other phases of the project, such as maintenance of the special equipment, removal and processing of records, etc. Mr. P. Varney will be at MacDill for a brief period to calibrate and initially maintain the special equipment.

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One airman will be assigned for routine maintenance of the special meteorological equipment, removal and processing of records, etc.

Technicians of the AFCRC will visit MacDill at intervals to obtain first-hand information on the progress of "Jet Stream," and to get ideas and suggestions from the personnel who will be faced with the actual problems of forecasting the operation. The experts will also consult with the Field Director concerning methods of obtaining information, and will coordinate their work with that of Project "Black Sheep" to prevent any undesirable duplication. Similar, informal contact had previously been made by AFCRC with the Navy Project ARCHA, which is a similar mission, but which uses fighter aircraft as vehicles of operation and has fewer instruments.

"Jet Stream" was assigned a priority of 1-B by Headquarters, Research and Development Command.[71] This was the highest precedence that could be established under the provisions of Air Force Regulation 80-11 (Research and Development, "Priority for Research, Development, and Operational Test Projects"), 13 March, 1951, as amended.

The parent command, in its letter to the Research Center, was of the opinion that, "the detailed structure of the jet stream should be determined since this poorly understood feature of the atmospheric circulation may be of critical importance on the range of strategic

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71. Ltr, Hq Research and Development Command to CG AFCRC, "Collection of High Altitude Weather Data - Development Directive No. 3006-01)," 13 April 1953, RDDG, Exhibit 17B.

bombers." The Center was requested to establish a project (which evolved into "Jet Stream") to obtain detailed data of weather phenomena at altitudes from 30,000 feet to the present ceiling of B-47 aircraft; furthermore, if possible the ceiling of the observations should be extended to 60,000 feet. The primary objective of the proposed project would be the study of the jet stream's wind field. Other proposed observations would be of the formation, location and characteristics of condensation trails and cirrus clouds; high level turbulence and haze; the tropopause and other elements that previous operational experience at high altitude indicates to be of importance.

The following are some of the problems which "Jet Stream" will endeavor to solve during its tenure. Detailed analyses of them will be found under Appendix "A" of this volume.

The first problem is that of "Winds and Temperatures Aloft."[72] The requirements of study are: "To develop improved techniques for forecasting the true winds and temperatures aloft (1) horizontally, in space and time, at levels up to the 50-millibar (mb) level throughout the Northern Hemisphere, and (2) vertically to 100,000 feet over a local area for specialized purposes."

The second is that of "Cirrus Clouds and Contrails."[73] Requirements are "to develop improved methods of forecasting (1)

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72. Rpt, "Title: Winds and Temperatures Aloft," prep by No. Air Weather Service, 1 March 1958. Exhibit 17C.
73. Rpt, "Cirrus Clouds and Contrails," prep by No. Air Weather Service, 1 March 1958. Exhibit 17D.

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the formation, amount, height, and dissipation of cirrus clouds, and (2) the formation and persistence of condensation trails."

The third problem is that of "Clear-Air Turbulence."[74] Its requirements of study are: "To develop techniques for forecasting the occurrence and intensity of clear-air turbulence which affects (1) aircraft operations up to the 50-mb level throughout the Northern Hemisphere, and (2) guided missile and rocket operations vertically to 200,000 feet and for horizontal flights to 100,000 feet over distances up to approximately 3,500 miles."

The final problem is that of "Visibility- High-Altitude."[75] Its requirements are: "To develop methods for operationally forecasting the (1) horizontal and (2) air-to-ground (slant-range) visibility in the free atmosphere, and in particular at altitudes from 20,000 to 50,000 feet, insofar as it is affected by haze, dust, or other (at present unknown) substances, and the relative position of the observer, the sun, and the object to be observed. (It is realized that clouds and precipitation also limit visibility aloft, but (this problem) is intended to be confined to investigating restrictions to high-altitudes visibility other than as effected by hydrometeors.)"

As stated heretofore on Page 38 of this volume, "Jet Stream" was originated by a Specific Item Report (SIR) written by the

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74. Rpt, "Clear-Air Turbulence," prep by Hq. Air Weather Service, 1 March 1952. Exhibit 178.
75. Rpt, "Visibility, High-Altitude," prep by Hq. Air Weather Service, 1 March 1952. Exhibit 179.

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B-47 Operational Engineering Section (OES), Headquarters, 6th Air Division.[76] The report emphasized the importance of a program to collect weather data by aircraft at altitudes above 35,000 feet, and which information would be used in the "checking of accuracy of forecasts as a basis for recommending new techniques and equipment to be used in acquiring upper air data, and for improving present procedures of reducing measured data into reliable forecasts."

Project "Black Sheep" which is the companion program of Project "Jet Stream" as referred to on Page 38 of this volume, began officially on 15 October, 1952.[77] Its purpose, as defined by Headquarters, Air Weather Service, is: ". . . to develop analysis and forecasting techniques that will best support jet bomber operations and to determine the best operational methods to provide meteorological service for all USAF high-level operations."

Secondary objectives of "Black Sheep" concern the evaluation of the worth of particular upper air charts, or a combination of charts including facsimiles, in upper-level forecasting; the determination of the degree of accuracy of forecasted elements required by high-level operations; and the determination of forecasting deficiencies that cannot be resolved without additional research by basic research agencies.

Semi-annual status reports are published by the 1st Weather

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76. Rpt, (SIR) "Collection of High Altitude Weather Data," prep by B-47 OES, Hq. 6th AD, 29 January 1952, DOES 319.1. Exhibit 17G.
77. Ltr, Hq AWS to CO 1st Weather Group, Offutt AFB, Neb., "Project Directive," 1 October 1952. Exhibit 18.

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Group, Offutt Air Force Base, Nebraska.

Included within this volume are both an abstract[79] and an enlargement[80] of a paper, "The 'Critical Eddies' in the Upper Atmosphere," given by Lieutenant Colonel Robert C. Bundgaard of Project "Black Sheep" before a Symposium on High-Level Forecasting on 14 September, 1953, at the Toronto Meteorological Conference, Toronto, Ontario, Canada. The subject is included in this historical report because of its propinquity. (Due to the technical aspects of the subject matter, no attempt will be made in this narrative to summarize Colonel Bundgaard's paper.)

Also included within this volume is a copy of the original document,[81] with illustrations, on icing conditions encountered at extremely high altitudes by MacDill-based B-47 aircraft, which was coauthored by Captain Currie S. Downie and Captain A. S. French, both of Project "Black Sheep." A condensation of their work appeared in the September, 1953, edition of Combat Crew magazine, entitled, "Thunderstorm Ice."[82]

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78. Disp Form, Comment 2, Detachment 1, 26th Weather Sq, 8 Oct 1953 to Hist Off to Disp Form, Historical Off to OIC Project "Black Sheep," 15 Sept 1953, MCDCAG 314.7.
79. Abstract of "The 'Critical Eddies' in the Upper Atmosphere," prep by Lt. Col. Robert C. Bundgaard, Project "Black Sheep." Exhibit 19.
80. Paper, "The 'Critical Eddies' in the Upper Atmosphere," prep by Lt. Col. Robert C. Bundgaard, Project "Black Sheep," for the Toronto, Canada, Meteorological Conference, 14 Sept 1953. Exhibit 20.
81. Document re icing conditions encountered by B-47 aircraft, prep by Captain Currie S. Downie and Captain A. S. French, both of Project "Black Sheep." Exhibit 21.
82. Captain Currie S. Downie and Captain A. S. French, "Thunderstorm Ice," Combat Crew (Sept 1953), 22-23. Exhibit 22.

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SAC Plan 1000 (Communications Building and Equipment) was completed, except for antenna installation awaiting necessary action by Air Materiel Command (AMC), during the latter part of July and the first part of August. The overall project began 30 November, 1951, and cost approximately $564,000, exclusive of the $250,000 automatic telephone exchange that began operations on 6 March, 1953.[83] The plan was composed of three buildings: Communications Center Building, located on Florida Avenue; Receiver Building, located on Hospital Road, and the Transmitter Building, located by the AMC fuel station.

The concrete block "Comm Center" has an area of 5,500 square feet. In addition to housing the telephone exchange, the Center includes teletype center, teletype maintenance, and cryptographic center. Occupancy of the Communications Center itself began on 16 July, 1953.

The concrete block Receiver Building has an area of 4,084 square feet, and is equipped with high-frequency (HF), very high-frequency (VHF), and ultra-high frequency (UHF) remote receivers for AACS and Base Communications.

The Transmitter Building, also constructed of concrete blocks, has a floor space area of 4,041 square feet, and houses HF, VHF, and UHF remote transmitters.

All of the buildings are air-conditioned. The Receiver and

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83. History 4th Air Division, March, 1953, pp 42-45.

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Transmitter Buildings were awaiting antenna installation at month's end. All buildings used prior to the occupancy of the new ones were returned to the custody of Air Installations Office (AIO).

Lack of the necessary material had completely stymied activity on project SAC-2AF-MCD-35/3-COMM and its companion, SAC-2AF-MCD-35/3A: Venice, Fla., Loran station-type MF timers, and Loran station obstruction lighting, respectively. The purpose of the combined project is to provide station identification and obstruction lights for two antennas. The original target date of completion was 1 October, 1953, but it is quite doubtful if that will be met.

The date of completion of project SAC-2AF-MCD-241-COMM, low frequency homer beacon at Zephyrhills, Fla., was also unknown, although the estimated date for arrival of the equipment was set at 15 November, 1953. Completion date of the project whose purpose is the construction for, and installation of, navigational aid AN/CRE-5 is unknown.

Project SAC-2AF-MCD-361-COMM, which is an instrument landing system (ILS) navigational aid to be sited at this base, was 40 percent completed as of the end of the month. Air Installations had completed the necessary work on the outer marker, inner marker, middle marker, and localizer reconditioning. It was expected the project would be complete by 1 October, 1953.

Work was halted on project SAC-2AF-MCD-541/5-COMM - UHF/DF

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which is a navigational aid, AN/CRD-6, when it was found that the original directional finder (D/F) site near the skeet range was unsatisfactory because of the base telephone cable being used to remote indicators to the control tower. When the necessary equipment was received, it was further discovered that the criteria for remoting indicators could not be met with this type of cable. Relocation of the site near the control tower will make it possible to use an isolated cable.

November 15, 1953, has been established as the date for the final 24-hour operation of the Radar Air Traffic Control Center (RAPC), project SAC-CAF-MCD-661/1-COAM.[84] Civil Aeronautics Administration (CAA) requires that 100A key boxes be installed prior to operation with actual weather conditions. When the equipment is received, it will be installed by the Peninsular Telephone Company of Tampa.

(Information pertaining to the above communications projects was received from Captain Clarence T. Westhoff, Base Communications Officer.)

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84. History 6th Air Division, July 1953, page 28.

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CHAPTER THREE

B-47 OPERATIONAL ENGINEERING

One new project was initiated during August by the B-47 Operational Engineering Section (OSE); one old project was completed; and 31 projects were undergoing additional research.[85]

The new project was "B-47 Compass Swinging Procedures (53-59)," which was an outgrowth of a project completed in July,

85. Rpt, "B-47 Operational Engineering Monthly Progress Report, 1 September 1953, prepared by Operational Engineering Section, Hq, 6th Air Division, DOSS 452.09". Exhibit 23.

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"Comparative Evaluation of Methods of Swinging Compass, B-47 A/C; (SL-59)."[86] The current project is actually an auxiliary of the former one, and has as its purpose the establishment of procedures and outlining of facilities needed to swing compasses by the tow-circle method. This procedure, as described in last month's report, consists of towing the aircraft in such a manner that the front and main rear gears are placed on a line tangent to a circle that is the desired path of the main gear; deviations from the tangent are measured for both of the main gears and are tabulated as corrections, followed by the computation of heading errors.

The project that was completed during August was "Westinghouse 20 KVA Alternators, B-47 Aircraft (SE-46A)." The project was begun on 28 April, 1953, with Staff Sergeant M. W. Huber as project engineer. It was established to determine if the latest model (-3) alternators would operate properly when the aircraft was flown through rain, and to evaluate the field flashing circuits that were installed concurrently on all 306th Bomb Wing B-47's. New A36A 9107-3 Westinghouse alternators were installed on all 306th aircraft prior to their departure to England. Several failures of these alternators occurred after the aircraft met rain; therefore they cannot be considered an effective fix for this deficiency. The

86. History 6th Air Division, July 1953, pp 18-19.

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flashing were not installed in the Wing's aircraft as parts were not available at MacDill prior to the 306th's departure, nor were the parts available in England. Consequently, the circuit was not evaluated and reported on in conjunction with project "Westinghouse 20 KVA Alternator Malfunctions: (EE-46)." But there will be no further action taken on the project just completed (EE-46A). Wright Air Development Center (WADC), Wright-Patterson Air Force Base, Ohio, will procure the Westinghouse window bracket alternator to correct the failure of -2 alternators to operate in rain.

To avoid needless repetition, and for time economy purposes, the current projects will be mentioned but briefly. Details of progress made during August can be found within the OSS Progress Report in Appendix "A" of this history.

"B-47 Weight Reduction Program: (AE-11)," was originated 13 May, 1953, with the purpose of decreasing the basic weight of aircraft on a manner to extend its long range capability.

"Flight Analyzer Installation, B-47 Aircraft: (AE-32)" is to record flight conditions of airspeed, altitude, and vertical acceleration for study by the WADC Structures Analysis Branch. The MacDill project began 30 April, 1953.

"B-47 Instrument Calibration Requirements: (AE-33)" has the purpose of determining the extent of instrument calibration necessary for the effective operation of B-47 aircraft, and was initiated in May, 1953.

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"Inverter Malfunctions: (23-10)" which originated 19 September, 1952, is to evaluate, on a competitive basis, nine (9) AN-3516 inverters from four different manufacturers.

"Fuel Boost Pump Failure: (23-16)" is to monitor failures of modified fuel boost pumps at this station. This MacDill project began 18 March 1953.

"B-47 Armament System Deficiencies: (23-42)" with the purpose of isolating and investigating deficiencies in the B-47 armament system, was originated 3 March 1953.

"Tracking Range of K-4 Bombing Navigation System in B-47 Aircraft: (23-43)" was originated 3 February 1953 and has for its purpose the testing of modified K-System computers which are installed on B-47 type aircraft.

"Remote Radar Indicator ID-718 in Co-pilot's Position: (23-44)" which originated 5 February, 1953, is to investigate the feasibility and advantages of installing an auxiliary radar scope in the co-pilot's position.

Specific Item Report No. 10, dated 31 July, 1953, [87] was submitted to SAC by Captain Enoch T. Neversen on 4 August 1953.

The installation of an auxiliary radar indicator in the co-pilot's position of B-47B No. 51-2074 was authorized by the Operational Engineering Section. A program was formulated to test the operational aspects of the indicator for co-pilot assistance in: (1) radar navigation, (2) target identification and (3) station keeping.

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87. Rpt, "Specific Item Report No. 10", 31 July 1953, prep by Operational Engineering Section, Hq, 6th Air Division, DOSS 452.0311. Exhibit 24.

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A second installation having a separate power supply and synchronizer was authorized by Headquarters Strategic Air Command for installation on a B-47 aircraft in the United Kingdom for testing, including station keeping tactics.

Optimum installation requires that the co-pilot face to the rear to use auxiliary indicator; and for optimum utilization of the auxiliary radar scope a separate power supply and synchronizer is desirable.

Recommendations were made that WADC and Boeing Airplane Company investigate space requirement in the co-pilots position of B-47E and RB-47E aircraft for an auxiliary radar scope. Specific recommendations on the auxiliary indicator scope for B-47E aircraft are being held in abeyance until the completion of evaluation of the unit containing the separate synchronizer.

Subject installation would transfer navigational responsibilities to the co-pilot whenever it is necessary for the observer to isolate and correct in-flight malfunction of the computer section of the K-4 bombing and navigation system. The co-pilot could further assist by relieving the observer for short periods on missions using station keeping tactics and help in placing the bombing cross-hair more accurately on the target.

Engineering details of the installation will be reported at a later date in the SIR covering the indicator having a separate synchronizer and power supply. A subsequent SIR will report the value of the remote indicator on station keeping tactics being conducted in the United Kingdom.

"Westinghouse 90KVA Alternator Malfunctions: (33-46) which began

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26 February, 1953, is to decrease the number of alternator malfunctions.

"Service Test of Improved Speed Governor for Jack & Heintz, AN-3516 Inverters: (EE-47)" has as its purpose the evaluation of a new speed governor for the Jack & Heintz Type AN-3516 Inverter. The MacDill project began 26 February, 1953.

"Failure of IN-3B Crystals in RT-154/APS-33: (EE-48)" which originated 2 March, 1953, has the purpose of investigating excessive IN-23B crystal failures which have occurred at this station in the past two months.

"Emergency K-System Bombing Computer: (EE-52)" is to determine the feasibility of utilizing an emergency bombing computer in the B-47 aircraft when a failure of the computing section of the K-system exists. This MacDill project began in February, 1953.

"K-System Dual Offset Unit: (EE-53) which originated in April, 1953, has the purpose of evaluating two prototype dual offset units.

"Evaluation of New Termal Delay Relay, A-1 Power Supply, In Conjunction With Fast Blow Fuses, K-System: (EE-54)" has the purpose of evaluating the new type thermal delay relays, K-301, located in the A-1 power supplies of the K-system. May, 1953, was the originating date of this project.

"Radome Failures, K-System: (EE-55)" is to determine whether an unreliable radome can be restored to usable condition by drying it out with heat lamps, and to determine whether a reliable radome can be coated with a sealing agent to prevent contamination. The project began in May, 1953.

"Evaluation of C-23 Camera: (EE-56)" which originated in May,

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1953, has the purpose of evaluating the capability of the O-23 Camera.

"ARN-14 Antenna Connector (EE-57) which began 2 June, 1953, is to eliminate failure of ARN-14 antenna connector in the vertical stabilizer of B-47 aircraft.

"Evaluation of 10" Radar Scope: (EE-58)" was originated 8 June, 1953, with the purpose of evaluating the 10 inch radar indicator in B-47 Aircraft.

"Deficiencies of B-47B Interphone System Prior to the 455th Aircraft. (Formerly-"Deficiencies of AIC-3 Interphone System): (EE-60)" is to eliminate deficiencies in present interphone systems and to outline requirements which will prevent similar deficiencies in future systems. The originating date of this project was June, 1953.

"Instrument Landing Facilities in Co-Pilot's Position, B-47 Aircraft: (EE-61)" which began 17 July, 1953, has the purpose of monitoring the installation of ILAS and OMNI indicator, ID-[illegible]79 and ID-[illegible]50 in the co-pilot's position in B-47 aircraft, and to evaluate this installation from an operational view.

"Jump of Radar Presentation on ID-[illegible]18/APS-[illegible]3 Caused by O-15 Camera: (EE-6[illegible])" originated [illegible]7 July, 1953, is to prevent "jump" of the radar picture on the indicator, ID-[illegible]18, when the O-15 scope camera is actuated.

"Fuel Loading Procedures: (ME-[illegible]8)" which began in February, 195[illegible], has the purpose of developing a firm method of refueling the B-47 aircraft prior to long range missions.

"Crew Comfort and Survival Equipment: (ME-44)" is to investigate and make recommendations regarding [illegible] comfort problems existing

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in the B-47 aircraft. The project originated 9 April 1953.

"Fuel Tank Leaks, B-47 Aircraft: (ME-63)" which began 19 February, 1953, is to report fuel tank leaks and to recommend corrective action.

"Service Life of B-47 Surface Control Pump Assemblies: (ME-64)" has the purpose of monitoring the operation of twelve (12) surface power control unit pumps, part number 4869-167WQ300, for the purpose of determining periodic replacement time. The originating date of this project was 10 June, 1953.

"Tow-Target Reel Installation: (ME-69)" is to determine the feasibility of installing a tow-target reel which can be readily removed or installed for towing winged targets with B-47 aircraft. This MacDill project began 13 February 1953.

"Alternator Water Separator: (ME-73)" has the purpose of testing a locally fabricated alternator water separator as regards efficiency of water separation, adequacy of cooling and freedom from icing. This MacDill project began on 16 April, 1953.

"Extruded Compressor Stator Blades J47-25 Engine: (ME-75)" which originated 28 May, 1953, is to monitor effect on engine life of a modified extruded compressor stator blade.

"Tool-Engine Mount Pin and Internacelle Fairing: (ME-76)" which began 19 June, 1953, has the purpose of evaluating and refining design of a locally devised multi-purpose tool for removing and installing engine mount pins and aft and forward internacelle fairings.

"Main Landing Gear Seal Failures: (ME-78)" is to determine if soft street servicing in accordance with T.O. 01-20EN-231 is the cause of "O" ring failures. This MacDill project originated 8 July

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1953.

"Towing Aircraft to Runway Prior to Take Off: (ME-79)" began 17 July, 1953, and has the purpose of determining the feasibility of towing B-47 aircraft from parking ramp to end of runway for purpose of saving fuel, with a result of saving dollars.

B-47 Operational Engineering Section projects which have been completed and are awaiting action by Headquarters, Wright Air Development Center:

(AE-7): Analysis of B-47 Mission Capability.

(AE-13): PDI Instrument Relocation.

(AE-18): Evaluation of Alco Windshield Wiper.

(EE-14): Evaluation of APN-1? and APN-68 Rendezvous Equipment.

(EE-14C): Rendezvous Descent Preliminary to Inflight Refueling of B-47E Aircraft.

(EE-30): K-System Slewing.

(EE-37): Nose Glass Control.

(EE-49): Use of the B-7 Intervalometer in Lieu of B-8.

(EE-51): APN-76 Receiver-Transmitter Location.

(EE-59): Comparative Evaluation of Methods of Swinging the Compass, B-47 Aircraft.

(ME-12): Directional Damper.

(ME-15): Observer's Ditching Harness.

(ME-31): Lower Wing Surface Access Panel.

(ME-36A): Periscopic Sextant Mount in the Navigator's Position, B-47E Aircraft.

(ME-49): Seal Retainers on Fuselage Access Doors.

(ME-60): Operational Suitability Test of Phase II Modified

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1953.

"Towing Aircraft to Runway Prior to Take Off: (ME-79)" began 17 July, 1953, and has the purpose of determining the feasibility of towing B-47 aircraft from parking ramp to end of runway for purpose of saving fuel, with a result of saving dollars.

B-47 Operational Engineering Section projects which have been completed and are awaiting action by Headquarters, Wright Air Development Center:

(AE-4): Analysis of B-47 Mission Capability.

(AE-13): PDI Instrument Relocation.

(AE-18): Evaluation of Alco Windshield Wiper.

(EE-14): Evaluation of APN-1? and APN-68 Rendezvous Equipment.

(EE-14C): Rendezvous Descent Preliminary to Inflight Refueling of B-47B Aircraft.

(EE-30): K-System Slewing.

(EE-37): Nose Glass Control.

(EE-49): Use of the B-7 Intervalometer in Lieu of B-8.

(EE-51): APN-76 Receiver-Transmitter Location.

(EE-59): Comparative Evalutation of Methods of Swinging the Compass, B-47 Aircraft.

(ME-12): Directional Damper.

(ME-15): Observer's Ditching Harness.

(ME-31): Lower Wing Surface Access Panel.

(ME-36A): Periscopic Sextant Mount in the Navigator's Position, B-47B Aircraft.

(ME-49): Seal Retainers on Fuselage Access Doors.

(ME-60): Operational Suitability Test of Phase II Modified

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B-47B Aircraft.

(ME-68): Multipl ce Life Raft Installation of B-47 Aircraft.

(ME-70): Locking Power Control Unit Se-l.

(ME-7?): Canopy Cone Seat Modification, B-47 Aircraft.

(ME-7(): J47-?3 and -?5 Engine Speed Switch.

(ME-7?): Functional Test of Fuel T nk Float Switches.

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CHAPTER FOUR

FACILITIES and MATERIEL

The site of MacDill's new dental clinic will be at the corner of Hospital Road and Administrative Loop.[88]

Scheduled for completion about December first, the building will be erected at a cost of $87,754.00 by Edward L. Bolding Company of Tampa.

The structure was designed by Reisner and Urbahn of New York City and will conform to standard Air Force dental clinics. The structure will contain fifteen (15) operative rooms, laboratories and waiting rooms. The concrete-walled, permanent type building is completely air-conditioned.

The new building program at MacDill recently enjoyed a visit

88. The Airman, MacDill AFB, FL, [illegible]53.

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from Brigadier General Charles G. Holle of the U.S. Army Corps of Engineers.[89] General Holle, South Atlantic Division Engineer, toured construction projects within this command before returning to division headquarters in Atlanta, Georgia.

Bureau of the Budget Circular A-45, dated 3 June 1953, adopted by P.L. 170 of the 82nd Congress, specifically paragraph 5b, requires a reappraisal of the Gadsden homes on this base in order to insure that rents and service charges are kept up-to-date.[90]

A recent staff inspection of the homes by the Family Housing Group, Directorate of Installations, in conjunction with Base Personnel, revealed that comparable rents established by the Base Appraisal Board are no longer realistic due to general decline of rents in the Tampa area and to the physical condition of the units.

A resurvey of Gadsden Homes has been requested in accordance with BoB circular A-45. By expediting the reappraisal, the new rents may be put into effect by 1 October 1953.

During the recent base defense and evacuation plans, and actual implementation of mobility plans, the necessity of insuring maximum availability of personnel through residence on the base has been emphasized.

To provide control necessary to accomplish this objective, action will be taken to amend Paragraph 4a(1), Air Force Regulation 30-6, dated 10 August 1951, in accordance with a draft informally coordinated with Colonel McCord and other representatives of the Family Housing Group, who visited MacDill Air Force Base on 13 and 14 August 1953.[91]

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89. The Airman, MacDill AFB, Fla., 7 August 1953.
90. Ltr, Hq USAF, "Rpt Control Symbol AFXBB-ZI", 19 Aug 53, AFOAI-3
91. Ltr, 6ADiv, Utilization of Base Housing, 15 Aug 53, MCDCO w/incl Draft of Amendment

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The draft states that all assignments be made in writing, giving precedence to officers and senior non-commissioned officers, except in the case of key personnel. Personnel will be so designated by the Base Commander without regard to order of rank or grade.[92]

Recommendations for the new 150-300 bed hospital proposed for this station will include an underground water supply as an elevated tank presents a flight hazard.[93]

In the interests of long range planning, one (1) 250 GPM pump and one (1) 400 GPM pump, gas engine driven, would provide a greater safety factor than two (2) GPM pumps.

In the design of the water supply lines, it was not intended to furnish two (2) new supply lines but one (1) new line with a tie-in to reinforce the POL system. By connecting the new hospital line to the existing system, water supply for the new hospital can be obtained from either side, i.e., city supply main number one or number two, thereby assuring adequate supply in case of failure or low pressure conditions in either main.

The principal reason for installing a chlorinator is to assure that a residual of .4 PPM can always be obtained in the hospital at all times. Despite heavy chlorinating by the City of Tempe and MacDill the .4 PPM can not be maintained at the end of the base distribution system in which the hospital is located. It must be pointed out that the chlorinator is unnecessary from a bacterial standpoint, but is required to provide the .4 residual as required by the State

---

92. Ref Footnote 91, Page 61, Incl-Draft of Amendment
93. Ltr, "Review of Preliminary Plans for New Hospital, MacDill AFB, Fla., dtd 12 Aug 53, MCDMAI 600.1, Exhibit 25.

RESTRICTED SECURITY INFORMATION

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Health Department. It is recommended that a small chlorination house be constructed on the new supply line to provide an adequate contact period and that a suitable vacuum type chlorinator with venturi tube control be installed therein.

It is believed that the water storage tank can be reduced from 250,000 to 150,000 gallons, and under normal operation usable pressure will be furnished from the supply line. Also, it would be rather difficult to maintain 250,000 gallons of fresh, potable water under existing conditions.

Other suggestions are: garbage holding room should be refrigerated; bakery oven should be changed to electric or low pressure gas; induced draft fans and reduced stack height; 100% fresh air in autopsy room to eliminate possible odors in return air; eliminate central air handling unit, utilizing instead piped chilled water, hot water and steam to needed areas with short runs of duct. With this method, the central air handling room and large ducts will be eliminated and more efficient spot control obtained. Also, the dirt catching convectors could be eliminated in the heating system.

On request from Strategic Air Command [9/] through Second Air Force, MacDill has completed a two-folder report "Airfield Pavement Inventory Series" which was sent to Strategic Air Command on 27 August 1953. The sample folder from Headquarters, Strategic Air Command, proved highly informative and the report on conditions at MacDill Air Force Base was in accord with the information disseminated in the sample folder. The original tracings have been retained for future use and

9/. Ltr, "Graphic Data to Support New Construction Programming", dtd 17 Aug 53, DMOC 686.

reference as request by Headquarters, Strategic Air Command.

On 4 August 1953, the second dyna-fogging machine arrived at MacDill Air Force Base.[95]

Base Supply reported that during the month of July 913.88 tons of property were shipped from this base under the Excess Disposition Program.[96] For the week ending 8 August 1953, thirty-eight (38) tons of excess property were shipped from this station to various AMS's,[97] and 10.37 tons of excess property were shipped to various AMS's for the week ending 29 August 1953.[98]

95. Daily Journal, Hqs 809th AB Gp, dtd 4 Aug 53.
96. Daily Journal, Hqs 809th AB Gp, dtd 4 Aug 53.
97. Daily Journal, Hqs 809th AB Gp, dtd 8 Aug 53.
98. Daily Journal, Hqs 809th AB Gp, dtd [illegible] Sep 53.

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CHAPTER FIVE

MISCELLANEOUS

Five B-47 ash trays were awarded by Brigadier General H. K. Mooney, Commander of 6th Air Division, to one (1) officer and four (4) airmen for management improvement suggestions on 31 August 1953.[99]

All management improvement suggestions are submitted to Base Manpower and are passed on by the 6th Air Division Management Advisory Group. Awards are given when an improvement suggestion proves to be practicable and saves manhours for its originating organization.

Base Air Installations Office received the new rock type filters for the Base Photo Laboratory's water system during the month of August for installation on 1 September 1953. It is anticipated that these filters will eliminate foreign matter deposits in processing

99. Daily Journal, Hqs 809th AB Gp, dtd 1 Sep 53

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water thereby producing better prints.

Emphasis was placed on the need for greater security consciousness in the Second Air Force Command by Major General Thomas S. Powers, Vice Commander of Strategic Air Command, in his letter dated 20 July 1953 to Headquarters, Second Air Force. Recent reviews of security inspections, internal defense tests and ground defense maneuvers have indicated a serious deficiency in the security afforded Category I elements of this command.[101]

Major General Frank A. Armstrong, Commander of Second Air Force, forwarded a copy of General Power's letter to the Commander of 6th Air Division with his letter dated 24 July 1953. Therein he expressed his desire that the contents of General Power's letter be forcefully brought to the attention of all personnel at MacDill Air Force Base, Florida, to insure compliance with the spirit and the letter of these directives.

Brigadier General H. K. Mooney, Commander of 6th Air Division, directed the attention of the commanders of the 306th Bomb Wing, 306th Bomb Wing, 809th Air Base Group and 98th Air Refueling Squadron to the need for greater security consciousness by his indorsement to General Armstrong's letter and the inclosure thereto. In his indorsement, he stressed the necessity for commanders at all levels to assume their share of the responsibility to insure success of the security aspect of our mission at MacDill Air Force Base. All individuals assigned or attached to this command have been made aware of the very

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100. Daily Journal, Hqs 809th AB Gp, dtd 1 Sep 53.
101. Ltr, "Security Responsibilities," dtd 24 Jul 53, 2AFCC, Exhibit 26.

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real possibility of the failure of Strategic Air Command's mission due to lack of security of our aircraft and support equipment.

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HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

ROSTER OF PERSONNEL
28 September 1953

NAME	HOME ADDRESS	DY PHONE	HOME PHONE
BRIGADIER GENERAL H. K. MOONEY Commander 6th ADiv	7803 Bayshore Dr. MacDill AFB, Fla	20-011	39-291
COLONEL E. C. HARDIN JR. Director of Operations	Apt. E. Bayshore Dr. Transient Quarters	23-011	35-971
COLONEL R. E. KIMMEL Director of Materiel	405 Staff Loop MacDill AFB, Fla	24-011	20-231
LT COL F. R. BERTERO Director of Personnel	3604 West Sterling Circle, Tampa, Fla.	21-011	62-5293
LT COL E. L. BISHOP Deputy Director of Operations	8115 Bayshore Dr.	24-681	60-3201
MAJOR K. L. WARNER Training Officer	8005 Bayshore Dr.	36-111	60-2254
MAJOR W. H. PATTON Asst Director of Materiel	3013 Meadows St # Tampa	39-681	None
MAJOR D. R. CHINNOCK Staff Arm & Elect Officer	16 Bridges Loop Apt 6	39-681	60-2822
1ST LT EVERETTE TAYLOR Aide - de - Camp	BOQ 408, Rm 14, MacDill AFB, Fla	20-111	None
MAJOR B. J. MUNNERLYN Adjutant	6220 Foster Ave # Tampa, Fla	27-111	63-4774

(#) All home addresses on the base unless otherwise indicated.

B. J. MUNNERLYN
Major, USAF
Adjutant

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

ROSTER OF KEY PERSONNEL
1 September 1953

NAME	*HOME ADDRESS	DUTY PHONE	HOME PHONE
#Colonel B. H. Merchant Base Commander	4 Staff Loop	31-111	36-271
#Lt Col T. G. Sanford Deputy Base Commander	8313 Bayshore Dr.	36-021	60-2331
#Lt Col D. J. Nolan Base Executive Officer	33 Secord Drive	26-321	60-3863
#Major B. W. Munnerlyn Base Adjutant	6220 Foster Ave Tampa	27-111	63-4774
#WOJG C. A. Whittle Asst Base Adjutant	BOQ 368 Apt #3	27-111	35-211
#Lt Col W. B. Hoynes Director of Personnel	5 Secord Dr.	31-031	60-2303
Major A. J. DiLucido Mil Personnel Officer	8207 Bayshore Dr. Apt #4	35-611	60-3351
#Lt Col L. J. B. Mestier Jr. Director of Operations	4 Garden Dr.	32-501	60-2223
Major H. P. Killingsworth Asst Dir of Operations	6208 Foster Ave. Tampa	32-501	63-5743
#Major S. L. Almon Director of Materiel	3510 Vasconia Tampa	28-071	62-5754
#Major R. G. Williams Air Installations Officer	11 Secord Dr.	31-051	60-3253
#Major H. C. Oakes Base Comptroller	3 Hillsborough Loop	25-301	60-2061
#Lt Col C. L. Lack Base Chaplain	9 Bridges Loop Apt #1	21-111	None
#1st Lt J. Thomas Personal Affairs	5502 Branch Ave. Tampa	25-061	32-9901
Major I. Peskoe Base Legal	1 Bridges Loop Apt #2	25-372	60-2373

#Major W. W. Howard Info Service Officer	2816 Sitios St. Tampa	22-311	82-2423
#Major J. H. Windsor Air Provost Marshal Comdr 809th Air Police Sq	4 Bridges Loop Apt #6	25-191	60-2833
#Major A. H. Haaf Transportation Officer	4735 West Anita Blvd. Tampa	38-011	63-2671
Lt Col R. N. Bailey Sq Comdr Hqs 809th ABG	106 S. Mantanzas Tampa	37-031	85-0732
Capt J. J. Karlonas Comdr Supply Sq	4211 Vasconia Tampa	32-031	63-1531
Capt J. H. Steiger Comdr Mtr Veh Sq	4720 Bay Vista Tampa	39-311	61-6914
Capt G. P. Foster Comdr Food Sv Sq	3616 Omar St. Tampa	25-021	63-4053
Major H. P. Killingsworth Deputy Comdr Opns Sq	6208 Foster Ave. Tampa	34-791	63-5743

(*) All home addresses on the base unless otherwise indicated.
(#) Indicates officers on alert as designated by 809th Standing Directive No. 11-2, 7 October 1952.

C A Whittle

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

B I B L I O G R A P H Y

Letters
Directives
Special Reports
General Orders
Special Orders
The Airmen
Daily Journal
Tampa Morning Tribune
Tampa Daily Times

APPENDIX "A"

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JESDL 2639
DL054
VDC02E
YVC065
YYC068JO
RR JESBA JESDL JWFAP JWFBG JWFQB JWPFN JWPJM JWPPG JWPRH 999
DE JEDMH 832
R 192303Z ZFF ZNJ
FM COMDRSACOFFUTT AFB NEBR
TO JESBA/COMDRAF 2 BAF KSDALE AFB LA
JWFQD/COMDRAF 8 CARSWELL AFB TEX
JWPRH/COMDRAF 15 MARCH ADB CALIF
INFO JWFAP/COMDRSTRAT RECONWG 28 SILSWORTH AFB SDAK
JWPPG/COMDRAIDIV 57 F AIRCHILD AFB WASH
JWPPG/COMDRADIV 14 TR VIS AFB CALIF
JWPJM/COMDRBOMBWG 93 C ASTLE AFB CALIF
JWFBG/COMDRAIRDIV 810 BIGGS AFB TEX
JESBQ/COMDAIRDIV 4 BARKSDALE AFB LA
JESDL/COMDAIRDIV 6 MCDILL AFB FLA
JWPRH/COMDAIRDIV 12 MARCH AFB CALIF

/R E S T R I C T E D/ OS 20683. FOL MSG FROM HQ USAF AS PERTAINS TO SAC BASES IS QUOTED FOR YOUR INFO AND COMPLIANCE QUOTE SAFIL 53011. CONGRESSMAN HARRY R. SHEPPARD CMA FROM THE 27TH DIST OF CALIF CMA MEMBER HOUSE APPROPRIATIONS COMMITTEE CMA ACCOMPANIED BY MRS. SHEPPARD CMA IS TRAVELING BY PRIVATE AUTO THROUGHOUT THE U.S. HE WILL VISIT MANY INSTALLATIONS TO ASSURE THAT FUNDS APPROPRIATED BY CONGRESS FOR NATIONAL DEFENSE ARE BEIN SPENT WISELY. CONGRESSMAN SHEPPARD DOES NOT HAVE A FIXED ITINERARY BUT ESTIMATES THE COL CLN LAST WEEK IN AUG 53 CN ELLSWORTH AFB. 1ST AND2 2D WEEKS IN SEPT CLN FAIRCHILD AFB AND SPOKANE AIR DEPOT. 3RD AND 4TH WEEKS IN SEPT CLN TRAVIS AFB AND CASTLE AFB. OCTOBER CLN MARCH ADB. 1ST OR 2ND WEEK IN NOV CLN BIGGS AFB AND BARKSDALE AFB. 2ND AND 3RD WEEKS IN NOV CLN MACDILL AFB. CONGRESSMAN SHEPPARD WILL ADVISE EACH INSTALLATION 24 HOURS BEFORE ARRIVAL. REQUEST THAT ALL AF PERSONNEL COOPERATE WITH CONGRESSMAN SHEPPARD IN EVERY WAY POSSIBLE TO MAKE HIS VISIT TO BASES WORTHWHILE. CONGRESSMAN SHEPPARD AUTHORIZED MILITARY AIR TRANSP IF REQUIRED CN ON ANY LOCAL INSPECTION. PLEASE RENDER HIM EVERY COURTESY POSSIBLE. UNQUOTE
19/2304Z AUG JEDMH

"A CERTIFIED TRUE COPY"

E. A. JOHNSON
2nd Lt., USAF

SECURITY INFORMATION

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SECURITY CLASSIFICATION (If any)

CONFIDENTIAL

DISPOSITION FORM

FILE NO.	SUBJECT
HQDCAS 310.	Request for Historical Information

TO	FROM	DATE	COMMENT NO. 1
Comptroller	6th Air Division Historical Officer	23 September 1953	

1. It is requested that the following, and allied, information be furnished for inclusion in the August, 1953, 6th Air Division History:

a. Specific purpose of the three- man team, headed by a Mr. _____ Cook, from the Atlanta, Ga., branch of the Committee 85 cases. (According to the Daily Journal of 11 August, the team was to conduct a "survey" of such cases; request a brief elaboration of this statement.)

b. The total number of cases awaiting courts-martial action as of 31 August; total number of cases undergoing investigation by the Committee and/or OSI; and the total number of cases which were awaiting preliminary scrutiny by the Committee.

c. The disposition of those individuals (and their number) who had admitted their error; this forecast being based upon cited directives from higher and intermediate headquarters.

d. The disposition of those individuals (if any) who, after being faced with evidence of wrong doing, insisted they were innocent.

e. The total amount of money which investigation (as of 31 August) showed was erroneously paid, and the total amount collected as of that date.

2. Further request similar reports be made monthly until such time as the Committee completes its work.

s/B. A. Johnson
t/B. A. JOHNSON
2nd Lt., USAF
Historical Officer

THIS IS A CERTIFIED TRUE [redacted] COPY:

B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF
Historical Officer

CONFIDENTIAL

DD FORM 1 FEB 50 96 REPLACES NME FORM 96, 1 OCT 48, WHICH MAY BE USED.

CONFIDENTIAL

TO: Historical Officer, 6th Air Division FROM: Base Comptroller DATE: 26 Sep 60 SUBJECT: [illegible]

1. Reference basic communication, you are advised as follows:

a. Mr. Lolley Deal, is in charge of a three-man team from Atlanta Branch of the General Accounting Office. They do not explain their mission. However from observation they appear to be interested in the number of cases involved, the probable cause of the cases, the action taken to effect collection, the local interpretation of orders and regulations regarding entitlement to reimbursement, and a detailed record of all cases having been processed or to be processed by Committee 60. They are in no way connected with Committee 60.

b. Due to the thorough and repeated examination of the files of this Committee it is considered impossible to render a factual report of progress as of 31 August 1960 nor can one be rendered for at least 30 days after this team completes their review because it will require that much time to reassemble our files into some semblance of order. They have not given me a target date when they expect to depart.

2. Due to the fact that the Base Provost Marshal, Office of Special Investigation, and the General Accounting Office are each attempting to report the same information requested in basic command, I foresee considerable variance of information reaching higher hq., therefore I prefer to submit correct information rather than "guestimates".

3. This office will submit a full report at the earliest possible date.

s/h C Walker
t/H. C. WALKER
Major, USAF
Base Comptroller
Ext 28-301

THIS IS A CERTIFIED TRUE COPY:

P. A. Johnson

P. A. JOHNSON
2nd Lt., USAF
Historical Officer

SECURITY INFORMATION

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0627

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 17)

16 August 1953

SECTION

AMENDMENT TO GENERAL ORDERS..... I
REASSIGNMENT OF AIR REFUELING SQUADRON..... II

I. AMENDMENT TO GENERAL ORDERS. General Order number 9 this Hq as pert to attachment of 98 Air Rflg Sqdn this sta is rescinded.

II. REASSIGNMENT OF AIR REFUELING SQUADRON. The 98 Air Refueling Squadron, Medium, having been assigned to the Second Air Force, is further assigned to the 6th Air Division, MacDill Air Force Base, Florida, effective 1 July 1953. AUTH: SAC GO # 53 dtd 15 Jun 53.

BY ORDER OF THE COMMANDER:

OFFICIAL:

C. A. Whittle

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

P. J. MINTERLYN
Major, USAF
Adjutant

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SECURITY INFORMATION

6AD-1
D/Co-1
305-1
306-1
Comp-4
D/Mnt-1
D/Bas-1
D/Ops-1
APM-1
18ARS-1

HEADQUARTERS STRATEGIC AIR COMMAND
Offutt Air Force Base
Omaha, Nebraska

COA 373

27 August 1953

SUBJECT: SAC Management Control Statement, Air Base Groups - July 1953

TO: See Distribution

Attached as Inclosure 1 are indexes computed under the SAC Management Control System, Air Base Groups. Ltr and Mountain Home are included for the first time. The following comments are made concerning the indexes.

1. Manning indexes for airmen continued to advance reaching an average of 88% of possible points while officer manning remained low, averaging 16% of possible points.

2. AWOL indexes remain characteristically low for Air Base Groups, with only 9 of the 22 receiving more than minimum possible points.

3. Reenlistment Rate shows a reduction for July, with an average of 46% of possible points compared with 55% in June. Nine of the 19 Air Base Groups scored both months show lower indexes for July and three show improvement. Only immediate reenlistments are considered in computing this index and scoring tables were prepared on this basis.

4. NCO Messes improved in financial operating efficiency indexes to an average of 69% of possible points, recovering most of the drop encountered for June.

5. MIT Aircraft Utilization is not being measured until further notice.

BY ORDER OF THE COMMANDER:

EARL C. MILLER
Lt Col, USAF
Asst Adjutant

1 Incl
SAC Mgt Con Statement,
ABOp - Jul 53

DISTRIBUTION:
Special

CENTRAL FILES
31 AUG 1953
OFFUTT AIR FORCE BASE
OMAHA, NEB

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Inclosure 1

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SAC MANAGEMENT CONTROL STATEMENT - JULY 1953

AIR BASE GROUPS

	Item Weight	Barksdale	Bergstrom	Bigs	Carswell	Castle	Davis-Monthan	Dow	Ellsworth	Fairchild	Forbes	Hunter	Lake Charles	Lockbourne	MacDill	March	Mountain Home	Offutt	Raney	Smoky Hill	Travis	Turner	Walker
	Percent of Maximum Score Obtained																						
1. Manning																							
Officer MIRS	20	10	10	10	20	10	10	10	10	10	10	10	10	10	10	10	20	70	10	10	30	10	40
Airmen MIRS	80	100	70	80	100	100	100	90	80	100	50	100	90	60	100	100	80	100	80	60	100	100	60
2. Personnel Records	50	40	100	100	100	100	100	40	100	100	100	50	70	40	70	100	90	100	100	50	100	80	100
3. AWOL Rate	50	30	20	10	40	80	90	70	10	60	10	10	10	10	30	10	10	60	100	10	10	10	10
4. Ground Safety	70	55	55	50	45	60	20	70	10	80	40	70	45	50	80	55	100	90	30	15	45	10	10
5. Reenlistment Rate	50	70	40	30	60	40	100	10	60	10	50	80	30	10	40	30	60	30	NA	60	10	100	40
6. Officer & NCO Messes																							
Officer Messes	25	10	10	10	10	40	30	10	10	50	30	80	50	100	100	70	10	10	100	100	60	20	10
NCO Messes	25	50	100	100	60	10	70	80	90	100	80	60	10	60	60	100	80	100	70	30	60	40	100
7. Reports of Survey	60	55	65	60	95	100	60	55	100	80	100	70	55	70	100	80	100	75	55	50	85	80	70
8. Supply Effectiveness	100	80	95	100	95	100	100	45	95	100	95	90	95	95	85	100	NA	100	100	90	80	80	100
9. T/O Equipment	20	100	100	100	100	100	100	20	100	100	100	100	100	100	100	100	60	NA	100	60	100	80	100
10. Flyaway Kits	60	100	70	80	50	90	70	NA	60	100	90	100	100	70	50	90	90	NA	NA	80	90	60	80
11. Vehicle Utilization	70	50	40	90	40	100	100	50	20	100	40	80	20	100	100	100	100	80	100	100	100	30	100
12. Air Base Group Costs	80	30	100	80	100	100	60	90	80	70	80	70	40	80	70	90	80	90	90	100	80	90	80
13. AMO Costs Incident to Maint.	60	30	70	10	60	80	70	20	80	80	80	60	80	80	80	30	10	100	50	50	20	70	60
14. Flying Safety	70	100	10	10	80	100	20	100	30	100	100	100	100	10	100	40	10	100	100	100	100	100	10
15. MIT Acft Utilization	--- Not Applicable ---																						
16. Synthetic Trnr Util.	50	100	100	70	90	100	100	20	100	80	90	70	10	100	100	100	50	100	80	NA	80	100	100
TOTAL Percent of Maximum	940	65	65	61	72	85	73	55	63	82	70	75	59	63	78	74	64	85	80	66	71	72	67

NA - Not Applicable

TOTAL ITEM WEIGHT for Dow is 880; Smoky Hill is 890; Offutt is 860; Mountain Home is 840; and Raney is 830.

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SECURITY INFORMATION

SAC

Management Control

System

AIR BASE GROUP

MACDILL
AIR FORCE
BASE

809th air base group

AUGUST 1953

PREDICTED SCORES

Prepared By
Base Comptroller

FOREWORD

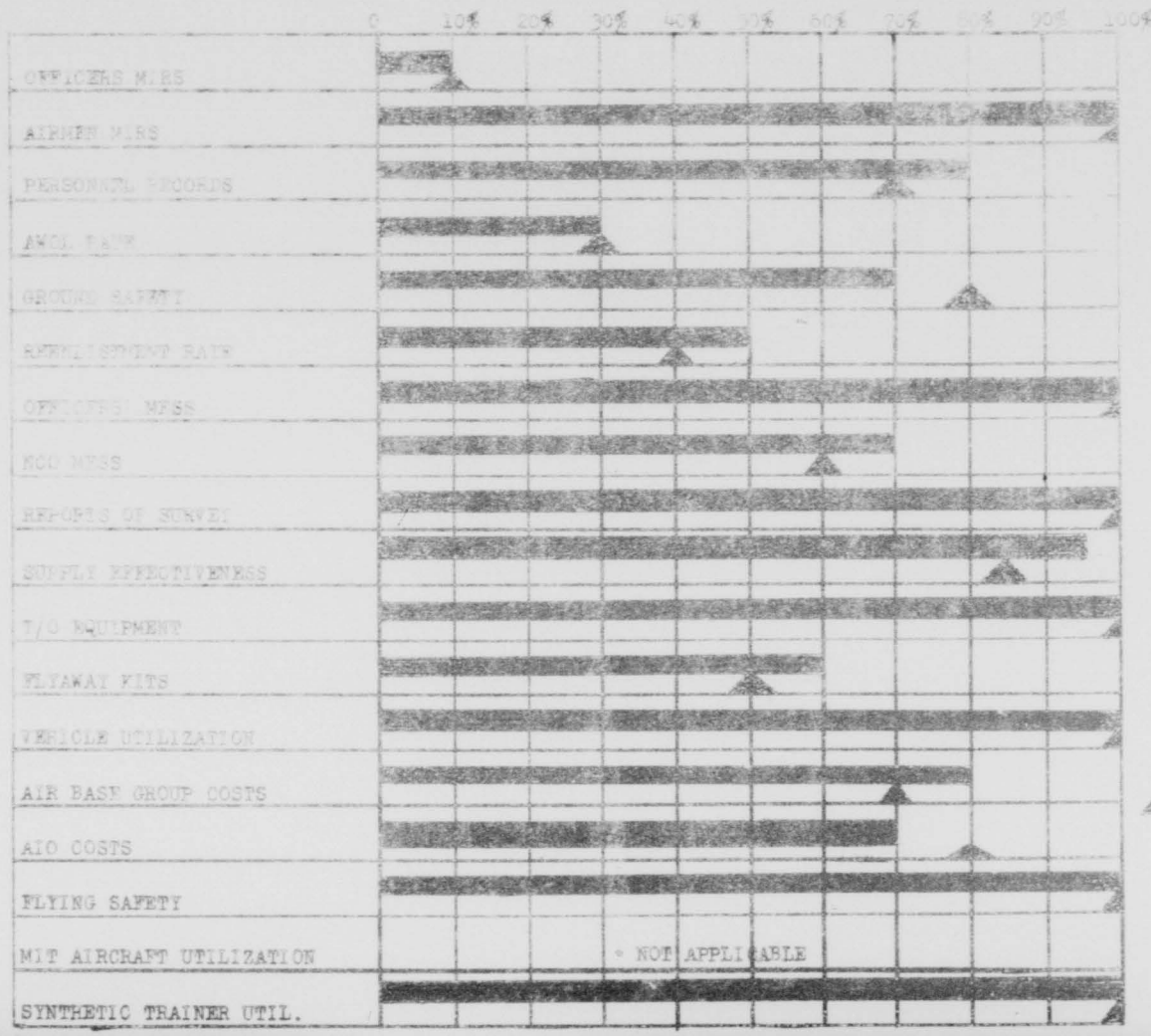
This detailed analysis of areas rated under the SAC Management Control System - Air Base Group was prepared by the Base Comptroller and provides predicted scores, graphic representation and appropriate analytical comments for the Commander and Staff. The Official SAC Scores for the previous month are compared with predicted scores for the current month, indicating point deviations and analysis of regression in the various areas.

In areas where 100% of the maximum score was achieved no analytical comment was made.

Graphic representation of performance for the current month is provided, as well as comparison columns indicating previous month's official SAC percentage of maximum score and current month's predicted MacDill percentage of maximum score.

H. C. OAKES
Major, USAF
Base Comptroller

AUGUST 1953 - BOYER AIR BASE GROUP SAC MANAGEMENT CONTROL PERCENTAGES



0633

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY % MAX SCORE	SAC JULY SCORE	PREDICTED AUGUST % MAX SCORE	PREDICTED AUGUST SCORE
Manning:					
Officers MIRS	20	10	2	10	2
Airmen MIRS	80	100	80	100	80
Personnel Records	50	70	35	80	40
AWOL Rate	50	30	15	30	15
Ground Safety	70	80	56	70	49
Reenlistment Rate	50	40	20	50	25
Messes:					
Officers' Mess	25	100	25	100	25
NCO Mess	25	60	15	70	17.5
Reports of Survey	60	100	60	100	60
Supply Effectiveness	100	85	85	95	95
T/O Equipment, Air Base Group	20	100	20	100	20
Flyaway Kits	60	50	30	60	36
Vehicle Utilization	70	100	70	100	70
Air Base Group Costs	80	70	56	80	64
AIO Costs - Incident. to Maint.	60	80	48	70	42
Flying Safety	70	100	70	100	70
MIT Aircraft Utilization	60	NA	NA	NA	NA
Synthetic Trainer Utilization	50	100	50	100	50
TOTAL SCORE	1000		*737		*760.5
PERCENTAGE OF TOTAL SCORE			78		81

NA - Not applicable
*Total Item Weight 940

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SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY SCORE	PREDICTED AUG. SCORE	POINT CHANGE	COMMENTS
Manning: Officers MIRS	20	2	2	NC	There were 120 spaces manned in required specialties out of 157 authorized for a 76.4% manning as compared to 116 manned out of 157 authorized in July (73.9% manning). There were shortages in AFSCS 62000 Food Service Superintendent, 6424 Supply Officer, 7024 Administrative Officer, 7324 Personnel Officer, 7724 Air Police Officer, and 94000 Marine Superintendent. With an assigned strength of 140, 85.7% of assigned officers were MIRS in August.
Airmen MIRS	80	80	80	NC	100% of maximum score attained. There were 2,325 airmen MIRS out of 2,452 authorized.

0635

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY SCORE	PREDICTED AUG SCORE	POINT CHANGE	COMMENTS
Personnel Records	50	35	40	+5	Officer unknowns decreased from 13 in July to 9 in August for a 99.51% completeness, or 80% of the maximum score. Airmen unknowns likewise decreased, from 54 in July to 50 in August, for a 99.83% completeness, or 100% of the maximum score.
AWOL Rate	50	15	15	NC	There were 10 AWOLs in August for a three-month total of 44. The rate was 4.4 per thousand for 30% of the maximum score, or 15 points. There have been 2 AWOLs through 9 September. If there are no more than 12 AWOLs in September, based on the same mean strength, the September score will increase to 60% of the maximum score or 30 points. If there are 8 AWOLs in September the score would improve to 70% of the maximum or 35 points.

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY SCORE	PREDICTED AUG. SCORE	POINT CHANGE	COMMENTS
Ground Safety	70	56	49	-7	A score of 49 points was attained with a combined Ground Safety Index of 5.66 and an Accident Cost Index of $3.17, resulting in 70% of the maximum score. The Ground Safety Index increase from 4.90 caused the regression in score. Had there been one less military accident and one less motor vehicle accident, the August score would have remained the same as July.
Reenlistment Rate	50	20	25	+5	The combined three-months immediate reenlistments (11) and regular terminations (26) result in a rate of 42.3% for 50% of the maximum score, or 25 points.

0637

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY SCORE	PREDICTED AUG. SCORE	POINT CHANGE	COMMENT
Messes:					
Officers' Mess	25	25	25	NC	100% of maximum score attained.
NCO Mess	25	15	17.5	+2.5	Twelve points were attained under the SAC "Financial Efficiency Index" for 70% of the maximum score. Factor three (Current Ratio) at 1.6:1 was a weak area again, Factors 7 and 8 (Net Profit or Loss from Operations before dues and Net Profit or Loss from Operations before dues- Year to Date) although improved from July are still weak.
Reports of Survey	60	60	60	NC	100% of maximum score attained.

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY SCORE	PREDICTED AUG. SCORE	POINT CHANGE	COMMENTS
Supply Effectiveness	100	85	95	+10	Category 1 (Aircraft Spares) was 81.3% effective for 90% of the maximum score, while Category 2 (All Other Classes) was 83.5% effective for 100%, giving the overall figure of 95% of the maximum score. Had 170 additional items in Category 1 (Aircraft Spares) been fully issued the combined effectiveness would have been 100%, resulting in maximum score, or 100 points. In the month of August items requested in Category 1 increased 1,526 while Category 2 had a decrease of 5,498.
T/O Equipment	20	20	20	NC	100% of maximum score attained.

0639

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY SCORE	PREDICTED AUG. SCORE	POINT CHANGE	COMMENTS
Flyaway Kits	60	30	36	+6	The overall percentage of completeness for five squadrons was 88.6% for 60% of the maximum score. The three tactical squadrons rated indicated a sharp increase in completeness over July. No figures were available for the 306th Bomb Wing.
Vehicle Utilization	70	70	70	NC	100% of maximum score attained.
Air Base Group Costs	80	56	64	+8	The net cost for the Air Base Group for August was $963,041, a $47,340 reduction from July cost while the base population increased to 9502. The per capita cost was thus reduced from July's $109.02 to $101.35 as compared to the standard cost of $109.54. This resulted in a performance index of 108 for 80% of the maximum score. An index of 116 or above is necessary for maximum score.

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SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
AUGUST 1953

11 September 1953

	MAXIMUM SCORE	SAC JULY SCORE	PREDICTED AUG. SCORE	POINT CHANGE	COMMENTS
AIO Costs - % Incid. to Maint.	60	48	42	-6	The percent of AIO Manageable Resources expended on maintenance and repair incident to maintenance was 96.9% for 70% of the maximum score. The regression from July (80% of Max. Score) was due in part to the sharp increase in accounts 09108.2A and 09108.3A (Cost of minor construction, minor additions, alterations and deletions). Had the total of these two accounts in August ($6,042.63) not exceeded the July total ($3,604.37), 80% of the maximum score would again have been attained.
Flying Safety	70	70	70	NC	100% of maximum score attained.
Synthetic Trainer Util.	50	50	50	NC	100% of maximum score attained.

0641

REPORT OF PROCEEDINGS OF THE EXECUTIVE GROUND SAFETY COUNCIL:

Headquarters
MacDill Air Force Base, Florida

Proceedings of a meeting of the Executive Ground Safety Council which convened at MacDill Air Force Base, Florida, under provisions of Second Air Force Regulation 32-2, dated 28 June 1952, and pursuant to Letter Order MCDCAG - 28, dated 18 February 1953, Headquarters 809th Air Base Group, MacDill Air Force Base, Florida.

The Council met pursuant to the foregoing order at Headquarters MacDill Air Force Base at 1400 hours, 13 August 1953.

Members present:

Lt Col Tom S. Sanford - Base Deputy (Acting President)
Lt Col William B. Hoynes - Base Pers Staff Officer
Lt Col T. J. Fowler - for Commander 305th Bomb Wing
Lt Col D. W. Rains - Commander 307th Air Base Group
Capt J. H. Steiger - Base Motor Transportation Officer
Capt R. L. Woods - for Base Provost Marshal
1st Lt George F. Allen - for Base Surgeon
2nd Lt R. B. Werner - 305th Bomb Wing
M/Sgt R. W. Denny - for Base Material Staff Officer
Civ Frank Joseph - Base Fire Chief
Civ Geo. R. White - Ground Safety Director (Recorder)

1. DISCUSSION:

a. Action taken on recommendations of 15 July minutes is listed as follows:

(1) The Safe Wheels goat has been reassigned to AIO and Motor Vehicle Squadron since the last meeting. All angles of responsibility were considered in determining the personnel most at fault in each accident.

(2) Publicizing of traffic changes has been accomplished. Use of the Daily Bulletin will be made for announcing grace periods before offenders are apprehended and issued traffic tickets.

b. Injury experience for the month of July was reviewed and discussed. It was pointed out that the one fatality which occured in July was classified as murder by Second Air Force and would not have been charged against the safety record if the new Air Force Regulation 32-2 was in effect. Also one vehicle accident which occured at a MATS installation in Venice Florida, would not have been charged against the base record under the new Air Force Regulation. Referenced regulation will go into effect on 1 September 1953. (Accident summary Incl #1)

c. The Safe Wheels score board for July was reviewed and dis-

cussed. The members were advised that MacDill has been selected as winner of the SAC Achievement Award Certificate, for its outstanding vehicle accident prevention record, in the Second Air Force. To compare the Safe Wheels record thus far in 53, with 1952, a mimeographed chart was presented. (Safe Wheels graph Incl #2)

d. The members were advised of MacDill's standing in Second Air Force regarding the cost of all accidents, injuries and fatalities during the period of January through June. MacDill had a cost of $30.32 placing second, with Hunter AFB in first place with a cost of $24.65. The overall saving to MacDill during this period was $90,725.00. A bar graph chart was presented to show month by month how 1953 is comparing with 1952 costs. The members were also shown a picture of the Second Air Force trophy which will be awarded to the base which has succeeded in recording the lowest cost-per-capita during 1953.

e. A copy of two Safety Briefs were distributed and discussed briefly.

f. A new publicity stunt titled "Buck for Safe Wheels" was introduced and methods for its use discussed. Approximately 5500 of the "Bucks" were shipped to MacDill from Headquarters Second Air Force.

g. Considerable discussion was held on operation of private motorcycles and scooters. Activation of the Base club will be started as soon as the 306th Bomb Wing returnes from England. Literature, regulations and quotations from the United Kingdom vehicle code, as it pertains to operation of vehicles, particularly motorcycles and scooters, will be distributed to the 305th Bomb Wing before their departure. The possibility of critiques were discussed as a method of further indoctrinate motorcycle and scooter operatrs in United Kingdom traffic problems.

h. Discussion at this time centered around the Base Commander's system of calling applicable officer-supervisor and/or the Squadron Commander to explain circumstances surrounding the disabling injuries and/or repertable government vehicle accidents, and what punitive, disciplinary or administrative action the supervisor intends to take. The Base Commander is notified of the accident by the Base Ground Safety Office. This notice contains a brief of the circumstances surrounding the incident and identifies the officer-supervisor.

2. RECOMMENDATIONS:

a. That the "Buck for Safe Wheels", publicity and manner of distribution be turned over to the Safe Wheels committee for action.

b. That the Ground Safety Section prepare indoctrination material regarding 7th Air Division directives and United Kingdom requirements for operations of motorcycles and scooters. This material to be disseminated to the 305th Bomb Wing for use in critequos, etc., before the Wing leaves for overseas duty.

0643

c. That the Ground Safety Director prepare a brief report of ground accident for the Wing Commanders on each reportable incident within their Wing. The Wing Commanders are encouraged to use this information in personally interigating the officer-supervisor and/or Squadron Commander.

d. Meeting adjourned 1450 hours.

/s/ William B. Haynes
WILLIAM B. HOYNES, Lt Col., USAF
Member

/s/ Geo R. White
GEO. R. WHITE
Ground Safety Director
Recorder

2 Incls:
1. Accident Summary
2. Safe Wheels Graph

HEADQUARTERS, MACDILL AIR FORCE BASE, FLORIDA, 18 August 1953

Approved:

/s/ B. H. Merchant
B. H. MERCHANT, Col., USAF
Commander

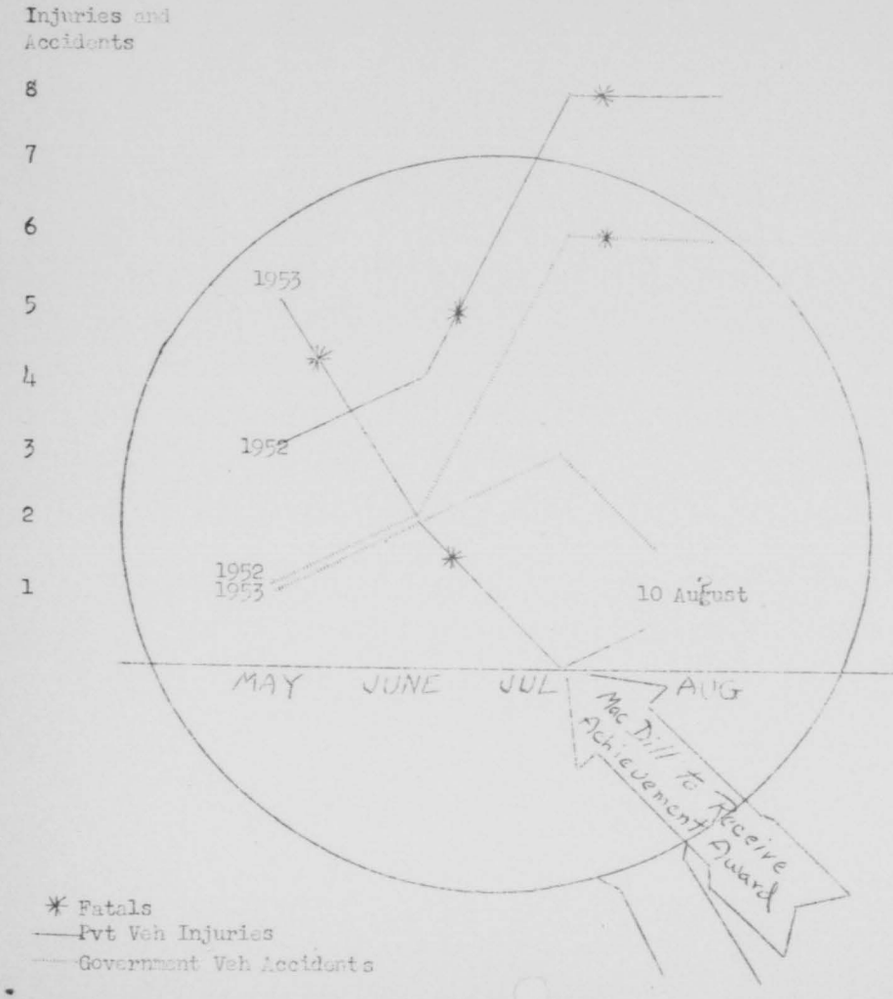
0644

Month of JULY — MACDILL AFB Command

RATES AND COSTS	809th AB Gp	305th Wing	306th Wing	307th Wing	SAC-DET	NON-SAC DET	6TH AIR DIVISION TOTAL: +
Mil Non-Disab Inj (on)	5	3	2	0	1	0	11
Mil Non-Disab Inj (off)	10	1	2	0	1	0	14
Civ Non-Disab Inj	0	0	0	0	0	0	0
Mil Disab Inj (on duty)	2	1	0	0	0	0	3
Mil Disab Inj (off duty)	3	1	2	2	1	0	9
Civ Disab Inj	1	0	0	0	0	0	1
Mil Fatalities	1	0	0	0	0	0	1
USAF Vehicle Accidents	4	0	0	0	0	0	4
Aircraft Accident Cost	.00	.00	.00	.00	.00	.00	$ .00
Property Damage Cost	$ 75.00	.00	.00	.00	.00	.00	$ 75.00
USAF Vehicle Accid Rate*	1.57	.00	.00	.00	.00	.00	.00
USAF Vehicle Repair Cost	$640.00	.00	.00	.00	.00	.00	$640.00
Mil Disab Inj Rate - on	4.85	4.28	.00	.00	.00	.00	2.84
Mil Disab Inj Rate - off	4.85	2.14	4.88	5.75	16.24	.00	4.73
Tot Disab Inj Rate - Mil*	4.85	2.85	3.26	3.83	10.82	.00	4.10
Civ Disab Inj Rate *	16.32	.00	.00	.00	.00	.00	12.52
Mil Inj Cost/Capita	8.40	.29	.09	.11	2.16	.00	3.44
Civ Inj Cost/Capita	.17	.00	.00	.00	.00	.00	.13
Total Cost/Capita *	7.76	.29	.03	.11	2.16	.00	3.33
Cost of Mil Injuries	$3405.00	$ 658.00	$ 176.00	$ 180.00	$ 644.00	$ .00	$ 35,125.00
Cost of Civ Injuries	$ 70.00	.00	.00	.00	.00	.00	$ 70.00
Total Accident Cost	$3425.00	$ 658.00	$ 176.00	$ 180.00	$ 644.00	$ .00	$ 35,910.00
Effectiveness %	35	100	100	100	35	100	60
Points Scored	24.5	70	70	70	24.5	70	42

* Effectiveness % and Score based on figures in this column (except 809th AB Gp).

\+ 6th Air Div. figures do not include experience of SAC and NON-SAC Detachments.



Why is the record better in 53'?

1 - 1952 Safe Wheels soft spots c corrected.
- a. Committee's well organized
- b. Excellent PIO cooperation
- c. Command Support-intensified

2 - Top Management - 100% support
- a. Traffic policies tightened
- b. Motorcycle operations - monitored
- c. Squadron Commanders interest intensified

3 - Gimicks - Signs, etc.
- a. Outdoor advertising
  - (1) Signs at each exit gate
  - (2) Progress Board next to Bank
  - (3) Jumbo Posters displayed
  - (4) Wrecked Vehicles displayed
- b. Safe Wheels Goat
  - (1) Custody changes on wheeled accidents.
- c. Animated Posters
- d. Safe Wheels Parade
- e. Safe Wheels Dance

0646

HEADQUARTERS 6TH AIR DIVISION
Mac Dill Air Force Base, Florida

CGC/rbr

MCDKAD .008

12 August 1953

SUBJECT: Processing Instructions Relative to Pay and Allowances

TO: See Distribution

1. The following information relative to pay and allowances for members contemplating overseas movement, is furnished as a guide in accomplishing processing:

a. Separate rations (BAS) will be discontinued the day prior to date of departure by the Squadron Certifying Officer upon arrival at destination.

b. Foreign Service Pay (airmen only) will commence the date the aircraft crosses the geographical boundries of the United States on its outward flight and be discontinued on date of return to the Zone of Interior.

c. Per diem will be paid on a monthly basis. Rates at temporary duty point are $2.70 per day for officers provided government quarters and messing facilities are available. In the event government quarters and/or messing facilities are not available, a certificate of non-availability must be obtained from the Installation Commander. Airmen are not entitled to per diem outside the Zone of Interior where government quarters and messing facilities are available.

d. Personnel are authorized to carry personal funds in the amount of fifty dollars ($50.00) only in United States currency. Additional funds may be carried in the form of Traveler's Checks or Money Orders. All United States currency must be exchanged for "Military Payment Certificates" (Script) upon arrival at destination.

e. Finance Officers, Postal Officers, or their agents will not exchange or convert any foreign currency and/or coin for or into any other foreign currency or coin, military payment certificates, or any United States dollar currency or instruments for personnel in or leaving the oversea command. Exchange of military payment certificates into dollars or dollar instruments for personnel departing for the United States or for areas where United States currency is used as pay and allowances, will be made at the latest possible hour prior to departure for the Zone of Interior.

f. All Class "E" allotment authorizations received after the 18th of August will not become effective until 1 October.

g. A Class "G" allotment (onetime) may be processed by the representative from the Personal Affairs Section in the "processing line," to alleviate financial hardship caused by late effective date of Class "E" allotment.

h. Military pay records for airmen will be picked up by a designated officer of each squadron.

i. Military pay records for officers will be picked up by the individual officer at the Finance Section.

j. Each member will maintain a complete itinerary during their tour of duty. Local time will be used for this purpose and will include meals and quarters available.

BY ORDER OF THE COMMANDER:

DISTRIBUTION: D

B. J. MUNNERLYN
Major, USAF
Adjutant

0648

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDKaD .008

CGC/rbr
12 August 1953

SUBJECT: Mobilization Procedure - Finance

TO: See Distribution

1. In case of mobilization of an organization of this base, the following procedure will be adhered to by all concerned:

a. Responsibilities of the Squadron Commander:

(1) Prepare advance rosters of "primary" personnel selected for mobilization, listing officers and airmen on separate rosters, and submit to the Finance Officer without delay.

(2) Audit memorandum pay records of alerted individuals and bring their pay up to date by Military Pay Order.

(3) Audit pending travel claims and request priority consideration of the Finance Officer for early settlement.

(4) Determine necessity or requirement for partial payments of pay or advances of travel allowances and furnish this information to the Finance Officer.

(5) Upon receipt of official mobility orders, prepare "final" rosters of personnel to be mobilized, listing officers and airmen separately. These rosters will be forwarded to the Finance Officer at least forty-eight (48) hours prior to date military pay records are to be picked up.

(6) Prepare Military Pay Orders for payment of partial payments of pay or advances of travel allowances and submit to the Finance Officer.

(7) Appoint Class A Agent Finance Officers to effect such payments. In addition, designate an officer to pick-up and sign for military pay records of the mobilized airmen. This designation will be reported to the Finance Officer on a Military Pay Order.

(8) Report subsequent changes in personnel deleted or added to official roster and arrange for partial payments or advances of travel allowances.

(9) Advise individuals of the necessity of filing income tax returns.

(10) Provide each airman with copy of indorsed orders and impress upon him the necessity for safeguarding these orders.

(11) Maintain close coordination with the Finance Officer on all matters pertaining to finance for mobilized personnel.

(12) Require each airplane commander to keep a master itinerary for himself and members of his crew, such itinerary to be turned in to the Squadron Pay Clerk for safekeeping upon completion of this temporary duty and pending submission of travel claim. All other members are to maintain their own itinerary to be turned in to the Squadron Pay Clerk for safekeeping upon completion of this temporary duty and pending submission of travel claim.

b. Responsibilities of the Personal Affairs Officer:

(1) Determine requirements for Class E Allotment for mobilized personnel and submit applications without delay but not later than one day prior to individual's scheduled departure.

(2) Maintain close coordination with the Finance Officer on all matters pertaining to the personal affairs of mobilized personnel.

c. Responsibilities of the Finance Officer:

(1) Receive rosters of "primary" personnel from squadrons and perform complete audit of military pay records of individuals reported.

(2) Bring items of pay and all information necessary up to date on the member's military pay record.

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(3) Coordinate "primary" roster with the Travel Branch and give first priority to travel claims pending for individuals shown on the roster. Settle outstanding claims as rapidly as possible and make provisions to make payment by check of those claims that cannot be settled before the individual's departure.

(4) Make preliminary plans for partial payments of pay or advances of travel allowances.

(5) Process all Class E and Class G Allotments.

(6) Upon receipt of official mobility orders and/or "final" rosters, adjust for discrepancies.

(7) Segregate military pay records of individuals reported on "final" roster and prepare money lists for partial and advance of pay payments and advance travel allowances.

(8) Effect partial payments of pay or advances of travel allowances through Class A Agent Finance Officers.

(9) Make final entries on the military pay records and attest.

(10) Prepare receipts for military pay records (cards or lists).

(11) Microfilm and deliver the military pay record to the officer designated to pick up and obtain the officer's signature on card or lists.

(12) Maintain close coordination with all concerned throughout all planning phases and actual mobilization.

(13) Prepare Standard Form 1034 "Public Voucher for Purchases and Services other than Personal" as a cover voucher for payments of Class G Allotments in accordance with provisions of AFM 173-20.

0651

Ltr Hq 6th AD MacDill AFB Fla file MCDKAD .008 dtd 12 Aug 53 subj: Mobilization Procedure - Finance (cont'd)

For planning purposes, it has been determined that, in cases of movements of one hundred (100) to five hundred (500) personnel, the process of paying airmen and transferring the military pay records can be accomplished in twenty-four (24) hours by the Finance Officer at any time except close out periods. If the movement is to be made during a close out period, it will require forty-eight (48) hours to complete the process.

BY ORDER OF THE COMMANDER:

DISTRIBUTION: D

B. J. MUNNERLYN
Major, USAF
Adjutant

0652

RESTRICTED

MEMORANDUM 6 August 1953

TO: Commander, 809th Air Base Group

FROM: Director of Personnel, 809th Air Base Group

SUBJECT: Report of Director of Personnel on Survey of Support Personnel Requirements to Augment 305th Bombardment Wing (M) Mobility Plan

1. The Base Director of Personnel and the Base Manpower Officer, 809th Air Base Group, accompanied the 306th Bombardment Wing (M) Survey Team to Fairford, England. The purpose of sending the above named officers on the trip was to survey the requirements of support personnel that would be needed to augment and support the 305th Bombardment Wing on its contemplated mobility in the near future.

2. The Survey Team departed MacDill Air Force Base on 26 July 1953 and proceeded to Fairford, England via Limestone, Maine. The team arrived in Fairford on 28 July 1953. Upon arrival, it was learned that the scheduled destination of the 305th Bombardment Wing on their current mobility plan had been changed from Fairford Air Force Base to Brize Norton Air Force Base, which is approximately fourteen (14) miles away. The team then proceeded to Brize Norton. Upon arrival, a conference was held with the Commander, 3920th Air Base Group. It was then agreed that the team would split up, each element working with his corresponding element in the 3920th Air Base Group.

3. The remainder of this report pertains to the report of the Base Director of Personnel and the Base Manpower Officer on support personnel requirements needed to support the 305th Bombardment Wing move to Brize Norton Air Force Base, England, by the 809th Air Base Group.

4. Since the 305th Air Refueling Squadron will be stationed at Mildenhall, England, the Commander, 809th Air Base Group, decided to split the personnel survey team. The Base Director of Personnel, 809th Air Base Group, remained at Brize Norton to survey their needs and the Base Manpower Officer proceeded to Mildenhall to establish their requirements.

5. The Base Director of Personnel, 809th Air Base Group, met with each Squadron Commander of the 3920th Air Base Group in order to determine the requirements for support personnel for each respective squadron. The Squadron Commanders of the 3920th Air Base Group were totally unfamiliar with the requirements that were needed to

SECURITY
INFORMATION
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support a B-47 tactical wing on a rotational move. This is substantiated by the fact that it would have been impossible for the 3920th Air Base Group to properly support the 305th Bombardment Wing on the AFSC's and numbers of personnel requested by their various squadron commanders. It was then decided to utilize the numbers and AFSC's that were listed in the 305th Bombardment Wing Mobility Plan, which was based on SAC Manual 400-1. A one (1) wing T/O was used to determine the required AFSC's in the preparation of this Mobility Plan. The squadron commanders of the 3920th Air Base Group agreed to accept the AFSC's and numbers as listed in the 305th Mobility Plan with certain officer deletions. These deletions were made due to non-availability within the 809th Air Base Group or that no requirement existed within the 3920th Air Base Group. A list of officer deletions are listed as inclosure No. 1. This plan was then presented to the Commander, 3920th Air Base Group, who stated he would accept the plan provided qualified airmen substitutions were made to bring the number of personnel up to the number required by SAC Manual 400-1. This was agreed to by both the Commander, 3920th Air Base Group and 809th Air Base Group. A representative of the 305th Bombardment Wing was present at all meetings and discussions and approved the above plan for the Commander, 305th Bombardment Wing. In addition, the Commander, 3920th Air Base Group, requested that the 809th Air Base Group furnish as many telephone and teletype operators as could be spared as he could not support the 305th Bombardment Wing unless he received additional support on this type of people. He also requested additional electricians. A survey is being conducted in order to determine what assistance can be rendered concerning this matter. Personnel furnished in these categories can be used as substitutes for officer deletions.

6. Two (2) members of the 809th Air Base Group party, Colonel Merchant and Captain Dickey, proceeded to Mildenhall Air Force Base, approximately 170 miles from Fairford Air Force Base, via KC-97, to establish liaison with the Commander. In the absence of the Base Commander, Lt Colonel Field, Deputy Commander was contacted. His general impressions of numbers, quality and AFSC's of support personnel TDY at his base were excellent. His specific requests for changes of numbers and AFSC's for the 305th Bombardment Wing rotation follow:

a. Total of ten (10) 64350, Sr Petroleum Supply Specialists.

SECURITY INFORMATION
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Memorandum, Dir of Pers, 809th ABG, MacDill AFB, Fla, dtd 8 Aug 53
subj: Rpt of Dir of Pers on Survey of Support Pers Requirements to Augment 305th Bomb Wing (M) Mobility Plan - continued

(An increase of six (6) over the 306th Bombardment Wing rotation.)

b. A five or seven level Communication Center Specialist for Base Operations. (A three level was supplied for the 306th Bombardment Wing rotation.)

c. Of the eighteen (18) Food Service Personnel supplied during the 306th Bombardment Wing (M) rotation at least two (2) to be trained in flight lunches.

d. An addition of two (2) 60330, Motor Vehicle Operators, due to dock maintenance of KC-97's being moved to Mildenhall AFB. (Total of sixteen (16) 603 career field personnel.)

The above information has been supplied to the Personnel Officer, 305th Bombardment Wing (M).

7. During the survey, the team visited Headquarters, 7th Air Division. The plan for furnishing support personnel to the 305th Bombardment Wing (M) was presented and was approved by their Director of Operations, Director of Personnel and Manpower Officer.

8. The following is furnished as a matter of information. Colonel Tartar, Commander, Fairford Air Force Base, informed Colonel Merchant, Commander, 809th Air Base Group, that he was very well pleased with the caliber and numbers of personnel furnished to support the rotation of the 306th Bombardment Wing (M). Further, the staff at Headquarters, 7th Air Division were well pleased with the support rendered.

9. Minor details concerning the support of the 305th Bombardment Wing (M) move will be handled by the Base Director of Personnel.

10. The Survey Team returned to MacDill Air Force Base on 5 August, 1953.

WILLIAM B. HOYNES
Lt Colonel, USAF
Director of Personnel

1 Incl
List of Officer
Deletions

A CERTIFIED TRUE COPY
(Including Inclosure)

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

RESTRICTED

LIST OF OFFICER DELETIONS

NUMBER	AFSC	TITLE
		HEADQUARTERS SQUADRON SECTION
1	7016	Administrative Staff Officer (Deputy Base Commander)
1	7024	Personnel Officer
1	7924	Chaplain
1	7316	Personnel Staff Officer
1	7344	Personnel Services Officer
1	6774	Finance Officer
1	6746	Management Analysis Officer
		AIR POLICE SQUADRON
1	7724	Air Police Officer
		MOTOR VEHICLE SQUADRON
1	6016	Transportation Staff Officer
1	7324	Personnel Officer
1	6034	Motor Pool Officer
		SUPPLY SQUADRON
1	6416	Supply Staff Officer
1	6424	Supply Officer (Management and Procedures)
1	6424	Supply Officer (Petroleum)
		INSTALLATIONS SQUADRON
1	95000	Firefighting Superintendent
		FOOD SERVICE SQUADRON
1	60000	Food Service Superintendent
1	6434	Supply Services Officer
		OPERATIONS SQUADRON
1	1416	Operations Staff Officer
1	3034	Communications Officer
1	4344	Aircraft Maintenance Officer (Base Flight)

Incl 1

SECURITY INFORMATION

RESTRICTED

ROSTER OF HQ 809TH AD GP SUPPORT PERSONNEL BY AFSC

HQ SQ

COMMAND

7024 (sic)
70250

ADJUTANT

70270 2
70250
70230
70010

LEGAL & CLAIMS

70250

CHAPLAIN

7924

PERSONNEL

73270
70250

PERSONNEL SERVICES

77251
73231

MATERIEL

64173

REPORTING

6834 (sic)
83170
83150
99350

ACCOUNTING & DISBURSING

81170 2
81150 3
81130 2

INSTALLATION SQUADRON

COMMAND

99970

PERSONNEL AND ADMINISTRATION

70230
70250
73250

MAINTENANCE & REPAIR

53350
55131
55150
55170
55250 2
55270
64131

FIRE PROTECTION & ACFT CRASH RESCUE

95170
64151
70010
95010
95130
95150
56330
56470
56430

UNIT SUPPLY

64151

SUPPLY SQUADRON

COMMAND

6434 (sic)

SECURITY INFORMATION
RESTRICTED

RESTRICTED

SUPPLY SQ (CONT'T)

PERSONNEL & ADMINISTRATION

73250 2

MATERIEL FACILITIES

55131
55151
55250
64150 3

MUNITIONS

46130 15
46150 14
46170 5
46171 2

UNIT SUPPLY

64151
64173

MANAGEMENT & PROCEDURES

64174
64175

INSPECTION & INVENTORY

43151B
64150
64130
70250

PETROLEUM

64370
64132
64010
64350

PROPERTY & ACCOUNTING

64132
64152 2
64175
64130
64174
70230
70250

FLY-AWAY KITS

64131 6
64151
64173

SERVICE STOCK

64100
64150
64131
64171
64152

OPERATION SQ

COMMAND

99150
7324 (sic)
70230
73230

PHOTO

2334 (sic)
23250 3
23230
23271
23270

BASE OPERATIONS

7724 (sic)
29130
27130
29370
64131

COMMUNICATIONS

3034 (sic)
29170
29270 2
29250 2
29331 2
29351 5
29370
30151
30450
36150
36130
36230
36251

SECURITY INFORMATION
RESTRICTED

RESTRICTED

OPERATION SQ (CONT'D)

TRANSIENT MAINTENANCE

4344
30150
43131
43151W
43151D
43151E
43151F
43171W
43151
43170

SUPPLY

64151 2
64171
64173

FOOD SERVICE SQ

6434
99970

PERSONNEL & ADMINISTRATION

70230
70010

FOOD SERVICES

62270
62010 47
62150 2
62170 1
62230 17
62250 48
62270 3
62350 1
62370 1
64151 2

AIR POLICE SQ

RETRAINING

96010 4
96130 4
96150 2
96171

PATROL FLIGHT

96010 5
96130 6
96150

SECURITY

7721
7021
96130
96010 43
96150 88
96170 3

OFFICER AUGMENTATION

96150

MOTOR VEHICLE SQUADRON

COMMAND

60370

PERSONNEL & ADMINISTRATION

73250
73270

MAINTENANCE

47131 5
47132 2
47151 6
47171 2
53150
47153

MOTOR POOL

6031
47151
60310 19
60330 5
60331
60350 20
70230

SUPPLY

64151
64173

SECURITY INFORMATION

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JRSDL 0651
DI066
VDA080
YVC088
YDC103KJ
JSDMH A102
RR JSPHQ /GSPA JSSDL 333
DE JSDMH /9
R 192157Z
FM COMMANDER AGELTECHO AIR COMMAND OPNTT AFB NEBR
TO JSPHQ/DIRECTOR OF LEGISLATION AND LIAISON OFFICE OF THE
SECRETARY OF THE AIR FORCE WASH DC
INFO JSSDL/COMDR AFSC ANDREWS AFB MD
JSSDL/CG STRATDIV 6 MACDILL AFB FLA

DPLM 20637. FOLLOWING REPORT SUBMITTED IN COMPLIANCE WITH AIR FORCE
REGULATION 11-7. THIS MESSAGE IN 2 PARTS. PART 1. FOLLOWING
CONGRESSIONAL INQUIRY IS QUOTED. "REDUCTION IN FORCE FIELD MAINTENANCE
SECTION MACDILL AIR FORCE BASE. WE ARE DEEPLY CONCERNED OVER ORDER
OF AIR FORCE RIF SOMETHIRTY ONE NOT ONLY FROM STANDPOINT OF
ELIMINATING FAITHFUL AND LONG TIME SKILLED EMPLOYEES EVEN MORE
IMPORTANT IMPACT AND LOSS OF PROPER MAINTENANCE MILLIONS OF DOLLARS
AIR FORCE EQUIPMENT. ADVISED THAT JOHN LINDSEY CIVILIAN PERSONNEL
OFFICER AND OTHER REPRESENTATIVES OF GENERAL MOMBEY NOW AT YOUR
HEADQUARTERS TO MAKE RECOMMENDATIONS REGARDING SERIOUSNESS THIS
MATTER CONFERENCE WITH THESE OFFICERS DURING THEIR VISIT. WILL
FURTHER APPRECIATE YOU ADVISING FULLY AFTER CONFERENCE OF YOUR
DECISION. REGARDS SPESSARD L. HOLLAND, US SENATOR, GEORGE SMATHERS,
US SENATOR, COURTNEY CAMPBELL MC." PART 2. THE FOLLOWING ANSWER
DISPATCHED. "DPLMD 20406. REFERENCE YOUR INQUIRY CONCERNING RIF OF
CIVILIAN PERSONNEL IN FIELD MAINTENANCE AT MACDILL AIR FORCE BASE.
CIVILIANS ARE AUTHORIZED TO FIELD MAINTENANCE ACTIVITIES TO PROVIDE
A CONTINUITY IN THE EVENT OF THE DEPLOYMENT OF THE
COMBAT WING; TO MAINTAIN NON-ORGANIC EQUIPMENT OF THE COMBAT WING
AND TO PROVIDE A LIMITED TRAINING CAPABILITY FOR MILITARY PERSONNEL.
EXPERIENCE HAS PROVED THAT NORMALLY 30 CIVILIANS ARE NEEDED TO
PERFORM THESE FUNCTIONS AT MEDIUM HOME BASE AND IS A SAC-WIDE
STANDARD. BECAUSE OF OUR REQUIREMENTS FOR DEPLOYMENT, THE MAINTENANCE
OF ORGANIC EQUIPMENT, INCLUDING TACTICAL AIRCRAFT, IS NECESSARILY
PERFORMED BY T/O MILITARY PERSONNEL. TO FORESTALL AN RIF, MACDILL
HAS BEEN REDUCED BY ATTRITION TO AN EMPLOYED STRENGTH OF 61 IN THIS
SECTION. THE 31 OVERAGE POSITIONS OCCUPIED BY INCUMBENTS ARE
BLOCKING EMPLOYMENT IN CRITICAL AREAS ELSEWHERE IN THE COMMAND.
SINCE IT IS APPARENT THAT LITTLE PROGRESS COULD BE ACHIEVED BY
FURTHER ATTRITION EFFORTS, MACDILL WAS DIRECTED ON 14 MAY TO

ACCOMPLISH FINAL REDUCTION BY RIF TO A STRENGTH OF 30 BY 31 AUGUST.
REGRET INCONVENIENCE TO INDIVIDUALS CONCERNED. EVERY EFFORT WILL
BE MADE TO PLACE INVOLVED PERSON #1. GOD LUCK."
10/2207Z AUG MEDMH

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

HEADQUARTERS
CIVIL AIR DIVISION (CAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 18)

26 August 1963

Section

ASSIGNMENT OF AIDS-de-CAMP.....I

I. ASSIGNMENT OF AIDS-de-CAMP. — FIRST LIEUTENANT ROBERTS TAYLOR 03361A this headquarters is assigned as Aide-de-Camp to BRIGADIER GENERAL HENRY W WOOLEY 580A this headquarters, effective 26 August 1963.

BY ORDER OF THE COMMANDER:

OFFICIAL:

R. J. MURPHREE
Major, USAF
Adjutant

/s/ C A Whittle
C. A. WHITTLE
MSgt, USAF
Asst Adjutant

DISTRIBUTION:
"D"
plus
CVA No 45

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B. C. Johnson

B. C. JOHNSON
1st Lt, USAF

HEADQUARTERS 306TH BOMBARDMENT WING MEDIUM
APO 179, c/o Postmaster
New York, New York

ODCCD 360 14 Aug 1953

SUBJECT: Touch and Go Landings - B-47 Aircraft

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. Reference is made to teletype CAPO 0738 dated 7 August 1953 from your headquarters directing attention to SAC Regulation 51-19, paragraph 6B, Change 1, which prohibits the performance of touch and go landings in B-47 aircraft unless performed under the supervision of a qualified instructor pilot.

2. It is felt that curtailment of touch and go landings in B-47 aircraft is undesirable from a safety of flight viewpoint, for the following reasons:

a. A sufficient number of full stop landings using the drag chute cannot be accomplished during normal training to insure proficiency on the part of both the pilot and co-pilot. Installing a new drag chute after each landing, by ground crews, with engines running, subjects the crew to the dangers of jet blast and to the consumption of excessive amounts of carbon monoxide gas. Shutting the engines down, installing the drag chute, and restarting the engines would consume an excessive amount of time.

b. Proficiency in full stop landings without the use of the drag chute is desirable. This type of landing should be practiced periodically on runways of not less than 10,000 feet that have smooth overruns. It is not considered desirable to practice full stop no chute landings at some overseas bases, example Fairford, England, where the runways are in poor condition and the overruns uneven.

c. Proficiency in touch and go landings is most desirable in order that pilots acquire and maintain the necessary judgement to decide whether or not to go around when a landing is long or fast and stopping is questionable.

Hq 306th Bomb Wing (M), APO 179, c/o Postmaster, N.Y., N.Y., ORSID 360,
Subj: Touch and Go Landings - B-47 aircraft

d. The possibility of failing to manipulate controls correctly such as flaps, propeller RPM, etc., which has been an accident cause f ctor in propeller-driven aircraft during touch and go landings is eliminated in the B-47 where the only control movement during the touch and go is the throttle.

e. Utiliz tion of the B-47 instructor pilots to supervise touch and go landings would curtail their flying as aircraft commanders with their own crews.

f. It is recommended that qualified aircraft commanders, with 100 hours first pilot time, be permitted to practice touch and go landings in B-47 aircraft.

/s/ Michael N. W. McCoy
/t/ MICHAEL N. W. McCOY
Colonel, USAF
Commander

cc: Comdr
6th Air Division

"A CERTIFIED TRUE COPY"
P. A. Johnson
P. A. JOHNSON
2nd Lt., USAF

Hq 306th Bomb Wing (M), APO 179, c/o Postmaster, New York, ODCID 360,
Subject: Touch and Go Landings - B-47 Aircraft

DAPOM 360 (14 Aug 53) 1st Ind

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana
2 Sept 1953

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. This headquarters concurs that curtailment of touch-and-go landings in B-47 aircraft will handicap the unit in maintaining pilot proficiency. Headquarters Strategic Air Command has been requested to re-consider this decision and an unfavorable reply has been received.

2. As a result of the Lockbourne accident and of an incident at Tinker Air Force Base, where a SAC B-47 ran off the end of the runway, a policy has been established that the drag chute will be used on all full stop landings.

3. Until present restrictions are lifted, it is recommended that the Aircraft Commander complete a full stop landing during the pilot proficiency missions and the co-pilot be given a full stop landing on some other mission. For your information, Change 2 to SAC Regulation 51-19 prohibits touch-and-go landings for crews training under SAC Regulations 50-8 regardless of whether or not an Instructor Pilot is on board the aircraft.

BY ORDER OF THE COMMANDER:

/s/ R. E. Stauffer
/t/ R. E. STAUFFER
CWO, USAF
Asst Adjutant

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1st Ind (cont'd)

B/L fr Hq 306th Bm Wg, file CDCSD 360, subject: Touch and Go Landings B-47 Aircraft, dtd 14 Aug 53

DCP 360 (14 Aug 53) 2d Ind 8 Sept., 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, 306th Bombardment Wing, MacDill Air Force Base, Florida

1. This headquarters concurs with your stand concerning touch and go landings. During your stay in the United Kingdom, this headquarters debated the restriction with Headquarters Second Air Force and their decision was the same as outlined in the 1st Indorsement to your letter.

2. It is recommended that, at every opportunity, the case be reopened. Until some relief is obtained, the instructions as outlined in the 1st Indorsement will be followed.

BY ORDER OF THE COMMANDER:

/s/ C. A. Whittle
/t/ C. A. WHITTLE
WOMO, USAF
Asst Adj

"A CERT FIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

RESTRICTED

HEADQUARTERS STRATEGIC AIR COMMAND
Offutt Air Force Base
Omaha, Nebraska

DOTRF 360 10 Apr 1953

SUBJECT: Evaluation of Time Difference Sight Reduction Tables

TO: Commanding General
Second Air Force
Barksdale Air Force Base
Louisiana

1. Attached hereto is copy of a letter from Headquarters Air Training Command and inclosures thereto which set forth a proposed celestial navigation sight reduction procedure which may be applicable to high speed aircraft. Request that the proposed procedure be evaluated by your command and that your comments and recommendations concerning its possible adoption be forwarded to reach this headquarters not later than 1 July 1953.

2. It is believed that copies of additional pages of the Time Difference Tables will be required to permit your command to make a practical test of the procedure through actual use. Direct communication between your command and Mather Air Force Base is authorized for the purpose of this evaluation.

BY COMMAND OF GENERAL LeMAY:

1 Incl
ATRC Ltr & Incls
thereto

/s/ Victor E. Bertel
/t/ VICTOR E. BERTEL
Captain, USAF
Asst Adj Gen

"A CERTIFIED TRUE COPY"
(Less Inclosure which is
not available)

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

SECURITY
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0667

Hq SAC, DOTRF 360, Subject: Evaluation of Time Difference Sight Reduction Tables

SAFOTA 360 (10 Apr 53) 1st Ind

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana
16 April, 1953

TO: Commanding General, 6th Air Division, MacDill Air Force Base, Florida

1. Request that the 305th and 306th Bombardment Wings evaluate the proposed procedures set forth in celestial navigation sight reductions as per basic letter.

2. Request that the consolidated comments and recommendations forthcoming from practical tests be forwarded to reach this headquarters not later than 20 June 1953 in order to meet the suspense date set forth in Paragraph 1 of basic letter by Headquarters Strategic Air Command.

BY COMMAND OF MAJOR GENERAL ARMSTRONG:

/s/ R. E. Stauffer
/t/ R. E. STAUFFER
CWO, USAF
Asst Adjutant General

"A CERTIFIED TRUE COPY"
P. A. Johnson
P. A. JOHNSON
2nd Lt., USAF

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1st Ind to Hq SAC, file DOTRF 360, subject: Evaluation of Time Difference Sight Reduction Tables, dtd 10 Apr 53

DOP 360 (10 Apr 53) 2nd Ind KLW/jep

HQ DOMTRSPR, 6TH AIR DIVISION, MacDill Air Force Base, Florida, 27 July, 1953

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

1. In accordance with 1st Indorsement to Strategic Air Command letter, DOTRF 360, subject: Evaluation of Time Difference Sight Reduction Tables, dated 10 April 1953, an evaluation of these tables has been made.

2. Instruction in the use of these tables was given by personnel from Mather Air Force Base to four Observers of the two Wings under this headquarters. Three of the Observers assigned to the 305th Bomb Wing used the tables on two missions each in the Celestial Navigation Trainer. This report represents their evaluation. One observer of the 306th Bomb Wing used the tables in the air on the 306th UK deployment. His evaluation of the tables will be forwarded as soon as received.

3. Points of advantage in the use of the tables are:

a. The tables are accurate and do allow the Observer to get precision fixes rapidly.

b. Pre-flight use of the tables is fast and simple.

c. The Observer is required to enter the Air Almanac only one time.

4. Points of disadvantage in the use of the tables are:

a. In-flight use of the tables require a lengthy addition and subtraction process and interpolation is required several times before an observation can be used. Both of the foregoing increase the chance for error in solution of a fix.

b. The selection of stars in the Time Reduction Tables is limited, and at time, the cuts given by these stars are not in keeping with good navigation procedures.

c. These tables do not give any distinct time saving or more rapid fixing features than authorized methods now in use.

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d. These tables have not worked out for but a narrow band of Northern Latitude 28°N - 59°N. These are not latitudes which are in normal flying training use.

5. In summary, it appears that there are many more significant disadvantages to the further development or use of the Time Difference Sight Reduction Table than advantages. Use of these tables is no real improvement either as to time saving or to precision over methods in use at this time. Further, it appears that the cost of acquisition, development, and/or production would not be justified.

6. In view of the foregoing, it is recommended that these tables not be further developed or authorized for use in Strategic Air Command.

FOR THE COMMANDER:

/s/ R. J. Munnerlyn
/t/ R. J. MUNNERLYN
Major, USAF
Adjutant

"A CERTIFIED TRUE COPY"

R. A. Johnson
R. A. JOHNSON
2nd Lt., USAF

SECRET

Classified: SECRET
AUTH: CG Second AF
Initials: Thorpe
Date: 27 Apr 53

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, La.

OAFCSD 319.1 28 Apr 1953

SUBJECT: Final Mission Reports - March CPX

TO: Commanding General
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska

1. Attention is invited to paragraph 2g, letter this headquarters, subject, "Final Mission Reports - March CPX," dated 15 April 1953. Subject paragraph should read: " Westover Air Force Base. (Pending)."

2. Attached hereto is the Senior Controllers Report Westover Air Force Base.

a. Reference paragraph 4a of the Controllers report. This headquarters does not concur.

b. Reference paragraph 4b. Concur.

c. Reference paragraph 4c. This headquarters considers the present number of operations personnel adequate to perform the duties required under S/C Operations Plan 40-53.

d. Reference paragraph 7c. Concur.

FOR THE COMMANDING GENERAL:

1 Incl
Final Rept of Mar 53
CPX (2 cys)

/s/ F. E. Porterfield
/t/ F. E. PORTERFIELD
2nd Lt. USAF
Asst. Adj. Gen.

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D. A. Johnson

D. A. JOHNSON
2nd Lt., USAF

(R-640) (S-1-194)

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Hq 2nd AF 2AFCER 310.1 Subj: Final Mission Reports - March CPX

DOCOR 311 (28 Apr 53) 1st Ind

HEADQUARTERS STRATEGIC AIR COMMAND, Offutt Air Force Base, Omaha, Nebraska, 23 July, 1953

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

1. Final Mission Report for the March 1953 Command Post Exercise has been reviewed by this headquarters and the following comments are furnished: Reference Inclosure 1 (letter from 306th Bombardment Wing).

a. Reference paragraph 7a. On-line encryption facilities and a SACCOMNET termination are programmed for Westover Air Force Base. These facilities will be activated at such time as Westover Air Force Base is transferred to this command.

b. Reference paragraph 7b. It is felt that SAC Regulation 55-16, as recently re-published, provides the needed guidance.

c. Reference paragraph 7c. Subject regulation will be reviewed per recommendation.

2. Recommendations of controllers not commented on in the preceding paragraphs are considered to be problems of a local nature and can be adequately resolved by Commander, 2nd Air Force.

BY ORDER OF THE COMMANDER:

1 Incl
w/d one copy

/s/ John W. Kline
L/Col, Chief Control Division
for
/t/ ARCHIE J. OLD JR.
Major General, USAF
Director of Operations

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D. A. Johnson

D. A. JOHNSON
2nd Lt., USAF

(S-10124)

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SECRET

1st Ind fr Hq 304th BW, file CD/TD 341, subject: Report of CPX Exercise, dtd 21 Mar 53

DCP 341 (21 Mar 53) 2d Ind WEC/jep

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida
20 April 1953

TO: Commanding General, Second Air Force, Barksdale Air Force Base, Louisiana

Forwarded in compliance with Second Air Force Operations Order 16A-53.

FOR THE COMMANDING GENERAL:

/s/ B. J. MONTERLYN
/t/ B. J. MONTERLYN
Major, USAF
Adjutant General

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

(C-680)

(6AD-D-1985)

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Hq CAF CAPOR 319.1 Subject: Final Mission Reports - March CFX

CAFOR 319.1 (28 Apr 53) 2nd Ind

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana
30 July 1953

TO: Commander, 4th Air Division, MacDill Air Force Base, Florida

Forwarded for your information and necessary action.

BY ORDER OF THE COMMANDER:

/s/ Zeak M. Buckner, Jr.
t/ ZEAK M. BUCKNER, JR.
Captain USAF
Asst. Adjutant

1 Incl
n/c

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D. A. Johnson

D. A. JOHNSON
2nd Lt., USAF

(DOP 35/2)
(60D-B-6047)
(R-1187)

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B/L Hq 306th Bomb Wg (M), file CDCTD 3A1, subject: Report of CPX Exercise

CAGD 3A1 (21 Mar 53) 1st Ind

HQ 306TH BOMBARDMENT WING MEDIUM, MacDill AFB, Florida, 4 Apr 1953

TO: Commanding General, 6th Air Division, MacDill AFB, Florida

1. Forwarded in accordance with Second Air Force Operations Order 1AA-53.

2. Concur in recommendations by Senior Controller.

FOR THE COMMANDING OFFICER:

/s/ Joseph C. Hudak
/t/ JOSEPH C. HUDAK
Captain, USAF
Assistant Adjutant

6 Incls
n/c

"A CERTIFIED TRUE COPY"

R. A. Johnson

R. A. JOHNSON
2nd Lt., USAF

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SECRET

Class: SECRET
Auth: CO 306 BW
Date: 21 Mar 53
Initials: T.W.P.

HEADQUARTERS 306TH BOMBARDMENT WING MEDIUM
MacDill Air Force Base, Florida

OOCTD 3/1

21 March, 1953

SUBJECT: Report of CPX Exercise

THRU: Commanding Officer
306th Bombardment Wing Medium
MacDill Air Force Base
Florida

Commanding General
6th Air Division
MacDill Air Force Base
Florida

Commanding General
Second Air Force
Barksdale Air Force Base
Louisiana

TO: Commanding General
Strategic Air Command
Offutt Air Force Base
Nebraska

1. ITINERARY. Pursuant to 306th Bomb Wing unnumbered Operations Order, and 6th Air Division LC MCDOG 670, 4 Mar 53 (See TAB A) the Westover CPX team departed MacDill at 1930, 7 March, by C-47 aircraft, arriving at Turner AFB 1/30 hours, 7 March. The senior controller received a copy of 2nd AF Operations Order 1AA-53 from the Base Adjutant at Turner, and the team departed at 0900, 8 March, by C-47 aircraft, arriving at Westover 1500, Sunday, 8 March. After contacting the appropriate authorities, (See TAB B), the CPX was established in Base Operations and reported its status to 2nd Air Force and SAC Hq, at the time designated in the 2nd AF Operations Order. The exercise was terminated by direction of SAC Hq at 0100 E.S.T., 14 Mar. After waiting two days for military air transportation, commercial air line was utilized for the return trip. (See TAB C). The team arrived at MacDill 0900 17 Mar 53.

2. COMMUNICATIONS. The communications-electronics facilities available at Westover to support the SAC Mission are as follows:

a. Aircomnet

(1) Two transmission channels to JEP (Washington)

(2) Three reception channels from JEP (Washington)

b. TWX - this line is through the telephone company in Springfield, Mass. (Chicopee 562).

SECURITY INFORMATION

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c. Emergency Line - Western Union.

d. Crypto Devices are all "Off-Line."

3. STATISTICAL DATA: The following data is a verbatim transcript extracted from the report sent to Hq SAC and Hq 2AF within twenty-four hours after the termination of the exercise:

a. "PART I."

(1) Hq 2AF and Hq SAC.

(2) Twenty-two messages received from 2AF and twenty-seven messages received from Hq SAC.

(3) Average elapsed time, (from originators file time to time controller received message) for messages received from 2AF was 1:41. Average elapsed time for messages received from SAC was 2:01.

(4) Average elapsed time for all incoming messages was 1:50.

(5) Receiver equipment was not inoperative at any time during the exercise. (Special note: All elapsed times indicated above include an average of eight minutes runner time from the communications center to the controller's post in Base Operations. Since AACS does not furnish runners, this time is chargeable to the SAC control team in your analysis of on-station handling time.

PART II: The following time summary, computed by an alternate method, is offered for your consideration. It disregards messages which arrived Westover so garbled that servicing was required prior to delivery to SAC controller. These delays were on:

2AF msg # 340	5:14
SAC msg # 10	6:12
SAC msg # 16	6:20
SAC msg # 20	14:20

SAC msg #20, which was originated 04362, 13 March, was never transmitted again by SAC although service was requested. Therefore, it is not included in either statistical method. The following figures indicate the time summary on messages which were acceptable in their original transmission form:

SECURITY
INFORMATION

Ltr, CDCTD 3/1, subj: Report of CPX Exercise, Hq., 306th BW, 21 Mar 53

(1) 2AF & Hq SAC.
(2) 21 messages from 2AF, 24 messages from SAC.
(3) Average elapsed time for 2AF was 1:30. Average elapsed time for SAC was 1:20.
(4) Average elapsed time of all incoming messages was 1:30.

PART III. Garble rate, on-station handling time, and excessive delays for servicing would be reduced drastically by procurement of "On-Line" cryptographic equipment at Westover AFB. Casual conversation locally indicates that this discrepancy was written up six months ago by another SAC control team. (For detailed breakdown see TAFS D & E).

b. The importance of "On-Line" cryptographic equipment cannot be overemphasized. Many messages were accepted on which the garble rate would have stalled out a detailed operational directive. The following table indicates areas in which typographical errors can be eliminated:

STEPS IN TRANSMISSION AND RECEPTION

OFF-LINE	ON-LINE
1. Original typing	same
2. Manual encoding	avoided
3. Manual tape-cutting	same
4. Manual decoding	avoided
5. Manual typing	avoided

Thus it is apparent that the five chances for human error are reduced to two when "On-Line" equipment is available.

4. PERSONNEL

a. Communications: The team was directed to take two crypto technicians on this exercise, to assist Westover in its communication "overload." One of the crypto technicians became ill at take-off time and was left at MacDill. The following AACS personnel status existed during the exercise:

SKILL	AUTH	ASSIGNED	PRD	NET
Teletype Op	41	35	34	-7
Crypto Tech	11	23	23	+12

SECURITY INFORMATION

Thus the augmentation was in the wrong career field. Since personnel levels fluctuate too rapidly for operations orders to be amended, it is recommended that direct arrangements be authorized between originating and receiving stations at the time of implementation.

b. Operations: The assignment of a communications officer to the team appears to be unwarranted after the first dry run, since communications procedures are well known to AACS personnel and easily explained to operations people.

c. Summary: It is recommended that future teams be composed of three rated officers and three operations specialist airmen. This will result in around the clock coverage by one officer and one airman at all times. Augmentation for Base Communications should be over and above these six people.

5. BASE SUPPORT: Base Support activities of transportation, housing, messing, operating space, and equipment were outstanding. A call to the appropriate agency produced immediate and courteous cooperation.

6. ADMINISTRATIVE: SAC Regulation 55-11, dated 22 May 1952, lists Atlantic Division of MATS as action addressee on route and support reports. According to the staff communication officer of ATLD, this is an unnecessary addressee. During the period 1-12 Mar, 71 OP Flicons and 49 P Flicons were so addressed.

7. SUMMARY OF RECOMMENDATIONS: It is recommended:

a. That on-line crypto equipment be produced for Westover. (This was written up six months ago by a previous control team).

b. That the control team be composed of three rated officers and three operations specialists, augmented by such communications personnel as agreed upon by dispatching and receiving units each time the exercise is ordered.

c. That Hq SAC review the addressees, as listed in the inclosure to SAC Reg 55-11, for applicability to Atlantic Division of MATS.

/s/ John W. Barnes
/t/ JOHN W. BARNES
Major, USAF
Senior Controller
Hq., 306th Bomb Wing M

6 Incls:
1. IO MCDCAG 672, dtd 4 Mar 53
2. IO MCDCAG 694, dtd 6 Mar 53
3. Roster Key Pers, Westover
4. Msg fr Newfoundland, dtd 150800Z Mar 53
5. Detailed Statistics, Inbound Msgs fr SAC
6. Detailed Statistics, Inbound Msgs fr 2AF

SECURITY INFORMATION

SECRET

Ltr, CDCTD 341, subj: Report of CPX Exercise, Hq., 306th BW, 21 Mar 53

DISTRIBUTION:
1 cy CO 306 BW
1 cy CG 6 ADIV
1 cy CG 2 AF
2 cy CG SAC

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3 through 6 inclusive)

P. A. Johnson

P. A. JOHNSON
2nd Lt., USAF

SECURITY INFORMATION

SECRET

0680

NOTATION

For purposes of this historical report, Letter Order MCDCAG-672, Hq., 6th AD, 4 March, 1953, and Letter Order MCDCAG-694, Hq., 6th AD, dated 6 March, 1953, are not copied. Original order placed on TDY to Westover AFB, Mass.,:

1 Major, Hq., 306th Bomb Wing (Top Secret)
1 1st Lt., 306th ARS (Top Secret)
1 T/Sgt., Hq., 306th Bomb Wing (Top Secret)
1 S/Sgt., Hq., 306th Bomb Wing (Top Secret)
1 S/Sgt., 809th Opns Sq (Crypto)
1 S/Sgt., 809th Opns Sq (Cyroto)

MO 694 substituted one (1) S/Sgt., 306th Field Maint. Sq., (Top Secret) for the S/Sgt. from Hq. 306th Bomb Wing.

P. A. Johnson

P. A. JOHNSON
2nd Lt., USAF
Historical Officer

KEY PERSONNEL - WESTOVER

WING COMMANDER	Col Merrell
Communications	Maj Griffin
Base Operations	Maj Meadows
	Capt Beardsley
AACS Squadron Comdr	Lt Col Killian
Detachment CO	Maj Block
Det. Opns Officer	Maj Rano
Comm. Center	Lt Borkowsky

TAB "C"

INCL 3

RESTRICTED

SECURITY INFORMATION RESTRICTED

PRECEDENCE OP | ORIGINATOR'S DATE-TIME GROUP 150820Z | MONTH & YEAR MAR 53

FROM NFMFOUNDLAND | Requires Paraphrase X NO

TO: SAC CONTROLLER WESTOVER AFB MASS
CO MCANDREW AFB NFLD

ATTN SAC CONTROLLER REFERENCE UR MSG DTD ONE FOUR ONE THREE THREE FIVE

ZULU PD DELAYED AT GANDER DUE TO WEATHER PD SOMO TANGO DELTA UNKNOWN

CMA RECOMMEND YOU UTILIZE ANOTHER MST OD OF TRAVEL AVAILABLE SIGNED

MAJ GARLITZ

DTG RECD 151118Z | Cryptocenter No. 619F | Crypto & Typists Initials: VW VW | Page #1 of 1 Pages

TAB "C"

SECURITY
INFORMATION

RESTRICTED

INCL 4

SECRET

Class: Secret
Auth: CC, 306th BW
Date: 21 March, 1963
Initials: T.W.P.

Detailed Statistics on Inbound Messages from SAC

*Servicing (Retransmission) request for garbles or omissions

Message Number	Transmission Time	Decipher & Type	Delivery	Total
SAC 1	:15	:17	:12	:44
2	:22	:05	:10	:37
3	:30	:26	:11	1:07 bmj
4	:52	:06	:12	1:10
5	1:00	:27	:06	1:33
6	:30	:12	:07	:49
7	:10	:56	:13	1:19
8	:39	:36	:08	1:03
9	:31	:33	:03	1:07
*10	4:36	:32	:04	5:12
11	:30	:49	:14	1:33
12	:43	:24	:10	1:17
13	:28	:48	:06	1:22
14	:22	:24	:05	:51
15	:27	:30	:10	1:07
*16	5:39	:36	:05	6:20
17	:40	:30	:04	1:14
18	1:29	:27	:09	2:05
19	:33	:14	:09	:56
*20	13:43	:29	:08	14:20
21	1:06	:22	:05	1:33
**22	:36	:22	:06	:44
23	:31	:31	:06	1:08
24	:24	:31	:07	:52
25	:34	:27	:09	1:10
26	1:30	:24	:05	1:59
27	:18	:19	:05	:42
SAC Average	1:26	:27	:08	2:01
Average (Without Reservice)	:37	:27	:08	1:12

** Since message was never ungarbled, in-bound time was used for gross statistical purposes.

TAB "D"

SECURITY INFORMATION

SECRET

INCL 5

0684

SECRET

Class: SECRET
Auth: CO, 306th BW
Date: 31 March, 63
Initials: T.W.P.

Detailed Statistics on Inbound Messages from 2AF

*Servicing (Retransmission) request for garbles or omissions

Message Number	Transmission Time	Decipher & Type	Delivery	Total
2AF 14	:59	:24	:12	1:35
32	1:33	:09	:17	2:19
47	1:14	:14	:13	1:41
93	1:35	:30	:07	2:12
111	:43	:34	:10	1:27
122	:27	:09	:15	:51
134	1:02	:52	:02	1:56
157	1:04	:16	:13	1:33
174	:43	:34	:10	1:27
185	:29	:15	:02	:46
184	1:07	1:45	:08	3:01
202	:33	:20	:10	1:03
230	:51	:22	:05	1:18
248	:39	:26	:10	1:15
261	1:02	:17	:04	1:23
269	:35	:06	:05	:46
277	:40	:22	:05	1:07
311	2:42	:15	:04	3:01
*342	4:30	:29	:15	5:14
359	:36	:15	:15	1:06
364	:46	:07	:05	:58
2AF Average	1:07	:26	:08	1:41
Avg (without reservice)	:56	:26	:08	1:30
Average All Msgs	1:18	:26	:08	1:52
Avg (without reservice)	:46	:26	:08	1:20

TAB "G"

SECURITY
INFORMATION

SECRET

INCL 6

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

SUBJECT: Proposed Plan for Ranges at Avon Park 24 August, 1953

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. This headquarters foresees a requirement for a planned program for the establishment and utilization of bombing and gunnery ranges at Avon Park. The indications are that there is a requirement within 2nd AF for the following types of ranges:

a. Air to Ground Fighter Gunnery Range.

b. Air to Ground Fighter Rocket Range.

c. Fighter Bombing Range.

d. Resolution target utilizing an OAP for reconnaissance aircraft (Reference SAC Ltr Subj: Resolution Targets for Reconn Unit, dtd 1 Jan 53).

e. Visual bombing targets for B-47 aircraft utilizing an OAP.

2. The present general plan is outlined as follows:

a. Air to Ground Gunnery Target - Remain in present location. It is serviceable and used daily by 2nd AF fighter aircraft from Turner AFB. It will require some modification.

b. Rocketry Target - An area is available adjacent to the gunnery target, but no target available.

c. Bombing Target for fighters - Utilize present target, making modifications as required. If location is not acceptable, release in northeast area of reservation. This will isolate the fighter aircraft into one general area. Under normal operating procedures it is anticipated that the fighter aircraft will first bomb and then fire on the air to ground range. The mobile UHF at the

gunnery range will act as control. Further, a fire truck and ambulance will be available at the gunnery range. Scoring by triangulation is not programmed for this target.

d. Resolution Target - will be located in the southeast quadrant of the reservation. Aircraft will use the same reflector as an OAP that the bombing aircraft will utilize when dropping on the visual target. IP will be located in the Lake Okeechobee area. This run will then be over a sparsely populated area.

e. Visual Bombing Target - located in central part of range, using the one reflector as an OAP. This target will have a scoring capability. The thinking right now is to use triangulation, as it can be put into operation in the shortest possible time.

3. This headquarters recommends that this entire project be divided into two parts. The first part is the fighter ranges and the second, the visual bombing and resolution target. This is recommended because the fighter aircraft are able to operate with the present equipment; and two, both the visual and resolution targets require a reflector.

4. Part one of the project, the fighter ranges, should be surveyed by a qualified fighter pilot, using the general plan as outlined in paragraph two as a basic guide. The specific recommendation as to work required may be accomplished after the Second AF fighter units complete their present gunnery program. With concurrence from 2nd AF, this headquarters will take no further action on the present gunnery ranges.

5. Part two of the project, the visual and resolution targets, will be undertaken by this headquarters. With concurrence of 2nd AF, the following action will be taken in the order indicated:

a. Develop, manufacture, and install a suitable reflector target at Avon Park. Build a resolution target in accordance with cited SAC letter.

b. Build a visual target and incorporate a method of scoring.

6. To complete the program the following information is required:

a. Reference the resolution target - in the event the flash bomb did not detonate in the air, what is the maximum distance it would fall short of the target? This information is required in order to place the target far engouh within the reservation boundary to insure a "dud" falling on government property.

0687

DOP, Subject: Proposed Plan for Ranges at Avon Park.

(1) Confirmation of the Lake Okeechobee area being suitable for an IP.

(2) Reference attachment 1 in cited SAC ltr on resolution target; what is the layout of the target in relation to the course from the IP?

(3) Would there be any objection to mounting the reflector in this target complex? At this stage, this seems advantageous as the area would give little or no return. One of the biggest problems is the development of a reflector to overcome the present ground return from the foliage in the Avon Park area.

b. Reference the visual target - as the one reflector has the capability of serving two visual targets, is there a plan for more than one visual target? This would give a capability for two patterns, or twice the number of aircraft on the range at the same time. This information is required in order to properly locate the target and spotting towers.

(1) The present program will require offset for visual bombing and the operator, when within visual sighting range, will have to switch from offset to direct. Is there an objection to this procedure? The only alternative is a reflector for each target, to include the resolution target, and it is believed that this procedure would be conducive to gross errors, non-scorable bombs, cost and time.

FOR THE COMMANDER:

/s/ C. A. Whittle
/t/ C. A. WHITTLE
MAJ, USAF
Asst Adj

cc: Comdr, Avon Park
Air Force Base,
Florida

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

0688

SECRET

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Fla.

CLASSIFIED: SECRET
AUTH: comdr, 6 AD
DATE: 26 Aug 53
NAME: Bishop/jep

DOP 319.1

SUBJECT: Project Jet Stream

26 August 1953

TO: Commander
306th Bombardment Wing
MacDill Air Force Base
Florida

1. Headquarters Air Force Cambridge Research Center letter, subject: Project Jet Stream (UNCLASSIFIED), RDO 114-33, dated 4 August, 1953, attached as Inclosure #1, reiterates the salient points of agreement reached at conferences between AFCRC personnel and cited members of this command. As these agreements were reached as late as one year ago, your comments concerning the following points are requested.

a. That your organization be assigned the project aircraft, B-47 S/N 51-2049, and further be responsible to man and maintain subject aircraft.

b. Reference the space problem - the project personnel would rather be closer to the Base Weather Station and, therefore, the Air Base Group will assign an office to them.

c. Reference personnel - it is understood that Lt Colonel Mead and Major Van Atta have been assigned primary duty as Observer and Aircraft Commander, respectively. Mr. Rados, Resident Representative of AFCRC, states that this assignment will require the individuals to be present for duty at Project Jet Stream on a full time basis. Further, he feels that it is impractical to have the Co-pilot assigned to the Bomb Wing as a Staff Officer. This individual, along with the cited crew members, will be required for mission planning and detailed analysis consuming all of his available non-flying time. This headquarters recommends that a pilot, AFSC 1234, be selected for this position, and further, that Major Van Atta qualify the individual in accordance with SAC Regulation 51-19, Supplement XIII, paragraph 3b. During the qualification period of this selected pilot, Staff personnel may fly as Co-pilot.

(This document consists of 2 pages
Copy number 5 of 5 copies)

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SECRET

File: DOP 319.1
Subject: Project Jet Stream

One of the major points in requiring a full time Co-pilot is that this individual will be responsible for the recording of the majority of data collected. Further, he will make a voice recording of the flight while airborne and be required to be present during the transcribing.

d. Reference supplies - It is recommended that the project be assigned to a Bomb Squadron for logistical support and administrative support. The unit to which the project is assigned may use the authority for requisitioning project supplies as outlined in AF Manual 67-1, paragraph 59d.

2. All indications point to the fact that this is a long range project, the flight portion consuming some two years. Under the present system of placing these individuals on Special Duty, there are disadvantages, primary of which is the fact that these individuals will be reported by your organization, but will not be available for duty and, therefore, cannot assume that portion of the workload required by their Table of Organization vacancy. It is recommended that your Director of Personnel investigate the possibility of assigning these individuals PCA to AFCRC (Project Jet Stream). If this is not feasible, they could be assigned to Headquarters 6th Air Division in the same manner as the SAC In-Flight Refueling Teams are assigned.

BY ORDER OF THE COMMANDER:

/s/ B. A. Johnson
/t/ B. A. JOHNSON
2nd Lt., USAF
Assistant Adjutant

1 Incl
1. AFCRC Ltr dtd 4 Aug 53
w/3 Incls

Copy less Incl furnished
AFCRC Project Jet Stream

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

(When inclosures are withdrawn or not attached the classification of SECRET on this correspondence will be changed to RESTRICTED in accordance with paragraph 26g, AFR 205-1)

(6AD-R-6620)

SECURITY INFORMATION

SECRET

SECRET

4 August, 1953

SUBJECT: Project Jet Stream (UNCLASSIFIED), RDO 114-33

TO: Commander
6th Air Division
MacDill Air Force Base
Tampa, Florida

1. The inclosed report, "Project Jet Stream" is intended to summarize the purpose, background and technical approach of this project. It is also to inform you formally of our plans. Using it as a basis, we should like to request your advice on matters pertaining to the efficient operation of this project at your base.

2. During August 1952, MajorTibbets visited your headquarters to discuss the project. At that time Colonel McCoy agreed to maintain and man the project aircraft, B-47 #51-2049, if it were assigned to the 306th Bomb Wing. It was also agreed that space would be made available to the personnel of the project to handle the special weather equipment. In a conference on 16 December 1952 at which General Mooney, General Senter of Air Weather Service, Colonel McCoy, Lt. Colonel Webb, Mr. Rados and others were present, it was understood that Lt. Colonel Mead and one pilot will be assigned to the project as permanent members of the crew. The other pilot is to be a staff member and not uniquely designated. We sincerely appreciate your advice and assistance on these matters.

3. As you are probably aware, delivery of the project aircraft has been delayed by necessary K-system modification and continuing maintenance problems. All project equipment has been installed and the aircraft will be delivered to MacDill Air Force Base for research flights as soon as aircraft equipment failures can be overcome.

4. Naturally, in such a project, certain supplies and working space are required. Our needs for working space, desks, chairs and stationery and miscellaneous supplies should be small. From time to time, certain special equipment, replacement parts, etc., will be shipped to MacDill Air Force Base for this project. It will be

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INCL 1

SECRET

Hq ARDC, subj: Project Jet Stream (UNCLASSIFIED) RDO 11/-33
4 August, 1953

necessary in some cases to draw these supplies from your supply section in order that accountability may be maintained. Advice as to the best procedure to be followed in these matters would be appreciated. Also, it is suggested that you inform us or Mr. Rodos of an officer who will act as principal contact or advisor for the project.

5. We are grateful for your efforts and those of your staff in helping us initiate the program. Every effort on our part will be made to continue the excellent cooperation which has been achieved between our organizations. We realize the importance and priority of your primary mission and the burdens of the additional duties imposed by our project. Should it appear that our plans are seriously in conflict with your primary responsibilities, we stand ready to consider mutually agreeable changes. It is our sincere hope and belief that, in due time, the results to be gained from Project Jet Stream will be of significant assistance to you and to the Strategic Air Command in the fulfillment of its mission.

4 Incls
1. Rpt "Project Jet Stream"
2. Cy ltr fm Hq ARDC dtd 23 Apr 52
3. Cy AWS Reqmts, SAC II-C-2, Problems 1,2,4 and 6
4. Form 996

R. C. MOUDE
Major General, USAF
Commander

Info cy to:
Cmdr ARDC, RDDG
w/Incl #1
Cmdr SAC, Col. Seaver,
Dowe w/Incl #1,2,3
Cmdr AWS, DSS w/Incl
#1 and 2
Cmdr Black Sheep w/Incl
#1,2,3

"A CERTIFIED TRUE COPY"
(Including all inclosures)
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

If inclosures 1,2, and 3 are withdrawn or not attached, the classification of this correspondence will be cancelled in accordance with Para. 25e, AFR 205-1

SECURITY INFORMATION

(6MD-R-6052)
(306R-R-264) (V591/-2)

SECRET

SECRET

Auth: CG, AFCRC
Init: CWP
Date: July 22, 1953

PROJECT JET STREAM (UNCLASSIFIED TITLE)

1. Project Jet Stream was initiated for the purpose of studying meteorological phenomena near the tropopause; it is hoped that these studies will ultimately contribute to the improvement of forecasting for USAF aircraft and missiles currently in use or under development. The specific, immediate purpose is to collect measurements of atmospheric elements, particularly of wind, affecting the operation of B-47 aircraft.

2. The technical background revolves around the fact that the standard methods of weather observation are not sufficiently frequent in time or space, nor sufficiently accurate, to provide data which are probably needed in order to improve significantly the forecasting of meteorological elements affecting the operation of aircraft. This is especially true of high level (i.e. above 30,000 feet) operations. In particular, observations of wind are scarce. The present network of upper air observations is inadequate for observation of the details of jet streams. The jet streams appear to be so narrow that at times they may exist and not be detected by the present network. In any event, the data grid is too gross to detect any fine structure that may exist within a jet stream. Furthermore, in cases where the observing network is in the vicinity of the jet stream, the winds are so strong that the balloons are often carried out of range of the observing equipment before adequate data are obtained. It is also possible that due to the great amounts of shear in the wind, the balloon may tend to avoid areas of highest winds and therefore, the maximum winds are never observed. Similar problems exist concerning contrails, clear air

(INCLOSURE #1)

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air turbulence and other operationally important phenomena. The development of high altitude aircraft and more accurate navigation equipment such as the K system and the APN-66 has for the first time made it possible to collect those data required for a more detailed study of the upper atmosphere and particularly the jet streams.

3. The specific requirement for this project is stated in the inclosed SECRET letter from Hq, ARDC to Commander, AFCRC dated 23 April 1952, Subject (Unclassified Title) Collection of High Altitude Weather Data Development-Directive 3005-G1. This requirement stemmed from Specific Item Report No. 5 dated 29 Jan 1952, Operational Engineering Section, Hq., 6th Air Division, MacDill AFB, Subject: Collection of High Altitude Weather Data and letter Hq 6th Air Division, dated 5 Feb 1952, subject same, and Indorsements by Hq, 2nd AF dated 20 Feb and Hq SAC dated 5 March 1952. The need for such research has also been stated as Section II - C - 2, Problems 1, 3, 4 and 6, Air Weather Requirements for R&D, dated March 1952, which are inclosed.

4. At this point, it might be mentioned that the requirement as stated by SAC has been divided into two components. The immediate need for forecasting for the B-47 has been referred to AWS. Project Black Sheep has been established for this purpose. The longer range requirements of increasing our background knowledge and of improving the methods of prediction have been placed with the Atmospheric Analysis Laboratory, GRD, AFCRC. For this purpose one B-47 (No. 2049) has been assigned to the project. Because of meteorological and climatological conditions, maintenance, crewing and other problems

associated with the operation of a B-47, and inasmuch as Project Black Sheep was located at MacDill AFB, it was decided, with the approval of the Commander, 6th Air Division and concurrence of Hq SAC (reference SECRET letter from Hq, ARDC to Commander SAC dated 21 Oct. 52, Subject: Project "Jet Stream" and indorsements thereto) to locate the project at MacDill AFB.

5. Our approach to the problem is to equip this B-47 with the finest instruments available and to fly this aircraft as frequently as possible for a period of two years while taking observations of the various meteorological elements with maximum accuracy. The data obtained will be subjected to whatever synoptic, statistical or mathematical analysis is necessary to obtain the solution of the particular problems of determining the meteorological conditions near the tropopause and methods of forecasting those conditions. This study of data will proceed concurrently with the observations, and the results obtained from the data gathered in the early stages of the project will, in all probability, cause revisions in the detailed flight plans and methods of observations to be used in the later phases of the project. It is hoped that these data will not only provide a sample of heretofore missing information, but will also serve as a standard against which to check measurements from other sources. It is this latter use which recommends our concentration on the quality of the observations and measurements which the B-47 will provide. Since quantity is an obviously unrealistic expectation, it is hoped that with quality, means and methods can be devised for constructing more accurate analyses of the upper air from the existing networks of observation. Without this hope, the practical aspirations of

the project would be futile, since there is no possibility in the foreseeable future of obtaining a regular network of observations comparable in detail to the observations to be made from the B-47 flights.

6. It must be pointed out that it is far too early to make any binding estimates as to how well we will be able to attain these goals, or how rapidly our progress toward them will proceed. In this project, we are in a very real sense attempting to push back an important frontier of meteorological knowledge. It is impossible to foresee all the scientific and technological obstacles which may be encountered.

7. The B-47 (No. 2049) has been equipped with the following special meteorological instruments:

a. Vortex thermometer MX-3
b. Aerograph (Kolsman type) KS-4
c. Dew point hygrometer
d. Lapse time camera
e. Voice recorder (AN/ANQ-3)
f. Accelerometer

The Vortex thermometer is considered the best temperature measuring device available. The Aerograph will record temperature, pressure and humidity. The Dw point hygrometer is perhaps the best humidity-measuring instrument available, especially at high altitudes. These three instruments combined with the other standard equipment of the plane will provide cross-checks to determine the accuracy of the measurements. The lapse-time camera will be used to photograph contrails, clouds and any other phenomena which the observer or other crew members believe valuable to the study. The Voice recorder will

provide the crew with a means of recording their "on the spot" impression. The accelerometer is an NACA instrument similar to the ones already installed on several of the other aircraft at MacDill. NACA is responsible for the installation and maintenance of this instrument. The records will be turned over to NACA for analyses and study of turbulence as it affects the structure of the aircraft. After completion of these studies the records will be turned over to the Atmospheric Analysis Laboratory for studies on the meteorological phases of the phenomenon.

8. The aircraft has been modified to contain the new "Blue Square" K-system. Needless to say, this is the most important equipment aboard since it permits rapid, frequent and accurate measurement of the winds at the high altitudes. It is hoped that observations of wind will be made as frequently as the equipment allows.

9. Major C. J. Tibbets is the Project Scientist for this research and is responsible for the instrumentation and observational phase of the program. Dr. William K. Widger, Jr., is responsible for the analysis and research phases, and for the technical studies to be undertaken within the laboratory and under contract with Texas A & M University. Mr. Robert Rados has been assigned as Field Director of the project. He has been at MacDill through the winter and will remain there with the aircraft. His duties will be to designate the missions and flight plans of the aircraft within the

safety limits of operation. As has been previously agreed, Mr. Rados will be responsible for that part of the operational control which pertains to the tracks to be flown, including both times and altitudes within the capability of the aircraft. The flight plans will be subject to the review, concurrence, and where necessary, veto of 6th Air Division personnel, to insure the planned mission can safely be undertaken. Mr. Rados will also perform other necessary duties and supervise the other phases of the project at MacDill, such as maintenance of the special equipment, removal and processing of the records, etc. Mr. P. Harney will be assigned for a limited period to calibrate and initially maintain the special equipment. One airman will be assigned for routine maintenance of the special meteorological equipment, removal and processing of the records. From time to time, members of the AFCRC, working on the analysis phases of the project, will visit MacDill AFB to get first-hand information; also to obtain ideas and suggestions from the men actually facing the problems of forecasting for B-47 operation. They will also consult with the Field Director on matters pertaining to the methods of obtaining information and will coordinate their work with that being conducted under Project Black Sheep to prevent any undesirable duplication. In organizing this work we have been in contact with Headquarters, 6th Air Division members of the O.E.S., 306th Bomb Wing, Detachment 1-26th Wx Squadron, 1st Wx Group and Hq AWS. We have also been in contact informally with the Navy Project AROW which is performing a similar mission, but with fighter aircraft and fewer instruments.

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RDDG [redacted] 23 Apr 1952

SUBJECT: (UNCLASSIFIED) Collection of High Altitude Weather Data-Development Direction No. 3005-01

TO: Commanding General
Air Force Cambridge Research Center
230 Albany Street
Cambridge 39, Massachusetts

1. Reference is made to:

a. Letter from this Headquarters to AFCRC, dated 12 February 1952, subject: Meteorological Data from High Altitude Aircraft and inclosure thereto,

b. First indorsement from this Headquarters dated 10 March 1952 to letter from Headquarters USAF dated 28 January 1952, subject: High Level Meteorological Studies (Inclosure No. 1).

c. Letter from Headquarters USAF dated 3 April 1952, subject: (UNCLASSIFIED) Forecasting Techniques to Fulfill Current and Imminent Operational Deficiencies, and Inclosures 1 and 2 thereto (Inclosure No. 2).

d. Letter from Headquarters Sixth Air Division dated 5 February 1952, subject: Collection of High Altitude Weather Data, with 2 indorsements (Inclosure No. 3).

2. Each of the above references emphasizes the critical importance of accurate weather forecasts to the operation of U.S. Air Force aircraft and missiles which are currently in use or are now under development. The immediate need indicated is for more accurate forecasts in conjunction with the operational use of the B-47.

3. This Headquarters believes that, in conjunction with the more theoretical investigations being carried out by your Center, it is necessary that detailed information on the occurrence and characteristics of high level meteorological phenomena be obtained. Such information will not only be of immediate use to the AWS in improving operational forecasting but it will also provide basic data for integration into the theoretical studies being carried out at your Center and elsewhere. It is believed that, in particular, the detailed structure of the jet stream should be determined since

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(INCLOSURE #2)

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this poorly understood feature of the atmospheric circulation may be of critical importance in its effect on range of strategic bombers.

4. It is requested that your Center initiate a project for the purpose of obtaining detailed measurements of weather elements at altitudes from 30,000 feet to the ceiling of present B-47 aircraft and if possible, to 60,000 feet. The primary objective of the project should be the study of the wind field of the jet stream. In addition, observations of the formation, location and characteristics of condensation trails and cirrus clouds, high level turbulence and haze, the tropopause and other meteorological elements which operational experience at high altitudes indicates to be important should be made.

5. This Headquarters has assigned this Project a priority of 1-B, the highest which it is authorized to establish under the provisions of paragraph 5b of AFR 80-11. In the event that this priority is not sufficient to support the immediate implementation of this Project, it is desired that this Headquarters be so notified in order that action can be initiated to request the concurrence of the Deputy Chief of Staff/Development in the assignment of 1-A priority.

6. It is suggested that a new Research and Development order be established to cover this effort. A possible title is "Jet Stream and Related Studies." Funds required for its implementation will be reprogrammed from within the Fiscal Year 52 and 53 R&D programs of your Center.

7. Any requirements for aircraft in support of this project should be processed through normal aircraft requirement channels. The Deputy for Operations of this Headquarters is aware of the establishment of this Project and is cooperating fully in attempting to provide suitable aircraft from within this Command's inventory or if this (is) impossible, from other sources within the USAF.

8. It is requested that this Headquarters be notified of any requirements for personnel in conjunction with this project which cannot be fulfilled through normal channels. In this respect, your comments on the desirability of requesting the services of Lt. Col. Henry L. Mead from S&C, as proposed in Specific Item Report No. 5 (See Inclosure 3 to this letter), are requested.

9. In accordance with ARDC Regulation 11-5, this letter is designated as Development Directive No. 3005-01.

BY COMMAND OF LIEUTENANT GENERAL PARTRIDGE:

3 Incls
a/s

JOHN W. KODIS
Lieutenant Colonel, USAF
Director of Geophysics
Office of Deputy for Development

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NOTICE

The three (3) inclosures referred to in the preceding letter from Hq., ARDC, 23 April, 1952, were not attached to subject correspondence at the time it was copied. Whereabouts of the inclosures is unknown at this headquarters.

B. A. JOHNSON
2nd Lt., USAF
Historical Officer
6th Air Division

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CLASSIFICATION
by authority of
CHIEF, AIR WEATHER
SERVICE

1 Mar 52 G.S.D.

1 Mar 52

Section II-C-2, Problem 1.

1. Title: Winds and Temperatures Aloft.

2. Requirements: To develop improved techniques for forecasting the true winds and temperatures aloft (1) horizontally, in space and time, at levels up to the 50-mb level throughout the Northern Hemisphere, and (2) vertically to 200,000 feet over a local area for specialized operations.

3. Purpose: Existing techniques for forecasting winds and temperatures aloft, particularly above 500 mb, are not accurate enough to meet the forecast demands of SAC, TAC, ADC, and ARDC for aircraft and guided missile operation and/or research. The higher operational altitudes and long-range capabilities of existing and planned aircraft, and the critical effect of inaccurately forecast winds and temperatures aloft on long-range jet aircraft flights, point to the need for more accurate forecasts to much higher altitudes, for longer periods of time, and over longer distances than are possible with the meteorological equipment and forecast methods available today.

Presently, guided missile research requires winds and temperatures aloft vertically to 200,000 feet over a local test area. Whether frequent wind and temperature observations in themselves will be sufficient to meet future operational requirements or whether actual forecasts will be necessary are questions research must answer. Right now the capability does not exist for fully meeting present guided missile requirements.

It is obviously most desirable that a means to provide operating arms with necessary weather service for long range missile and jet aircraft be ready by the time those vehicles become available for use. The capability does not exist now for fully meeting present, let alone future needs of AWS using agencies. This does not mean that there has been no increase in forecasting capabilities since the introduction of jet aircraft and very long-range bombers. On the contrary, gradual but steady improvements are an accomplished fact; but the requirements of using agencies have grown at a faster pace. The gap between the two must be narrowed, for ADC in particular requires accurate wind and temperature forecasts for the defense of the nation, while for training and in case of an all-out war, SAC and TAC have the same forecast requirements for offensive action. A priority of 1-A is recommended.

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(INCLOSURE #3) SECRET

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Section II-C-[illegible], Problem 2. 1 Mar 58

1. Title: Cirrus Clouds and Contrails.

2. Requirement: To develop improved methods of forecasting (1) the formation, amount, height, and dissipation of cirrus clouds, and (2) the formation and persistence of condensation trails.

3. Purpose: In the past it has been almost impossible to visually observe the bases and tops of thin stratiform cirrus clouds. The development of the cloud base and top indicator (Section I-D-3, Problem 1) should greatly improve our knowledge of the occurrence and thickness of cirrus clouds. The presence or lack of cirrus clouds is of great importance to jet aircraft attempting to carry out special high altitude photo reconnaissance and also for routine high-altitude VRF (etc) flights and flight formations of all types. Existing techniques for forecasting cirrus clouds do not provide the accuracy desired by using agencies. The formation and persistence of condensation trails associated with the operation of guided missiles and both jet and reciprocating-engine aircraft are factors which influence the success of air operations. Visual positioning of aircraft, still an important complement to electronic methods, is significantly effected by condensation trails. The ability to predict accurately the atmospheric conditions which are favorable for contrail formation (area, altitude, time, and persistence) is thus of great importance. It is recommended that a 1-B priority be assigned to this problem.

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CHIEF, AIR WEATHER
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1 Mar 57 G.S.D.

Section II-C-2, Problem A.

1. Title: Clear-Air Turbulence.

2. Requirement: To develop techniques for forecasting the occurrence and intensity of clear-air turbulence which effects (1) aircraft operations up to the 50-mb level throughout the Northern Hemisphere, and (2) guided missile and rocket operations vertically to 200,000 feet and for horizontal flights to 100,000 feet over distances up to approximately 3500 miles.

3. Purpose: The importance of so-called "gust-loads" has been incorporated in the design of aircraft, but the effect of turbulence remains a problem in aircraft operation even when aircraft are designed to withstand the strain of rather extreme accelerations. The penetration of turbulent areas unaware, unprepared, or too close to the ground is a flight hazard; also, certain military flights - high-level, high-speed jet aircraft, for example - cannot be successfully or effectively carried out in very turbulent air. There is, therefore, a requirement for space and time forecasts of clear-air turbulence in the free atmosphere. The ability of the Air Weather Service to meet such requirements is limited at present to very general indications by inferences or principles, the basis of which are questionable. Better forecasts of clear-air turbulence will provide increased safety and efficiency for aircraft, guided missiles, and rocket operations. A priority of 1-B is recommended.

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Section II-C-3, Problem 6. 1 Mar 57

1. Title: Visibility, High-Altitude.

2. Requirement: To develop methods for operationally forecasting the (1) horizontal and (2) air-to-ground (slant-range) visibility in the free atmosphere, and in particular at altitudes from 20,000 to 50,000 feet, insofar as it is affected by haze, dust, or other (at present unknown) substances, and the relative position of the observer, the sun, and the object to be observed. (It is realized that clouds and precipitation also limit visibility aloft, but Problem 6, "Visibility, High Altitude," is intended to be confined to investigating restrictions to high-altitudes visibility other than as affected by hydrometeors.)

3. Purpose: Pilots of jet aircraft flying at altitudes above 20,000 feet frequently report an unknown obstruction to vision which has not been forecast and which was not visible from the ground at the time the phenomenon was reported aloft, even when the sky is observed to be clear. Existing techniques of forecasting visibility fail completely in attempting to forecast high-altitude visibility, both air-to-air and air-to-ground. Although increased use of airborne radar may tend to diminish somewhat the need for forecasting these parameters, there will still be instances in which visibility can be expected to play an important role - photo-reconnaissance, air support of ground troops, in-flight refueling, etc. Research is required to develop a means of forecasting high-altitudes visibility. A priority of 1-C is recommended.

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

29 January 1952

DOCS 319.1

SPECIFIC ITEM REPORT NUMBER 5.

SUBJECT: Collection of High Altitude Weather Data.

TO: Commanding General
Air Research and Development Command
Baltimore, Maryland

1. PURPOSE:

The purpose of this letter is to point out the immediate need for a test program to collect weather data by aircraft at altitudes above 35,000'. This information is to be utilized in checking accuracy of forecasts, as a basis for recommending new techniques and equipment to be used in acquiring upper air data, and for improving present procedures of reducing measured data into reliable forecasts.

2. CONCLUSIONS:

a. Present weather, especially wind, forecasts available to jet pilots are often very unreliable and inaccurate to the degree of being hazardous if used in flight planning.

b. Maximum range operations by Strategic Air Command B-47's will be seriously restricted unless a notable improvement is made in forecasting winds at altitude.

c. A B-47 equipped with a "K" navigation system can accurately and expeditiously collect weather data at altitude. Air Weather Service personnel can utilize this information to develop better forecasting techniques as well as to provide a basis for recommending acquisition of new type recording equipment.

d. Lt Col Henry L Mead, 7724A, is ideally qualified as a Project Officer for a test program of this type, by virtue of his experience in both weather forecasting and B-47 K-system operation.

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OSS, Hq 4th Air Div, MacDill AFB, Fla., Specific Item Rpt No 5, subject: Collection of High Altitude Weather Data, dtd 29 Jan 52.

e. Air Weather Service is interested in participating in such a test program. Several well qualified forecasters presently on duty with Air Weather Service have B-47 experience acquired at Project WIRAC.

3. RECOMMENDATIONS:

a. The present accuracy of weather forecasts, especially wind predictions, available to jet pilots be improved many fold.

b. A test program be initiated by Wright Air Development Center, jointly with the Air Weather Service, to collect and analyze high altitude weather and wind data.

(1) A B-47, equipped with a "K" navigational system, be utilized as the test vehicle to measure atmospheric variables at altitudes.

(2) Wright Air Development Center provide the test aircraft and both pilot crew members.

(3) Lt Col Henry L Mead, 7724A, be assigned as a project officer and as the navigator for the B-47 crew.

(4) Wichita AFB, Kansas be considered the most feasible location for conducting this test program.

c. Based upon data collected during the test program, Air Weather Service develop new forecasting techniques and recording equipment.

d. This test program be initiated as soon as possible in order to improve upper altitude forecasting before a large number of B-47's become available to Strategic Air Command.

4. DISCUSSION:

a. During the past few years numerous jet fighter pilots have commented on the inability of forecasters to give accurate weather information at altitudes above 35,000'. Of particular note was the large discrepancy often encountered;

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OSS, Hq 6th Air Div, MacDill AFB, Fla., Specific Item Rpt No 5, subject: Collection of High Altitude Weather Data, dtd 29 Jan 52.

in both direction and velocity of the forecasted wind. Although the reliability of high altitude forecasting has been questionable for some time, it has not been a matter of too great concern because fighter aircraft, with their comparatively short range, were affected by the winds for only short periods of time. With the advent of the B-47, with its comparatively long range capability, it is apparent that erroneous and inaccurate wind forecasts have critical implications.

b. It is not uncommon for a jet pilot to find winds with as much as 50 knots and 90° vector difference from those forecasted. In extreme cases velocity variations as large as 150 knots and heading variations up to 180° have been encountered. A jet aircraft cannot operate under as wide a variation in wind forecasts as can conventional type aircraft. In the past, with propellor type aircraft, it was always possible to change altitude when adverse winds were encountered without any appreciable penalty in fuel consumption. This is not so in jet type aircraft, particularly the B-47. Any change, either above or below the mission profile, is extremely costly from a fuel consumption viewpoint. Operating with present forecasting limitations, it is quite conceivable that on some future long range mission an entire flight of B-47's will fail to reach their base because unexpected adverse winds were encountered. If the B-47's maintain cruise profile altitude in such a situation, the ground speed will drop and fuel starvation ensues prior to reaching destination; if a descent is made to a more favorable altitude of less wind, fuel starvation will result from excessive consumption at low altitude. It is obvious that continued variations in forecasted winds will cause Strategic Air Command to plan combat missions with greater fuel reserves in order to operate within reasonable safety limits. This in turn means shorter range capabilities.

c. By 1953 the Air Weather Service will probably be requested to furnish wind forecasts accurate to within 10 knots and 15°, at altitudes up to 55,000.' If this requirement is to be met, Air Weather Service must be given every opportunity to collect and investigate all data possible during 1952. New methods of measuring weather variables and of collecting and reducing data will have to be developed.

d. A B-47 equipped with a K Navigation System is the most practical vehicle available today to accurately measure wind velocity at high altitudes over a long range in a matter of a few hours. In addition, the aircraft can carry various instruments to simultaneously

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measure and record atmospheric variables desired by the Weather Service. The test program will not only provide for continuous recording of these variables, but will also serve as an immediate and accurate check on the forecaster's predictions made prior to take-off. At present, there is no means by which a forecaster can det ermine just how his forecast compared to actual conditions, except by informal conversations with jet pilots inbound from cross country flights who have estimated the wind velocity and direction encountered.

e. A particularly interesting phenomenon worthy of special investigation is the Jet Stream. There have been occasions in the past when pilots have encountered a change in wind velocity of as much as 100 knots with a change of only 1,000 feet in altitude. Forecasters today can predict the general areas in which jet streams will be encountered. It would be a great advantage to operational planning, if the exact velocity, location, and altitudes could be forecasted.

f. Informal information available to the Operational Engineering Section indicates that the Air Research and Development Command is presently conducting and upper altitude investigation utilizing balloons equipped with recording equipment. The proposed B-47 weather test program is intended to supplement, and should be actively coordinated with, the balloon program.

g. Lt Col (1037) Henry L. Mead, 7724A, presently assigned to the 306th Bomb Wing at MacDill Air Force Base, is particularly well qualified to participate in a test program of this type. This officer has been actively engaged in B-47 "K" system navigation and bombing problems during the last 14 months. In addition, Colonel Mead spent two years as a forecaster and has maintained his proficiency in this field because of his keen interest in weather prediction.

h. It is recommended that Wright Air Development Center contact Air Weather Service and initiate a test program according to their requirements. Further, that this program be initiated at an early date, prior to delivery of large numbers of B-47's to Strategic Air Command.

/s/ Thomas P. Savage
Major, USAF for
/t/ P. S. FLEMING
Colonel, USAF
Chief, O.E.S.

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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HEADQUARTERS
AIR WEATHER SERVICE
Andrews Air Force Base
Washington 25, D. C.

1 October, 1952

SUBJECT: (UNCLASSIFIED) Project Directive

TO: Commanding Officer
1st Weather Group
Offutt Air Force Base
Nebraska

1. Reference your letter of 16 April 1952 requested a B-47 project group at MacDill Air Force Base.

2. General. Though the AWS has been forecasting for jet aircraft operations on an increasing scale since the close of World War II, adequate forecasting tools still are not available. The advent of the B-47 aircraft has introduced new forecasting problems: wind, turbulence, cirrus clouds, contrails and temperature forecasts at high levels are especially critical. An opportunity exists at MacDill AFB to work with SAC operational B-47 aircraft and with a GRD controlled B-47 aircraft especially equipped to collect upper air data. A developmental unit that can fully exploit this opportunity to collect data and can devote full time to the study of upper level analysis and forecasting should be able to develop valuable techniques that can be used as prototypes in the AWS.

3. Purpose: It is desired that you establish a suitable facility at MacDill AFB to develop analysis and forecasting techniques which will best support jet bombers operations and to determine the best operational methods to provide meteorological service for all USAF high-level operations. This project is assigned the nickname BLACK SHEEP and will commence by 15 October, 1952. Secondary objectives of the project will be:

a. To evaluate the usefulness of particular upper air charts, or combination of charts including facsimile charts, in upper-level forecasting.

b. To determine the degree of accuracy of forecasted elements that such high-level operations require.

c. To determine those forecasting deficiencies that cannot be resolved without more research by basic research agencies.

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SUBJECT: (UNCL) Project Directive

4. Requirements:

a. Equipment and supplies: Facilities at your disposal will be utilized.

b. Personnel: Initially your organization will be furnished four officer forecasters, including Lt. Colonel Robert C. Sundgaard. A fifth officer will be assigned by January, 1953. Other personnel must be furnished from resources within your command. Technical consultants from this headquarters will be made available to this group as required and as specifically requested by your project officer.

c. Troop spaces: Initially no additional troop spaces will be provided for this project since the present MacDill authorization is considered adequate for both is project and present base functions. Upon receipt of sufficient justification arrangements may be made to adjust the authorization to meet an increase in spaces at MacDill, although probably not before 1st Quarter, 1953.

5. Coordination with Other Commands:

a. Direct communications on technical matters concerning this project are authorized between Detachment 1, 26th Weather Squadron and this headquarters and Air Force Cambridge Research Center. Information copies of all correspondence outside of WS channels will be provided this headquarters.

6. Priority: This project is considered of sufficient importance that its manning priority shall be secondary only to the Offutt Weather Control and Flight Service Centers.

7. Reports:

a. Semi-annual status reports will be submitted in accordance with AWS letter 55-3, dated 21 September, 1952. The first status report will be due 15 April, 1953.

b. Reports Control Symbol AWS-71 is assigned these reports.

c. Partial or fragmentary reports may be submitted at any time that the dissemination of such information is considered timely and appropriate to supervising agencies. No reports control symbol will be assigned to such reports.

Copy furnished:
CO 7th Wea Gp

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B. A. JOHNSON
2nd Lt., USAF

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ABSTRACT

THE "CRITICAL" EDDIES

IN THE UPPER ATMOSPHERE

by

Robert C. Bundgaard
Lt. Col., USAF

In the upper troposphere and stratosphere there exist a great number of turbulent disturbances that are so small in intensity, duration or extent that they completely escaped detection even within a very dense network of the ordinary upper-air observations made as often as every six hours. In the standard upper-air map analysis, the definition of the initial state of the atmosphere is therefore obtained by some kind of mostly ill-defined smoothing. These neglected disturbances may however exert trigger actions and release important new development (sic). In particular, a small change in the initial state might completely reverse the involved instantaneous motions of individual air particles as described by the ordinary differential equations of atmospheric hydrodynamics, especially if the motions considered were initially unstable or became unstable at some later stage. Theoretical prognoses, therefore, cannot be based upon such equations when used together with the incompletely observed initial

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(Abstract: The "Critical" Eddies in the Upper Atmosphere, by Lt. Col. Robert C. Rundgaard)

state. Instead, a more complicated system of equations describing the smoothed motion must be obtained by taking into account the nature of the irregular small-scale motions that have been eliminated in the initial stage through the smoothing process. This paper presents some evidence as to the nature of these turbulent disturbances from observations made by the high-level weather research Project BLACK SHEEP of the Air Weather Service.

Between 35,000 and 50,000 feet, small-scale atmospheric motions (with dimensions as small as 2-10 miles and 5-20 minutes) can be observed and followed in a semi-Lagrangian way by photographing the deforming exhaust trails persisting frequently up to two hours. Remote from the main synoptic jet streams, horizontal and vertical shears well in excess of 10^{-3} and 10^{-2} sec^{-1} have been observed, as well as narrow (ten-mile wide) walls of vertical motion beneath undulation cirrus-forming bands.

Slowly growing festoons of virga, wispy, striated, and veil-like, are frequently seen apparently hanging upstream from the exhaust trail being transported with the wind field. These festoons resemble the tails cirrus uncinus; they are up to a mile wide and 10 to 15 miles along the exhaust trail. From newly formed contrails, rapidly mushrooming protuberances, heavy, opaque, and cumuliform, are seen to bulge downward at the rate of 20m/sec or more.

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(Abstract: The "Critical" Eddies in the Upper Atmosphere, by
Lt. Col. Robert C. Bundgaard)

These two types both result from large variations along the exhaust trail in the fall-out rates for the exhaust particles.

Measuring roughly 200 microns in length and occuring singly or in cluster formations, these particles are either cup-like prismatic crystals with unfinished sides or completed columns but with air cavities, according to H. Weickmann. Assuming that 0.16 gm cm^{-3} is the maximum effective density of an aggregate of these hollow crystals, its maximum settling speed at -55° C would be about one meter per second according to Stokes' Law. Origination in a water saturated ambiance at very low temperatures, the corners and edges of these crystals are formed first; then, the surfaces are built rapidly inward from the edges, resulting in the above mentioned type of crystals. Not only are such forms of the ice crystals regulated by the high degree of ice supersaturation, but also both their size as well as their frequency of formation, which both increase with lowering temperature and consequent rise of ice supersaturation of the atmosphere along the exhaust trails.

In the festoons and protuberances, there have been very suddenly formed heavy concentrations of these large ice crystals, which - it is supposed - fall out <u>en masse</u> leaving many smaller platelates and other types of smaller crystals behind in the original

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trail. Festoons [illegible] observed horizontal width of 1.7 miles in ten minutes would represent a vertical wind shear 50 to 500 times too large were the maximum settling spread of the festoon particles limited according to Stokes' Law. Instead, then, of the mechanics of individually falling particles, the tydrodynamics of "air-drops" heavily laden with large ice crystals must be applied for finding the fall-out speed, as pointed out by K. Johannessen and V. J. Schaefer. An analogy exists with snow avalanches in the mountains. When the snow surface first commences to slip, locally created clouds of snow dust start to descend the mountain slope reaching enormous speeds. Houses are crushed by the impact of these snow-dust clouds considerably in advance of the avalanching snow.

Finally, it is mentioned that periodic succession of discharged, irregularly shaped vortex-loops are sometimes seen to move along the axis of the exhaust trail. These presumably take place at a certain critical Reynolds number. Although of no apparent interest when considering the turbulent disturbances of the atmosphere, these vortex sheets might nevertheless give clues as to the way in which the exhaust trails break-up and dissipate.

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B. A. JOHNSON
2nd Lt., USAF

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THE "CRITICAL" EDDIES IN THE UPPER ATMOSPHERE

by

Robert C. Rundgaard
Lt. Col., USAF

Symposium on High-Level Forecasting

Monday morning, September 14, 0930 - 1930

Toronto Meteorological Conference

Toronto, Ontario, Canada

Eddies are disturbances in the uniform flow of air. They have many forms, including irregular, turbulent motions as well as the smooth motion that can be represented by a streamline function. The critical eddies represent an intermediate stage between laminar motion and fully-developed turbulence. Atmospheric evidence at very high levels of such regular turbulence will be presented this morning. To start off, I hope you won't mind if we look at some home-made movies which I have taken and edited, after a fashion.

I. INTRODUCTION (20 sec)

A (model plane) and B (trail). This is the Boeing six-engine B-47 bomber. It puts out roughly 200 pounds of water per minute as

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combustion in its exhaust - enough to make 10^9 cubic feet of cloud. But before we look at the deforming exhaust trails, let us first look at a stereoscopic movie of a Helmholtz cloud-wave.

II. TRANSVERSE WAVES

A. (Scene, 18 sec) In these time-lapse telephoto pictures, look at the very bottom part. Disregard the cumuliform clouds in the foreground, which partly obscure the cirrus waves. You'll also notice cirrus wave-crests forming farther up toward the middle of the picture.

B. (Map, 12 sec) This is a 200mb isotach map. Located here in Florida, the theodolite telescope has the shown azimuth of 25 degrees. The isotachs, in red, are drawn at 25kn-intervals. The Helmholtz-waves are south of the jet at 40,000 feet. May I also call your attention that the general motion is slightly oblique to the camera's azimuth and away from it.

C. (Scene, 18 sec) This is another view of the same scene. If the differences in density and velocity in the laminar flow are determined, as well as its internal stability, we would thus be able to compute the wave's speed, length, and amplitude.

D. (Legend, 1 min, 18 sec) The next sequence represents tracings of the last scene. (Let this go along mostly without dialogue.

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(The "Critical" Eddies in the Upper Atmosphere, by Lt. Col. Robert C. Sundgaard. Symposium on High-Level Forecasting, Sept. 14, 1953, Toronto Meteorological Conference, Toronto, Canada) Call attention to the wave inclination, referencing back to the 200mb map. Point out error in propagation speed: C ≠ 4.7 = 47 kn. Also annotate Ludlum's illustration.) Just how the wave speed, length, and amplitude can be computed will be determined later.

C. (Scene, 18 sec) Here's a third view of the last scene. (Short pause) In order to make photogrammetric measurements from exhaust trails of wind shear, etc., it is necessary to know some of their properties. (Continue right along with dialogue as scene III (Ring, 15 sec) comes along) For example, we need to know something of the growth rate, fall-out speed of exhaust particles. So we'll now look at the characteristic life history of the exhaust trails: formation, protuberances, festoons, vortex sheets, dissipation.

IV. FORMATION

A. (15 sec) and B (18 sec) (Scenes) Here are two scenes of formation (Short pause. Continue dialogue right into V A and B. Read slowly as there is plenty of time) From newly formed contrails, rapidly mushrooming protuberances, heavy, opaque, and cumuliform, are seen to bulge downward at twenty times the rate of maximum settling speed for the individual exhaust particles. In the protuberances, there have been very suddenly formed heavy concentrations of these

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large ice crystals, which - it is supposed - fall out en masse leaving many small platelets and other types of smaller crystals behind in the original trail. Instead, then, of the mechanics of individually falling particles, the hydrodynamics of "air-drops" heavily laden with large ice crystals must be applied. This matter will be considered later in more detail. These remarkable pictures were taken from a T-33 jet fighter flying along-side the forming exhaust trail.

C. (Legend, 7 sec) (Fast) This what we'll see in the next scene. Here the vertical scale has been expanded five times.

D. (Scene, corkscrew, 14 sec) This is time-lapse telephoto. Note the protuberances. These are two contrails (sic) made by separate aircraft.

E. (Panorama of D, 17 sec) This is a wide-angle panorama of the last scene. After they've formed, the protuberances sometimes merge together to form a festoon. At other times the festoons are formed alone. We'll now look at the festoons.

VI FESTOONS

A. (Legend, 10 sec) This is what we'll see in the next scene. (Let dialogue run into next scene, B) This slowly growing festoon of virga, wispy, striated, and veil-like, is actually hanging upstream from the exhaust trail being transported with the wind

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field. These festoons resemble the tails of cirrus uncinus; it is up to ten miles wide. Festoons grown to an observed horizontal width of 1.7 miles in ten minutes would represent a vertical wind shear 50 to 500 times too large were the maximum settling speed of the particles limited according to Stokes' law. They are obviously not the result of diffusion processes.

VII. THE 12 MARCH CASE:

A. (Legend, 12 sec) We'll now look at the same case of protuberances and festoons as shown by the six pictures out in the hall. This is what we'll see in the next two scenes. (Pause) B. (Scene, 13 sec) (No remarks) C. (Scene, 5 sec) (No remarks) D. (Legend, 5 sec) (No remarks) E. (Scene, 8 sec) (No remarks) F. (Legend on protuberances, 10 sec) (No remarks) G. (Scene, 5 sec) (No remarks) H. (Scene, 44 sec.) This is a telephoto panorama of the foregoing scenes. This strip is furnished by GENITALP Foundation.(Short pause) The next sequence that we're about to see shows festoons forming from protuberances and growing into a large exhaust trail. The very first part of this sequence is unfortunately very dark. But looking carefully you'll actually see the festoons forming. Incidentally, to begin with, you will also notice the thrust of the exhaust (from left to right) relative to the festoons.

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(The "Critical" Eddies in the Upper Atmosphere, by Lt. Col. Robert C. Rundgaard. Symposium on High-Level Forecasting, Sept. 14, 1953, Toronto Meteorological Conference, Toronto, Canada)

VII. THE 28 APRIL CASE:

(1 min, 5 sec) We'll see stills of this later. (Pause) This contrail is at 200mb and -56 degrees centigrade. This gives you an idea of the relative size of the exhaust trails. Both contrails are at 200mb. The left one was 130 feet wide. (Long pause) Turning from this case, our next sequence deals with the spreading extent of B-47 exhaust trails. It is not an uncommon experience to have the exhaust trail spread out finally into a sheet of cirrus overcast. The next sequence shows just that.

IX. PESTOON GROWTH:

A. (Legen, 20 sec) This shows what we'll see in the next scene.

B. (Scene, 15 sec) (Id 11b: a 1047, b 1123 to 1148 EST, c, d scenes)

X. DISSIPATION:

(55 sec) We'll now see five scenes showing the dissipation of exhaust trails. A periodic succession of discharged, irregularly shaped vortex loops are sometimes seen to move along the axis of the exhaust trail. These presumably take place at a certain critical Reynolds number (195). Although of no apparent interest when considering the turbulent disturbances of the atmosphere, these vortex

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(The "Critical" Eddies in the Upper Atmosphere, by Lt. Col. Robert C. Rundgeard. Symposium on High-Level Forecasting, Sept. 14, 1953, Toronto Meteorological Conference, Toronto, Canada)

sheets might nevertheless give clues as to the way in which the exhaust trails break up and dissipate. (Pause) Operator, as soon as this film ends, please go right on to the 35mm slides.

INTERLUDE

While we're waiting for the operator to change over to the slides, I may mention that (fill in with the attached material until the 35mm slides are ready) the methods of meteorological photogrammetry used here will be presented a week from this coming Saturday at Rochester, and will therefore not be given here as it is mostly of non-meteorological interest.

35mm SEQUENCE:

The following group of color slides show contrails that occurred over a period of an hour and a half.

A. Slide 1: The position of the contrail with respect to the camera in the first scene is shown in red; the second scene, in green; the third scene, in purple; the fourth scene, in blue.

B. Slide 2: Shows the 13-minute-old contrail at -31° C and 376 mb. Notice the fuzzy edges.

C. Slide 3: Shows the 32-minute-old contrail, a continuation to the right of the last one. Note the cloud puff in the center extending upward from the contrail. The cloud tick at the right

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may be followed as an identifying register in the following slide.

D. Slide 4: Shows the growing contrail, now 49 minutes old.

E. Slide 5: Shows how permanent is the contrail, one and one-half hours old. Now, the next and final sequence of scenes shows a deformation of another contrail that occurred just about the time of the two contrails just shown.

F. Slide 6: This slide indicates our point of view as we will see this indicated section of the new contrail in the next slide, shown here in red.

G. Slide 7: This contrail, 8 minutes old, -56° C, at 39,000 feet shows already some festoons growing.

H. Slide 8: In the next slide a minute later we will look at the segment which is represented here as the continuous red line.

I. Slide 9: Notice that the opaque cumuliformed roll along the top of the contrail is visibly separated from the lower sheet of wispy and striated festoon hanging upstream.

J. Slide 10: We now continue to rotate the camera more toward the south and look now in the direction along the black arrow. Incidentally, in the next slide we'll also see two old fragments of B-50 contrails, as represented here by the two green lines.

K. Slide 11: Here are the remnants of the two old B-50

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contrails 17,000 feet lower. Here is the beginning of the deformation which becomes increasingly accentuated in the succeeding scenes.

L. Slide 12: We're now going to interrupt this time-lapse sequence of scenes of this particular contrail to take a look at an 18-minute-old contrail which happened to be in just this same region of the atmosphere, but 20 minutes earlier. This new contrail is represented here by the solid purple line.

M. Slide 13: And here is the other deformed contrail 20 minutes ~~later~~ earlier, Maj

N. Slide 14: Coming back now to the original contrail time-lapse sequence, we are reminded of its last scene by the dashed black and red lines as shown here. The fifth scene of this contrail, here represented by the fuzzy solid red line, will now be seen in the next picture. Also seen will be a new B-47 contrail in the process of being formed - the blue line here.

O. Slide 15: Notice how big the deformation has now become in the original B-47 contrail, now 36 minutes old. In the next scene, I want to call your attention particularly to this section here between aircraft turns of the new contrail, the B-47 on its bomb run at this moment being here.

P. Slide 16: As before, this is what we are to see in the

(The 'Critical' Eddies in the Upper Atmosphere, by Lt. Col. Robert C. Rundgaard. Symposium on High-Level Forecasting, Sept. 14, 1953, Toronto Meteorological Conference, Toronto, Canada)

next slide: The original and increasingly deformed contrail in red, old fragments of contrails in green and purple, and the new and now 12-minute-old contrail in blue.

Q. Slide 17: Notice this festoon flagging upstream. Here is the original contrail and its deformation.

R. Slide 18: Now the camera is swung around toward the north to view 38 minutes later that portion of the contrail seen first:

S. Slide 19:

XIII. EXAMPLES OF CONTRAIL DEFORMATION: (Operator, please now go to the large 3 x 4 inch slides.)

A. Slide 1: Exact photographic tracings, these contrails were made by the same B-47 on successive, straight, and level, constant-power-setting runs on the local radar bomb site. The foremost one is about 10 minutes old and the fourth one on the horizon is roughly an hour and a half old. The indicated radar wind of 285° and 40 knots was measured at time of "bombs away" of the latest run. The cirrus radiatus is oriented downstream in the direction of flow. Since the deformation of the contrail is normal to the wind direction, the dynamic model which represents this situation has to be three-dimensional. Analytical studies in three dimensions are not common, to say the least.

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The photographs could be interpreted as showing a wall of strong vertical velocities ten miles wide, or so. In this case, it could be up to one meter per second, if all the observed deformation were assumed to be in the vertical plane. Perhaps such velocities exist at this level. Let us view the horizontal arrangement of this as viewed from above.

B. Slide 2: In spite of the great height of the contrail and the cirrus radiatus, they may be a thermally-orographically induced effect at the windward coastline whereby a heat source can also act as an equivalent mountain. Similar observations from the English coast showing large vertical displacements in the 30,000 foot level over small hills permit this explanation.

A sustained vertical displacement along the cirrus band, moreover, could also be partly the effect of the sublimation heat from ice crystal formation. So, let us look at this last contrail here as it moves down along the cirrus radiatus.

C. Slide 3: The photo tracings here are at two-minute intervals except between c and d where the period is four minutes. There is no apparent increase in the deformation of the contrail. The clouds being rather thin, we may in the first approximation therefore neglect the influence of both the condensation heat as well as

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thermal-orographic influences, the more so if we are able to show that the shearing instability is the primary cause of the cirrus band and contrail deformation.

Wave-like flow patterns that often produce the long parallel bands of cirrus clouds occur quite frequently independent of orography, especially in jet streams. To leave for a moment the case at hand of the cirrus band and contrail deformation, let us look at this situation:

D. Slide 4: Which shows the finger-like jets in the jet stream giving rise to local shearing instabilities. Each dot represents a wind measured by nineteen B-47 aircraft flying a special weather mission to probe the jet stream. The airborne radar K-system automatically computes a wind every 10 seconds for each aircraft. Here, I also parenthetically mention some experimental observations. Five B-47's in a very widely spread and fixed formation: each continuously maintains the same TAS as they measure their relative velocities, or divergence, by means of their airborne radar. On five occasions, we got measured shears of the magnitude reported.

E. Slide 5: The sequence of cloud and clear sky bands suggest a gravitational-shearing wave which, according to the wave length, would be of the internal rather than the discontinuity type

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as we will now see. The cloud waves must, in particular, be assumed to be instability waves and to have increasing amplitudes if they are to lead to finite displacements and to cloud formations. In the absence of friction and surface tensions the most rapidly increasing waves must be infinitesimally short. In a fluid system resembling the atmosphere, in which a thin layer of transition exists, the shortest waves, however, are of the stability type, so that there remains only a fairly short wave-length region of instability waves. The upper limit of this region, called the critical wave-length, indicates an upper limit to the wave length of the billow clouds and cirrus bands. This slide shows clearly how the critical wave-length increases with vertical wind shear and decreases with surface and internal stabilities.

F. Slide 6: From this slide, which brings us back to the case at hand of the deformed contrail under the cirrus band, we see that such cloud bands usually originate within an unstable stratified thin layer subjacent to a marked temperature inversion. This layer must also be a zone of marked transition along the vertical in the horizontal wind which is about equal to the propagation speed of such cloud bands.

It can also be easily shown by both experiment and theory that

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transversal waves, i.e., rolls of billow clouds normal to the direction of motion can exist only with a small variation along the vertical of the horizontal wind. For larger values of shear, they change into longitudinal waves parallel to the general motion.

Since the density and velocity differences are known, we are thus also able to compute the velocity of propagation corresponding to a given wave-length, according to the expression written on the blackboard.

G. Slide 7: In the movie, we mentioned that the protuberances and festoons depended upon the properties of the exhaust particles. In the upper half of this slide is shown exhaust trail crystals, whereas ordinary cirrus-stratus crystals are shown in the bottom half.

H. Slide 8: Actual traces of contrail photoscopy showing for the same contrail in four successive displacements at two-minute intervals. The contrail system traverses the general wind motion at right angles. The festoons flag upstream because they also hang down into a region of lesser speed. The periodic distribution of the flagging festoons locate both temperature and humidity variations and also the axes of evenly spaced longitudinal Helmholtz waves, of the same form just shown.

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(The "Critique Address" [illegible] by It. Col. Robert C. Sandmeyer. Symposium on High-Level Forecasting, Sept. 14, 1953, Toronto Meteorological Conference, Toronto, Canada)

I. Slide 9: This slide shows a well known demonstration of a layer of heavily suspended sediment temporarily overrunning a colder clear layer. As we see here, the descending floccules, very closely resemble the exhaust trail protuberances.

J. Slide 10: An analogy also exists in the rapidly cascading clouds of volcanic ash and dust. Here is a picture of such a cloud which reached a measured velocity of 96 miles per hour.

K. Slide 11: As you may remember from the film strip, the dissolution of a contrail looked very much like this.

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"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

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(A condensation of this article, written by Captain Currie S. Downie and Captain A. S. French, appeared in the September, 1953, edition of Strategic Air Command's Combat Crew magazine, pages 22-23. The following is a true copy of the original.)

Nowadays SAC is flying 'em higher and faster than ever before but still not high enough or fast enough to outclimb or outdistance "Old Man Weather." Harmless, pretty looking cumulonimbus clouds (castles in the air) may contain sinister hazards for the unweather-wise and unsuspecting venturesome young pilot. This was evidenced by the recent encounter with moderate to severe turbulence and rime icing of a MacDill (Air Force Base) based F-47 flying at high altitude through a thunderstorm over Alabama, resulting in a new low temperature world icing record.

However, this F-47 is not the only jet plane to encounter high altitude weather hazards. During the summer of 1951 a mass flight of jet fighters was winging its way through a region of well developed thunderstorms over Ohio. In rapid succession, eight of these F-84's either crashed or made emergency landings. A thorough investigation of this multiple accident determined the most probable cause to be failure of the engines because of icing of the jet intake area. Although at considerably higher temperatures, this was the same type of weather situation that the F-47 ran into - well developed, mature thunderstorms with considerable turbulence and an excessive amount of supercooled liquid water for rapid and severe ice formation.

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(Article by Captain Downie and Captain T. E. Trench of Project BLACK SWEEP)

More recently, another jet plane was involved in a costly tragedy. This time a BOAC jet airliner crashed on 2 May, 1953, near Calcutta, India, killing all 37 passengers and a crew of six. Three observers reported that the plane broke out of the base of the clouds with both wings torn off, the result of an encounter with severe thunderstorm turbulence. Thus, weather is still a factor to be reckoned with no matter how high the flight may be.

Because of his B-47 icing encounter at minus 51 degrees centigrade at 36,000 feet PA (pressure altitude), Major Donald G. Prieve of the 306th Bomb Wing, 6th Air Division, the aircraft commander, is now undisputed holder of the world's record for low temperature airframe icing. Never before has icing been encountered at such an extremely low temperature. The fact that icing occurred indicates that supercooled water, rather than ice crystals, was present in the cloud. Weather men and cloud physicists have persistently maintained that it is impossible for water droplets to exist at such low temperatures, but Major Prieve's experience proves once and for all that very low temperature icing is possible and that it does occur in naturally occurring clouds.

Here's how it happened: Flying VFR at 36,000 feet PA with an OAT (outside air temperature) of minus 54 degrees centigrade, B-47

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(Article by Captain Downie and Captain French of Project BLACK SHEEP)

"Fireball Number 6" (SAC code name for plane number Six of this particular mission) entered the tops of cirrus clouds just south of Greenville, Alabama (point A on Figures 1 and 2). Major Prieve, one of the most experienced and competent pilots in SAC, reported:

"Shortly after entering the cirrus clouds we encountered moderate turbulence. I noticed a three degree centigrade rise in OAT when we started to pick up rime ice. The airspeed dropped off about 15 knots as we picked up a quarter-inch layer of ice on the windshield, canopy, and leading edges of the wings."

The visual observation of ice on the windshield, canopy, and leading edges of the wings is convincing evidence that ice was present. However, when the very uniform cruising speed of the B-47 is considered, the 15-knot drop in airspeed proves without doubt that icing was actually encountered. With a small amount of wing icing, the stalling speed of the B-47 increases considerably, because at high speeds a slight deformation of the B-47 airfoil causes a critical increase in drag. A quotation from AWS (Air Weather Service) Manual 105-39, January, 1953, serves to illustrate the point:

"Ice increases drag and decreases lift. In wind tunnel experiments, it has been shown that an ice deposit of 1/8 inch at the leading edge of an airfoil will reduce the lift about 50 percent, increase the drag an equal amount, and greatly increase the stalling speed. The same deposit on a B-47 would increase the stalling speed by 40 knots."

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(Article by Captain Downie and Captain French of Project BLACK SHEEP)

Thus, the real icing hazard to the B-47 lies in the narrow range between the stalling and the buffeting (or maximum) mach number. As the amount of ice on the airframe increases, the stalling speed likewise increases until eventually it would not be possible to maintain level flight. For Major Prieve's flight conditions, another quarter-inch of ice accretion without a corresponding increase in the power setting would have caused a stall.

The icing also caused alternator failure. The alternator is an electrical power source and failure will result either by a short through the brushes because of moisture or by overheating because icing of the air intake cuts off the circulation of the cooling air. The entire K-system radar navigation and bombing equipment, the loran and the instrument landing system thus ceased to operate when the icing was encountered. An attempt to shield the alternator has resulted in icing of the shield (see Figure 3), but proper redesign and rearrangement of the shield will solve this problem.

Here's when it happened. Major Prieve indicated that the icing occurred about 1140 EST on 18 March, 1953, at point B on Figures 1 and 2. It was difficult for him to determine the exact duration of the icing. After about five minutes, he noticed that the ice had partly evaporated although the moderate turbulence and cloud deck continued. Thus the icing stopped near point C (Figures 1 and 2).

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(Article by Captain Downie and Captain French of Project BLACK SHEEP)

The turbulence continued until point D. At point E the clouds at flight level ended but a broken layer was visible above the aircraft.

Another B-47 pilot, Captain L.M. Large, in Fireball No. 7 at 34,000 feet PA and minus 48 degrees centigrade OAT in the clouds, reported moderate to severe turbulence at 1145 EST as he was approaching Montgomery, Ala., but he did not encounter icing. He also reported a so-called "squall line" or line of convective cells (cloud buildups) on the radar scope just south of Montgomery. Moderate turbulence was encountered by several other B-47 aircraft over the same route about two hours earlier.

What are the danger signs to look for? A carefull look at the weather chart (figure 2) discloses the type of weather situation which caused this hazardous condition aloft. At 1130 EST a low pressure area centered over Indiana was associated with a slow moving frontal system; an occluded front extending southward through Tennessee joined with the cold front extending westward from northern Alabama through Arkansas and a very diffuse warm front extending southeastward to the vicinity of Albany, Georgia. Thus the B-47's were flying through what the weatherman verbosely calls the warm moist maritime tropical air mass of the warm sector.

The hourly weather reports ("hourlies") which each pilot studies before taking off, show that both Montgomery and Selma

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(Article by Captain Downie and Captain French of Project BLACK SHEEP)

(30 miles west of Montgomery) were reporting thunderstorms during the morning; Selma at 0930 EST, and Montgomery from 1030 to 1050 EST. At 1130 the Selma observer noted a line of cumulonimbus in the sector from NE through S. The line of convective cells reported on airborne radar by Fireball No. 7 was oriented NW-SE, thus bearing out the Selma report. The surface weather observations for Selma and Montgomery from 0930 to 1130 EST are:

Montgomery (MGM)	0930	15⊙	45⊕	120⊕	15+	R -	LYR CLDS MSTLY SW
	1030	15⊙	E45⊕	5	TR-		T OVHD MOVG NE
	1050	10⊙	E45⊙	85⊕	7	R-	T ONLY ONCE BINOVC NW
	1130	11⊙	M90⊙	250⊕	15	R-	CLR W LWST PRES 108 0930
Selma (SEM)	0930	S8	W15⊕	3	TR-		T OVHD LTGIC W THRU E
	1030	2-⊙	M14⊙	30⊕	6	R--	CIG RGD
	1043	S12	2⊙	N22⊙	110⊕	7	
	1130	30⊙	M110⊙	250⊙	10		LW CB NE Thru S

In case of flight through thunderstorm areas, the best weather instrument the B-47 pilot has is his airborne radar, which is primarily for navigation and bombing. A visual check of cloud conditions, in search of the areas of the least convective activity, is usually of no value because of the extensive masking clouds around the thunderstorm cells. Radar is able to pierce the screen of masking clouds and give the location of the core of the thunderstorm. Thus airborne radar will locate the best possible path to circumnavigate the severe thunderstorm weather. The pilot of every plane equipped with radar should by all means exploit this extremely useful weather instrument

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to the fullest extent.

What's a thunderstorm really like? Both the simplified schematic thunderstorm model and the idealized diagramatic representation (Figure 4) show the downdraft and updraft areas. The violent updrafts are not necessarily in the center of the thunderstorm, but often occur around the perimeter. Thus, even the edges of a thunderstorm is dangerous. The moderate to severe turbulence reports, the line of convective cells on airborne radar, the thunderstorms reported at the surface, and the increase in temperature in flight altitude, all indicate that in this particular case the icing most likely occurred in a violent thunderstorm updraft. The extremely strong upward current lifted the drops to great height and low temperature so rapidly that there was insufficient time for freezing to take place.

The fact that the water became so cold without freezing is probably because there were not enough ice crystal nuclei to facilitate freezing. Ice crystal nuclei are those minute particles of matter required for the freezing of liquid drops suspended in the atmosphere. The crystalline structure of ice being what it is, only a relatively few materials can serve efficiently as ice crystal nuclei.

Liquid cloud droplets mixed with snow crystals have been photographed at minus 50 degrees centigrade over the Alps. Wing

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(Article by Captain Downie and Captain French of Project (BLACK SHEEP)

icing has been observed to form at approximately minus 50 degrees centigrade in a condensation trail formed by the propellers of the same aircraft. However, the time required for the droplets to move from the propellers to the leading edge of the wing (less than .01 second) was probably less than the freezing time of the droplets, or more probably, the icing was caused by the vapor condensing directly on the wing.

Why is it possible to get supercooled water in the atmosphere at minus 51 degrees centigrade OAT? Minus 51 degree centigrade (or 60 degrees below zero Fahrenheit) is much colder than the normal freezing point of water (32 degrees). In the laboratory a great deal of care is required to supercool water very far below its freezing point. Dr. Vincent Schaefer, noted scientist of cloud seeding and jet-stream cloud fame, has been unable to supercool cloud droplets below minus 39 degrees centigrade. English and French cloud physicists report that small droplets cannot be cooled below minus 41 degrees centigrade in the laboratory without ice crystals forming. Thus it is readily apparent that supercooled water at minus 51 degrees centigrade OAT is a very unusual phenomenon.

The old rule that icing is no problem at temperatures colder than 0 degrees Fahrenheit (minus 18 degrees centigrade) does not adequately cover the thunderstorm icing situation. Pilots should

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(Article by Captain Downie and Captain French of Project BLACK SHEEP)

not be taken by surprise if icing occurs at temperatures in the neighborhood of minus 50 degrees centigrade. Because of the very low temperature, more than the usual amount of heat is required for protection of aircraft using thermal anti-icing systems. Even with maximum dynamic heating the skin temperature of the B-47 aircraft did not exceed minus 27 degrees centigrade in this case.

The temperature report was correct. Within one hour of the time that the minus 54 degree centigrade clear air temperature was observed by Major Prieve, weather instruments carried aloft by balloons from the upper air observation stations in the area also measured the temperature at the same altitude. Atlanta and Pensacola reported minus 54 degree centigrade and Selin reported minus 53 degree centigrade at 36,000 feet PA (Figure 5). Thus there was very good agreement between the aircraft and meteorological temperatures. The icing occurred about halfway between Atlanta and the other two temperature reporting stations. The minus 51 degree centigrade is the lowest corroborated temperature at which icing was ever reported in naturally occurring clouds.

Two recent incidents throw additional light on the primary B-47 operational weather problem. On 13 April, 1953, 36 B-47's of the 305th Bomb Wing at MacDill were assigned Springfield, Mo., as their target for a TAC evaluation mission. Unexpectedly, severe thunderstorms were encountered enroute, and as a result some of the planes

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turned back before reaching the target area. Only a few of the aircraft reaching the target were able to bomb it because their radar sets were knocked out by alternator trouble.

On 29 April, 1953, seven B-47's were in the vicinity of MacDill when they encountered thunderstorms. One aircraft reported rime icing at minus forty-five (45) degrees centigrade in the cirrus shelf in the vicinity of the thunderstorms. Several of the pilots estimated that the tops of the thunderstorms extended to 60,000 feet.

Project Black Sheep, a weather research project at MacDill Air Force Base, was set up for the purpose of investigating high altitude meteorological flight problems. It was originally assumed that the B-47 would be able to fly 'over the top' of the clouds and weather, thus flight-level wind forecasting (the 15 degree and 10 knot forecast wind accuracy requirement) would be the most important job of the weather man. However, since Black Sheep investigations have shown that large areas of severe weather may extend to a height of 60,000 feet, it becomes apparent that the B-47 cannot always top or avoid the weather. Thus, in areas where thunderstorms are likely to occur, inflight weather is still the primary meteorological hazard to B-47 operations, and must be recognized as such by both the weather forecaster and the pilot. Thunderstorm weather can make or break the B-47 forecast, and can "snafu" the entire mission.

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(Article by Captain Downie and Captain French of project BLACK SHEEP)

The End

(Cleared by Captain Campbell and Lieutenant Colonel Earl W. Blake, Deputy Director of Operations, Hq., 6th Air Division.)

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B. A. JOHNSON
2nd Lt., USAF

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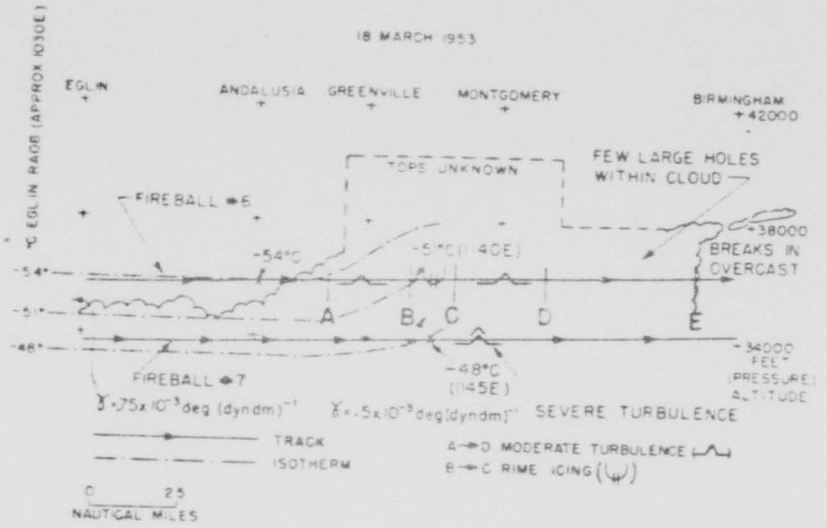

FLIGHT CROSS SECTION

FIGURE 1

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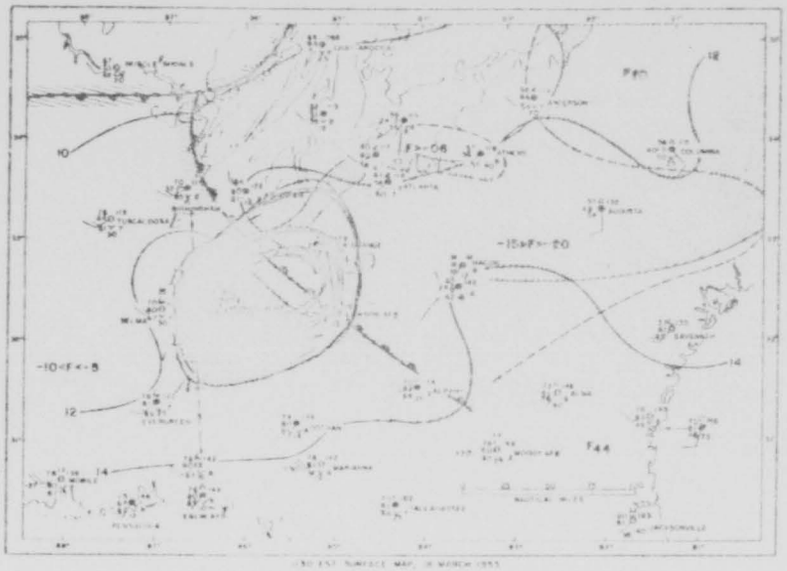

FIGURE 2

SURFACE WEATHER MAP

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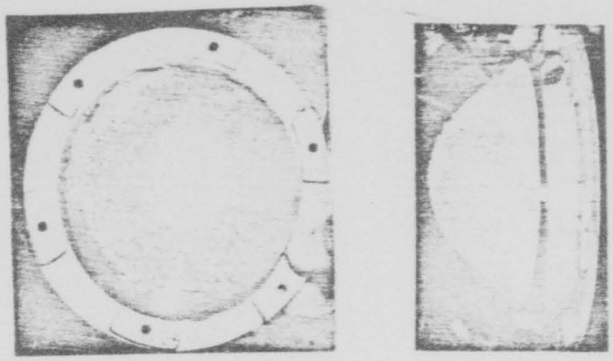

ICING ON SHIELD (WATER SEPARATOR)

ALTERNATOR INLET ICING

ALTERNATOR (ICING IN AIR INLET AT LEFT)

FIGURE 3

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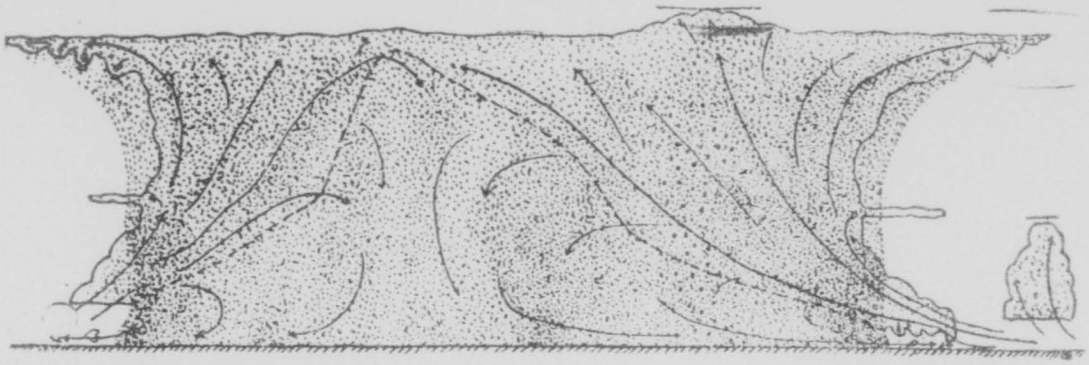
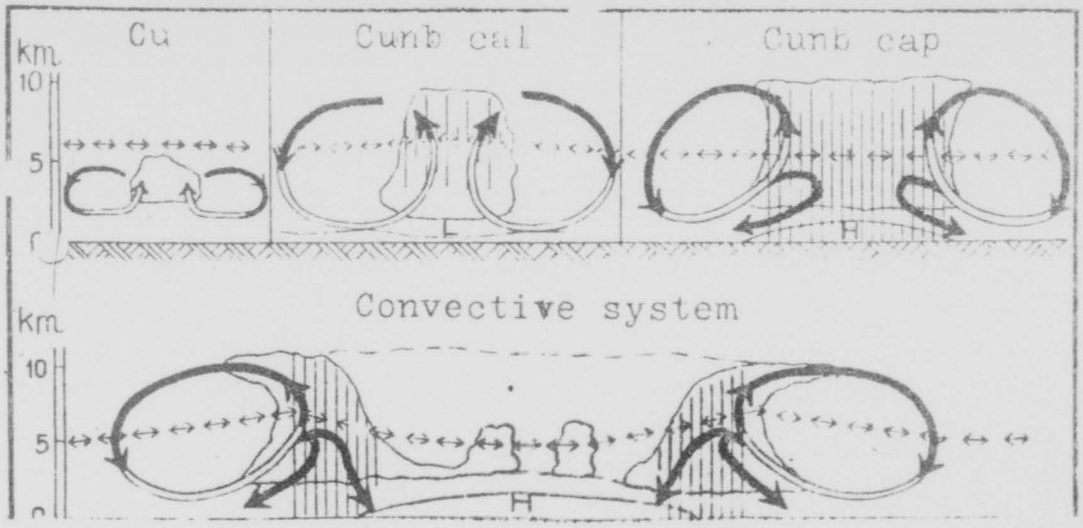


Idealized, diagrammatic, cross section of a well-developed local thunderstorm. The lines represent cloud outlines, the dots raindrops, the black spots hail-stones, and the arrows winds. The dotted line within the body of the cloud marks the boundary between ascending and descending winds and, therefore, roughly the position of the cloud base. It will be noted that winds may concentrate lines of falling raindrops in such a way as to bring more intense rainfall than is occurring by virtue of the precipitation falling from the same area at a height of a kilometer or two. The most intense rainfall is shown near the borders of the thunderstorm where there is most active condensation and release of the raindrops. With a given rate of fall from the thunderstorm or any part of it the amount of rainfall at any place passed over will increase in proportion to the decrease in the velocity of the storm. Thus, when a moderate or intense shower becomes stalled on a mountain slope a cloudburst occurs. A description with diagrams, of the details of the front of a thunderstorm was published in the Mo. WEATHER REV. June, 1919, 47: 398-400.



THUNDERSTORM MODEL

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FIGURE 4

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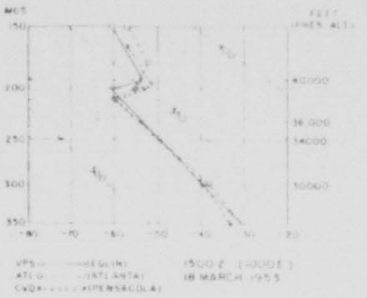

METEOROLOGICAL TEMPERATURES

FIGURE 5

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thunderstorm ICE

By CAPT. CURRIE S. DOWNIE
AND CAPT. ARTHUR S. FRENCH
Project Black Sheep
MacDill Air Force Base

NOWADAYS, the Strategic Air Command operates its bombers and fighters higher than ever before but still not high enough to outclimb "old man weather." Harmless-appearing cumulo-nimbus clouds often contain sinister hazards for the unweather-wise and unsuspecting pilot. This was evidenced by a MacDill based B-47's recent encounter with moderate-to-severe turbulence and rime icing while flying at high altitude through a thunderstorm over Alabama, resulting in a new low-temperature icing record.

Because of his B-47 icing encounter at minus 51 degrees centigrade at 36,000 feet P.A. (pressure altitude), the experience of Maj. Donald G. Prieve of MacDill's 306th Bomb Wing is considered unique. Never before had icing been reported at such an extremely low temperature. The fact that icing occurred indicates that supercooled water, rather than ice crystals, was present in the cloud. Weathermen and cloud physicists have persistently maintained that it was impossible for water droplets to exist at such low temperatures, but Major Prieve's experience proves extremely low temperature icing is possible in naturally occurring clouds.

Here is how it happened. Flying VFR at 36,000 feet P.A. with an OAT of minus 54 degrees C., the B-47 entered the tops of cirrus clouds just south of Greenville, Ala. Of this experience, Major Prieve reported: "Shortly after entering the cirrus clouds, we encountered moderate turbulence. I noticed a three-degree rise in OAT when we started to pick up rime ice. The airspeed dropped off about 15 knots as we picked up a quarter-inch layer of ice on the windshield, canopy and leading edges of the wings."

The drop in airspeed is particularly significant. With a small amount of wing icing, the stalling speed of the B-47 increases considerably, because at high speeds a slight deformation of the B-47 airfoil causes a critical increase in drag. Quoting from AWS Manual 105-39: "Ice increases drag and decreases lift. In wind tunnel experiments, it has been shown that an ice deposit of ½-inch at the leading edge of an airfoil will reduce the lift about 50 per cent, increase the drag an equal amount, and greatly increase the stalling speed. The same deposit on a B-47 would increase the stalling speed appreciably." Thus the real icing hazard to the B-47 lies in the range between a low speed stall and high speed buffeting (stall), or maximum Mach number. This range of airspeed decreases with an increase in altitude. As the amount of ice on the airframe increases, the stalling speed likewise increases until eventually it might be impossible to maintain level flight.

Another B-47 pilot, Capt. L. M. Leage, flying a few miles farther south at 34,000 feet P.A. and minus 48 degrees C. OAT in the clouds, reported moderate to severe turbulence, five minutes later, as he approached Montgomery, but he did not encounter icing. He also reported a so-called "squall line" or line of convective cells (cloud buildups) on the radar scope just south of Montgomery. Moderate turbulence was encountered by several other B-47 aircraft over the same route, about two hours earlier.

What are the danger signs to look for? A careful look at the weather chart discloses the type of weather situation which caused this hazardous condition aloft. At 1130 EST, a low-pressure area, centered over Indiana, was associated with a slow-moving frontal system. An occluded front, extending southward through Tennessee, joined with the cold front extending westward from northern Alabama through Arkansas and a very diffuse warm front extended south-eastward to the vicinity of Albany, Ga. Thus the B-47s were flying through what the weatherman verbosely calls—the warm-moist maritime tropical air mass of the warm sector.

The hourly weather reports show that both Montgomery and Selma, 30 miles west, were reporting thunderstorms during the morning;

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Selma at 0930 EST and Montgomery from 1030 to 1050 EST. At 1130, the Selma observer noted a line of cumulo-nimbus in the sector from NE through S.

In case of flight through thunderstorm areas, radar is the best weather instrument the B-47 pilot has. A visual check of cloud conditions to locate areas of the least convective activity is usually of no value because of the extensive masking clouds around the thunderstorm cells. Radar is able to pierce the screen of masking clouds and give the location of the core of the thunderstorm. Thus airborne radar will locate the best possible path to circumnavigate severe thunderstorm weather. The pilot of every plane equipped with radar should by all means exploit this extremely useful weather instrument to the fullest extent.

Violent updrafts are not necessarily in the center of the thunderstorm but often occur around the perimeter, making even the edge of a thunderstorm dangerous. The moderate-to-severe turbulence reports, the line of convective cells on airborne radar, the thunderstorms reported at the surface, and the increase in temperature at flight altitude---all indicate that in this particular case the icing most likely occurred in a violent thunderstorm updraft. The extremely strong upward current lifted the drops to great height and low temperatures so rapidly that there was insufficient time for freezing to take place.

The fact that the water became so cold without freezing is probably due to the fact that there were insufficient ice crystal nuclei to facilitate freezing.

The old rule that icing is no problem at temperatures colder than zero F. (minus 18 degrees C.) does not adequately cover the thunderstorm icing situation. Pilots should not be surprised if icing occurs at temperatures in the neighborhood of minus 50 degrees C. Because of the very low temperatures, more than the usual amount of heat is required for protection of aircraft using thermal anti-icing systems. Even with maximum dynamic heating, the skin temperature of the B-47 aircraft did not exceed minus 27 degrees C. in this case.

Other B-47s have encountered thunderstorm ice, and one aircraft reported rime icing at minus 45 degrees C. in the cirrus shelf in the vicinity of the thunderstorms. Several of the pilots estimated that the tops of the thunderstorms extended to 60,000 feet.

Project Black Sheep, a weather research project at MacDill, was established for the purpose of investigating high altitude meteorological flight problems. It was originally assumed that the B-47 would be able to fly "over the top" of the clouds and weather, thus flight-level wind forecasting (the 15-degree and 10-degree knot forecast wind accuracy requirement) would be the most important job of the weatherman. However, since Black Sheep investigations have shown that large areas of severe weather may extend to a height of 60,000 feet, it becomes apparent that the B-47 cannot always top or avoid the weather. Thus, in areas where thunderstorms are likely to occur, in-flight weather is still a primary meteorological hazard to B-47 operation and must be recognized as such by both the weather forecaster and the pilot. Thunderstorm weather can make or break the B-47 forecast, and can disrupt the entire mission.

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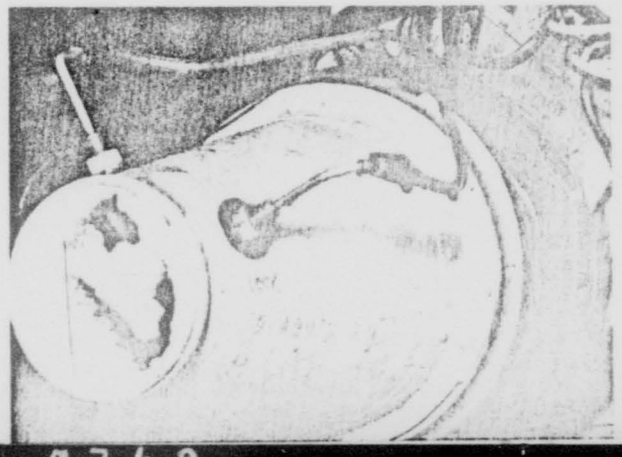

HARMLESS-APPEARING cumulo-nimbus clouds can mask sinister hazards to safe jet operation, as alternator icing in inlet demonstrates.

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B-47
OPERATIONAL ENGINEERING SECTION

MONTHLY PROGRESS REPORT

1 August through 31 August 1953

6TH AIR DIVISION

MAC DILL A.F.B., FLORIDA

SECURITY INFORMATION

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.092 1 September 1953

SUBJECT: B-47 Operational Engineering Monthly Progress Report.

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

1. The Monthly Progress Report of this Section is submitted herewith, covering the period from 1 August through 31 August 1953. This report is divided into three parts: (I) new projects initiated during the month, (II) active projects being conducted by the Operational Engineering Section, and (III) B-47 Operational Engineering Section projects completed, awaiting action by your Headquarters.

2. New projects initiated during the month by this Section:

B-47 COMPASS SWINGING PROCEDURES: (EE-59)

The failure of turn-table on the compass rose at MacDill Air Force Base and the lack of a turn-table at Fairford RAF Station made it impossible to swing the compass by the turn-table method as required by paragraph 4-1273, Section IV, T.O. AN 01-20ENB-2. To eliminate this problem, a new procedure for swinging the compass was devised. This method, known as the tow-circle method, has been proven superior to other methods in use at this time. Therefore, an auxiliary project was set up under EE-59 and Specific Item Report No. 105A, is currently being published. The purpose of this report is to recommend that the tow-circle method be adopted by all B-47 activities and to outline the facilities and procedures required to utilize it. In addition, this report covers procedures used in swinging the compass which are not adequately covered in pertinent technical publications.

3. Old projects completed during the month are:

WESTINGHOUSE 20 KVA ALTERNATORS, B-47 AIRCRAFT (EE-46A).

This project was established to: (1) determine if the latest model (-2) alternators would operate properly when the aircraft was flown through rain, and (2) to evaluate the field flashing circuits which were to be installed concurrently on all aircraft of the 306th Bomb Wing. New A35A 9107-2 Westinghouse alternators were installed on all aircraft of the 306th Bomb Wing prior to their departure for the U.K. Several failures of these alternators occurred after rain had been encountered. Therefore, they are

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not considered an effective fix for this deficiency. The field flashing circuits have not been installed in these aircraft, because parts were not available prior to the departure of the Wing nor were they available at the TDY station. As a result, this circuit was not evaluated in conjunction with subject alternators, but will be evaluated and reported upon in conjunction with project EE-46 (See Part II). This project (EE-46) is therefore considered complete and no further action will be taken. WADC is procuring the Westinghouse window bracket alternator to correct the deficiency noted in item (1) above. Therefore, no action by that agency is required to complete this project.

THOMAS P. SAVAGE
FOR Major, USAF
Chief, O.E.S.

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PART II

of

B-47 OPERATIONAL ENGINEERING SECTION

MONTHLY PROGRESS REPORT

ACTIVE PROJECTS BEING CONDUCTED BY THE OPERATIONAL ENGINEERING SECTION

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PROJECT NO. AE-11: B-47 Weight Reduction Program

PROJECT ENGINEER: Captain John T. Ball

DATE OF ORIGIN: 13 May 1952

PURPOSE: To decrease the basic weight of the aircraft as a means for extending its long range capability.

SUMMARY AS OF 31 JULY 1953: As a result of two weight reduction conferences, the removal of most components installed in the aircraft has been reviewed for possible weight saving items by USAF, AMC, WADC, SAC and Boeing Airplane Company. Approved weight reduction items have been integrated into production and retrofit programs. The items below have been listed as those which the combat commander may be permitted to remove for combat operations. Technical Orders are to be written authorizing the field stripping of these items:

1.	Partial stripping of A.I. system	-95#
2.	Remove entrance ladder	-35#
3.	Remove engine inlet screens	-246#
4.	Strip IFR Systems	-62#
5.	Remove dry ice containers	-145#
6.	Delete SPR system	-113#
7.	Delete bomb bay oxygen	- 9#
8.	Remove approach chute and container	-57#
9.	Delete visual bombsight & associated equipment	-376#
10.	Delete ARN-6 Group "B" parts	-45#
11.	Delete ARN-12 marker beacon Group "B" parts	-9#
	TOTAL	-1192

31 AUGUST 1953: No additional information.

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PROJECT NO. AE-22: Flight Analyzer Installation, B-47 Aircraft

PROJECT ENGINEER: Capt John T. Ball

DATE OF ORIGIN: 30 April 1953

PURPOSE: To record flight conditions of airspeed, altitude, and vertical acceleration for study by the WADC Structures Analysis Branch.

SUMMARY AS OF 30 APRIL 1953: In compliance with a written directive from the Commanding General, Strategic Air Command, contained in a letter, DM4DS1C 452.2, dated 2 April 1953, Subject: Flight Analyzer Installations on F-84G and B-47B series aircraft, this Section has initiated a project to monitor flight analyzers installed in five (5) B-47B aircraft assigned to the 305th Bomb Wing, MacDill AFB. This Section will monitor the operation of the analyzers and act as a collection agency to forward the recorded data to Headquarters WADC. AMC is to supply the logistical support for the project. This project will be initially on an indefinite time basis pending clarification of a termination date by Headquarters WADC.

31 MAY 1953: Flight analyzers have been installed in five (5) B-47 aircraft. The monitoring program has been established and is in operation to forward the recorded data to your Headquarters. A project goal of 2000 recorded flight hours has been jointly established. This was reduced to 1600 hours in view of the 400 hours recorded for NACA under OES Project AE-12, which will be made available to WADC. To date 53:00 hours have been recorded during this project.

30 JUNE 1953: Some difficulty has been experienced because of an occasional malfunction of the recording instruments and in maintaining all flight analyzers since maintenance specialists are lacking in the knowledge of the instrument's installation and operation. At present, all instruments are functioning properly and a total of 110:00 hours have been recorded.

31 JULY 1953: Occasional delays are still occurring due to the aforementioned reasons; however, the time rate has increased and a total of 200 hours have been recorded to date. At this point the project is 12% complete.

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PROJECT NO. AE-22: Flight Analyzer Installation, B-47 Aircraft.

31 AUGUST 1953: The accumulation of time was retarded slightly this month due to aircraft with analyzers installed standing down prior to going TDY overseas. One analyzer, having inadvertantly been left installed in a transferred aircraft, has been recovered and will be carried overseas for installation in another aircraft. The data collected overseas will produce information under different climatic conditions and should increase the scope of the results. A total of 291 hours have been collected to date.

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PROJECT NO. AE-23: B-47 Instrument Calibration Requirements

PROJECT ENGINEER: Captain John Ball

DATE OF ORIGIN: May 1953

PURPOSE: To determine the extent of instrument calibration required for effective operation of B-47 aircraft.

SUMMARY AS OF 31 MAY 1953: In compliance with a written directive from the Commanding General, Strategic Air Command, contained in a joint messageform file number DM4DS8U68345, dated 15 April 1953, this Section has initiated a project to determine the extent of instrument calibration required for effective operation of B-47 aircraft. An initial study to determine the most pertinent instruments has been completed. A Specific Item Report will be submitted covering the present instrument limitations and requirements and possible master calibration equipment necessary but not presently authorized.

30 JUNE 1953: A study of the limitations and calibration requirements of the present instrument installations is being continued.

31 JULY 1953: The study of calibration requirements and limitations of the present instruments installed in B-47 aircraft has been concluded and the results of these studies are being evaluated and compiled for the Specific Item Report.

31 AUGUST 1953: With the return of the 306th Bomb Wing from their overseas tour and with the receipt of a Boeing document on Airspeed Calibration, additional information will be obtained and evaluated along with previous findings. This will complete the research and evaluation phase of this project.

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PROJECT NO. EE-10: Inverter Malfunctions.

PROJECT ENGINEER: S/Sgt Michael Huber

DATE OF ORIGIN: 19 September 1952

PURPOSE: To evaluate, on a competitive basis, nine (9) AN-3516 inverters from four different manufacturers.

SUMMARY AS OF 31 JULY 1953: This project was established as a result of SIR No. 39, dated 25 April 1952, recommending competitive evaluation of inverters manufactured by Eicor, Eclipse-Pioneer, Royal, and Jack & Heintz. WADC concurred with this recommendation, and this Section was to receive nine (9) typical AN-3516, 50,000 foot inverters from each of the four manufacturers. Inverters were received from Eicor and Eclipse-Pioneer, and evaluation of these inverters was initiated in November 1952.

The test on the Eicor inverters was closed with the concurrence of WADC in May 1953. An SIR is being published concerning the Eicor inverter portion of the test.

Eclipse-Pioneer inverters meet the dimensional requirements of specification AN-3516; however, they will not fit in the spare position due to the location of the input leads. Modified ventilating sleeves are required in the secondary position. The eight (8) Eclipse-Pioneer inverters still undergoing tests have accumulated an average total operating time of 474:40 hours and an average air operating time of 245:50 hours. One inverter was removed from service at 430:00 total operating hours and 242:00 air operating hours due to burned up A.C. brushes and slip rings. These nine test inverters have accumulated a total of fifteen (15) malfunctions, and fifteen (15) minor adjustments of voltage or frequency. Four (4) malfunctions were caused by burned up AC brushes and slip rings. Three (3) of these occurred at an average of approximately 26 operating hours. The inverters were repaired and new type brushes were installed in all inverters. One (1) malfunction was caused by failure of the D.C. input relay. Two (2) malfunctions were caused by unstable frequency or voltage. Both inverters were repaired and returned to service. Eight (8) of the malfunctions were of unexplained origin, as these inverters failed in the aircraft, but operated properly on the bench and upon reinstallation in the aircraft.

31 AUGUST 1953: Information concerning the operating time of the Eclipse-Pioneer inverters for the past month is not available at this time. SIR #108, dated 19 August 1953, subject: Service Test of Eicor Rotary Inverter, Type AN-3516, in B-47 Aircraft has been forwarded to your Headquarters.

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PROJECT NO. BE-16: Fuel Boost Pump Failure

PROJECT ENGINEER: Major W. E. Frazier

DATE OF ORIGIN: 18 March 1952

PURPOSE: To monitor failures of modified fuel boost pumps at this station.

SUMMARY AS OF 30 JUNE 1953: Because of an excessive number of failures due to boost pump seal leakage on earlier models, this project was initiated on the above date, and SIR #41, dated 6 May 1952 was submitted. At this time it was decided to continue monitoring the modified units as received and, as a result, one hundred and eighty (180) B-18B P/N TF 52400-6 and sixty-eight (68) B5C pumps P/N 31400-25 were taken under surveillance by OES.

As of this date there have been four (4) failures of the B18B units. Average operating time for the remaining one hundred and seventy six (176) pumps is 203:20 hours.

There have been four (4) failures of the B5C (Thompson) pumps. Average time on the remaining units since installation is 268:20 hours.

31 JULY 1953: To date five (5) B-18B pumps have failed; three (3) failed prior to 25 June 1953, and two (2) during the period 25 June to 25 July 1953.

Average operating time for the remaining one hundred and seventy-five pumps is 233:07 hours.

Delete one (1) B-18B failure from record as of 30 June 53 due to erroneous report, Total remaining units as of that date were one hundred and seventy-seven (177).

There have been no failures of the B5C (Thompson) pumps during the period 25 June thru 25 July 1953.

Average operating time for the remaining units is 295:06 hours.

31 AUGUST 1953: Information on the numbers of failures during August 1953 is not available at this time but will be furnished in the next Monthly Progress Report.

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PROJECT NO. EE-42: B-4 Armament System Deficiencies

PROJECT ENGINEER: Captain James T. Crowder

DATE OF ORIGIN: 3 March 1953

PURPOSE: To isolate and investigate deficiencies in the B-4 armament system.

SUMMARY AS OF 31 MARCH 1953: Recurring malfunctions of the B-4 armament system during the operational suitability testing of B-47B aircraft S/N 51-2206 that was reported in SIR #75, dated 9 January 1953 led to the establishment of a project to isolate and investigate the deficiencies in the system. Deficiencies noted during the operational suitability test as as follows:

1. Lack of a method to provide dehumidified air for the gun charger.

2. Links jamming in ejection chutes causing stoppage of guns.

3. Ammunition chute breakage occurring during certain movements of the turret.

On 6 March 1953, at the request of the WADC Armament Laboratory, a representative of the Walter Kidde Company, discussed at this station the problem of dehumidifying the compressed air. He left the following standard Air Force items for trial installation in one aircraft: A mechanical separator, a chemical drying cartridge and a 100 cubic inch bottle. These items have been installed in one B-47B aircraft of the 306th Bomb Wing and one gunnery flight has been made to date.

Emerson Bulletin ECO 129 024-D25, dated 16 July 1952 directed the replacement and a repositioning of the channel guard assembly with a similiar but larger assembly which would eliminate ammunition chute interference during turret movement. However, failures of ammunition chutes at this and other chute locations have continued since this bulletin has been accomplished.

Barrel life is averaging approximately 2,000 rounds when the firing schedule is a three (3) second firing burst and forty-five (45) second cooling period. Six (6) barrels have ruptured with subsequent damage to the radome from projectiles.

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PROJECT NO. EE-42: B-4 Armament System Deficiencies, (Continued)

30 APRIL 1953: The B-47 aircraft in which the mechanical separator, mechanical drying cartridge and 100 cubic inch storage bottle were installed has not flown another gunnery mission this month due to fuel cell leakage and inspection. It is believed that malfunctions in the automatic gun charger, type B-1, will be reduced by supplying a constant pressure of dehumidified air to the gun charger from the pressure regulated, dehumidified, larger capacity air storage system. Further evaluation missions will be flown. If these missions prove successful, a SIR will be prepared which will recommend that the modification to provide dehumidified, larger capacity, constant pressure regulated air to the B-1 gun charger in the B-4 armament be incorporated in all B-47 aircraft equipped with the B-4 armament system.

31 MAY 1953: The test aircraft has been grounded during May because of fuel cell leakage, therefore, no further progress has been made on this evaluation.

30 JUNE 1953: To date no charger malfunctions of gun chargers have occurred on aircraft number 51-2296, that has the larger capacity, dehumidified and pressure regulated system installed.

Informal information has been received from the Armament Laboratory, WADC, that an experimental contract has been let to the Emerson Electric Company for development of a pressure regulated, larger capacity and dehumidified air system for the B-4 turret.

31 JULY 1953: The barrel extension and bolt assembly of the M-3 machine gun is suspected of becoming elongated due to the high rate of fire. A means of checking the barrel extension and bolt assembly dimensions is being considered. WADC has been requested to furnish these dimensions. The aircraft which has the increased capacity air system installed has made several flights with no malfunctions of the gun charger.

31 AUGUST 1953: Elongation of the barrel extension and bolt assembly was suspected of causing unexplained malfunctions of the guns. The actual dimensions of these assemblies were compared with design specifications provided by WADC, and were found to be within limits. An SIR is being prepared on the increased capacity air system for the gun chargers.

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PROJECT NO. EE-43: Tracking Range of K-4 Bombing Navigation System in B-47 Aircraft.

PROJECT ENGINEER: Capt Enoch T. Naversen

DATE OF ORIGIN: 3 February 1953

PURPOSE: Classified Information

SUMMARY AS OF 31 MARCH 1953: SIR #85, classified confidential, dated 3 February 1953, was forwarded through command channels to Hq WADC on 6 February 1953. The action copy has been returned to the OES as Headquarters SAC has established a tracking range requirement with Hq USAF. Testing will continue.

30 APRIL 1953: No progress has been made on this project during the month of April. Informal information has been received from the Armament Laboratory, WADC, that the modified computer now being tested by that agency will be available on approximately 1 May 1953 for OES testing. In addition, a second computer was shipped to the Armament Lab from Sperry Gyroscope Company on 13 April 1953, and will be made available to the OES as soon as it is received.

31 MAY 1953: The modified computers have been received and are presently being installed in the test vehicles, B-47 aircraft numbers 51-2332 and 51-2338. The installation of these computers was delayed because of malfunctions which were found during the pre-installation bench checks.

30 JUNE 1953: The installations have been completed in B-47 aircraft 51-2332 and 51-2342. Four (4) satisfactory and three (3) partially successful missions have been flown. The test items have functioned properly on all missions but due to a malfunction of other K-System components only partial evaluation was obtained. It is anticipated that the required number of missions will be completed by 31 July.

31 JULY 1953: This project is 70% completed. Five (5) satisfactory missions were completed during July. The remaining missions should be completed by 20 August 1953.

31 AUGUST 1953: This project was completed 29 Aug 53. A Specific Item Report (CONFIDENTIAL) is being written outlining the results of the tests.

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PROJECT NO. EE-44: Remote Radar Indicator ID-218 in Copilot's Position

PROJECT ENGINEER: Capt Enoch T. Naversen

DATE OF ORIGIN: 5 February 1953

PURPOSE: To investigate the feasibility and advantages of installing an auxiliary radar scope in the copilot's position.

SUMMARY AS OF 31 MARCH 1953: A prototype installation of an auxiliary indicator has been completed. Initial test flights indicate that the installation is satisfactory spacewise. A test program has been outlined for the evaluation by crews of copilot station keeping, target assist, and navigation assist by several crews.

30 APRIL 1953: One crew has flown a number of RBS missions on which the co-pilot assisted the observer in target identification. The co-pilot assisted materially in reducing the bcccs on some bomb runs. The test program is being continued with the test crew and other crews evaluating all aspects of the auxiliary indicator.

30 MAY 1953: The evaluation of the prototype installation of the auxiliary indicator has been completed and a report is now being prepared. It has been determined that this indicator enables the co-pilot to assist the observer with target identification and also to maintain his own proficiency in radar navigation. The feasibility of station keeping was not investigated. This investigation will be continued with three (3) additional installations in aircraft of the 306th Bomb Wing. These installations will have separate synchronizers for the auxiliary scope, permitting the co-pilot to operate this scope independently from the main scope when necessary. It is expected that one installation will be completed by 1 July 1953.

30 JUNE 1953: No additional information.

31 JULY 1953: Specific Item Report No. 107 (Confidential), dated 31 July 1953, is being published and will be forwarded to the B-47 Project Office. This report covers the installation and operational aspects of the auxiliary indicator at co-pilot's position. The installation which incorporates a separate synchronizer will be installed when the cabling is complete.

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PROJECT NO. EE-44: Remote Radar Indicator ID-218 in Co-Pilot's Position (CONT'D)

31 AUGUST 1953: SIR #107, dated 31 July 1953, classified confidential, subject as above, has been forwarded to your Headquarters. The installation of the auxiliary indicator with a separate synchronizer was not completed prior to return of the 306th Bomb Wing to MacDill.

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PROJECT NO. EE-46: Westinghouse 20 KVA Alternator Malfunctions.

PROJECT ENGINEER: S/Sgt M. W. Huber

DATE OF ORIGIN: 25 February 1953

PURPOSE: To decrease the number of alternator malfunctions.

SUMMARY AS OF 31 AUGUST 1953: The following comments are applicable to six aircraft which had test configurations on the alternators and which were monitored by this Section:

Window Bracket Alternators: The window bracket alternator has not failed on any occasion due to passing through rain or clouds. A total of 26 flights has been made and on 16 of these, clouds and/or rain were encountered. On these 16 flights, two failures occurred on the alternators equipped with the Boeing water separator which were on the same aircraft. One failure of the window bracket alternator occurred when the pilot retarded the throttles enough to allow the engine RPM to drop below 52%, but this is not considered a malfunction.

Boeing Water Separator: Alternators equipped with the Boeing water separator have made 44 flights and failed on six out of 20 flights through rain and/or clouds. This separator has been installed in all aircraft of the 305th Bomb Wing. The present status of the installation of this item on aircraft of the 306th Bomb Wing is not known, however, on 10 August 1953, the separators had been installed on 37 aircraft.

Bearings: Fourteen (14) sets of temperature stabilized bearings have been installed. Because it is impractical to monitor and control the tests of these items, the alternators have been tagged to require entries of aircraft time on installation and removal, and instructing the depot activity which overhauls the alternator to return the bearings to Westinghouse.

Field Flashing Circuits: All aircraft of the 305th Bomb Wing have the field flashing circuit incorporated in the alternator control circuits. There have been additional reports of instances where the alternator output could not be restored by flashing the field. In two cases, attempts to flash the field were unsuccessful for more than two hours after failure and output was not restored until a descent to 15-20,000 feet was made. This problem is being investigated to determine if it is caused by the design of the flashing circuit or if it is a result of improper operating procedures.

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PROJECT NO. EE-47: Service Test of Improved Speed Governor for Jack & Heintz, AN-3516 Inverters.

PROJECT ENGINEER: S/Sgt M. W. Huber

DATE OF ORIGIN: 26 February 1953

PURPOSE: To evaluate a new speed governor for the Jack & Heintz Type AN-3516 Inverter.

SUMMARY AS OF 31 JULY 1953: Unofficial TWX dated 20 January 1953 from B-47 Project Office, subject: Flight Test Evaluation of Inverters, requested this Section to conduct service tests of six (6) Jack & Heintz AN-3516 inverters equipped with improved speed governors. These six inverters have been installed in 306th Bomb Wing aircraft and are undergoing tests. Three (3) Jack & Heintz inverters with the old type of speed governors are being used as control items. The frequency and frequency stability of all nine (9) inverters will be checked every twenty-five (25) flying hours, since these characteristics are functions of speed governor operation. A SIR will be submitted when the inverters have accumulated sufficient operating time to establish conclusive indications of speed governor operation.

The six (6) test inverters have accumulated an average total operating time of 197:00 hours and an average air operating time of 91:11 hours. Frequency adjustments have been necessary on three of the test items, at an average total operating time of approximately 140:00 hours. No adjustments have been required on the control items.

31 AUGUST 1953: No information regarding the operating time of these inverters is available at this time. Information has been received that this speed governor must be adjusted more frequently than the old type of governor.

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PROJECT NO. EE-48: Failure of IN23B Crystals in RT-124/APS-23.

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: 2 March 1953

PURPOSE: To investigate excessive IN-23B crystal failures which have occurred at this station in the past two months.

SUMMARY AS OF 31 JULY 1953: This project was initiated because of the excessive rate of failures of the IN23B crystals during project "Sky-Try". The effects of the following items on the crystals in the RT-124/APS-23 are being monitored: (1) faulty or abnormally short life TR tubes, (2) vibration due to lack of shock mounts on the RT-124, (3) proximity of other operating radar sets on flight line, and (4) effect of normal leakage past TR tube during long (5 micro-second) pulse operation.

Another aspect was revealed when local Western Electric Representatives advised that future systems were to have the 5 micro-second pulse length reduced to 3.75 micro-seconds to reduce failure of the crystal. OES felt that this would adversely affect Beacon operation, as the U. S. Coast Guard Depot, which maintains the Radar beacon at Egmont Key, indicated that their instructions were to adjust the beacon to respond to pulse from 2 to 5 micro-seconds long. The Armament Lab was advised of this fact and no further action can be taken on this matter by the OES, as inter-service coordination is required to assure that beacon stations respond to pulses of the correct length.

31 AUGUST 1953: WECO reported that although the AS-361 drops when the equipment is off, enough power is reflected from the ground to burn out the crystals if the antenna is pointed toward aircraft parked nearby with their radars on. Therefore, Mr. Parlee of WECO suggested that the crew members and maintenance personnel of the 306th Bomb Wing stop the antenna facing aft before every turn-off. This is being done and the OES will monitor both the compliance with this new SOP and the IN23B replacement rate for appreciable change.

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PROJECT NO. EE-52: Emergency K-System Bombing Computer

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: February 1953

PURPOSE: To determine the feasibility of utilizing an emergency bombing computer in the B-47 aircraft when a failure of the computing section of the K-System exists.

SUMMARY AS OF 31 MARCH 1953: At the request of Headquarters, Second Air Force, the OES will evaluate an emergency bombing computer. The purpose of this computer is to provide an emergency radar bombing capability when the A-1 computer fails. This computer operates independently of the A-1 computer, and, if it proves successful, will effectively increase the reliability of the system.

30 APRIL 1953: Construction of the emergency computer is approximately 65% completed, but has been delayed because of higher priority projects. It is estimated that the construction phase of this project will be completed by 31 May 1953, at which time the familiarization and testing phases will be initiated.

31 MAY 1953: No progress during this month because of higher priority projects within the 306th Bomb Wing.

30 JUNE 1953: It has been determined that the auxiliary indicator, which has a seperate synchronizer, incorporates the same features as the emergency bombing computer i.e., variable range mark and sweep and individual azimuth control. Since construction of this unit was given a higher priority by the Commanding Officer of the 306th Bomb Wing, it was decided that the feasibility of the emergency computer would be based on the results of the Auxiliary Indicator tests. The auxiliary indicator is approximately 85% complete and should be ready for flight test during the month of July.

31 JULY 1953: It is estimated that the first auxiliary indicator will be completed and installed by 20 August 1953 (see Project EE-44, Part II). When this is accomplished, tests will be made to determine if this equipment can be: (a) calibrated with sufficient accuracy to be used as an emergency bombing computer, and (b) if it is feasible for the co-pilot to utilize this equipment to drop bombs when the normal bombing equipment has failed. Continuation of the emergency computer test project will be predicated upon the results of these tests.

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PROJECT NO. EE-52: Emergency K-System Bombing Computer. (CONT'D)

31 AUGUST 1953: No progress has been made during the past month. The 306th A&E Squadron has been unable to supply any assistance toward the completion of this project since the squadron has only sixteen 32171E's assigned (half strength) and a large back log of shop work.

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PROJECT NO. EE-53: K-System Dual Offset Unit

PROJECT ENGINEER: Capt E. T. Navorsen

DATE OF ORIGIN: April 1953

PURPOSE: To evaluate two prototype dual offset units.

SUMMARY AS OF 30 APRIL 1953: Headquarters SAC has requested that two prototype dual offset units be installed and evaluated for operational suitability in B-47 aircraft. The purpose of the dual offset unit is to increase the offset bombing capability of the K-System by permitting the radar operator to use either of two offset aiming points during the bomb run. Testing will be initiated upon completion of the installation.

31 MAY 1953: Installation has been completed in one 305th Bomb Wing B-47 aircraft. No flight testing has been completed in this aircraft due to the malfunctioning of the APS-23 radar on test flights and the installation of an extended tracking computer in the same aircraft. A second installation has been completed in a 306th Bomb Wing B-47 aircraft. A check out flight test has been completed satisfactorily.

30 JUNE 1953: Two (2) satisfactory test missions have been completed using the dual offset unit in a 305th Bomb Wing aircraft. The number of test flights accomplished in the 306th aircraft is not known. K-System operators are favorably inclined to having a second offset aiming point. One deficiency has been noted by the test observers and other observers. The dials are especially difficult to read and set on the ballistic unit and dual offset unit. A counter-type dial has been suggested for easier reading.

31 JULY 1953: No formal reports have been received from the 306th Bomb Wing Test Officer in the U.K. Informal reports indicate that the unit is considered advantageous in that three aiming points are available to better isolate the target to be bombed. In general, this confirms the conclusions of the operators in the 305th Bomb Wing.

31 AUGUST 1953: This project has been completed and an SIR is being prepared recommending: (1) that this feature be incorporated in future systems, (2) that counter type dial indicators be used, and (3) that dials and controls for each offset point be positioned so that the operator will not be able to insert the offset data improperly. In general, all testing officers have indicated that the dual offset unit makes it easier to isolate and bomb complex radar targets.

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PROJECT NO. EE-54: Evaluation of New Termal Delay Relay, A-1 Power Supply, In Conjunction With Fast Blow Fuses, K-System

PROJECT ENGINEER: Capt J. A. Balega

DATE OF ORIGIN: May 1953

PURPOSE: To evaluate the new type thermal delay relays, K-301, located in the A-1 power supplies of the K-System.

SUMMARY AS OF 31 MAY 1953: Alternator malfunctions in B-47 aircraft have frequently caused failures of the thermal delay relay, K-301, located in each of the two A-1 power supplies of the K-System. This has resulted in air aborts. The relay manufacturer has produced a new type relay wherein the gage of the wire which has been burning out consistently has been enlarged from 16 mils to 25 mils. Four of these new type relays have been procured by OES and installed in aircraft of the 305th Bomb Wing in order to evaluate their reliability. Simultaneously, the use of 8 amp fast blow fuses in place of the 8 amp slow blow fuses for F-8806 and F-8809 is being monitored to determine the practicability of using a combination of a fast blow fuse and an old type relay as an interim fix until the new type relays are available.

30 JUNE 1953: To date a total of forty (40) flights have been accomplished with aircraft containing the new type thermal delay relays. All but two of these flights have been trouble free in respect to this particular malfunction. On one flight F-8609, the fuse which protects the thermal delay relay, burned out. On this particular aircraft an 8 amp slow blow fuse and a new type relay were installed. The fuse burned out before the new type relay did. On the other flight which had trouble, the thermal delay relay burned out. This aircraft contained a combination of an 8 amp slow blow fuse and an old type relay. These results, though meager, substantiate the fact that the old type relay will burn out before the 8 amp slow blow fuse, and said fuse will burn out before the new type relay. One hundred (100) new type thermal delay relays have been procured for the aircraft in the 305th Bomb Wing. These particular relays have the guage of the wire in question increased from 16 mils to 20 mils. All A-1 Power Supplies in the wing will be equipped with these new type relays. Upon completion of this change, action by OES will be concluded and an SIR will be forwarded.

31 JULY 1953: All A-1 power supplies in the 305th Bomb Wing have been equipped with the new type thermal delay relay, K-301, with the 20 mil wire. Of ten (10) flights on which malfunctions have occurred, results are as follows: On two (2) flights the relay blew and the fuse did not, on three (3) flights the fuse blew and the relay did not, and on five (5) flights both the relay and the fuse blew. All fuses were the slow-blow type. This indicates that the new type relay alone is not the final fix for this malfunction, but that proper fusing also is required. Attempts

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PROJECT NO. EE-54: Evaluation of New Termal Delay Relay, A-1 Power Supply, In Conjunction with Fast Blow Fuses, K-System (CONT'D)

have been made to obtain appropriate fast blow fuses without success. The assistance of WADC has been solicited in obtaining these fuses. If this type fuse can be acquired, an evaluation of its use with the new type relay will be made.

31 AUGUST 1953: WADC has informed the OES that 8 amp fast blow fuses have been ordered and will be forwarded upon receipt. An informal recommendation has been made to A.C. Spark Plug Field Engineers that their home office conduct a study of surge voltages and transients in the circuits related to K-301 to better determine the proper fusing of subject relay. A study of various types of 5 amp slow blow fuses is being conducted to determine the feasibility of their use in subject equipment to reduce failures caused by voltage fluctuation of the alternators.

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PROJECT NO. EE-55: Radome Failures, K-System

PROJECT ENGINEER: Captain J. B. Balega

DATE OF ORIGIN: May 1953

PURPOSE: To determine whether an unreliable radome can be restored to usable condition by drying it out with heat lamps, and to determine whether a reliable radome can be coated with a sealing agent to prevent contamination.

SUMMARY AS OF 31 MAY 1953: Poor APS-23 radar definition during high altitude flights of B-47 aircraft has become apparent. Investigation revealed that radomes are becoming contaminated, because of moisture or hydraulic fluid saturating the inside of the radome or because of damage to the innerliner. Requirements for replacement radomes exceed the supply availability, therefore, this project was initiated to determine the feasibility of restoring contaminated radomes to a usable condition by heat application. Simultaneously, sealing agents are being studied to determine if they can be used on the inner surface of the radomes to seal them and prevent this deterioration.

30 JUNE 1953: A contaminated radome was procured for testing purposes and subjected to heat from banks of infra red lamps. Capacitance measurements of the radome were taken periodically as the radome was being dried out, and curves of capacitance vesus drying time were constructed. After 540 hours of dgying, the radome was judged to be serviceable as far as capacitance measurements were concerned. Whether or not permanent physical damage had been incurred, resulting in increased reflection characteristics of the radome, could not be determined at this time. The radome then was placed on an aircraft, and flight tests are being made to evaluate radar presentation and definition. On the first test flight, the range presentation and definition were satisfactory at an altitude of 42,000 feet, indicating that dehydrating the domes has favorable possibilities.

WADC indicated that the Goodyear Erosion Resistant Coating Systems 23-56 and 23-56S should be tested. At present, this sealant is being applied to a radome which is known to be good. On completion, the radome will be reinstalled on an aircraft and flight tests will be made.

31 JULY 1953: The dehydrated radome has been flown during two flights, both of which were successful. Engineering difficulties have been encountered with the aircraft, on which the coated radome was installed, keeping it grounded most of this period. The OES and the 305th Bomb Wing coated the radomes on two additional aircraft with the Goodyear Erosion Resistant Coating System 23-56 which utilizes neoprene. Four flights have been made with these neoprene coated radomes, but radar malfunctions have prevented

PROJECT NO. EE-55: Radome Failures, K-System (CONT'D)

an accurate evaluation of this coating. Further flight testing will continue until a complete evaluation can be obtained. SIR #104, dated 23 July 1953, subject: Determination of AN/APS-23 Radome Transmission Characteristics by Use of the Capacitance Checking Method" has been published; this report deals with the test equipment required to determine deterioration of radomes.

31 AUGUST 1953: Four additional flights have been accomplished on the dehydrated radome. With the exception of minor APS/23 malfunctions, all results were quite satisfactory and provided further proof of the feasibility of reclaiming radomes by drying them out with heat. Capacitance measurements on this radome indicate that no contamination has occurred. Four additional flights were accomplished on neoprene coated radomes, with three flights on one radome providing satisfactory results, and the remaining flight on the second radome providing relatively unsatisfactory results. This second radome is developing an area just forward of the drain hole which has capacitance readings in excess of the allowable standard, thus showing that some contamination has occurred even though the radome is coated with neoprene.

WADC reports that after 50 simulated flights to operating altitudes in an altitude chamber, neoprene coated radomes show no deterioration. WADC also has made simulated flights on two partially contaminated but usable radomes which were uncoated and both radomes were completely unusable after 7 flights. Their results indicate that radomes "breathe" during ascent and descent, and that this "breathing" is a contributing factor in the deterioration of uncoated radomes.

The radome manufacturer, Zenith Plastic Company, is developing a new production process to seal both the interior as well as the exterior surfaces of the radomes. Until these items become available, the B-47 Project Office is requiring that Zenith coat all radomes with neoprene prior to delivery.

This Section has attempted to remove moisture from various contaminated radomes with the aid of a suction pump, but these attempts met with no success.

AMC is now preparing a T.O. to authorize and direct the coating of all radomes. Because of the possibility of the 2-4% attenuation caused by the neoprene coating causing unforeseen problems, the OES has requested that Hq SAC obtain authority for 20 domes to be coated and a more comprehensive service test be made by the OES. In addition, it was suggested that the publication of the T.O. be postponed until these service tests are completed.

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PROJECT NO. TE-56: Evaluation of O-23 Camera

PROJECT OFFICER: Captain E. T. Naversen

DATE OF ORIGIN: May 1953

PURPOSE: To evaluate the capability of the O-23 Camera.

SUMMARY AS OF 31 MAY 1953: Headquarters Strategic Air Command has requested the OTS to evaluate the O-23 camera installation in B-47 aircraft for reliability and resolution and to determine adequate operating procedures. Initial tests have been conducted on O-23 cameras in aircraft within the 306th Bomb Wing, but were discontinued because of the impending transfer of this organization. Currently, O-23 cameras are being installed in all B-47 aircraft at MacDill AFB. All future tests will be conducted with one squadron in the 305th Bomb Wing.

30 JUNE 1953: Twelve (12) O-23 camera installations have been completed in the 305th Bomb Wing aircraft. Three (3) test flights have been accomplished using the camera on simulated and actual bomb runs. Only RAI pictures have been obtained. Undercast conditions precluded use of the optics. The film footage is being analized.

31 JULY 1953: Panatomic-X film was used on two test flights. The optical pictures were of better quality than those made with super-XX film but are not considered acceptable. The RAI pictures were too thin and lacking in contrast. Plus-X film will be tested when available. Super-XX film sill normally give fair to good RAI pictures. The optical pictures will be over exposed with this film even if the fastest shutter speed (1/200th of a second) is used. The Armament Lab, WADC, has been queried about the possibility of testing a camera filter having half of the light transmission capacity of the present Y-10 camera filter. Some optical and RAI pictures appear to be out of focus. A camera image viewer (TSY 7065) has been obtained recently and the out of focus problem is being investigated.

31 AUGUST 1953: The focus of the optics and B scope have been checked on two aircraft having a history of out-of-focus pictures. The camera image viewer was used in the normal O-23 camera position and the focus was found to be within tolerance. Since the camera is disconnected from the Y-4 optics during the above check, the camera is not being checked and therefore the focus check is probably not 100% valid. Plus-X film has been used on some test flights. Both RAI and optical pictures are better than ones using Super-XX film. A filter having only 50% of the light transmission characteristics of the present minus blue filter will be installed in place of the present camera filter on two test aircraft to determine if better optical pictures can be obtained.

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PROJECT NO. EE-57: ARN-14 Antenna Connector

PROJECT ENGINEER: S/Sgt M. W. Huber

DATE OF ORIGIN: 2 June 1953

PURPOSE: To eliminate failure of ARN-14 antenna connector in the vertical stabilizer of B-47 aircraft.

SUMMARY AS OF 31 JULY 1953: The co-axial cable connector for the ARN-14 antenna has failed numerous times resulting in loss of the omni-range receiver. The most common failure is withdrawal of the center pin from the connector. The connector is located near the top of the aircraft fin and due to its inaccessibility, repair is time consuming and difficult. Several means of clamping the cable are to be tested to eliminate this type of failure. The possibility of using a different type of connector is also being investigated.

31 AUGUST 1953: An SIR is being written recommending the use of the PL-259 connector (in which the center pin is molded in the plug) in place of the UG-21/V. This requires that both cable ends be terminated in PL-259's and that a PL-258 be used to join them. This Section feels that loss of reception due to intermittent or broken cable connection far outweigh the advantage of the lower standing wave ratio obtained with the "constant impedance" UG-21/V connector.

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PROJECT NO. EE-58: Evaluation of 10" Radar Scope.

PROJECT ENGINEER: Capt E. T. Naversen

DATE OF ORIGIN: 8 June 1953

PURPOSE: To evaluate the 10 inch radar indicator in B-47 Aircraft.

SUMMARY AS OF 31 JULY 1953: Headquarters SAC has directed the OES to evaluate the ten inch radar indicator in B-47 aircraft. One installation was completed in B-47B 51-2220 prior to its deployment with the 306th Bomb Wing to the U.K. The indicator was removed from the test aircraft after four missions were flown (1) because the radar operator felt that it was adversely affecting his bombing accuracy, and (2) in order to remount the indicator in a tubular shock mount and to install a larger visor. No formal test reports have been received but informal reports indicate that the ten inch indicator had good definition in NAV position but very poor definition in TRACK and BOMB positions. In addition, the bias control range does not seem adequate for operation under all conditions. A ten inch indicator is installed in 305th Bomb Wing B-47 S/N 51-2332 for concurrent evaluation with other K-System components. One flight has been accomplished.

31 AUGUST 1953: Five test flights were completed during the month of August. Side by side installation of the ID-216 five inch indicator (with and without a magnifier) and the IP-231 ten inch indicator discloses that the definition and general presentation are about the same for both tubes in the NAV position. The definition of the five inch indicator remains good on the bomb run whereas the ten inch indicator presentation deteriorates from approximately 15 nm to the bomb release point. The evaluation has been completed but an SIR is being held in abeyance pending word from the B-47 Project Office as to whether the future production 10" scope will have the same electrical and electromechanical feature as the present model. This information is required to determine if research on defects in the IP-231 should be initiated.

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PROJECT NO. WE-60: Deficiencies of B-47B Interphone System Prior to the 455th Aircraft. (Formerly - "Deficiencies of AIC-3 Interphone System)

PROJECT ENGINEER: Capt JOHN T. A. ELY

DATE OF ORIGIN: June 1953

PURPOSE: To eliminate deficiencies in present interphone systems and to outline requirements which will prevent similar deficiencies in future systems.

SUMMARY AS OF 31 JULY 1953: It has been determined that the following additional interphone requirements exist for the B-47 to meet all operational requirements:

1. Mixed facilities which permit the co-pilot to monitor UHF when in the INTERPHONE position during actual and simulated ground controlled approaches.

2. The co-pilot should also be able to: (a) monitor INTERPHONE in the UHF position during RBS runs and transition flights, and (b) hear the COMPASS when on UHF during actual and practice instrument approaches.

3. The navigator's facilities should: (a) Provide this crew member the option to monitor UHF in the INTERPHONE position during RBS runs; (b) permit easier access to the foot mike switch. This facility can also be used by a third pilot during transition flights.

4. A fourth interphone outlet should be provided in the aisle for use by the observer during emergencies and by the fourth crew member during Standardization Checks.

31 AUGUST 1953: A test installation consisting of two switches at the co-pilot's position has been made on B-47 #2206. One switch allows the co-pilot to hear the pilots command plus mixed signals when on command. The other switch mixes command and interphone for both the co-pilot and the navigator whenever it is thrown. This removed the interphone system mixed signal deficiencies.

The possibility of obtaining these same results by rewiring the co-pilot's and navigator's interphone control boxes and utilizing presently unused positions (eliminating the additional switches mentioned in paragraph 1 above) is being investigated.

An SIR will be prepared on this subject during September.

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PROJECT NO. EE-61: Instrument Landing Facilities in Co-Pilot's Position, B-47 Aircraft

PROJECT ENGINEER: Captain J. L. Balega

DATE OF ORIGIN: 17 July 1953

PURPOSE: To monitor the installation of ILAS and OMNI indicator, ID-249 and ID-250 in the co-pilot's position in B-47 aircraft, and to evaluate this installation from an operational view.

SUMMARY AS OF 31 JULY 1953: To make it possible for B-47 pilots to receive instrument checks as required by AFR 60-2 and AFR 60-4, Strategic Air Command message DIMAS8 15439, dated 28 July 1953, directed the installation of the ILAS and Omni-range indicators, ID-249 and ID-250, in the co-pilot's position of nine B-47 aircraft in the 305th Bomb Wing. Installation of these indicators was monitored by OES, and to date all affected aircraft have been completed. Flight results indicate satisfactory operation. After an inspection of this installation by personnel of 22nd Bomb Wing, as directed, an SIR will be published.

31 AUGUST 1953: An SIR covering this installation is being prepared.

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PROJECT NO. EE-62: Jump of Radar Presentation on ID-218/APS-23 Caused by O-15 Camera

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: 27 July 1953

PURPOSE: To prevent "jump" of the radar picture on the indicator, ID-218, when the O-15 scope camera is actuated.

SUMMARY AS OF 31 JULY 1953: The presentation on the radar indicator, ID-218/APS-23, is distorted, i.e., jumps each time an exposure is made by the O-15 scope camera. This distortion is particularly distracting to the operator during a bomb run when an exposure is being made on every scan. This deficiency is apparent on approximately 60% of the systems in use at MacDill AFB. This project will be concerned with the cause and an engineering fix will be recommended.

31 AUGUST 1953: It was experimentally determined that a adapter to move the camera further from the indicator is impractical, primarily because of the distance required to remove jump in all cases and because of the increased object distance for both camera and operator.

Two soft iron shields were tried and rejected as ineffectual, since maximum possible shielding reduced picture jump only about fifty per cent.

Unless some way is found to modify the camera, the following solutions, although considered unsatisfactory in that they do not remove the source of the trouble, will be evaluated:

a. A switch giving the operator the option of blanking the clockwise scan on the ID-218 would be helpful whenever picture jump or back-lash is excessive.

b. Locating the O-15 camera on a remote indicator. This is another argument in favor of an auxiliary indicator installation in the co-pilot's position.

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PROJECT NO. ME-28: Fuel Loading Procedures.

PROJECT ENGINEER: Major Lomax Gwathmey

DATE OF ORIGIN: February 1952

PURPOSE: To develop a firm method of refueling the B-47 aircraft prior to long range missions.

SUMMARY AS OF 31 AUGUST 1953: Multiengine jet bombers carrying unusually large volumes of fuel in the fuselage called for new techniques in fuel loading procedures. A project was set up by the OES to collect data over a period of time under various operating conditions and make an analysis of the various variables involved with the view of recommending the best and most practical system of fuel loading for the B-47 aircraft.

As an auxiliary project under this project, the practicability of providing Ground Servicing (Refueling and Electrical power for starting engines) of B-47 aircraft from the KC-97 aircraft was explored during July 1952. With the use of a kit to contain certain equipment for refueling and certain electrical cables, it was determined that refueling and starting engines of B-47 from the KC-97 was entirely practical. Specific Item Report No. 59, August 1952 covered this project.

Another additional auxiliary project, was the replenishing of fuel used by a B-47 for engine start and taxi, at the end of the take-off runway with all engines running. Such a procedure is considered to be practical and not excessively dangerous when certain rules are obeyed and certain precautions taken. This procedure will permit the aircraft to take-off with only 300# less fuel than its fuel system will hold and for average conditons of taxi out, will add 100 to 150 nam to its range capability. It is considered a useful procedure for certain combat operations. SIR #101, dated 3 June 1953 covers this project. An SIR will be prepared covering the main project.

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PROJECT NO. ME-44: Crew Comfort and Survival Equipment

PROJECT ENGINEER: Major Willis E. Frazier

DATE OF ORIGIN: 3 April 1953

PURPOSE: To investigate and make recommendations regarding the crew comfort problems existing in the B-47 aircraft.

SUMMARY AS OF 31 JULY 1953: Undue aircrew fatigue and inadequacies in survival equipment became apparent in B-47 aircraft operation at MacDill AFB. Accordingly, SIR No. 27, subject: Crew Comfort and Survival Equipment, dated 3 April 1952, recommended that ARDC take the following action: (1) initiate a program to determine what items are causing excessive crew member discomfort and fatigue, and (2) take positive measures to improve the design of, or completely eliminate various items which are causing crew fatigue. An ARDC Human Factors B-47 Research Team investigated the above recommendations, and published a report entitled: "Human Factors in B-47 Operation", dated 18 November 1952. This report received wide dissemination.

One subject of current interest is an evaluation of a light underarm life preserver, type MA-1, Hq SAC questionnaires used in the evaluation were furnished to the 306th Bomb Wing during July, to be accomplished as soon as possible.

31 AUGUST 1953: Additional information on the underarm life preserver evaluation is not available at this time, but will be included in the next progress report.

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PROJECT NO. ME-53: Fuel Tank Leaks, B-47 Aircraft.

PROJECT ENGINEER: 2nd Lt C. B. Shive

DATE OF ORIGIN: 19 February 1952

PURPOSE: To report fuel tank leaks and to recommend corrective action.

SUMMARY AS OF 31 AUGUST 1953: (For detailed data and discussion of fuel tank discrepancies prior to 1 July 1953 see all Monthly Progress Reports published since 19 February and SIR #48, dated 26 May 1952.)

During the period 1-28 August 1953, forty-seven (47) tactical aircraft were assigned to the 305th Bomb Wing. Fuel leak data on these aircraft is as follows:

a. Twelve (12) self sealing fuel tanks were changed during this period for the following reasons: Activation, one (1) each -3 cell, two (2) each -8 cells, and one (1) each -9 cell; Split inner liner, one (1) each -3 cell.

b. Four (4) non-self-sealing tanks were replaced because of holes. These tanks were two (2) each -13 cells and two (2) each bomb bay tanks.

c. A total of twenty-six (26) leaks were encountered which are attributable to interconnects and other miscellaneous hardware connections, and are distributed as follows: nine (9) worped spiders, thirteen (13) loose interconnects, two (2) loose fuel tank sump connects, and two (2) defective float check valve assemblies.

Information on fuel tank leaks during August 1953 for the 306th Bomb Wing is not presently available.

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PROJECT NO. ME-54: Service Life of B-47 Surface Control Pump Assemblies.

PROJECT ENGINEER: 2nd Lt C. B. Shive, Jr.

DATE OF ORIGIN: 12 June 1952

PURPOSE: To monitor the operation of twelve each subject assemblies, part number 4869-167 WQ 300, for the purpose of determining periodic replacement time.

SUMMARY AS OF 31 AUGUST 1953: SAC message to OES, dated 9 January 1953, concurred with a modified project to monitor twelve (12) surface power control unit pumps. During the month of April, two (2) of the PCU pumps were changed, S/N A-1113 after 202:05 hours and S/N A-1202 after 180:05 hours. No additional units failed through July 1953, at which time the average time on the ten (10) remaining PCU pumps was 254:07 hours. Information on pump failures for August, which is not presently available at MacDill AFB, will be included in the September Progress Report.

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PROJECT NO. ME-69: Tow-Target Reel Installation

PROJECT ENGINEER: Major Willis B. Frazier

DATE OF ORIGIN: 13 February 1953

PURPOSE: To determine the feasibility of installing a tow-target reel which can be readily removed or installed for towing winged targets with B-47 aircraft.

SUMMARY AS OF 31 AUGUST 1953: In accordance with Hq SAC message DMAS8 56603, dated 14 February 1953, a project to determine the feasibility of a tow-target reel installation in a B-47 aircraft was initiated. An A-2 reel was installed in the tail cone of a B-47 aircraft at MacDill AFB, and the installation was approved from a structural standpoint by WADC. Also, a glider tow-target (Aero 27 or Type A-1) was modified to a 45° swept wing, single vertical tail configuration after the manner developed by the Air Force Armament Center, Eglin AFB, Florida. The first evaluation flight of the target and reel installation was accomplished on 10 August 1953, followed by a second flight on 12 August 1953. The target and cable were lost on this second flight when the cable snapped because of a deployed parachute, which was probably induced by violent maneuvers of the tow-target at Mach .81. Following is a preliminary summary of the two flights:

a. The target is stable during take-off both at 400' and 600' behind the towing B-47.

b. Nine-thousand six hundred (9600') feet of runway were required for the target to take-off when towed 400' behind a B-47 aircraft weighing 152,000 lbs, and which took off after 7200' feet of ground roll.

c. The target was stable during climb.

d. The cable reeled out properly on the second flight, after slight modifications to the reel following the first flight, in which reel-out difficulty was encountered.

e. The target slow rolled at 35,000' to 40,000' at Mach .74 through Mach .81. A modified target has been furnished to the OES by the AFAC at Eglin AFB for study and flight testing at MacDill in an effort to attain stable flight at Mach .81. The AFAC reports that they have achieved Mach .82 at 42,000'.

f. The power of the motor and the torque of the clutch are both insufficient to enable the target to be reeled in.

g. Calculations show that the cable less the target can be reeled in.

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PROJECT NO. ME-69: Tow-Target Reel Installation (CONT'D)

h. Target was landed successfully at the end of 600' of cable at completion of the first flight.

The flying phase of this project will be continued as soon as a 306th Bomb Wing flight crew becomes available.

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PROJECT NO. ME-73: Alternator Water Separator

PROJECT ENGINEER: 2nd Lt C. B. Shive, Jr.

DATE OF ORIGIN: 16 April 1953

PURPOSE: To test a locally fabricated alternator water separator as regards efficiency of water separation, adequacy of cooling and freedom from icing.

SUMMARY AS OF 31 AUGUST 1953: Alternator voltage fluctuation occurred frequently in the B-47 aircraft during flight through moderate to severe precipitation, causing loss of alternator output resulting in inoperative K-Systems and, in some cases, damage to K-System components. It was therefore necessary to have some method of separating water from air taken in the nose of the accessory dome for alternator cooling. One such device was fabricated by the 305th Bomb Wing at MacDill AFB and tested in the Boeing Laboratory during April 1953. On this test the separator was satisfactory from the standpoint of water separation and cooling, but failed through icing. A second MacDill AFB water separator, providing a less restricted air passageway, was tested at Boeing-Wichita during August 1953 at the same time that the Boeing Company designed water separator, as used with ECP 1407M, was being tested. This Boeing separator, incorporating a baffled dome and a 90° air inlet on the alternator, proved to be the most satisfactory fix tested, and has been committed as ECP 1407M on B-47 52-422 (645) and on, RB-47 51-15837 (36) and on. ECP 1407MK has been recommended for retrofit on B-47 51-2045 (88) through 52-421 (644), and RB-47 51-5258 (1) through 51-15836 (35). Kits have been authorized for 135 B-47B airplanes in the block 51-2045 (88) through 51-2356 (400) and 28 B-47E airplanes 52-394 (617) through 52-421 (644).

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PROJECT NO. ME-76: Tool-Engine Mount Pin and Internacelle Fairing.

PROJECT ENGINEER: 1st Lt Haynes Clark

DATE OF ORIGIN: 19 June 1953

PURPOSE: To evaluate and refine design of a locally devised multi-purpose tool for removing and installing engine mount pins and aft and forward internacelle fairings.

SUMMARY AS OF 31 AUGUST 1953: The original tool used during May and June was removed from service and replaced by a second model, which incorporated features to protect the user and the aircraft.

The second model proved highly satisfactory from the standpoint of time saved and safety for both the user and the aircraft. After approximately one month use in the docks, a critical part of the tool broke under the severe impact loading inherent in an impact type puller.

A third model of the tool with the critical part made of a steel less resistant to wear but more suitable for severe impact loading is now being evaluated. An SIR to include working drawings for fabrication of the tool will be prepared during September 1953.

Restricted

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PROJECT NO. ME-75: Extruded Compressor Stator Blades J47-25 Engines

PROJECT ENGINEER: 2nd Lt C. B. Shive

DATE OF ORIGIN: 28 May 1953

PURPOSE: To monitor effects on engine life of a modified extruded compressor stator blade.

SUMMARY AS OF 31 MAY 1953: The engine Contractor has furnished this station with six (6) J47-25 engines equipped with the new extruded compressor stator blades which are being installed on all production engines. These blades are cheaper to manufacture than the forged type previously used, and can be replaced individually. Subject engines have been installed on B-47 #51-2269 and their operation will be monitored by the OES.

30 JUNE 1953: The subject engines are operating normally, and have flown 40:10 hours as of 25 June 1953 at the TDY station.

31 JULY 1953: The five engines incorporating extruded compressor stator blades, installed on A/C 51-2269, are running normally, and have operated 72:15 hours each as of 25 July 1953.

31 AUGUST 1953: The five engines incorporating extruded compressor stator blades are operating normally and have flown 102:45 hours each, as of 31 August 1953.

Restricted

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PROJECT NO. ME-78: Main Landing Gear Seal Failures

PROJECT ENGINEER: 2nd Lt C. B. Shive, Jr.

DATE OF ORIGIN: 8 July 1953

PURPOSE: To determine if soft strut servicing in accordance with T.O. 01-20EN-231 is the cause of "O" ring failures.

SUMMARY AS OF 31 JULY 1953: Six main landing gear "O" ring seals have failed on B-47 aircraft of the 305th Bomb Wing, operating from MacDill Air Force Base, Florida. These aircraft had an average of 114.8 landings following compliance with T.O. 01-20EN-231 (soft strut servicing) and an average of 161.4 total landings at the times of seal failure. Of these failures, five have been on the aft main strut and one has been on the forward main strut. At present, failed "O" ring seals are being removed from the struts and sent to WADC for study. The 306th Bomb Wing, operating from RAF Fairford Station, England, has reported no failures.

31 AUGUST 1953: Three main landing gear "O" ring seals failed during the month of August in the 305th Bomb Wing. This brings the total number of main landing gear strut failures to nine, of which six are aft main struts and three are forward main struts. At the time of the seal failure the struts had an average of 96 landings following compliance with T.O. 01-20EN-231 (soft strut servicing), and an average of 138 total landings. No main landing gear struts or seals were changed by the 306th Bomb Wing during August because of failure of "O" ring seals.

Restricted

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PROJECT NO. ME-79: Towing Aircraft to Runway Prior to Take-Off

PROJECT ENGINEER: Major T. P. Savage

DATE OF ORIGIN: 17 July 1953

PURPOSE: To determine the feasibility of towing B-47 aircraft from parking ramp to end of runway for purpose of saving fuel, with a result of saving dollars.

SUMMARY AS OF 31 JULY 1953: Headquarters, Second Air Force and Strategic Air Command have requested that a study be made of the feasibility of towing aircraft to the end of the runway prior to starting engines for the purpose of saving fuel and dollars. The possibility of integrating such a plan with existing pre-flight inspection procedures and existing ramp and taxi areas is being studied. The effects upon engine life, man power and ground equipment requirements, as well as actual fuel and engine savings are being investigated. A preliminary report is being completed and will be forwarded during the current month.

31 AUGUST 1953: A special interim report, covering the study phase of this project has been completed and forwarded thru Hq 6th Air Division to Hq 2AF and Hq SAC for further consideration. This report recommends a service test by an operating wing as the only positive way to determine and evaluate the practical effects of certain aspects of such a plan. Hq 2AF and Hq SAC will decide whether or not such a service test should be run.

Restricted

0790

Restricted

PART III

of

B-47 OPERATIONAL ENGINEERING SECTION

MONTHLY PROGRESS REPORT

B-47 OPERATIONAL ENGINEERING SECTION PROJECTS COMPLETED

AWAITING ACTION BY

HEADQUARTERS WRIGHT AIR DEVELOPMENT CENTER

Restricted

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SUMMARY LIST OF B-47 OES COMPLETED PROJECTS AWAITING AMC ACTION

Project No. and Title	Status
AE-4: Analysis of B-47 Mission Capability	SIR's #53, #53A and #53B are being considered by Hq WADC. A project to further evaluate the suitability of the published IFR speed schedules in SIR #53B is being considered by Hq SAC.
AE-13: PDI Instrument Relocation	SIR #82, dated 24 January 1953, forwarded to Hq WADC. The interchange of the Mach meter and PDI has been approved in principle by the Project Office and the initiation of a T.O. to interchange these instruments is under consideration.
AE-18: Evaluation of Alco Windshield Wiper	SIR #102, dated 30 June 1953, has been forwarded to Hq WADC. The Flight Test Section at Wright-Patterson AFB has three (3) B-47 aircraft modified which incorporate the modified windshield wiper and a deflector. Testing continues.
EE-14: Evaluation of APN-12 and APN-68 Rendezvous Equipment	SIR #76 was forwarded through command channels 13 February 1953. WADC has initiated action with AMC to have the maintenance instructions in SIR #76 incorporated in the next edition of the "Handbook of Maintenance Instructions" (T.O. AN 16-30 APN-12 and APN-76). WADC is expediting action to incorporate APN-69 rendezvous radar equipment into the B-47 program. This constitutes closing action on this project.
EE-14C: Rendezvous Descent Preliminary to Inflight Refueling of B-47B Aircraft	SIR #76C, dated 27 May 1953 forwarded to Hq WADC. A letter containing WADC's comments was initiated on 3 August 1953 and forwarded to Hq SAC. WADC has taken action to delete reflectors of the APN-12 receiving antennas in KC-97 aircraft. No information has been received on the inclusion of the rendezvous techniques and procedures in the B-47 Flight Handbook, T.O. AN 01-20ENB-1. It was understood that the Aerial Refueling Conference held at Boeing, Wichita, 22 July 1953, recommended that information contained in this SIR be included in the Technical Order.

Restricted

EE-30:	K-System Slewing	SIR #97, dated 8 May 1953, forwarded to Hq WADC. The Armament Lab, WADC, is considering several proposals to prevent the undesirable effects of slewing in the second station "AUTO" position. These proposals are now being tested in conjunction with the OES proposal. No further information is available from WADC at this time.
EE-32:	Nesa Glass Control	SIR #73, dated 23 December 1952, forwarded to Hq WADC. Technical Order 01-20ENB-129 has been issued to connect the Nesa Glass Control Unit to the secondary inverter in aircraft which did not have this change made in production. No further information is available from WADC.
EE-49:	Use of the B-7 Intervalometer in Lieu of B-8.	SIR #95, dated 14 April 1953, forwarded to Hq WADC. WADC concurs in the recommendation that the B-7 intervalometers be installed in the B-47 until such time as B-8 intervalometers are available, and has recommended that AMC prepare a T.O. to this effect. MCAMA has indicated that an answer on this project will be completed and forwarded to the OES by 1 Oct 53.
EE-51:	APN-76 Receiver-Transmitter Location	SIR #99, dated 27 May 1953, has been forwarded to Hq WADC. No additional information.
EE-59:	Comparative Evaluation of Methods of Swinging the Compass, B-47 Aircraft	SIR #105, dated 25 July 1953, has been forwarded to Hq WADC. No information concerning the action to be taken by WADC has been received.
ME-12:	Directional Damper	SIR #100, dated 26 June 1953, forwarded to Hq WADC. Although the Laboratory approved the recommended procedures for pre-flight inspection of the damper, no action will be taken in view of indorsement by Hq SAC which indicated that it was desired that the modification be held in abeyance until WADC tests determine the desirability of retaining the damper in the aircraft. Boeing has been requested to initiate flight tests on this installation, beginning in November 1953.

ME-15:	Observer's Ditching Harness	SIR #45, dated 21 May 1952, and SIR #64, dated 27 October 1952, were forwarded to Hq WADC. The Contractor has established an approved ECP for incorporation of an observer's ditching station on the walkway next to the co-pilot. The installation will include a safety belt and shoulder harness. No further information is available at this time.
ME-21:	Lower Wing Surface Access Panel.	SIR #17, dated 6 March 1952, and SIR #64, dated 27 October 1952, were forwarded to Hq WADC. The Aircraft Laboratory at WADC concurs with discrepancies as outlined in the above SIR's, but feels that too much control would be required during a recommended swaging operation to insure correct fit and pressure. The Contractor submitted ECP 1351M incorporating an access door retaining stud to be effective with the 731st aircraft. OCAMA has been requested to issue a T.O. requiring organizational maintenance units to install ECP 1351 as a retrofit. Letter from Hq WADC to Hq SAC, dated 24 July 1953 contains information as outlined above and constitutes closing action on this project.
ME-36A:	Perioscopic Sextant Mount in the Navigator's Position, B-47B Aircraft.	SIR #13A, dated 4 November 1952, forwarded to Hq WADC. No additional information has been received.
ME-59:	Seal Retainers on Fuselage Access Doors	SIR #58, dated 19 August 1952, forwarded to Hq WADC and reviewed by that Center. The Contractor was requested to initiate an ECP, which was approved by WADC as ECP 1221. OCAMA was requested by WADC to publish a T.O. to permit field maintenance activities to replace rivits with screws when new door seals have to be installed. This project is considered complete, and is closed by above action.
ME-60:	Operational Suitability Test of Phase II Modified B-47B Aircraft	SIR #75, dated 9 January 1953, forwarded through channels to Hq WADC. The "action" copy has not been received by AMC-WADC.

ME-68:	Multiplace Life Raft Installation of B-47 Aircraft	SIR #83, dated 29 January 1953, forwarded to Hq WADC. This SIR showed that installation of a life raft in the cable well on top of the fuselage was feasible. Boeing Airplane Company has fabricated a mock-up of a multiplace life raft installation, utilizing the Mark IV life raft. The mock-up inspection will be held 10 September 1953.
ME-70:	Leaking Power Control Unit Seal.	SIR #91, dated 18 March 1953, forwarded to Hq WADC. The recommended use of leather back-up rings behind the -10 "O" ring seal was not approved by WADC because of the additional friction forces imposed on the metering pin. The use of a -11 "O" ring seal was considered to be a better interim fix. The contractor is at present investigating this provlem and is attempting to dovelop a permanent fix. No further information is available.
ME-72:	Canopy Cone Seat Modification, B-47 Aircraft	SIR #96, subject: Canopy Cone Seat Modification, B-47 Aircraft, dated 25 April 1953, forwarded to Hq WADC. This report recommended modification of canopy cone seats: (1) to insure a more accurate fix of the canopy cones with the seats, and (2) to alleviate the difficulty now experienced adjusting the cone seat positions. Preliminary information indicated that the recommended cone seat design change had been approved by WADC. However, Boeing has indicated that the OES proposal is not acceptable because the cone seats, as modified, can be adjusted in such a manner that the canopy latching provisions will be incorrectly matched. Boeing and AMC have no suggestions to relieve the maintenance problem, although a revised method for "jigging" the canopy during shipment will reduce the problem somewhat. This project is considered closed.
ME-74:	J47-23 and -25 Engine Speed Switch	SIR #103, dated 22 July 1953, forwarded to Hq WADC. Action copy has not been received by WADC.

ME-77:	Functional Test of Fuel Tank Float Switches	SIR #106, dated 30 July 1953, forwarded to Hq WADC. This SIR recommends that fuel tank float switches be functionally tested prior to each aerial refueling mission and that Technical Order 01-20ENB-178 be revised and used as a basis for this test. Action copy has not been received by WADC. Information copies have been distributed to the Laboratory.

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

DOOS 452.0311 4 August, 1953

SUBJECT: Evaluation of an Auxiliary Radar Indicator, Co-Pilot's Position, B-47B Aircraft (Project Fishpond) (ES-44). (RCS: 2-SAC-R1)

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana
ATTN: DAFSMF

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska
ATTN: DMAD

1. Forwarded herewith are one (1) "action" copy and twelve (12) information copies of Specific Item Report No. 107, dated 31 July 1953, subject as above. Four (4) information copies are for retention by Second Air Force Headquarters, four (4) are retention by Strategic Air Command Headquarters, and four (4) are to be forwarded with the "action" copy to the Joint AMC-WADC B-47 Project Office at Wright-Patterson Air Force Base, Ohio, ATTN: WCOWN. This report summarizes an investigation conducted by the B-47 Operational Engineering Section. In accordance with SAC Regulation 80-2, dated 17 March 1952, as to be amended, ten (10) information copies have been transmitted directly to the Joint AMC-WADC B-47 Project Office at Wright-Patterson Air Force Base, Ohio.

2. When Inclosure No. 1 is withdrawn or not attached, the classification of CONFIDENTIAL on this correspondence will be changed to RESTRICTED in accordance with paragraph 25a, AFR 205-1.

FOR THE COMMANDER:

1 Incl
Specific Item Rpt #107
(13 cys)

/s/ P. A. Johnson
/t/ P. A. JOHNSON
2nd Lt., USAF
Assistant Adjutant

"A CERTIFIED TRUE COPY"
(Including Inclosure)
P. A. Johnson
P. A. JOHNSON
2nd Lt., USAF

(6MD-C-5002)

SECURITY INFORMATION

CONFIDENTIAL

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 451.0311 31 July 1953

SPECIFIC ITEM REPORT NO. 107

SUBJECT: Evaluation of an Auxiliary Radar Indicator, Co-Pilot's Position, B-47B Aircraft (Project Fishpond) (EB-44).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

A. To investigate the possibilities of an auxiliary radar indicator at the co-pilot's position in the B-47B aircraft from the standpoint of:

1. Feasibility of installation.

2. Operational value and use.

II. FOREWORD:

A. The Operational Engineering Section authorized the installation of an auxiliary radar indicator in the co-pilot's position of B-47B No. 51-2074. The object of the installation was to ascertain if there was sufficient space in the co-pilot's position to accommodate the indicator and to evaluate its operational use by the co-pilot.

B. A program was formulated to test the operational aspects of the indicator for co-pilot assistance in: (1) radar navigation, (2) target identification, and (3) station-keeping. Only radar navigation and target identification on the bomb run was tested by the co-pilots on three crews.

C. A second installation having a separate power supply and synchronizer was authorized by Headquarters Strategic Air Command and is being installed in a 306th Bomb Wing B-47 aircraft in the U.K. for testing which will include station keeping tactics. With this

SECURITY INFORMATION

installation the observer can use the K-System for routine navigation and can track winds into the navigational computer while the co-pilot is station keeping, without affecting the auxiliary indicator. This is not possible with the present system.

III. CONCLUSIONS:

A. It is feasible to install an auxiliary radar indicator in the co-pilot's position in B-47E aircraft.

B. The optimum installation requires that the co-pilot face to the rear to use the auxiliary indicator.

C. The co-pilot can assist the radar observer in radar navigation, and target identification, using the auxiliary rear indicator.

D. A separate power supply and synchronizer is desirable for optimum utilization of the auxiliary radar scope.

IV. RECOMMENDATIONS:

A. WADC and Boeing Airplane Company investigate the space requirements for an auxiliary radar indicator in the co-pilot's position of B-47E and RB-47E aircraft.

B. The specific recommendations on the auxiliary indicator for B-47E aircraft will be held in abeyance until completion of the evaluation of the unit containing the separate synchronizer.

V. DISCUSSION:

A. The work load of the B-47 observer has been the subject of much discussion, but no action has been taken to lessen his responsibilities when the need arises. Normally, the crew tasks assigned to the observer can be handled expeditiously by one individual. However, during times when it is necessary for the observer to attempt to isolate and correct an in-flight malfunction of the computer section of the K-4 bombing and navigation system, it would be advantageous to be able to transfer the navigational responsibility to the co-pilot. Radar navigation can be accomplished by the co-pilot if an auxiliary radar indicator is installed at this station. It is also advantageous to have the co-pilot relieve the observer for short periods during missions using station keeping tactics and the co-pilot can often help the observer place the bombing cross-hairs more accurately on the target.

SECURITY INFORMATION
CONFIDENTIAL

B. An auxiliary indicator was installed in a B-47B aircraft to determine if such an installation was practical. Since the APS-23 radar system is already equipped to accommodate an auxiliary indicator, only cables and brackets were necessary to install the auxiliary indicator. The engineering details of the installation will be reported in the SIR which covers the indicator having a separate synchronizer and power supply.

C. The auxiliary indicator was mounted on the left side of the co-pilot's station. The co-pilot had to rotate his seat and face aft to use the indicator. The scope did not interfere with the use of the armament systems. This location is considered optimum because more space exists behind the co-pilot than forward, and mounting the scope adjacent to the instrument panel would interfere with the magnetic compass. It is not known if sufficient space exists in the ejection seat airplane for the indicator to be mounted in this position. It is recommended that WADC and Boeing Airplane Company determine if the auxiliary indicator can be accommodated at the co-pilot's station in the ejection seat airplanes.

D. Two test crews flew one (1) evaluation mission each and one test crew flew two (2) missions to determine the operational utilization of the auxiliary indicator in the co-pilot's position. Radar navigation by the co-pilot was used by all three crews and was found to be adequate by all. Two crews were not enthusiastic about co-pilot assistance on the bomb run. The third and least experienced crew utilized co-pilot assist during the bomb run. This crew found that target identification assistance on the bomb run was instrumental in preventing runs on misidentified aiming points. The remote indicator seems to be especially valuable for the inexperienced observer who may need some assistance before attaining full proficiency.

E. It was not possible to test station keeping tactics using the remote indicator as no such missions were flown during this test program. This technique will be tested in the improved auxiliary installation currently being installed in the T. K. The results of this evaluation will be reported in a subsequent SIR.

/s/ Enoch T. Neverren
/t/ ENOCH T. NEVERSEN
Captain, USAF
Project Officer

APPROVED:

/s/ THOMAS P. SAVAGE
Major, USAF
Chief, O. E. S.

CONFIDENTIAL

0800

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDMAI 600.1 13 August, 1963

SUBJECT: Review of Preliminary Plans for New Hospital
MacDill Air Force Base, Florida

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska
Attn: Utility Section

1. This headquarters has received an information copy of "Sanitary Comments" from your headquarters pursuant to the preliminary plans of the 150-300 bed hospital proposed for this station.

2. The subject of the installation of an elevated water tank was discussed with Base Operations, this station, before the preliminary plans were drawn up. The Base Operations Section has strongly opposed the erection of an elevated tank at the site of the new hospital. Although such installation is not in direct conflict with existing criteria, the Base Operations Section believes that locating the elevated tank at this point would constitute a definite flight hazard, and should be avoided if there is any other expedient available. This information was transmitted to the Corps of Engineers, hence the design of ground storage reservoir and pumps.

3. Relative to installation of two (2) 250 GPM pumps, no objections are interposed to this change, although it is believed that the theoretical calculation of 0/ GPM is low. At the present hospital site actual demands of 150 to 200 GPM (domestic consumption) for several hours at a time are not uncommon. A more liberal safety factor would be preferred, such as one (1) 250 GPM pump and one (1) 400 GPM unit with gasoline-driven engine connected to the 400 GPM unit.

4. Reference is made to paragraph 7 of comments. It was not the intention of the design to furnish two (2) new water supply lines to the new hospital site, but to provide one (1) new supply main from Hangar Loop and Oleander Street with a tie-in therefrom to reinforce the existing six-inch main to the POL system. The ten-inch line which feeds the six-inch (which parallels the parking apron and crosses the apron to the POL system) is the source of supply for Aqua System No. 2 and is subject to heavy pressure variation. There is some question as to the desirability of its present

...DMAT 600.1, Subj: Review of Preliminary Plans for New Hospital, MacDill AFB

limited use, for, according to the applicable engineering manuals, an acus system water supply main is not to be used as a portion of the station distribution grid but as a service only. A recording gauge installed on this main showed pressure drops to 70 psi when the acus system is in use. Acus System No. 7 will continue in service after the new POL system is completed. The purpose of that portion of the pipe triangle was to reinforce the line to the POL system, and to aid circulation, not to supply the new hospital. It can be eliminated if desired. At the request of this headquarters the new supply line to the proposed hospital is shown connected into the main distribution system at the corner of Hanger Loop and Oleander Street. A pressure survey accomplished by station personnel indicates that this tie-in location is the strongest point in the entire southern end of the station water distribution grid. It is the bottom of the main pipe loop of the distribution system. One leg being fed by a twelve-inch main from the 500,000 gallon elevated tank and directly connected into the No. 1 supply main (MacDill Avenue entrance) from the city, and the other leg being directly connected to the No. 3 supply main from the city which enters the reservation at Bruce Avenue. By connecting the new hospital line into the existing system of Hanger Loop and Oleander Street, water supply for the new hospital can be obtained from either side, i.e., city supply main No. 1 or No. 3, thereby assuring adequate supply in case of failure or low pressure conditions in either main.

5. Reference is made to paragraph 4 of comments. The principal reason for installing a chlorinator is to assure that a residual of .4 PPM can always be obtained in the hospital at all times. There is a considerable question as to the requirement for additional chlorination at this point. The City of Tampa chlorinates heavily at their water treatment plant and furnishes a water which meets the bacterial standard of the Florida State Department of Health and the Interstate Railroad Commission. It is chlorinated again as it enters the MacDill reservation. However, even with these two periods of chlorination, it is impossible to maintain .4 residual at the ends of the base distribution system, particularly in the hospital area. Several years ago there was voluminous correspondence and much discussion between the Base Medical Inspectors and the station regarding the condition that a residual of .4 was not being maintained in the hospital area. The problem was ultimately solved by installing a chlorinator in the hospital line and maintaining the required residual in the referenced area. Therefore, while it is believed that the installation of a chlorinator is unnecessary from a bacterial standpoint, it is required to provide the controversial .4 residual. Relative to the suggestion that a hypochlorinator be considered, local experience with hypochlorinators has been unsatisfactory. During the past few years there have been three (3) hypochlorinators installed at MacDill. None were satisfactory and all have been eliminated. Experience with

0802

WCMAT 600.1 Subj: Review of Preliminary Plans for New Hosp, MacDill AFB

hypochlorinators at the station indicates that they are unreliable, require constant and excessive maintenance, are messy, and the chlorine solution is difficult to properly maintain. It is recommended that a small chlorination house be constructed at some convenient location on the new supply line at sufficient distance from the hospital to provide adequate contact period and that a suitable vacuum type chlorinator with venturi tube control be installed therein.

6. It is believed that the size of the water storage reservoir can be reduced to 150,000 gallons. Under normal operation, usable pressure will be furnished from the supply line and the storage may be inactive for weeks at a time. It is believed that it will be difficult to maintain 250,000 gallons of fresh and potable water under these conditions and that the smaller capacity reservoir will be more easily maintained.

7. Other suggestions submitted for consideration are as follows:

a. The garbage holding room should be refrigerated.

b. The bakery oven should be changed to electric or low pressure gas.

c. Support induced draft fans and reduced height of stack if possible.

d. Recommend 100% fresh air in autopsy room to eliminate possible odors in return air.

e. Request that consideration be given to the elimination of the central air handling unit, utilizing instead piped chilled water, hot water, and steam to various areas with short runs of duct. By this method the central air handling room and large ducts will be eliminated and more efficient spot control obtained. In addition, the dirt-catching convectors could also be eliminated in the heating system.

FOR THE COMMANDER:

/s/ C. A. Whittle
t/ C. A. WHITTLE
WOJG, USAF
Asst Adj

cc: Comdr 2AF

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

0803

Hq SAF Barksdale AFB La, DAPCG, "Security Responsibility."

DCG (24 Jul 63) 1st Ind

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, 305th Bombardment Wing, MacDill Air Force Base, Fla.
Commander, 306th Bombardment Wing, APO 139, c/o Postmaster, New York, N.Y.
Commander, 800th Air Base Group, MacDill Air Force Base, Fla.
Commander, 98th Air Refueling Sq, MacDill Air Force Base, Fla.

1. Your attention is directed to the basic letter from the Commander, Second Air Force, and to the inclosed letter from the Vice Commander, Strategic Air Command.

2. I cannot emphasize too strongly the necessity for commanders at every level to assume their full share of this major responsibility. Every individual assigned or attached to this command must be cognizant that failure of the Strategic Air Command's mission due to lack of security of our aircraft and support equipment is a very real possibility.

3. In order to insure the success of the security aspect of our mission, you will give this subject your active personal attention.

/s/ H. K. Mooney
/t/ H. K. MOONEY
Brigadier General, USAF
Commander

1 Incl:
n/c

"A CERTIFIED TRUE COPY"
R. A. JOHNSON
2nd Lt., USAF

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, La.

2AFCG 24 July 1953

SUBJECT: Security Responsibility

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

1. A copy of General Power's letter expressing the SAC policy on security responsibility is attached for your information and necessary action.

2. Periodic reports of my Inspector General have cited our security weaknesses and indicate that I must again remind you of your responsibilities for the security of vital equipment and installations.

3. My "Commanders' Notebooks" for February, April, and June make reference to this condition. The April notebook specifically charges the senior commander with security within his command. In addition, Second Air Force Regulation 355-1, 16 March 1953, subject: "Defense, Surface Defense Plans and Operations" points up the responsibilities of senior commanders and their staffs for security and defense planning.

4. I desire that the contents of the attached letter from General Power and this letter be forcefully brought to the attention of all personnel and that you insure compliance with the spirit and the letter of these directives.

/s/ Frank A. Armstrong, Jr.
/t/ FRANK A. ARMSTRONG, JR.
Major General, USAF
Commander

1 Incl:
Ltr fr SAC, File IGISB 380,
Subj: Security of SAC Installations, 20 July 53

"A CERTIFIED TRUE COPY"
(Including Enclosure)
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

COPY

HEADQUARTERS STRATEGIC AIR COMMAND
Offutt Air Force Base
Omaha, Nebraska

IGISB 380 20 Jul 1953

SUBJECT: Security of SAC Installations

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. Review of reports of security inspections, internal defense tests and local ground defense maneuvers indicates a serious deficiency in the security afforded Category I elements of this command.

2. The security program conducted within this command has provided senior commanders with sufficient guidance to establish adequate security systems and procedures to preclude the perpetration of acts of simulated sabotage to the degree indicated in the above reports. The established systems and procedures of the security program cannot succeed unless active command support is made evident to all personnel of the command.

3. The prevalent erroneous idea that air police are the only personnel required to take positive action in preventing security violations, penetration of restricted areas, and acts of sabotage contributes to the seriousness of the situation. The normal law enforcement and security functions of air police squadrons are intended to provide aid and assistance to other units in the security and local ground defense of each installation.

4. The tactical mission of tactical wings and the support mission of air base groups vary to such an extent that an inherent conflict is produced in determining which mission will receive priority. The provisions of AFR 24-1 and supporting SAC directives place the responsibility for the security of each installation upon the installation commander. SAC Regulation 20-15 places the responsibility for accomplishing the tactical mission upon division or single wing commanders as appropriate. In order to achieve a more equitable distribution of effort between the above missions, and since the success of the SAC tactical mission is heavily dependent upon the success of the security mission, the policy of this command henceforth will be that the security of each installation rests with the appropriate air division or wing commander.

COPY

IGIEB
Subject: Security of SAC Installations

5. An immediate survey of all installations will be conducted within your command to determine the adequacy of the existing security program at each installation. Reports of the results of these surveys together with corrective action taken and suggested methods of improving the overall security program will be forwarded so as to reach this headquarters on or before 15 August 1953.

BY ORDER OF THE COMMANDER:

/s/ Thomas S. Power
/t/ THOMAS S. POWER
Major General, USAF
Vice Commander

0807

APPENDIX "D"

0809

0810

MACDILL STATISTICAL SUMMARY -PART I

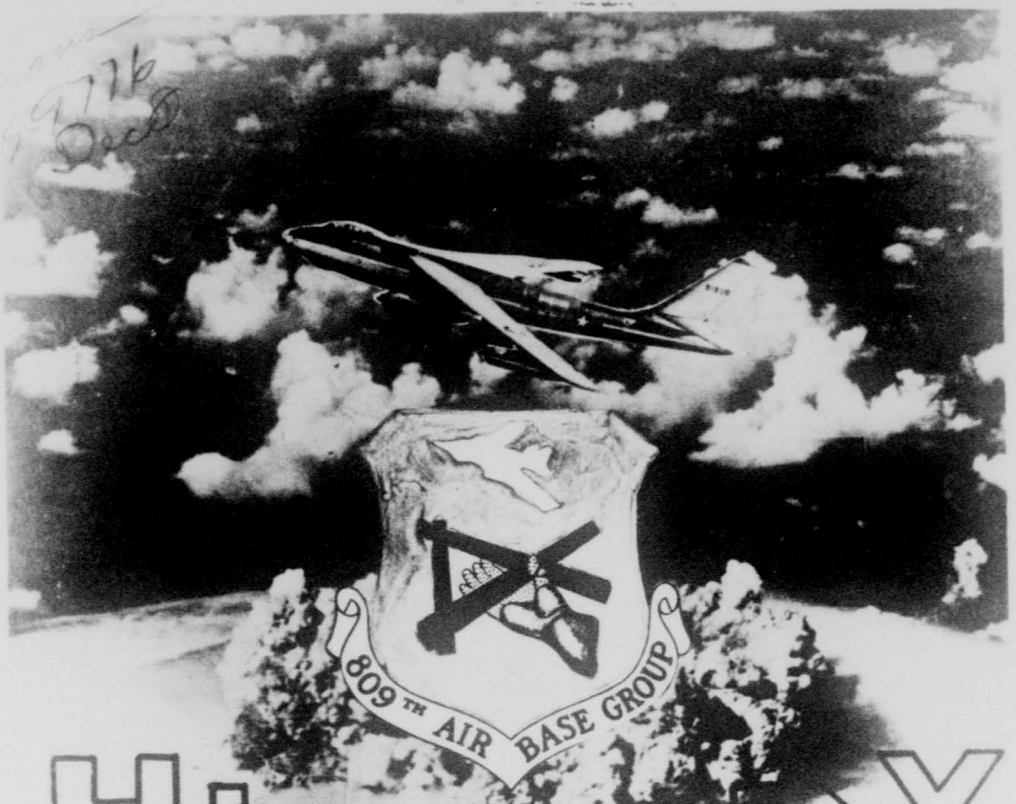
STATION STRENGTH SHEET

FOR PERIOD 1 THROUGH 31 AUGUST 1953

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PFD & PNFD	(F) AVG ASGD	(G) AVG HDI PRESENT
Hq 6th Air Div	OFF	10	14		9	15	10
	AMN	7	9		9	10	9
	CIV	3	3				
Hq 809th AB Gp	OFF	54	57	15	64	58	60
	AMN	215	346	14	340	354	335
	CIV	79	72				
809th Supply Sq	OFF	14	12		7	13	7
	AMN	383	466	6	364	469	343
	CIV	137	138				
809th Mtr Veh Sq	OFF	5	4		3	5	3
	AMN	203	393		296	388	267
	CIV	8	8				
809th AP Sq	OFF	14	12		11	12	9
	AMN	449	453	34	318	459	269
	CIV	1	1				
809th Instl Sq	OFF	8	5		4	6	4
	AMN	301	394		340	391	319
	CIV	169	178				
809th Fd Sv Sq	OFF	7	3		3	3	3
	AMN	372	548		401	550	385
809th Oprs Sq	OFF	37	31	2	28	32	27
	AMN	422	490	2	430	495	414
	CIV	27	23				
8th Crash	OFF	8	2		2	2	1
Boat Flt	AMN	100	115		113	116	108
TOTAL 809TH	OFF	147	126	17	122	131	114
ABG	AMN	2445	3205	56	2602	3222	2440
	CIV	421	420				
740th AF Band	OFF	1	0		0	0	0
	AMN	34	36		31	35	32
7th ALT Chamber	OFF	1	1		1	1	1
Indoc Flt	AMN	11	14		13	14	12
Hq 305TH	OFF	45	47		35	48	36
BM WG	AMN	106	119		106	118	106
	CIV	3	3				
364th Bm Sq	OFF	66	62		58	60	50
	AMN	102	151		146	152	141
365th Bm Sq	OFF	66	63		60	62	55
	AMN	102	154		148	154	142
366th Bm Sq	OFF	66	58		56	57	46
	AMN	102	161		155	164	152
305th A&E	OFF	14	11		9	11	9
Maint Sq	AMN	370	336		315	338	303
305th Field	OFF	7	6		5	6	5
Maint Sq	AMN	423	504		459	497	448
305th Periodic	OFF	5	5		4	5	4
Maint Sq	AMN	221	228		220	218	203
305th Air Ref	OFF	85	78		76	78	75
Sq	AMN	229	252		246	250	232
305th Med Gp	OFF	27	35		29	35	29
	AMN	98	104	1	95	103	89
TOTAL 305TH	OFF	381	365		332	362	309
BOMB WING	AMN	1753	2009	1	1890	1994	1816
	CIV	3	3				

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PFD & PNFD	(F) AVG ASGD	(G) AVG PHY PRESENT
*HQ 306TH	OFF	45	54		14	54	36
BM WG	AMN	106	121		60	120	94
	CIV	3	3				
*367th Bm Sq	OFF	66	61		4	62	22
	AMN	102	123		35	123	65
*368th Bm Sq	OFF	66	61		4	61	20
	AMN	102	120		23	121	63
*369th Bm Sq	OFF	66	59		3	59	20
	AMN	102	113		18	114	53
*306th A & E	OFF	13	14		5	15	7
Maint Sq	AMN	337	352		96	351	158
	CIV	4	6				
*306th Field	OFF	7	8		3	9	5
Maint Sq	AMN	349	406		153	411	260
	CIV	30	34				
*306th Periodic	OFF	5	5		2	5	4
Maint Sq	AMN	175	203		108	204	141
*306th Air Ref Sq	OFF	85	78		6	78	26
	AMN	229	232		28	233	94
306th Avn Sq	OFF	15	13		11	13	11
	AMN	33	41		40	41	38
306th Med Gp	OFF	72	50	47	77	50	59
	AMN	202	202	359	515	205	476
	CIV	55	54				
*TOTAL 306TH	OFF	440	403	47	129	406	210
BOMB WING	AMN	1737	1913	359	1076	1923	1442
	CIV	92	97				
TOTAL 307TH ABG	OFF	1	8		7	8	8
	AMN	4	8		8	8	8
SPECIAL MISSION UNITS							
Det "21" 3944th	OFF	4	2		2	2	2
Radar Scor Sq	AMN	30	31		28	31	27
3908th Strat	OFF	16	30		16	29	13
Eval Sq	AMN	47	58	2	29	54	28
	CIV	1	1				
98th Air Ref Sq	OFF	85	50		33	49	34
	AMN	229	307		257	277	212
TOTAL SAC ORGNS	OFF	1086	999	64	651	1003	701
	AMN	6297	7590	418	5943	7568	6026
	CIV	520	524				
Detachment 1,	OFF	12	11	1	9	12	10
26 Weather Sq	AMN	28	26		25	25	24
Hq 1928 AACS Sq	OFF	13	11		9	11	8
	AMN	120	217	3	175	203	163
	CIV	6	5				
Det 3, 136th Comm	OFF	2	2		2	3	3
	AMN	47	63		61	68	57
C-97-2 Mobile	OFF	1	1		1	1	1
	AMN	21	22		19	22	21
B-47 Mobile	OFF	1	1		1	1	1
Tng Unit	AMN	17	24		21	23	19
7th OSI	CIV	6	6				
TOTAL NON-SAC	OFF	29	26	1	22	28	23
ORGANIZATIONS	AMN	233	352	3	301	341	284
	CIV	12	11				
TOTAL MACDILL	OFF	1115	1025	65	673	1031	724
AFB	AMN	6530	7942	421	6244	7909	6310
	CIV	532	535				
GRAND TOTALS		8177	9502	486	6917	8940	7034

* INDICATES ALL FIGURES ARE AS OF 9 JUNE 53 ITH THE EXCEPTION OF AUTHORIZATIONS.



HISTORY

6th AIR DIVISION

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B.A. Johnson

HISTORY

6TH AIR DIVISION

Including

809th Air Base Group
MacDill Air Force Base

Florida

1 - September - 30

1953

B. A. Johnson
Division Historical Officer
2d Lt. B. A. Johnson

S. E. Wickam
Division Historian
M/Sgt. S. E. Wickam

B. H. Merchant
B. H. MERCHANT
Colonel, USAF
Commander

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APPENDIX

"A"	Documents Arranged As Exhibits
"B"	Photographs

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CHRONOLOGY OF MAJOR EVENTS

1 Sept - Colonel Ernest C. Hardin, Jr., Headquarters, 306th Bomb Wing, placed on Special Duty with Headquarters, 6th Air Division, as Director of Operations, vice Colonel William E. Creer, transferred to Headquarters, 305th Bomb Wing.

2 Sept - Results of USCM Vulnerability Test held 28 August - 2 September were highly unsatisfactory.

3 Sept - Colonel Elliott Vandevanter, Jr., led first flight of 15 B-47's from Tampa to Brize-Norton, England, as "Can Do" outfit began 90 day temporary duty in the United Kingdom, replacing sister 306th Bomb Wing.

Detachment Number One, 305th Bomb Wing, activated as of 0001 hours.

4 Sept - Colonel Michael N. W. McCoy, 306th Bomb Wing Commander, established new unofficial speed record of 9 hours, 13 minutes from Fairford, England, to MacDill as first units of 306th B-47's arrived from 90 days temporary duty.

5 Sept - Captain Augustine C. Trapold, 368th Bomb Squadron, broke Colonel McCoy's east-west Atlantic unofficial record by flying from Fairford to MacDill in 9 hours, 7 minutes. Last of 305th Bomb Wing B-47's departed for England.

6 Sept - Detachment One, 306th Bomb Wing, discontinued as of 2400 hours.

7 Sept - 306th Bomb Wing returned from 90 days temporary duty in United Kingdom as of 0001 hours.

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7 Sept - Captain William T. Paull, 366th Bomb Squadron, 305th Bomb Wing, succumbed to injuries suffered on 28 August, 1953, when he was accidentally catapulted through canopy of T-33 (on ground) and 40 feet into the air.

8 Sept - Conference held concerning MacDill's logistical support of the 2512th Air Force Reserve Specialist Training Center, Drew Park, Tampa, Florida.

9 Sept - All B-29 OQ gunnery ceased at Avon Park Bombing and Gunnery Range, Avon Park AFB, Florida.

10 Sept - Mock-up inspection of a proposed Mark IV life raft held at WIBAC, Wichita, Kansas, with 6th Air Division B-47 Operational Engineering Section personnel in attendance.

Announcement was made of the establishment of a B-47 cadre within the 305th and 306th Bomb Wings earmarked for the 340th Bomb Wing, Sedalia AFB, Missouri.

Lieutenant Colonel (Chaplain) Charles L. Lack assigned duty as Base Chaplain, vice Lieutenant Colonel (Chaplain) Alfred A. Kelsey, transferred to Elmendorf AFB, Alaska. Detachment 2, 3908th Strategic Evaluation Squadron began preparations for the evaluation of B-47 crews.

12 Sept - Special study of the cost of B-47 operations published by Division Comptroller.

14 Sept - Total of 429 airmen were granted early releases from active duty under the provisions of USAF Message AFPMP-4 ALZ ECOM 139/53, dated 7 August, 1953.

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14 Sept - 466th Fighter Squadron, Turner AFB, Ga., arrived for gunnery training.

22 Sept - Concurrent move of 305th and 306th Bomb Wings was completed as of 1109 hours.

24 - 25 Sept - Seven members of Programming Division, AFCAS, Headquarters, USAF, visited MacDill.

24 Sept - Letter published over the signature of Brigadier General H. K. Mooney, 6th Air Division Commander, concerning the "Command Emphasis on Standardization Board Procedure."

26 Sept - Directive issued pertaining to the handling of "Category Baker" messages in the same category as Top Secret material.

B I B L I O G R A P H Y

Letters

Directives

Special Reports

General Orders

Special Orders

Daily Journal

Tampa Morning Tribune

Tampa Daily Times

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CHAPTER ONE

ADMINISTRATION and PERSONNEL

The major event of the month was the concurrent replacement of the 306th Bombardment Wing - pioneer B-47 Stratojet unit of the United States Air Force - in the United Kingdom by the 305th Bombardment Wing.[1] This particular history will not endeavor to record the arrival of the 306th from its 90-day period of temporary duty (TDY) at Fairford, England, or the journey of the 305th to its temporary base at Brize-Norton, England, as the histories of the respective Wings will adequately record the events as they transpired.

1. History 6th Air Division, August 1953, pp 17-19.

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The 6th Air Division was responsible for monitoring the overall temporary duty programs of both Wings, while the 809th Air Base Group carried out its mission of support by furnishing certain personnel to the 305th.[2]

Administrative action by 6th Air Division included the publication of necessary orders that activiated Detachment Number One, Headquarters, 305th Bombardment Wing effective 0001 hours, 3 September, 1953;[3] placed the main body of the Wing, less Detachment One and the 305th Medical Group, on temporary duty for approximately ninety (90) days effective 0001 hours, 3 September, 1953;[4] discontinued Detachment Number One, Headquarters, 306th Bombardment Wing as of 2400 hours, 6 September, 1953;[5] and returned the 306th Wing, less Detachment One, to their home station of MacDill Air Force Base, Florida, as of 0001 hours, 7 September, 1953.[6]

The 809th Air Base Group received a message of appreciation for its efforts in supporting the two Wings from Major General Frank A. Armstrong, Jr., Commander of the Second Air Force, Barksdale Air Force Base, Louisiana. His personal message to Colonel B. H. Merchant, 809th Air Base Group Commander, read as follows:

> ". . . The return of one wing from TDY concurrent with the departure of the other wing located at the same station (Ed

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2. Op. cit. pp 9-10.
3. GO 19, Hq 6AD, 28 August 1953. Exhibit 1.
4. GO 20, Hq 6AD, 1 Sept., 1953. Exhibit 2.
5. GO 22, Hq 6AD, 4 Sept., 1953. Exhibit 3.
6. GO 23, Hq 6AD, 6 Sept., 1953. Exhibit 4.

note: see page 1 of this report) has been unprecedented in Air Force history. It is quite obvious to all that these missions could not have been undertaken without the wholehearted support of your organization. Please extend my personal appreciation to all members of the 809th Air Base Group for the part they played in assuring the success of these missions."

In relaying the Second Air Force Commander's personal appreciation to the 809th, Colonel Merchant added, ". . . The job could not be accomplished without the exceptional devotion to duty which has been displayed by all concerned. I am sure that each member of this organization will derive personal satisfaction from the knowledge that his efforts are recognized and thoroughly appreciated."[7]

In order to ". . . progress as rapidly as possibly toward the ultimate goal of being able to determine, within available cost resources, the cost of operating a major organization such as Air Base Group . . .," the Base Comptroller, Major Homer C. Oakes, requested that three types of sub-accounts be eliminated from consideration in the SAC Air Base Group Rating System: 59,900 Command Training, Other; 72,800 Permanent Change of Station - Military; and 79,400 Permanent Change of Station - Civilian. The request was based on the fact that the Air Base Group Commander has little, if any, control of such costs and usually there is no benefit received from the activities from which the costs are computed. The request was based upon Item Number 12, Strategic Air

7. Ltr, Hq 809th AB Gp to Staff Offs and Sq Comdrs 809th AB Gp, "Message of Appreciation," 10 Sept., 1953, MCDCCO 201.22. Exhibit 5.

Command (SAC) Technical Pamphlet 170-3, "SAC Air Base Group Rating System," pertaining to Air Base Group Costs, and a SAC letter, COB-1A 319, "A & E Monthly Expense Report," 4 August, 1953.[8]

MacDill achieved 78 percent of the maximum score available for August, 1953, under the provisions of the SAC Management Control System, Air Base Groups; this figure was three percent below the predicted score made by the Base Comptroller.[9] For September, the Comptroller predicted a maximum score of 78 percent.[10]

According to recapitulation of activities of the "SAFE WHEELS for '53" Ground Safety Campaign (1 May through 7 September)[11] the 1953 overall program organization and execution was "far more satisfactory" than the 1952 effort. But, weak spots developed in the last month of the 1953 drive. Mr. George White, Ground Safety Director, made several recommendations that would apparently alleviate the weaknesses in future campaigns. He suggested that the "Safe Wheels" Committee members be replaced about three times during a drive of 180 days duration. Also recommended was that a field grade officer be appointed as project officer in order to stimulate and pressure organizations whenever their support of the drive appeared to be weakening. Another improvement suggested was that regular

8. Ltr, Hq 6AD to Comdr, SAC, "SAC Air Base Group Rating System," 14 Sept., 1953, MCDK 310.1.
9. History, 6th Air Division, August 1953, page 8.
10. Rpt, "Predicted Scores," September 1953, 809th Air Base Group, MacDill AFB, Fla. - SAC Management Control System, Air Base Group," September, 1953, prep by Base Comptroller. Exhibit 6.
11. History, 6th Air Division, [illegible] 6.

monthly meeting be held with all government vehicle operators. This individual safety contact was deemed advisable since a large percentage of operators came from units other than the Motor Vehicle Squadron; indications were that the vehicle safety indoctrination of the former drivers ceases upon graduation from the base drivers' training school.

Final figures of the "Safe Wheels" campaign disclosed that the 306th Bomb Wing scored an outstanding record of only two disabling injuries; the 305th recorded three deaths and two disabling injuries, that resulted from private vehicle operation, and one government vehicle accident; the 809th Air Base Group had six disabling injuries in private vehicle accidents, and nine government vehicle mishaps.[12]

One private motor vehicle-caused fatality was recorded during the month of August, plus 11 disabling injuries to military personnel.[13] The death was that of Captain R. J. Woodall, 305th Periodic Maintenance Squadron, at 2330 hours on 28 August, near Union Springs, Alabama. The deceased had been released from active duty two days prior to the accident; however, because of administrative regulations, he was under military control until such time as he arrived at his home, and therefore his death reflected against MacDill.

Notification was received that the 98th Air Refueling Squadron[14] would be inactivated 25 November, 1953, and the "personnel and equipment

12. Ltr, Hq 6AD to Comdr SAC, "Final Evaluation - "Safe Wheels for 53," 14 Sep 53, MCDPGS. Exhibit 7.
13. Rpt, "Proceedings of Ground Safety Council," September 1953, prep by Executive Committee of the Ground Safety Council, Flying Safety Division, Hq 6AD, September 1953. Exhibit 8.
14. History, 6th Air Division, August 1953, page 7.

will be absorbed to the greatest extent practicable by the 68th Air Refueling Squadron Medium," which would be activiated on the same date.[15] The action was scheduled to occur at Lake Charles Air Force Base, La., thus foreshadowing transfer of the98th from MacDill to the Louisiana installation sometime between 1 October and 25 November.

Thirteen additional cases totaling $2,163.76 of possible fraud against the government that involved erroneous payment of dependent travel pay[16] were reported by the Air Provost Marshal's investigative section. Of these, one involved a major, another a captain; nine master sergeants were involved, as were one technical sergeant, and one staff sergeant. Investigation of these cases was continuing at month's end.[17]

PERSONNEL

The expanding B-47 program within Second Air Force will result in the training of a Stratojet cadre by the 305th and 306th Bombardment Wings at MacDill for the 340th Bomb Wing, presently located at Sedalia Air Force Base, Missouri. Foundation for this training was announced by SAC in August,[18] forwarded by Second Air Force during the first part of September,[19] and initial operation began by 6th Air Division the

15. GO 63, Hq SAC, 3 Sept., 1953.
16. History, 6th Air Division, August 1953, pp 3-6.
17. Ltr, Hq 6AD to Comdr 2AF, "(Uncl) MDAFB-53-170 RCS AF-L-13 (SAC-1) (Part IA)," 16 and 18 Sept., 1953, MCDCPM 333.5.
18. Ltr, Hq SAC to Comdr 2AF, "B-47 Cadre Requirements," 21 Aug 53, DPIMD 320. Exhibit 9.
19. 1st Ind, Hq 2AF to Comdr 6AD, Subject as above, 10 Sept., 1953. Exhibit 9A.

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latter part of the month, with allocation of cadre spaces divided between the 305th and 306th Bomb Wings. Each unit was allotted spaces of 15 officers and 131 airmen; these spaces being above the amount required by Table of Organization (T/O) and similar manning plans.

A B-47 pilot instructor team composed of three officers from the 306th and three from the 305th Bomb Wings were scheduled to be reassigned to the 308th Bomb Wing, Hunter Air Force Base, Ga., as of 1 November 1953, to assist that unit in its conversion to Stratojets.[22] This movement was in compliance with the policy of General Curtis E. LeMay, Commander of the Strategic Air Command, that "six instructor pilots be made available to each converting or activating B/RB-YRB-47 wing." Both the Second and Fifteenth Air Forces (the latter headquarters is March Air Force Base, Calif.) were instructed to furnish such teams; the Second to withdraw instructor personnel from 6th Air Division to make three, six-man teams while the Fifteenth Air Force formed four, six-man teams from within its resources. Such personnel, upon completion of the accelerated B-47 activation program were promised assignments of their choice, commensurate with their grade and experience. These who might be dissatisfied with their ultimate assignment were

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20. 2nd Ind, Hq 6AD to Comdrs 305th and 306th Bomb Wings, Subject as aforementioned. Exhibit 9B.
21. Manpower Notice No. 32, Hq 809th AB Gp to Comdr, Det 1, 305th Bomb Wing; Comdr, 306th Bomb Wing; D/Pers, 6AD; and Base Pers, 809th AB Gp, "B-47 Training Augmentation," 21 Sept.,1953. Exhibits 10 and 10A. (305th and 306th Wgs respectively)
22. TWX, Hq 2AF to Comdr 6AD, 2AFPEA 0100, 1 Oct., 1953.

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to be authorized the SAC Commander to discuss the problem. Instructor pilots who had been withdrawn previously from 6th Air Division tactical units and reassigned to the 22nd, 44th, 301st, 303rd Bomb Wings, and the 801st Air Division were also included in this category.[23]

In addition to the aforementioned group for the 308th Bomb Wing, both MacDill Wings were alerted to nominate three instructor pilots each for reassignment on or about 1 January, 1954. The losing organizations were informed by Division that a requisition had been submitted for 18 replacement B-47 pilots to cover the losses, including six earmarked for the 340th.[24]

A total of 429 airmen were released from active duty on 14 September under the provisions of USAF Message AFPMP-4 ALZICOM 139/53, 7 August 1953, according to Lieutenant Colonel William B. Hoynes, Base Director of Personnel.[25] The criterion for the early release was the completion of three or more years of active duty by date of discharge. In addition, 265 airmen applied for early release under new criteria (minimum of two years active duty).[26] Of this number, 148 men were from the 809th Air Base Group; 79 were from the 306th Bomb Wing; 11 from the 98th Air Refueling Squadron; 11 from the 306th Medical Group; eight from the 740th Air Force Band; six from the 305th Medical Group;

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23. TWX, Hq 2AF to Comdr 6AD, 2AFO 3900, 31 Aug., 1953.
24. Ltr, Hq 6AD to Comdrs, 305th and 306th Bomb Wings, "Selection of B-47 Instructor Pilots," 9 Sept., 1953, MCDPOB 370.
25. Daily Journal, Hq 809th AB Gp, 24 Sept., 1953.

and two from the 7th Altitude Chamber Indoctrination Unit.[27] The general reason for the "Reduction in Force" (RIF) program[28] was explained by SAC as:[29]

> "During Fiscal Year 1954, the Air Force is confronted with a decreasing military personnel authorization and an anticipated low loss rate of airmen. In turn, prospective capability from the Fiscal Year 1955 less rate versus procurement capability indicates an inability to maintain authorized strength. Because of this situation, it has been deemed absolutely essential to expedite the voluntary early release of normally anticipated non-reenlistees due for separation in Fiscal Year 1955 so that their loss will occur during Fiscal Year 1954 when procurement capability is adequate."

Lieutenant Colonel (Chaplain) Charles L. Lack arrived on 10 September from Biggs Air Force Base, Texas, to assume the duties of Base Chaplain. He filled the vacancy created by the departure on 25 August of Lieutenant Colonel (Chaplain) Alfred A. Kelsey for a similar post at Elmendorf Air Force Base, Alaska.[30]

Chaplain Lack[31] was Base Chaplain at the 810th Air Base Group at Biggs prior to his arrival at MacDill. He served with the Third Air Division from November, 1948 to June, 1950. He also was a member of the 36th Pursuit Group and the 48th Air Base Group from June, 1941 to October, 1953. The Chaplain received his original commission in the Reserve Officers Training Corps in 1930; his permanent and present date of rank is 21 December, 1949. He majored in English, German, and

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26. TWX, Hq USAF to All Commands, AFPMP-4 AIMAJCOM 820/53, 14 Sept., 1953.
27. Daily Journal, Hq 809th AB Gp, 29 Sept., 1953.
28. History, 6th Air Division, August 1953, page 10.
29. TWX, Hq SAC to Comdr 6AD, DPPAC 28132, 21 Sept., 1953.
30. History, 6th Air Division, August 1953, page 12.
31. See Photograph, Appendix "B."

Church History at Gettysburg College, Gettysburg, Pa., 1925-1930, from which he matriculated with a Bachelor of Science Degree in 1930. Three years later he received his ministerial diploma from Gettysburg Theological Seminary, 1930-1933. Chaplain Lack graduated also from the Army Chaplain School in December, 1943, and from the Chaplain Transitional Training Course in June, 1945.

Colonel Ernest C. Hardin, Jr., Headquarters, 306th Bombardment Wing, was placed on Special Duty with Headquarters, 6th Air Division on 1 September for duty as Director of Operations,[32] filling the post created by the transfer of Colonel William E. Creer to the 305th Bomb Wing.[33]

Strength figures for 1-30 September, 1953:[34]
(O-Officer; A-Airmen; C-Civilian)

SAC Units	Auth	Asgd	Atchd
Hq 6th Air Division	10 (O)	12(O)	
	7 (A)	9(A)	
	3 (C)	3(C)	
809th Air Base Group	147 (O)	121(O)	19(O)
	2445 (A)	2925(A)	119(A)
	423 (C)	414(C)	
305th Bomb Wing	381 (O)	366(O)	32(O)
	1753 (A)	1995(A)	358(A)
	3 (C)	2(C)	
306th Bomb Wing	425 (O)	392(O)	6(O)
	1679 (A)	1918(A)	32(A)
	92 (C)	94(C)	
307th Air Base Group	1(O)	8(O)	
	4(A)	8(A)	

32. SO 243, Hq 6AD, 23 Sept., 1953, par 20.
33. History, 6th Air Division, August, 1953, page 11.
34. Rpt, "MacDill Statistical Summary, Part I," for period 1 - 30 September, 1953, prepared by Base Stat. Svc. Office.

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Special Mission Units	Auth	Asgd	Atchd
Det "21" 3944th RBS Sq	4 (O)	2 (O)	
	30 (A)	33 (A)	
3908th SESq	16 (O)	30 (O)	
	47 (A)	43 (A)	
	1 (C)	1 (C)	
98th AR Sq	85 (O)	70 (O)	
	229 (A)	376 (A)	
TOTAL SAC ORGNS	1071 (O)	1002 (O)	57 (O)
	6239 (A)	7350 (A)	511 (A)
	522 (C)	514 (C)	
TOTAL NON-SAC ORGNS	29 (O)	25 (O)	1 (O)
	233 (A)	349 (A)	3 (A)
	12 (C)	10 (C)	
TOTAL MAC DILL AFB	1100 (O)	1027 (O)	58 (O)
	6472 (A)	7699 (A)	514 (A)
	534 (C)	524 (C)	
GRAND TOTALS	8106	9250	572

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CHAPTER TWO

OPERATIONS and TRAINING

According to a study prepared under the direction of Major Homer C. Oakes, 6th Air Division Comptroller, the total MacDill Air Force Base cost per B-47 per flying hour is $1,592.

This, and subsequent figures, was based upon the combined experience of the 305th and 306th Bombardment Wings from December, 1952, through April, 1953.

The $1,592 figure per B-47 per flying hour included the hourly attrition cost per aircraft of $960 and hourly engine replacement cost per aircraft of $122 added to a grand total cost per B-47 per flying hour of $2,674 for the period [illegible] study.

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Direct operating cost per hour ranged from $822 for 10 flying hours per B-47 to $398 for 40 hours per aircraft. The study disclosed that combat crew training requirements could be accomplished at an hourly rate of $434 per aircraft; this cost being equivalent to the hourly cost in a month in which 32 hours per aircraft are flown, based on the assumption that a Stratojet wing would have its full complement of B-47's.

The B-47 direct operating cost per hour showed an inverse relationship to the monthly total hours flown, as the total flying hours increased from 1,152 in December, 1952, to 3,002 in April, 1953. The hourly B-47 direct operating cost decreased from $650 in December to $413 in April.

Fuel and oil cost per hour for each B-47 averaged $256; the fuel consumption for B-47's was computed at 1,708 gallons per flying hour. This figure was comparable with the 1,759 gallons consumed hourly as indicated by Air Force Letter 150-10, Peacetime Planning Factors, 2 February, 1953.

Based upon 40 changes during the five-month period, as reported in removal of aircraft engines or less report (AF Form 250), the J47-GE-23 and J47-GE-25 engines average 92 flying hours prior to removal for overhaul as compared with the standard of 100 flying hours as listed in SAC Manual 150-1, Program and Manpower Planning Factors, October, 1952. Based upon 31 changes made during this period, the J47-GE-11 engines averaged 255 flying hours prior to removal for

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overhaul, as compared with the standard of 175 hours listed in SAC Manual 150-1. Engines of this type were gradually replaced during the five-month period by the J47-GE-23 and J47-GE-25 type.

This cost data was obtained from the experience gained by the 305th and 306th Wings for the period of December, 1952, through April, 1953, during which time combat crew training was the predominant mission and activity. Included in the compilation of B-47 direct operating cost were fuel and oil expenditures; payroll of flying military personnel; the cost of military and civilian payrolls plus locally purchased and centrally procured supplies costs for B-47 organizational, field maintenance, periodic maintenance, and armament and electronics maintenance. Fuel costs were extracted from aviation fuel issues and defuels report, and were costed at 15 cents per gallon for JP-4 fuel and 63 cents per gallon for oil. The direct payroll expenses for flying military personnel operating B-47's were derived from the actual man-days of personnel for the five-month period in both Wings and costed at the standard cost established in Air Force Letter 177-4, USAF Manual of Cost Reporting. The B-47 maintenance supply expenses included in the attached study represented only the supply costs that were actually entailed during the five-month period, and did not include supply expenses of issues prior to that period that were in inventory. The supply expenses for direct operating cost excluded certain non-expendable items that were costed when salvaged and that were included in the total base support cost.

During this period that was studied, the determination was made that no direct correlation existed between maintenance supply cost and hours flown; therefore, in order to project hourly cost from 10 to 40 flying hours per month, only fuel and oil cost was taken as a determinable variable; all other direct cost was assumed as fixed.

The initial capital cost of one B-47 with combat configuration (K-System installed) was assumed to be three million dollars ($3,000,000). This figure was employed in the computation of the hourly attrition cost of $960 per flying hour. The attrition rate of 32 aircraft per 100,000 flying hours for which aforementioned attrition cost was derived, is listed in Air Force Letter 150-10, Program and Manpower Peacetime Planning Factors, 2 February, 1953. The attrition factor included losses due to flying accidents, ground accidents, fair wear and tear, and natural phenomena.

All of the replaced engines that were considered in subject study were assumed to be either depot-rebuilt or repaired at a cost of $20,000 per engine. Local engine work was included in the direct operating costs. Engine replace cost per hour of $122 was obtained by dividing the total number of hours flown during the five-month period (11,650 hours) by the total replacement cost of $1,420,000 (71 engines replaced by the depot in the period multiplied by $20,000).

A factor of 1.04 hours was required to accomplish one item of

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combat crew training, according to a determination made from the five-month training experience as reported on Air Training Report, Bombardment Crew (1-SAC-T12) and from Air Force Form 11OA.

A figure of 20 flying hours per month was considered to be a possible flying-hour program, since the one year's experience (July, 1952-July, 1953) as reported in the SAC Summary of Operational Data, 1 July, 1953, indicated that the average hours flown per B-47 per month was 20.6. This figure was used as one of the points in projecting the increase in quality of combat crew training through the increase of flying hours.

The Air Base Group costs that made no contribution (direct or support) to B-47 operations at MacDill were excluded from the study; Reserve components, special missions at Homestead AFB, Fla., and asset and clearing accounts.[35]

The concurrent move of the 306th Bombardment Wing from Fairford, England,[36] to MacDill, and the 305th Bombardment Wing from MacDill to Brize-Norton, England, was completed as of 1109 hours, 22 September, with the arrival of the last Military Air Transport Service (MATS) aircraft bearing 306th personnel and equipment from the United Kingdom at the completion of their 90 days temporary duty (TDY)

35. Rpt, "Summary Cost of B-47 Operations," 12 Sept., 1953, prep by 6AD Comptroller. Exhibit 11.
36. History, 6th Air Division, August 1953, page 19.

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under the provisions of Second Air Force Operations Order 26-53.[37]

The historical event of two pioneer Stratojet Units making a simultaneous two-way exchange between the United States and an overseas base was highlighted by the achievement of Colonel Michael N. W. McCoy, 306th Commander, on 4 September as he sliced 40 minutes off the old unofficial England-Tampa non-stop jet speed record by streaking over the estimated 4,495-mile route in the unofficial time of 9 hours, 13 minutes for a new unofficial speed mark of 508.8 miles-per-hour.[38] The old unofficial mark of 9 hours, 53 minutes had been established by Colonel Elliott (Pete) Vandevanter, Jr., 305th Commander, on 4 August, 1953.[39]

Flying with Colonel McCoy in the lead aircraft of the first element of 15 B-47's were Major James Gallagher and Captain Clyde Leffingwell. An estimated 2,500 manhours were spent on the washing and waxing of the sleek metal exterior of the aircraft in order to attain maximum speed.

But Colonel McCoy's record did not last long, as on 5 September Captain Augustine C. Trapold, B-47 commander of the 368th Bomb Squadron, zoomed across the Atlantic in 9 hours, 7 minutes. Other crew members of the record-making "Tampa Tempest" were Lieutenant Colonel Benjamin B. Klose, and Captain Donald Jagger, all of the 368th.[40] Colonel Klose was the aircraft commander of the B-47 that established the

37. History, 6th Air Division, May 1953, pp 22-37.
38. Daily Times (Tampa, Fla.), 4 Sept., 1953, page 1.
39. History, 6th Air Division, August 1953, pp 17-19.
40. Morning Tribune (Tampa, Fla.), 6 Sept., 1953, page 1.

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then new unofficial mark of 5 hours, 22 minutes from Limestone Air Force Base, Maine, to Fairford, England, on 6 June, 1953.[41] That record was shattered on 28 July by Colonel Vandevanter who made the flight over the same route in 4 hours, 14 minutes (unofficial time).[42]

On 5 September, a near accident occurred when the aircraft piloted by Captain Robert Harris of the 369th "Fightin' Bitin'" Squadron, developed a cracked canopy at 35,000 feet altitude over the North Atlantic when one hour's flight away from England. The B-47 descended to a much lower altitude because of the hazardous condition, thereby consuming considerable more fuel. By the time the aircraft had reached Presque Isle, Maine, the crack had gone along the full length of the canopy. After a second mid-air refueling at that point, the aircraft continued in flight until it was 40 miles out of Boston, Mass., when one engine exploded, and caused the other to also explode. The aircraft then limped back to Limestone AFB, Me., after the fires were extinguished. With Captain Harris were Captain David M. James, Captain Sam Smith, and "Nifer Naill," a Scottie pup belonging to Captain James. "Nifer," which is Welsch for "Number One" was credited with being the "good luck" charm that saved the aircraft.[43]

The first flight of 15 B-47's of the 305th Bomb Wing took off early in the morning of 3 September, with Colonel Vandevanter

41. History, 6th Air Division, June 1953, page 11.
42. History, 6th Air Division, July 1953, pp 9-10.
43. Morning Tribune (Tampa, Fla.), 6 Sept., 1953, page 1.

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leading the flight.[44] The final element left two days later.[45]

Brigadier General H. K. Mooney, 6th Air Division Commander, and Colonel Robert E. Kimmel, Division Director of Materiel, accompanied the 305th on its journey, and remained in England until about 20 September in assisting the unit.[46]

For further and more complete details concerning this joint movement, the reader's attention is invited to the 305th and 306th Bomb Wing histories for September, 1953.

Lieutenant Colonel Harry W. Robb, Headquarters, 6th Air Division, who served at Limestone Air Force Base, Maine, as Strategic Air Command Senior Comptroller during the movement of the 306th return to the Zone of the Interior from United Kingdom, in accordance with Second Air Force Operations Order 71-53, 15 August, 1953, issued a rather unfavorable report concerning activities at that base in connection with the execution of the operations order.

According to his final report,[47] "communications at Limestone Air Force Base are inadequate." He commented that the switchboard for the "long line" was inoperative because of "long standing lack" of relay switches. The most advantageous location for the Control Team would be in Base Operations; however, the normal "long line"

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44. Morning Tribune (Tampa, Fla.), 3 September, 1953, page 1.
45. Morning Tribune (Tampa, Fla.), 6 September, 1953.
46. Daily Journal, Hq 809th AB Gp, 4 Sept., 1953.
47. Ltr, Hq 6AD to Comdr SAC, "Final Report from SAC Senior Controller, Limestone AFB, Me.," 16 Sept., DOP 319.1. Exhibit 12.

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terminal through Eighth Air Force (Headquarters at Carswell Air Force Base, Texas) was not available, therefore all calls had to be made from or relayed to the terminal which was located in the Wing Headquarters Building Control Room, approximately one mile distant.

A direct wire terminal to SAC Headquarters at Offutt Air Force Base, Omaha, Neb., was located in Base Operations at Limestone; the request for its activation was made and authorized Friday by SAC but the wire was terminated without notice to the Controller the following Saturday noon. Urgent requests for its reactivation were not granted, with resultant delay and considerable inconvenience being caused to the Control Team for communications other than the submission of routine reports. The Control people had to be available 24 hours a day during the four days of aircraft movement, and there were insufficient personnel to continuously man all the posts.

Colonel Robb wrote that TWX messages were consistently slow in arriving - even those that carried Operational Immediate precedence; thus telephone or telecon had to be utilized for any communications that required a quick answer and/or discussion.

The Control Team needed details of tanker operations in the area plus the movement of the 306th B-47 and support aircraft, since queries from SAC, and any emergency variations of the 306th flight plans required knowledge and decisions by the Senior Controller.

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Strike reports from the air refueling tanker were not received at Limestone for relay to SAC as planned in 2AF Operations Order 71-53. The Senior Controller's message to Westover Air Force Base, Mass., requested that the strike reports be sent by radio rather than by TWX summary at the end of each day; however, the results of that request were negative.

Newspaper wire services from Portland, Me., and Boston, Mass., continuously called day and night for information regarding the various flights of aircraft. Bitterness mounted partly as the Senior Controller, with only the instructions from the operations order as a guide, could not satisfy the press' requirements. Some relief was obtained by contacting Lieutenant Colonel Roads Tilley, SAC Public Information Officer; however, as there was no way of determining what information had previously been released, the Controller was unable to give the latest developments concerning the stock releases.

Also noted in the report was that numerous changes in communications procedures for B-47 operations were somewhat confusing from the views of planning, briefing, and execution.

Other than for communications difficulties, base facilities at Limestone were adequate and support was excellent even with the operation coming over a weekend.

Colonel Robb recommended "that a prototype Control Room for operations of this type be established as a requirement and vigorously supported by SAC supply-wise." He termed communications by "long

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line," TWX, telecon, air-ground and point-to-point radio as "basic requirements." It was further recommended that the Control Room be located in Base Operations, thus giving ready access to the information and facilities contained thereat and to the Control Tower in event of aircraft emergencies. Sleeping facilities should be provided adjacent to the Control Room for 24-hour instant availability of supervisors during extensive operations such as the movement of B-47's, KC-97's, and F-84's.

Also suggested was that officer on duty in the Headquarters SAC Control Room "not only have all Operations Orders and information concerning the operation on hand for ready reference," but they also be given the authority to activate or authorize any available methods of communications that would expedite reporting and/or controlling the operation at any hour, any day of the week.

It was further recommended that the communications equipment and supply capability be predetermined for every unit involved in the operation and that the Communications Plan be issued as late as permissible prior to the start of the operation in order to eliminate as many planning changes as possible. In addition, a communications officer from the Planning Staff be a member of the Control Team to observe communications; especially if the Control Team were to be located at a station designated as the primary communications control

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station for air-ground reporting as was Bermuda for the F-84 flight to North Africa.

The Senior Controller concluded his recommendations with the promise that copies of controlled press releases be sent to the Control Team to be used as a basis for releasing to wire services current information relative to the progress of the mission. Of course, the Team would be advised of the necessary security restrictions relative to the release of information.

In compliance with instructions received from Headquarters, Second Air Force,[48] Captain Clarence J. Westhoff, Base Communications Officer, issued a directive pertaining to the control of "Category Baker" (air-to-ground) messages. "Category Baker" messages are those communications which are encoded by means of AFSAL 5104; they are to be handled, stored, and safeguarded in the same manner as Top Secret messages.

According to the local directive,[49] the Base Cryptographic Section will be held responsible for the monitoring and safeguarding of such messages arriving on the station. "Pony circuits" (an inter-base circuit between 1928th AACS, Base Operations, Radio Operations, Base Communications Center, 305th and 306th Bomb Wing Operations,

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48. Ltr, Hq 2AF to Comdr 6AD, "(Unclassified) Handling of Category B aker Messages," 3 Sept., 1953, 2AFOED 311.
49. Ltr, Hq 809th AB Gp to D/Ops 6AD; Comm Off, 305th and 306th Bomb Wings; Base Ops Off, 809th AB Gp; Comdr, 1928th AACS Sq; Cryptosecurity Off, 809th AB Gp; Adj, 809th AB Gp; and Comdr 2AF (Attn: Comm-Elect), Subject as above, 26 Sept., 1953. Exhibit 13.

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Headquarters, 6th Air Division Control Room, and Airway Center) will be used by receiving units to transmit Category Baker messages to the Base Communications center in the original form (encoded) as received. Other organizations or sections on the pony circuits will not be permitted to receive or decode this type of message. The Base Cryptographic Section will assign serial numbers for this type of messages; this section will also maintain the encrypted traffic volume report.

Decoding of Category Baker messages will be done by Base Crypto, with a clear text copy delivered to the addressee. According to the directive, the Crypto section will, during normal duty hours notify the addressee who, in turn, will dispatch an armed courier to obtain and deliver the subject message. At times other than during normal duty hours, clear texts of messages will be delivered directly to the 6th Air Division Control Room Officer by crypto personnel.

A classified material destruction report will be prepared in duplicate by the addressee, and the original copy submitted to the Base Crypto section on all messages received during the month; subject report will be due on the third day of the month following the reported period. Each copy of all Category Baker messages will be accounted for. Making of additional copies of messages received will require the approval of the Cryptosecurity Officer.

Specific instructions were outlined for the Base Cryptographic Section: The clear text will be copied on a separate sheet of paper when decoding such type messages, and not written on the coded text

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copy; files of coded text will be maintained for a period of one month, then destroyed; clear text copy will not be retained by the Crypto section; any messages decoded by Category Baker System will be assigned a minimum security classification of Confidential, and will be handled and stored as Top Secret material.

Headquarters, Second Air Force outlined the four phases required for administering standardization checks in accordance with Second Air Force Regulation 51-7, (Flying Training - Standardization Crew Activities) 30 January, 1953, for all units equipped with B-47 aircraft. Phases I and II were to be accomplished prior to III and IV.[50]

The first phase consisted of a written examination divided into "proficiency" and "emergency procedures," with separate grades posted on the Standardization Activities Chart (2AF Form 59).

Phase II consists of aircraft commanders and co-pilots demonstrating their proficiency in the execution of emergency procedures to the maximum possible extent in the flight simulator.

The third phase is a bomb team check. It is accomplished by all three crew members planning a mission, including refueling transition and instruments for the aircraft commander; and, on actual bomb release or radar bomb scoring (RBS) run, celestial navigation and radar procedures for the observer. Preflight of the aircraft up through the starting of the engines will be completed by the normal crew. At this point the standardization crew aircraft commander will take the co-pilot's seat, while the latter remains on the ground. The mission

50. Ltr, Hq 2AF to Comdr 6AD, "Periodic Standardization Checks (B-47 Type Aircraft)," 25 Sept., 1953, 2AFOTS 353.

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will be completed with the standardization crew aircraft commander and observer checking the procedures of the crew aircraft counterparts.

The fourth phase is a co-pilot check administered by the standardization co-pilot. This phase will include celestial navigation, gunnery, refueling, and atomic weapon procedures. The crew co-pilot will be specifically checked on atomic weapons preflight, IFI*, IFE**, assisting the observer in celestial navigation, gunnery, and in-flight refueling (IFR) procedure. The standardization co-pilot will, on this flight, evaluate also the aircraft commander, co-pilot, and observer on crew coordination in general.

A practice atomic unit will be loaded on the aircraft, with the leading coordinated by the squadron with the Wing Special Weapons Officer at least one day before the flight so that hoists may be installed in the aircraft and the aircraft wiring may be completed. The leading will be done at the aircraft's normal parking position on the day of the flight. Post loading will be completed by an armament and electronics (A&E) team not later than 45 minutes prior to station. The crew will report to the aircraft two hours and 45 minutes prior to take-off time. The additional 45 minutes will be used to accomplish all standard operating procedures (SOP's) required in connection with atomic missions. After landing, the aircraft will be taxied to the parking area where the flight crew will perform a post-flight check on the unit. Off-loading the unit

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* (In-Flight Insertion)
** (In-Flight Emergency)

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or making arrangements for a security guard will be the responsibility of the Armament and Electronics squadron.

Units not having a bombing capability will adjust this phase to meet their individual requirements for the co-pilot.

The various unit commanders were advised that their final evaluation should include, only the comments on this procedure, but also make recommendations for, additions, deletions, or major changes to this procedure. Second Air Force requested that an evaluation report be submitted when sufficient standardization checks had been made to properly evaluate the outlined procedure.

An "operational immediate rush" directive was received from the immediate parent command relative to certain Standardization Board procedures that required immediate compliance.[51] One instance for this compliance would be that of giving a crew a "stand board" check as prescribed in paragraph 4h, SAC Regulation 51-19, (Flying Training - Minimum Requirements for Initial Check-Out and Recheck of Aircrews and Aircrew Members), 8 August, 1952, on their next scheduled flight. As this message from Second Air Force was termed retroactive, in the event that a combat had received a change since the last "stand board" check, a new check would have to be accomplished on the next scheduled flight unless two or more flights had been flown since the last crew change and the unit had demonstrated to the Wing Commander's satis-

51. TWX Hq 2AF to Comdr 6AD, 2AFO 1313, 11 Sept., 1953

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faction their ability to adequately handle all emergency procedures. This action, according to Second Air Force, required precedence over normal checks.

This thought of Standardization Board checks as applied to emergency procedures was implemented by a directive from Brigadier General H. K. Mooney, 6th Air Division Commander,[52] based upon a Second Air Force teletype,[53] that directed the attention of certain commanders to the "deficiencies disclosed during an investigation of a recent SAC aircraft accident which indicated sloppiness in approving clearances, maintenance, Stand Board checks, emergency procedures, and bail-out procedures." Colonel Hewitt T. Wheless, Second Air Force Director of Operations, followed up the teletype with a call to General Mooney in which the concerns were expressed of General Frank A. Armstrong, Jr., Second Air Force Commander, with the lack of attention paid to the procedures in this area by the operating units involved in the accident.

The mishap occurred at Tucson, Arizona, (at an unspecified date and involving unspecified aircraft, according to cited letter) and involved an aircraft that experienced an engine fire following take-off. The resultant confusion indicated a serious lack of awareness of emergency bail-out procedures, particularly on the part of the co-pilot of the aircraft concerned. Investigation disclosed

52. Ltr, Hq 6AD to Comdr, 305th Bomb Wing; Comdr, 306th Bomb Wing; Comdr, 809th AB Gp; and Comdr, 98th ARSq; "Command Emphasis on Standardization Board Procedures," 24 Sept., 1953, DOP 360.
53. TWX, Hq 2AF to Comdr, 6AD, 2AFOA 0882, 4 Sept., 1953.

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that the co-pilot asserted he had never been checked on emergency procedures, although his squadron commander testified that this was not so. Unfortunately, squadron records failed to disclose properly whether or not such checks had been made on or by the co-pilot.

General LeMay's point of view on this accident was that if one of his top outfits was maintaining this type of "sloppy approach" to such a vital program as Standardization Board checks, then all SAC units must be closely supervised for assurance that proper procedures are being followed. This resulted in a policy for SAC and Second Air Force operations personnel to spot check each heretofore mentioned item when visiting bases in the future.

General Mooney enjoined all of the commanders to whom his letter was addressed to pay particular attention to the deficiencies that existed at the Tucson fiasco to ascertain that they did not occur on MacDill and/or within units of the Division. "It is my intention," General Mooney concluded, "to keep informed of each organization's procedures, in this vital area, through personal inspections and checks by my Staff."

6th Air Division was informed that according to the rescission of Second Air Force Regulation 60-3, Use of T-33 Aircraft as B-47 Chase Aircraft, dated 15 May 1953, all wings (including the 305th and 306th) involved in Second Air Force Plan 50-43 (Emergency War Plan) would maintain "a" T-33 aircraft in commission on the ground

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during the periods that B-47 aircraft would be airborne.[54]

Over-filling or expansion of fuel in tip tanks and faulty check valves in the pressurization system of a T-33 Number 6929 piloted by Colonel Michael N. W. McCoy at Wichita Air Force Base, Kansas, on 12 September resulted in an Aircraft Incident Report (SAC Form 5) being sent to Second Air Force Headquarters from 6th Air Division.[55]

Prior to departing from MacDill, Colonel McCoy, according to the report, had been warned by Major Wesley S. Mink, Chief of Maintenance, 306th Bomb Wing, not to fill the T-33's tip tanks above the 230-gallon level. The T-33 had been modified by having the tip tanks installed with filler neck at the top of the tank instead of on the side, thereby permitting complete filling of the tank - but not permitting space for expansion of fuel, unless precaution was taken against over-filling. Colonel McCoy passed this information on to the Alert Crew at Wichita upon landing thereat. During the pre-flight check, he noticed that the fuel level in the tanks was about one inch from the top, whereas it should have been four inches. The Alert Crew pointed out that the aircraft had been refueled at approximately 75°F, and at the time of pre-flight, the temperature had risen to about 99°F, thus accounting for the increase in fuel level.

After idling the jet engine for about 10 minutes, Colonel McCoy applied power; this action caused the cabin pressurization system to spray fuel throughout the cockpit. He estimated that about

54. TWX, Hq 2AF to Comdr 6AD, 2AFOTA 1993, 16 Sept., 1953.
55. Ltr, Hq 6AD to Comdr 2AF, "Transmittal of Aircraft Incident Report - RCS: SAC-F2," 23 Sept., 1953, ODCSD 360. Exhibit 14.

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four gallons of fuel came out of the pressurization system. The T-33 Maintenance Officer was contacted by Colonel McCoy after he had shut down the engine, and the former said that their unit had experienced similar trouble with check valves in the pressurization line to the trip tanks. Although Wichita had sent Unsatisfactory Reports (UR's) on the malfunction, the replacement valves were less reliable. Wichita's solution was to maintain the tank level down from four to six inches from the top.

Colonel McCoy, after receiving this information, called for a fire truck, then proceeded to run the engine until the lines were dry. The aircraft was left to dry for 12 hours, then another attempt was made to fly. The second time a small amount of fuel came out in the same manner as the first occurrence. After running the engine until no fuel or fumes were coming from the vents, the aircraft was left to dry for about two hours, then started again. This time no fuel or fumes escaped at 100 percent power. As the gear came up on take-off, the cockpit was filled with blue smoke and fuel fumes. Colonel McCoy went on 100 percent oxygen, then turned the heat control to full hot. This action cleared the cockpit in about three minutes.

Colonel McCoy recommended that all pilots be cautioned against occurrences of this kind which can probably be avoided by not filling the tip tanks above the 230-gallon level.

According to a directive from Headquarters, Strategic Air Command to the 3908th Strategic Evaluation Squadron, MacDill

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Detachment 2 of that unit will begin the evaluation of B-47 crews locally on or about 1 October, 1953. The Detachment requested certain types of support equipment and facilities of the 6th Air Division:[56] Avon Park Bombing Range, Avon Park OQ Range, Sarasota Gunnery Range (all in Florida); the MacDill Base Photo Lab, transportation facilities, use of the B-47 Flight Simulater, special weapons, practice bombs (S6GCA GP, 500-lb AN-64), and ammunition.

The evalutation program would require the utilization of a bombing target at the Avon Park Bombing Range for the release of 250-lb or 500-lb sand-filled practice bombs on one day a week during the four weeks of October. The requirements for November and December would be about the same. In the event that the target for release of practice bombs could not be made available, permission was asked for a Target Alpha, whereby a visual camera attack could be made.

Gunnery phase of the evaluation program would require the use of the B-47 gunnery equipment and the necessary range time for firing on the Avon Park OQ Range. The proposed schedule called for two fire dates in October, and the same number in November and December, up to and including the 18th of that month. B-47 crew personnel assigned to Headquarters, 3908th SESq. were scheduled for refresher gunnery training three times during October - a few

56. Ltr, Hq Det 2, 3908th Strategic Evaluation Sq (SES) to Comdr 6AD, "Support Requirements of Detachment 2, 3908th SES," 10 Sept., 1953, SESD2, Exhibit 15.

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days in advance of the crew evaluation. The actual checking and grading of the B-47 crewmen being evaluated would be accomplished by gunnery personnel assigned to Detachment 2.

Requirements of the proposed program called for air firing on the Sarasota, Fla., Gunnery Range eight times during October from 1100 to 1300 hours. Nine fly-throughs of that range would also be required in performance of the evaluation missions.

Base Photo Lab requirements for the evaluation missions would consist of developing and printing (visual runs only) radar film taken with the O-15 and O-23 cameras on each mission. The October schedule called for two evaluation missions per week with two to four crews flying each mission. Priority was requested for the photo developing and printing of the film used on scheduled evaluation mission in order to have the mission results available in time for the following day's critique. The initial photo lab requirements would be to process the radar film from the Monday night mission between 0200 and 1000 hours on Tuesday; film from the Thursday flights would be available to the lab by 2000 hours and would be required to be completed by 1000 hours on Friday. Other photographic requirements would be processed by the lab on the regular schedule.

Transportation requirements called for two one-half ton pickup trucks for local hauling of personnel and supplies, and a carry-all for transporting personnel to and from Avon Park OQ Range.

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A request was made to use the B-47 Flight Simulator two periods of four hours each every week beginning 6 October. One half of the periods would be used for emergency procedure checks of pilots undergoing evaluation, and the remainder for proficiency training of pilots assigned to Detachment 2.

The Special Weapons phase of the evaluation program would require the use of two complete units and two loading teams on two dates (16 and 30) of October. The Detachment Special Weapons Officer was scheduled to join the unit on 1 October, and he will coordinate all required schedules for equipment and personnel. Maximum support in this area was requested in accordance with letter, Headquarters Strategic Air Command, "Special Weapons Equipment for the 3908th Strategic Evaluation Squadron," DM6C 471.4, 14 August, 1953; and letter, Headquarters, Second Air Force, same subject, 2AFMWM 471, 20 August, 1953.

Detachment 2 requirements for the evaluation project would be for approximately 16 practice bombs, S6GGA GP, 500-lb AN-M64 or 250-lb T-52 or T-61, during October. It was requested that the bombs be delivered and loaded on the aircraft as required during the evaluation program. No armament and electronics personnel are assigned to the Detachment.

Each B-47 crew is scheduled to fire 400 rounds of caliber .50 ammunition during the evaluation. The Detachment requested that

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the supply and loading of the necessary ammunition be done by the parent wing of the crews undergoing evaluation. Specific requirements for the period of October through December would be four loadings of 400 rounds, or 1600 rounds of ammunition per month.

Headquarters, 6th Air Division was in general agreement with the Detachment's requests; however, some minor changes due to lack of facilities were suggested.[57] For example, it was doubted if the request for use of a radar target could be met as there was no radar reflector available. Although one was being planned, it would not be available during October, or possibly November; however, when the installation of the reflector was complete, a necessary schedule would be made. Visual bombing could be accomplished at any time. The Avon Park Bomb Plot in September was not equipped with ultra high frequency (UHF) facilities, although equipment had been requested. An agreement was reached between Lieutenant Colonel Robert O. Cellotto, 3908th Strategic Evaluation Squadron, and Major J. C. Griffin, 809th Operations Squadron, whereby Avon Park Bombing Range requirements would be held in abeyance pending the installation of the UHF radio equipment, and radar reflectors.

Division concurred in the request for use of the B-47 Flight Simulator except that prior committments made to Second Air Force

57. 1st Ind, Hq 6AD to Comdr Det 2, 3908th SESq, 3 Oct., 1953 to ltr Hq Det 2, 3908th SESq to Comdr 6AD, "Support Requirements of Detachment 2, 3908th SESq," 10 Sept., 1953, MCBOO 353. Exhibit 15A.

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may require some rescheduling.

The 306th Bomb Wing would place two complete special weapons training units at the disposal of the 3908th on 16 and 30 October; loading personnel from the 809th Supply Squadron would handle the training units for the Bomb Wing. The Supply Squadron's Ammunition Section would load special weapons in the Bomb Wing aircraft.

Due to the non-availability at Base Supply, 500-lb sand-filled practice bombs would not be issuable to the 3908th during October. During the interim, the 306th was scheduled to furnish practice bombs for its crews undergoing evaluation.

Units and loading teams from the 809th Air Base Group would be available and would work under a 306th Wing loading supervisor in the loading of practice bombs in 306th B-47's.

The necessary ammunition would be requisitioned and loaded into unit aircraft by 306th Armament and Electronics Squadron munitions personnel.

The success attained by a Unit Simulated Combat Mission (USCM) Vulnerability team during a five-day operation from 28 August, 1953, to 1 September, 1953, "clearly indicates that security is virtually non-existent at MacDill Air Force Base," according to a report made by the leader of the team, Second Lieutenant Thomas A. Martin.[58] The test was made in conjunction with the movement of the 305th Bomb Wing on 90 days temporary duty to the United Kingdom.[59]

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58. Ltr, Hq 2AF to Comdr 6AD, "USCM Vulnerability Test, 28 Aug 53 - 2 Sep 53 (RCS: 2-SAC-Y1)," 10 Sept., 1953, 2AFIGSV 333 w/incl: Ltr, USCM Vulnerability Test Team, MacDill AFB, Fla., "Report of USCM Vulnerability Test, 28 Aug 53 - 2 Sept 53," 3 Sept, 1953. Exhibit 16.
59. See page 16 of this report.

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The team of Lieutenant Martin and four airmen arrived by commercial aircraft at Tampa, Fla., on 27 August, 1953. The following day the team leader reported to the Commander, 6th Air Division.

During the succeeding five days, the team conducted espionage and reconnaissance for the purpose of determining unit and the details of deployment of the forthcoming mission; determining the location of, and degree of security around Category I items; and acquainting team members with the physical features of the installation.

Through the medium of casual contact and routine conversation both on and off MacDill Air Force Base, details of the mission were learned from both military and civilian personnel.

During five days prior to the penetration, the Vulnerability Team members attempted to learn facts and details concerning the 305th's mission. The team, working as individuals, contacted military and civilian personnel in the Post Exchange, Post Exchange Snack Bar, Officers' Mess, NCO Mess and other on-base installations, plus contacting personnel on busses and in civilian establishments in and around Tampa. In general, most people contacted were tacit; they tried to avoid any discussion of the mission. Many contacts mentioned that they had received instructions that the movement was classified and not to be discussed.

After five days of contact efforts, the Vulnerability Team had learned that some maintenance men had already departed the station and were being placed along the route that would be followed

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by tactical aircraft; other support personnel would leave via Military Air Transport Service (MATS) aircraft prior to E-Day, while others would be leaving as late as a week after E-Day; tactical aircraft would leave in three phases: one-third on E-Day, Thursday, 3 September, and an additional third on each of the following two days; tactical aircraft would fly from MacDill to Limestone AFB, Me., and from there to their destination in England. This information concerning the tactical aircraft's departure in three phases and the dates thereof was gleaned from a woman employee of the Post Exchange who worked at the music counter; the fact that the tactical aircraft would proceed to England via Limestone was gathered from an unidentified Captain in the Post Exchange Snack Bar.

Despite these important "leaks," the Vulnerability Team agents were unable to get specific details as to times, aircraft numbers, etc., with which to fill out the general information. "This is contributed to the fact," wrote Lieutenant Martin, the Team leader, "that the people contacted - the average airman - did not have access to this information."

Civilians in Tampa, especially bartenders "and other people in this line of work," either did not know (or were not talking) any information concerning the 305th movement.

With this background secured, the Vulnerability Team began their penetration at 0800, Wednesday, 2 September, 1953. Before this particular effort ended at 0845 37 B-47's and two KC-97's

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theoretically were destroyed, in addition to the simulated destruction of the Base Communications Building.

Team members gained comparatively easy access to the base by coming through the MacDill Avenue gate (Main Gate) at 0400 in a taxi; the members were dressed in civilian clothes, and their identification, which easily could have been compromised, was not closely checked by the Air Police on sentry duty at the gate. The team members then changed from civilian clothes into fatigues at the Base Bus Station, located in the center of the cantonment area behind the Base Gymnasium.

At 0450 hours, one team member secured from a barrack, a flight line pass belonging to an airman third class with which he was able at 0730 hours to enter the Flight Line.

In the meantime, at 0520 hours, two other team members entered the Flight Line area by crawling under the Refueling Gate that hangs over railroad tracks. The clearance from the bottom of the gate to the ground is approximately 18 to 20 inches, affording a comparatively easy source of access. After gaining entrance in this manner, the two men hid in the latrine of the hanger that is immediately adjacent to that particular gate. At 0800 hours, the three team members began their placing of simulated bombs on the 39 aircraft. Throughout this phase of the exercise, the one team member was wearing the stolen pass while the other two men had no flight line pass of any type, genuine or fradulent. During their "destroying" of aircraft none of the three was challenged, stopped, or questioned. In most instances, at least

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one member of the crew was present at the aircraft checked; however, the crewman was usually situated in front of the aircraft, making approach from the rear comparatively easy. At about 0845 hours the three team members left the flight line together.

While the 39 aircraft were being "destroyed," Lieutenant Martin, the Team Leader, and an enlisted member commandeered a government carryall parked outside Base Operations and drove to the Base Communications Building. Access to the interior of the building was not easy, as the rear door, due to a system of relay boxes and a switchboard, can be opened only from the inside. However, in a short time, an airman came out of the building, and the fourth airman member of the Vulnerability Team caught the door before it closed, and walked into the building. This access would have enabled the team member to destroy the equipment and seriously endanger base communications facilities. (A generalized list of facilities located within the Base Communications Building was given in a preceding history,[60] and includes the telephone exchange, teletype center, teletype maintenance, and of major importance, the cryptographic center.)

At 0830, the team leader and the airman who gained access to the Base Communications Building returned in the carryall and entered the flight line. They went to the 305th Wing Headquarters Building and commandeered the Buick staff car assigned to Colonel Elliott Vandevanter, Jr., Wing Commander. Ensconced in this vehicle, the two

60. History, 6th Air Division, August 1953, page 47.

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team members made a complete - and totally unchallenged - tour of the flight line, plus exit and entrance through several flight line gates. While no actual destruction of Category I items was accomplished by this move, such action could have been possible; especially if the other team members (three airmen who "accounted" for 39 aircraft) had been apprehended in the process of placing simulated bombs on the aircraft.

At 0910 hours the staff car was returned. The team assembled at 0930 hours, compared notes, then reported to the 6th Air Division Executive Officer at 1000 hours. At 1200 hours General Mooney and his staff were given a briefing on the details and results of the test. At 1400 hours, Major John H. Windsor, MacDill AFB Provost Marshal, the Vulnerability Team, and Lieutenant Colonel T. J. Bosselli, Assistant Operations Officer of the 305th Bomb Wing, held a meeting to review the penetration test, in the hope that such a review would more clearly acquaint the Operations personnel with the glaring security weaknesses in order to affect remedial action.

Reiterating, "the degree of success attained (by the team) clearly indicates that security is virtually non-existant at MacDill Air Force Base." This deficiency, however, could not be blamed on the security system, for the same methods have been successfully employed at other bases, the report said. "It was clearly evident," Lieutenant Martin wrote, ". . . that the personnel being utilized as security guards, were not only few in number, but they were poorly

indoctrinated and poorly motivated." This was apparent by the fact that the team member with the stolen pass should have been apprehended at the flight line gate, and such apprehension may have alerted the base and served to have foiled the entire penetration test. Furthermore, had flight line personnel been alert, they would have apprehended the other two team members who did not have any type of pass.

"In summary," Lieutenant Martin concluded, "the success of the USCM Vulnerability Test can be attributed to outright negligence and inefficiency on the part of poorly indoctrinated, improperly motivated personnel."

6th Air Division indorsed the correspondence to the 305th Wing at Brize-Norton, England (APO 147, New York, N.Y.)[61] with the request that the indorsement "indicate the extent to which accomplishment of the primary mission . . . would have been affected if the simulated sabotage had been, in fact, hostile in nature." Furthermore, Division wanted to know of the corrective action taken or contemplated in accordance with paragraph 7b, SAC Regulation 205-4, "Security" - Vulnerability Testing Procedures (RCS: 1-SAC-Y1 and 2-SAC-Y1), 24 July, 1953.

The 305th reported that had the sabotage and/or penetration had been actually directed by any enemy, the Wing's effectiveness would have been reduced 35 percent on H-Day, had total destruction

61. 1st Ind Hq 6AD to Comdr 305th Bomb Wg, 16 Sept., 1953, to ltr Hq 2AF to Comdr 6AD "USCM Vulnerability Test, 28 Aug 53 - 2 Sept. 53 (RCS:2-SAC-Y1)," 10 Sept., 1953, MCDCDC #333. Exhibit 16A.

been effected. However, according to the indorsement, "Previous tests indicate that total destruction of all aircraft sabotaged is very unlikely and therefore through maintenance efforts by H ≠ 1 three of the aircraft would have been flyable, and by H ≠ 2 another five would have been flyable. Taking H ≠ 2 as the last day of the mission we would then have an effectiveness of 49 percent."

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The Wing opined that this test and prior ones emphasized that point guards at Category One items would be the only system that could give positive security to 305th equipment. As of the time of writing, the Wing had placed that method in operation and based on a previous test, only two aircraft were considered effectively sabotaged.

Indoctrination of guard personnel within the Wing had been made via an "Aircraft Guard Briefing Folder" that outlined the specific duties of guards, "and should prevent further instances of sabotage due to poor job knowledge," the indorsement concluded.[65]

In forwarding the 305th Wing's reply to higher headquarters, 6th Air Division noted: "Continuing command impetus is being given the security indoctrination program. The Provost Marshal has indoctrinated the wing commanders, squadron commanders, engineering

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62. History, 6th Air Division, March, 1953, Appendix "D" (under separate cover.)
63. History, 6th Air Division, April, 1953, Appendix "D" (under separate cover.)
64. History, 6th Air Division, May 1953, pp 43-45.
65. 2nd Ind, Hq 305th Bomb Wing to Comdr 6AD, 14 Oct., 1953, to ltr, Hq 2AF to Comdr 6AD, "USCM Vulnerability Test, 28 Aug 53 - 2 Sept 53 (RCS: 2-SAC-Y1), 305WA3 333. Exhibit 16B.

officers, and squadron security officers in the proper method of apprehending unauthorized personnel on the station." In the event that an individual, "who has no business in the area," is discovered, he is taken into custody and security forces notified immediately. After being taken to Security Forces Headquarters, if the individual is determined to be "hostile," the internal security operations plan is placed into effect.[66] The person is taken later to the 7th District Office of Special Investigations (OSI) headquarters for further questioning; upon the decision of the senior commander, the Base Defense Plan[67] may then be put into effect.

Since the subject penetration test, the Air Police and organizational testing teams make daily inspections of tactical aircraft access and guard procedures, with reports of said tests being forwarded to the 6th Air Division Commander for corrective action. As an additional check, tests are made by the Base Commander, unknown to the Air Provost Marshal, against the Security Forces.

Air Police teams inspect bachelor living quarters daily for improperly secured restricted area badges. Disciplinary action is taken against the owners when passes are found to have been secured improperly, i.e., not under lock or similar proper safeguard.

Sentry boxes had been located on the flight line adjacent to Category One elements as entry points to specific aircraft. This measure will preclude unauthorized personnel from approaching aircraft.

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66. History, 6th Air Division, May 1953, pp 43-45.
67. History, 6th Air Division, July 1953, pp 14-15.

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With the view of providing a minimum of human error and positive means of identification, a new system on a trial basis was being planned for two squadrons of the 306th Bomb Wing whereby the individual's "Identification Card" (DD 2AF Form) will be exchanged at a flight line turnstile for the individual's restricted area badge.

The Air Provost Marshal was conducting daily instructions and close supervision in order to generate the use of positive identification procedures by restricted area gate guards. To emphasize and/or implement this action, testing procedures are being conducted to test the guard's alertness; disciplinary action is taken on any failure that can be attributed to an individual.

The Security Control Officer conducts frequent and regular inspections of the physical safeguards now in place, and around the restricted area. The space between the cited flight line gate that was most effectively used by two members of the Vulnerability Team was "eliminated," and the entrance through Hangar Three blocked. Due to the limitations of manpower (55 airmen discharged in September under the "early out" program; 28 more eligible in October under same general provisions)[68] which reduced the numbers on patrol duty, and the large area of coverage, the security fence is considered to be only a psychological deterrent to entry. (During the 9-11 March, 1953, Vulnerability Test, two agents placed a saw-bench against the flight line fence behind Hangar Two and gained entrance in that manner.[69]

68. Figures furnished by Adjutant, 809th Air Police Squadron.
69. History, 6th Air Division, March 1953, Appendix "D," (under separate cover.)

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During a limited Vulnerability Test in May, an agent was able to climb over the barbed wire atop a portion of the security fence by means of a pair of heavy gloves and a thick wool blanket.[70] In both instances, of course, penetration was done during hours of darkness.) The desired relocation of the fencing and the installation of protective lighting on the outer fringe of the tactical aircraft parking area would aid greatly the Air Police in tighter security measures; however, such relocation and installation is held in abeyance due to present budget limitations.[71]

The AN/APQ-T2 Radar Trainer Number Three, since its arrival on the base, has caused no end of trouble, according to correspondence emanating from the Air Base Training Flight Section of the 809th Operations Squadron.

Difficulties began from almost the moment that work began uncrating, assembling, and rendering operational the trainer. One computer unit had been damaged as the result of a rail shipment,[72] and many of the subsequent installation difficulties resulted therefrom. One of the pieces of wood that held the trainer in place was rammed through part of the equipment, with consequent internal failures. In addition, many of the parts had been damaged by the accident; consequently they had to be removed and returned to the manufacturer, the American Machine and Foundry Company, Boston, Mass., for repair. Whereas 5,000 manhours were spent in uncrating, assembling, and

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70. History, 6th Air Division, May 1953, pp 43-45.
71. 3d Ind, Hq 6AD to Comdr 2AF, 4 Nov., 1953, to ltr, Hq 2AF to Comdr 6AD, "USCM Vulnerability Test, 28 Aug 53 - 2 Sept 53 (RCS: 2-SAC-Y1)," 10 Sept., 1953, MCDCCO 333. Exhibit 16C.
72. Ltr, Hq 6AD to Comdr SAC, "Evaluation of AN/APQ-T2 Trainer," 19 Aug., 1953, MCDOOTF 353.41. Exhibit 17.

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making the trainer operational, the time required for this work would have been reduced to about 1200 man hours had the equipment arrived in proper condition.

Another difficulty encountered in the installation of the AN/APQ-T2 was that of schematics that were missing; and of those received, many were inaccurate.[73] The trainer occupies a space of 15 feet by seven inches by 21 feet by five inches by seven feet and seven inches (15'7" by 21'5" x 7' & 7"). As the assembly is in a smaller area than recommended by the manufacturer, the air conditioning unit had to be removed; however, this created no problem insofar as operation of the trainer is concerned, as the building has temperature and humidity control "equal or better" than those which could be provided by the training unit. The roof of the trainer had to be removed also, as the building was not high enough to permit installation. Such alterations and/or renovations were done with the prior approval of the manufacturer and Air Materiel Command (AMC) and did not result in any major problems or time delay.

Supply difficulties of the AN/APQ-T2 Radar Trainer have been numerous,[74] since replaceable component parts are not available through normal supply channels, excluding tubes, resistors, condensors, etc., which are obtainable therefrom. In addition to no action through normal supply channels, the future was even more dismal as the American

73. Ltr, Hq 6AD to Comdr, Hill AFB, Ogden, Utah, Attn: OOAMA, "Status of AN/APQ-T2 Trainer," 17 Sept., 1953, MCDOOTF 452.31. Exhibit 17A.
74. Ltr, Hq 6AD to Comdr SAC, "Operational Suitability of AN/APQ-T2 Radar Trainer," 15 Sept., 1953, MCDOOTR 353. Exhibit 17B.

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Machine and Foundry representative in residence at MacDill, Mr. Edward McHarris, informed base authorities that no contract had been negotiated by the government with the company for the manufacture of replacement parts. So snafued was the supply situation that parts were not available to repair a complete power unit with the result that it had to be dismantled from the T-2 trainer at MacDill and shipped to the factory in Boston, Mass., to be rebuilt and to have parts replaced.

Engineering deficiencies are also apparent in the AN/APQ-T2 Radar Trainer, according to local radar technicians.[75] As an example, the picture presentation has been classed as "very poor" to the extent that the trainer provides approximately 10 to 15 percent of the desired range and definition. This is attributed to the fact that the design of the reflector assembly on the antenna unit is in error, causing an undesirable beam pattern that in turn produces a "searchlight" type of return on the indicator. This factor creates a rapid attenuation of the transmitted energy as the tilt is varied; this causes a loss of signal strength returns. In addition, the beam width of the reflector is not sufficient to permit the desired definition in conjunction with the transmitted frequency.

Recommendations were made that redesigning be accomplished of the reflector required in the vertical plan to approach a cosecant squared pattern; furthermore that tests be performed on the improvement of the beam width against the increase in transmitted frequency.

75. Ltr, Hq 6AD to Comdr WADC, "Installation and Operation Difficulties of AN/APQ-T2 Radar Trainer," 11 Sept., 1953, MCDOTF 353. Exhibit 17C.

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As of the date of the report (11 September), the trainer, since the contractor stated it was operational, had been in operation 453.5 hours. The number of hours lost due to maintenance difficulties since the trainer had been declared operational by the contractor totaled 102.

A preliminary recommendation, albeit "highly," was made by Mr. John Belko, 6th Air Division civilian Radar Advisor, that further acceptance of the AN/APQ-T2A, also manufactured by the American Machine and Foundry Company, be terminated "until such time as observers are permitted to perform checks from the operational standpoint."[76]

This recommendation came as the result of a discussion held at Strategic Air Command Headquarters with a Lieutenant Colonel Lipscomb in which Mr. Belco was asked to make a limited evaluation of the AN/APQ-T2A and a comparison between the AN/APQ-T2 and the AN/APQ-T2A Ultrasonic Trainers.

Mr. Belco felt that in order to make the desired evaluation and/or comparison, it would be necessary to perform navigation, bombing, and control response checks on the AN/APQ-T2A Trainer. Unfortunately, at that particular time, the trainer was receiving a performance check by a representative from the Wright Air Development Center (WADC); furthermore, the check was scheduled to continue through 23 September, after which American Machine and Foundry would require all the available time to correct the discrepancies.

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76. Ltr, Hq 6AD to Comdr SAC, "Evaluation and Comparison of the AN/APQ-T2 and AN/APQ-T2A Trainers," MCDOOTF 452.32, 14 Oct., 1953. Exhibit 17D.

But, Mr. Belco discussed with a Mr. Hybekmann, the WADC representative, the trainers from the standpoint of the operational value to SAC in view of the indicator presentation for identification, range of presentation, the definition of land, sea, and targets. Also discussed were the topics of target breakup and the effects of tilt variation on targets during mission performance.

Subsequent to this discussion, Mr. Hybekmann permitted Mr. Belco to view the indicator presentation of the AN/APQ-T2A Trainer. Mr. Belko found the range to be approximately 120 miles, and the definition a considerable improvement over the T2 Trainer, but this brief view was made only from one position of the aircraft and at one range and one position of tilt setting. In order to determine if the trainer would maintain this response, navigation and bombing missions would have to be performed to enable sufficient observations to be made. Control responses could not be made. One very important factor, in Mr. Belko's opinion, is that the units of the "K" Systems are not located in positions in the B-47 aircraft, and he does not believe that this factor is being taken into consideration in then current checks.

The opinion was also advanced that an observer should be included as part of the check team. All the performance checks did not produce the required accurate evaluation for proper radar set simulation. With this point, and to eliminate any further discord that might occur, Strategic Air Command was requested to dispatch as soon as possible at least one, but preferably three,

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observers to the American Machine and Foundry Company, Boston, Mass., where they could perform the missions and conform with a check sheet that would show the acceptability of the trainer for observer training.

This check sheet listed 19 points: ground returns, miles to miles; isolated targets out to blank miles; searchlighting effect; target definition; target breakup; aircraft orientation; tilt effect on navigation; tilt effect on tracking and bombing; target breakup on bomb run; target lost at blank seconds before release point; picture distortion; receiver gain; video gain; altitude whole and measurement; contrast control; beacon; jamming; receiver tunning effect, and wind determination repeatability.

General concurrence was granted by Headquarters, Second Air Force to MacDill's proposal for certain ranges at Avon Park Air Force Base, Fla.[77] The recommendations to placing fighter ranges in the northeast corner of the reservation, adjacent to the gunnery target; to initiate action to provide a suitable reflector target, and a visual bombing and resolution target were received with high favor.[78]

Second was of the opinion that "due to critical need for B-47 bombing target, this project should be given priority over resolution target and fighter ranges."

More specifically in the overall approval, Second made these comments regarding the associated points:

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77. History, 6th Air Division, August 1953, pp 29-32.
78. TWX, Hq 2AF to Comdr 6AD, 2AFOTA 0078, 1 Sept., 1953.

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That the resolution target should be placed as near to the center of the reservation as possible, and in no event less than three miles from the nearest boundary. This wide area would provide a safety measure in the event that flash bombs did not detonate in the air and fell short of the target.

Lake Okeechobee was deemed acceptable as a suitable IP (initial point).

The layout of the resolution target did not need to bear any special relation to the course from the IP.

Radar reflectors should be placed in the most advantageous area of the target complex on the reservation after giving due consideration to possible damage from high explosive bombs. The view answered Division's question of whether Second would object to mounting the reflector in the target complex, considering the problem that of developing a reflector that would overcome the then present ground return from foliage in the Avon Park area.

Due to the populated areas surrounding the Avon Park ranges, Second was in perfect accord with Division's idea that two visual bomb targets should be provided. No objection was raised concerning the plan to switching from offset to direct bombing, provided the offset aiming point would be within the boundaries of the range areas.

In the initial letter that established tentative plans for increasing the facilities and consequent value of the Avon Park ranges,[79]

79. History, 6th Air Division, August 1953, 29-32.

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6th Air Division raised the problem of prividing a radar reflector for the resolution target. In response to a subsequent query from Second Air Force[80] regarding this matter, Division replied that the estimated cost of the radar reflector would be $4,421.40, and if the resolution target would be required in this project, an additional $900 should be added to this estimate.[81]

Planning for increasing the value of Avon Park continued during the month. Another major plan tentatively approved - to the point of requesting approval of essentiality of the project - was that of the construction of a visual bombing target and night photography target.[82] The work would entail the clearing and grubbing of an equilateral triangular area 1,000 feet on each side, the construction of a radar reflector for visual bombing, and the construction of a resolution target for night reconnaissance crews. The construction would be midway between Bombing Targets "A" and "C" in the Bombing Range Area.

This facility, according to the letter, "is urgently needed immediately to provide adequate operational facilities required by the base mission, and outlined in SAC Regulation 50-8 ("Training" Training Program for SAC Units, 5 January, 1952) and Second Air Force Regulation 50-10 ("Training" - Avon Park Bombing Range, 6 August, 1953) which pertain to visual bombing for B-47 crews and night photography

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80. TWX, Hq 2AF to Comdr 6AD, 2AFOTA 1575, 14 Sept., 1953.
81. Ltr, Hq 6AD to Comdr 2AF, "Cost Estimate for Radar Reflector, Avon Park Air Force Base, Fla.," 19 Sept., 1953, MCDMAI 600.1. Exhibit 18.
82. Ltr., Hq 6AD to Comdr 2AF, "Construction of Visual Bombing Target and Night Photography Target, Avon Park Air Force Base, Fla.," 24 Sept., 1953, MCDMAI 600.1. Exhibit 19.

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runs for reconnaissance crews." It was pointed out that the Avon Park Bombing Range Area is the only facility within the jurisdiction of Second Air Force that is suitable for B-47 bombing practice.

Division was unable to list a project on the approved Fiscal Year 1954 Major Repair and Minor Construction Program as a substitution, because only two projects of high priority had been approved. The first one, MacDill 28-54, Jet Engine Test Stand, is of highest priority and is urgently required; the second approved project, MacDill 24-54, 13.2 KV Overhead Line, has also been technically approved and funded by SAC. Bids were issued 17 September.

Shortly after 9 September, all B-29 OQ gunnery at Avon Park was cancelled per instructions from Second Air Force.[83] However, two B-29 systems were retained on the OQ range pending further notice.

The 466th Fighter Squadron from Turner Air Force Base, Ga., arrived about 14 September, and was scheduled to depart on or about 10 October. That unit replaced the 308th Fighter Squadron which is also based at Turner.[84]

Captain William T. Paul, 366th Bomb Squadron, 305th Bomb Wing, died 7 September[85] from injuries that resulted at about 1130 hours on 28 August when he was catapulted 40 feet into the air through the

83. TWX, Hq 2AF to Comdr 6AD, 2AFOTA 1045, 9 Sept., 1953.
84. Daily Journal, Hq 809th AB Gp, 12 Sept., 1953.
85. Daily Journal, Hq 809th AB Gp, 7 Sept., 1953.

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plastic canopy of a T-33 jet trainer as it was taxiing for a take-off. Apparently the deceased inadvertently touched off the ejection seat mechanism.[86] He suffered multiple fractures.

86. History, USAF Hospital, MacDill AFB, Fla., September, 1953, page 3.

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CHAPTER THREE

B-47 OPERATIONAL ENGINEERING

During the period of 1 September - 31 October, 1953, 13 new projects were initiated by the B-47 Operational Engineering Section, while nine projects were completed.[87] (It is to be noted that the Monthly Progress Report has been changed into a bi-monthly one in accordance with SAC Regulation 80-2, ("Research and Development" - Operational Engineering Program (RCS: 1-SAC-R1 and 2-SAC-R1) 21 September, 1953.)

87. Ltr, Hq B-47 OES, Hq 6AD to Comdr WADC "B-47 Operational Engineering Bi-Monthly Progress Report," 1 November 1953. Exhibit 20.

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In addition, 21 projects were undergoing further research.

As arranged within the subject report, the first project was that of Evaluation of Landing Speed Indicator, Angle of Attack Indicator and Angle of Yaw Indicator Installation (AE-24). This project was begun at the direction of both Headquarters, Strategic Air Command (SAC) and Wright Air Development Command (WADC) for the purpose of conducting a comprehensive program to determine the value of the landing speed indicator, manufactured by Safe Flight Instrument Corporation, and the angle of attack and yaw indicators, produced by Specialities, Inc., and installed in B-47 aircraft. As of the date of the report (1 November) two 306th Bomb Wing aircraft were at Wright-Patterson Air Force Base, Ohio, for the installation of the instruments by WADC personnel. A questionnaire for pilots' evaluations has been prepared jointly by the WADC and OES (Operational Engineering Section) officers. When the aircraft return to MacDill, the evaluation will be initiated and continued until conclusive results are obtained.

Determination of KC-97G, B-47 Aerial Refueling Speeds and Refueling Altitude Limits (AE-25). This project is one of the results of a conference held at WIBAC (Boeing Airplane Company, Wichita, Kan.) on 22 and 23 July, 1953, relative to the suitability of the B-47 - KC-97 aerial refueling data curves available in the applicable technical orders. Headquarters, SAC directed the 6th Air Division

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OES to conduct further flights, with the purpose of determining the minimum practical aerial refueling speeds for the B-47 bomber formating with the KC-97 tanker, and also to check the KC-97 rated power performance for accuracy and the effects of army (sic) hot day upon them. The rated power data for the KC-97G with refueling configuration is currently being collected and reduced for a sea level standard condition plot, preparatory to initiating the B-47 phase of this project.

Service Test of FRS-2 Control Assembly for Jack and Heintz Inverters (EE-47A). WADC had requested OES to service test a new type of frequency and voltage control assembly, type FRS-2, which had been designed by the Jack and Heintz Company for retrofit of their type AN-3516 inverter, as well as for use in the new 50,000' inverters now being developed by that company. Six of the FRS-2 control assemblies will be installed in the type AN-3516 inverters manufactured by that concern, and will be placed in service under typical operating conditions. The running time, control stability and operation of these test items will be monitored and compared with the performance of three standard assemblies. The Service Test of Improved Speed Governors for Jack and Heintz AN-3516 Inverters was begun on 26 February, 1953. (Reference subject Progress Report.)

Compass Errors in K-Systems (EE-59A). Normal operating conditions are not duplicated when the compass portion of the K-System is

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swung; therefore, there is a possibility that appreciable compass errors exist. If errors do exist, they may be attributable to the magnetic fields of the operating engines and associated equipment, and the errors introduced by the tow vehicle and ground power unit used during the compass swing. The purpose of this project is to determine the magnitudes of these errors and if appreciable, to establish procedures for their elimination. A companion project, B-47 Compass Swinging Procedure (EE-59), was reported in a previous history.[88] Furthermore, Specific Item Report (SIR) 105 on the "Comparative Evaluation of Methods of Swinging the Compass, B-47 Aircraft," dated 25 July, 1953, was forwarded to Headquarters, WADC. No information on action taken by that organization has been received.

Radar Target Folder Viewer (EE-63). SAC Headquarters requested OES to evaluate a Radar Target Folder Viewer, which newly developed device projects pictures of the target that are normally contained in a Target Study Folder directly above the radar presentation. This method permits the rapid and continuous comparison of the two presentations and makes it unnecessary for the radar observer to move his eyes away from the hood, as is the case when a standard target folder is used. The suitability and feasibility of the new device will be based upon the comments of observers using it as well as on the comments of the personnel preparing the film used with the viewer.

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88. Reference 6th Air Division History, August, 1953, Exhibit B-47 OES Monthly Progress Report, 1 - 31 Aug., 1953, page 1 and page 43.

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Functional Test of New Brushes for the B-47 Starter-Generator, Manufactured by the National Carbon Company (EE-64). Headquarters, Air Research and Development Command (ARDC) and Headquarters, SAC requested that functional service tests be made of a starter-generator brush manufactured by the National Carbon Company, a new supplier of the brushes. Five starter-generators using these brushes will be installed on service aircraft when received by OES from WADC and will be monitored for 250 aircraft flying hours. The starter-generators will be returned to WADC for evaluation upon completion of the tests.

APS-23 Modifications to Improve Performance and Uniformity of Signal Return (EE-65 and 65A). B-47 radar observers have experienced difficulty in adjusting antenna tilt to give adequate signal strength and range independence of signal strength simultaneously at normal operating altitudes. Rings of strong and weak returns are encountered and fading of the target frequently occurs during bomb runs. Furthermore, excessive maintenance time must be spent in tuning and adjusting the receiver-transmitter to provide a usable radar presentation at such altitudes. Two modifications will be tested to determine if they will increase the performance and return uniformity and eliminate the deficiencies. One modification is that of repositioning the cosecant reflector of the antenna, AS-361/APS-23, thereby impreving the radiation pattern. The second modification permits the operator to increase the transmitted pulse length from 3/8 to 1 microsecond

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and decrease the receiver bandwidth to 3 megacycles, thus increasing the performance by 3 to 4 db.

Use of the K-System in Conjunction with an APN-11 Beacon as a Blind Approach Landing System for B-47 Aircraft (EE-66). SAC requested the evaluation of the possibility of utilizing the K-System in conjunction with the APN-11 beacon as a blind approach landing system. The K-Systems on several aircraft will be modified to permit the tracking and beacon functions to be used simultaneously. An APN-11 beacon will be placed adjacent to the active runway and landing approaches will be made with this system, under visual conditions, to determine its suitability and operating limitations. In addition, a study will be made to determine if the system has other tactical applications.

Suitability Test of B-47 Canopy Sunshade (ME-26A). Arrangements have been made by SAC and Second Air Force to distribute three sunshades, P/N F30075, for B-47 aircraft, on the basis of one each to the 301st Bomb Wing, Barksdale AFB, La., 44th Bomb Wing, Lake Charles AFB, La., and to the 6th Air Division, for the conducting of a suitability test of 60 days duration. The OES will evaluate the local sunshade, with particular attention directed to the handling, installation, and ability of the sunshade to withstand wind conditions encountered during normal usage. Results of the evaluation will be published in an SIR on completion of the test.

Fourth Crew Member Position, B-47 Aircraft (ME-80). No permanent position exists within the B-47 for the flight accommendation of a

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fourth individual, such as an instructor, crew chief, or combat crew evaluator. Thus, SAC directed that a mock-up of a minimum suitable installation be done by OES. The mock-up will include a safety belt, an oxygen station, and an interphone station. Upon approval of the installation by representatives of SAC, WADC, and Fifteenth Air Force, the schematic drawings and specifications necessary to accomplish a standardized field installation will be published in an SIR, which be used as the basis of a Technical Order (T.O.) after Headquarters, United States Air Force has granted the authority for the installation as a SAC requirement.

Service Testing the LeTourneau A-3 Airtow Vehicle (ME-81). This vehicle, which is driven by four 50 horsepower electrical motors, located one on each wheel, that receive their power from a gas engine generator unit, is capable of towing the B-47 aircraft and supplying all required power. The gas engine generator unit is also the primary source of power for A.C. and D.C. power that is required for K-System operation, and D.C. power required for engine start. The evaluation of the airtow vehicle will include a study covering the suitability from the standpoint of the operator, a determination of capability as a tow vehicle, and as a source of electrical power, and an economic and performance comparison with other equipment that provides fully or in part the same functions. One of the Air Force's recent acquisitions of the LeTourneau A-3 airtow vehicles is on the base. The operational suitability and capability test will be

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conducted jointly with the 306th Bomb Wing per verbal instructions from the Requirements Branch, Directorate of Materiel, Headquarters, SAC.

Eseco Ground Power Equipment (ME-82). WADC requested that a service test and evaluation be conducted on two sets of ESECO ground power equipment for B-47 aircraft, each set for the support of five aircraft. OES will determine the operational suitability and capability of the equipment. A comparative evaluation will be made with the Gremco equipment from the view of electrical output plus stability, physical construction, and maintenance requirements.

Water-Alcohol Injection for B-47 Wings (ME-83). At the request of WADC, a project has been initiated to evaluate the employment of water-alcohol injection by a B-47 wing. The evaluation will include an analysis and recommendations of procedures for preparing the water-alcohol solution in the field and a determination of the equipment required and its suitability to support the operational employment of water-alcohol injection by a tactical wing. However, servicing equipment will not be ready until December.

Nine projects were completed during the period 1 September - 31 October, 1953:

B-47 Weight Reduction Program (AE-11). This program was begun on 13 May, 1952, with Captain John T. Ball as Project Officer, and for the purpose of decreasing the basic weight of the aircraft as a means for extending its long range capability.[89] According to the

89. Reference 6th Air Division History, August, 1953, Exhibit, B-47 OES Monthly Progress Report, 1 - 31 Aug., 1953, page 4.

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last summary, 31 July, 1953 (no additional information was available as of 31 August, 1953), the program had progressed to the point where 11 items were listed, totaling minus 1192 pounds that could be removed by a combat commander for combat operations:

1.	Partial stripping of A.I. system.....	- 95#
2.	Removal of entrance ladder.....	- 35#
3.	Removal of engine inlet screens.....	- 246#
4.	Stripping of IFR systems.....	- 62#
5.	Removal of dry ice containers.....	- 145#
6.	Deletion of SPR system.....	- 113#
7.	Deletion of bomb bay oxygen.....	- 9#
8.	Removal of approach chute and container.....	- 57#
9.	Deletion of visual bombsight & associated eqmt....	- 376#
10.	Deletion of ARN-6 Group "B" parts.....	- 45#
11.	Deletion of ARN-12 marker beacon Group "B" parts..	- 9#
	Total..	-1192#

The approved weight reduction items have been integrated into production and retrofit programs, and Technical Orders are being written that will authorize the removal of this training equipment from the aircraft prior to entering combat. Specific items of weight reduction will be considered as specific projects in the future. No additional work will be accomplished on this particular project.

B-4 Armament System Deficiencies (EE-42). This program was initiated on 3 March, 1953, with Captain James T. Crowder as Project Engineer for the purpose of isolating and investigating deficiencies in the B-4 armament system.[90] (Monthly progress as reported will not be included in this narrative; attention of the researchist is invited to footnote below.) The final evaluation was contained in SIR 111, 18 September, 1953 (no copies available for this history), "Improved

90. Ibid, pp 10-11.

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Air System for the B-4 Fire Control System," and which was submitted to Headquarters, WADC. In substance, the report stated that the proposed improvement to the system will increase the reliability of gun firing; however, it was recommended that present systems not be modified, except for combat. This recommendation was made because only a limited number of aircraft equipped with the B-4 armament system are assigned to combat units, and these systems will be replaced in the near future. No further action will be taken on this project.

Tracking Range of K-4 Bombing-Navigation System in B-47 Aircraft (EE-43). This project was begun on 3 February, 1953, with Captain Enoch T. Naversen as Project Officer[91] for the purpose of reporting the result of the evaluation of the extended tracking range systems installed in two 305th Bomb Wing B-47B aircraft. The project was concluded with the publication of Specific Item Report 85A, 16 September, 1953.[92] It is to be noted that Appendix II, Bombing Summary, of subject SIR is not included therein, as Headquarters SAC exercised strict security control over the distribution of the actual bombing results. In fact, copies thereof could not be obtained from OES for purposes of this historical report.

K-System Dual Offset Unit (EE-53). The purpose of this project which began in April, 1953, with Captain Enoch T. Naversen as Project Officer, was to evaluate two prototype dual offset units.[93] The

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91. Ibid, page 12.
92. Rpt, B-47 OES Hq 6AD to Comdr WADC, "Specific Item Report No. 85A, Evaluation of K-System Extended Tracking Range Computer, B-47B Aircraft. (EE-43)," 16 Sept., 1953. DOES 452.0311. Exhibit 21.
93. Reference 6th Air Division History, August, 1953, Exhibit, B-47 OES Monthly Progress Report, 1 - 31 Aug., 1953, page 20.

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conclusion of this project are contained in Specific Item Report 114, 8 October, 1953 (copies not available for this historical report). In general, the report recommends adoption of the dual offset feature in future systems, as the evaluation disclosed that this capability is highly desirable, particularly for strange target runs. No further action on this project will be taken by OES.

ARN-14 Antenna Connector (EE-57). This project was begun on 2 June, 1953, by Staff Sergeant M. W. Huber for the purpose of eliminating failure of the ARN-14 antenna connector in the vertical stabilizer of B-47 aircraft.[94] The project terminated with publication of SIR 113, "Coaxial Connectors in ARN-14 and ARC-27 Antenna Cables, B-47 Aircraft," 3 October, 1953, (copies not available for this history). The report recommended that the UG-21/U connectors, that frequently fail because of the withdrawal of the center pin, be replaced with PL-259 and PL-258 connectors when failure occurs. Furthermore, another recommendation was made that the PL-258 and PL-259 connectors be installed during retrofit and production in place of the UG-21/U connector.

Deficiencies of B-47B Interphone System Prior to the 455th Aircraft (EE-60), (formerly: Deficiencies of AIC-3 Interphone System). This project, begun in June of this year with Captain John T. A. Ely as project officer, was for the purpose of eliminating deficiencies in present interphone systems and outlining requirement to prevent similar deficiencies in future systems.[95] The project ended with the

94. Ibid, page 26.
95. Ibid, page 28.

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publication of SIR 116, 26 October, 1953.[96] Recommended were that technical orders be issued as soon as possible that would direct field modification of the B-47B interphone system as established within subject SIR, to remove subject deficiencies; furthermore, that future interphone systems be analyzed to insure they do not contain analogous deficiencies.

Instrument Landing Facilities in the Co-Pilot's Position, B-47 Aircraft (EE-61). This project was begun on 17 July, 1953, by Captain J. L. Balega for the purpose of monitoring the installation of ILAS and OMNI indicator, ID-249 and ID-250 in the co-pilot's position in B-47 aircraft, and for the evaluation of this installation from an operational viewpoint.[97] Publication of SIR 110, 14 October, 1953,[98] ended this project. The report recommended that WADC initiate action to rearrange subject indicators in the co-pilot's instrument panel in accordance with a diagram included within the SIR, and that WADC also authorize and supply the TOC (Technical Order Compliance) kits to enable field modification of in-service aircraft, in accordance with aforementioned diagram. Consequently, the Technical Order that would direct the change should also authorize the removal of the instruments prior to entering combat.

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96. Rpt, B-47 OES 6AD to Comdr WADC, "Specific Item Report No. 116, Inadequacy of the Combat Interphone System Installed in B-47B Aircraft. (EE-60)," 26 Oct., 1953. Exhibit 22.
97. Reference 6th Air Division History, August 1953, Exhibit, B-47 OES Monthly Progress Report, 1 - 31 Aug., 1953, page 29.
98. Rpt, B-47 OES 6AD to Comdr WADC, "Specific Item Report No. 110, Installation of ILAS and Omni-Range Indicator in the Co-Pilot's Position, B-47 Aircraft (EE-61)," 14 Oct., 1953. Exhibit 23.

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Alternator Water Separator (ME-73). This project with the purpose of testing a locally fabricated alternator water separator pertaining to efficiency of water separation, adequacy of cooling and freedom from icing was begun 16 April, 1953, by Second Lieutenant C. R. Shive, Jr.[99] Subsequent events have proven that the requirement for a water separator in the cooling air inlet to the alternator no longer exists. Tests conducted by the manufacturer proved that the Boeing (Airplane Company) right angle air inlet to be the best interim fix to meet the problem. The window bracket alternator design produced by Westinghouse, wherein the cooling does not pass over the brushes, was proved in tests conducted by OES[100] to be the final fix. A similar test was begun on 25 February, 1953.[101] Until such time as the window bracket type alternator becomes available in sufficient quantity to equip all operating B-47's, a Boeing retrofit kit, ECP 1407 MK, is recommended for use for the installation of the Boeing right angle air inlet on the alternators. No additional work will be done on this project.

Towing of B-47 Aircraft to Runway Prior to Take-Off (ME-79). This project began 17 July, 1953, with Major T. P. Savage in charge for the purpose of determining the feasibility of towing B-47 aircraft

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99. Reference 6th Air Division, History, August 1953, Exhibit, B-47 OES Monthly Progress Report, 1 - 31 Aug., 1953, page 37.
100. Rpt, B-47 OES 6AD to Comdr WADC, "Specific Item Report No. 112, Water Separators for 20 KVA Alternators in B-47 Aircraft (EE-46)" 5 Oct., 1953. Exhibit 24.
101. Reference 6th Air Division History, August 1953, Exhibit, B-47 OES Monthly Progress Report, 1 - 31 Aug., 1953, page 15.

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from the parking ramp to the end of the runway for the purpose of saving fuel.[102] In a special interim report, SIR Number 109, 25 August, 1953, (copies not available for this historical report), the recommendation was made to Headquarters, SAC that a service test made by an operating wing would be the only positive means of determining and evaluating the practical effects of certain aspects of such a plan. After consideration by higher headquarters, it was determined that such tests could not be accomplished at this time, and that the project be shelved for at least six months. OES will not take any additional action on the matter until directed to do so.

To avoid needless repetition, only a synopsis will be made of continuing projects. Details may be found in Part II of inclosed Bi-Monthly Progress Report, Exhibit 20, (Appendix "A").

Flight Analyzer Installation, B-47 Aircraft (AE-22) - project began on 30 April, 1953, with Captain John T. Ball, Jr., as Project Engineer for the purpose of recording flight conditions of airspeed, altitude, and vertical acceleration for study by the WADC Structures Analysis Branch. As of 31 October, 1953, the project was approximately 25 percent complete.

Inverter Malfunctions (EE-10). This project, under Staff Sergeant Michael W. Huber, was originated on 19 September, 1952, for the evaluation, on a competitive basis, of nine AN-3516 inverters from four different manufacturers. No estimation was made as to the percentage of completion.

102. Ibid, page 41.

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Fuel Boost Pump Failure (EE-16). Purpose of this project, which was originated on 18 March, 1952, with Major W. E. Frazier as Project Engineer, is to monitor failures of modified fuel boost pumps.

Remote Radar Indicator ID-218 in Co-Pilot's Position (EE-44). This project was initiated on 5 February, 1953, under Captain Enoch T. Naversen, to investigate the feasibility and advantages of installing an auxiliary radar scope in the co-pilot's position. An auxiliary indicator in the co-pilot's position was evaluated as regards target identification assistance to navigational assistance by the co-pilot. Results of the evaluation were contained in Specific Item Report No. 107, 31 July, 1953. Other work continues.

Westinghouse 20 KVA Alternator Malfunctions (EE-46). This project has the purpose of decreasing the number of alternator malfunctions, and was begun by Sergeant Huber on 25 February, 1953.

Service Test of Improved Speed Governor for Jack and Heintz AN-3516 Inverters (EE-47). Sergeant Huber is in charge also of this project that began 26 February, 1953, for the purpose of evaluating a new speed governor for the Jack and Heintz Type AN-3516 Inverter.

Failure of 1N-23B Crystals in RT-124/APS-23 (EE-48). Purpose of this project, which began 2 March, 1953, with Captain John T. A. Ely as Project Engineer, is to investigate the excessive 1N-23B crystal failures that had occurred at MacDill during the two months preceding initiation date of the project.

Emergency K-System Bombing Computer (EE-52). Captain Ely is

in charge of this project which began in February, 1953, for the purpose of determining the feasibility of utilizing an emergency bombing computer in the B-47 aircraft when a failure exists of the computing section of the K-System.

Evaluation of New Thermal Delay Relay, A-1 Power Supply, in Conjunction with Fast Blow Fuses, K-System (EE-54). This project is an evaluation of the new type thermal delay relays, K-301, which are located in the A-1 power supplies of the K-System. The project began in May, 1953, under Captain J. L. Balega.

Radome Failures, K-System (EE-55). This project began in May of this year under Captain Balega for the purpose of determining whether an unreliable radome can be restored to usable condition by drying it with heat lamps, and determining whether a reliable radome can be coated with a sealing agent to prevent contamination. A Specific Item Report was being prepared at month's end on this project.

Evaluation of C-23 Cameras (EE-56). It was anticipated that tests and consequent SIR would be produced early in November on this project whose purpose is the evaluation of the capability of the C-23 camera. The project began in May, 1953, under Captain Naversen.

Evaluation of 10" Radar Scope (EE-58). This project was begun on 8 June, 1953, under Captain Naversen for the purpose of evaluating the 10-inch radar indicator in B-47 aircraft.

Jump of Radar Presentation on ID-218/APS-23 Caused By C-15 Camera (EE-62). This project was begun on 27, July, 1953, by

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Captain Ely for the purpose of preventing "jump" of the radar picture on the indicator, ID-218, when the O-15 scope camera is actuated.

Fuel Loading Procedures (ME-28). The purpose of this project, which began in February, 1952, with Major Lomax Gwathmey as Project Engineer, is to develop a firm method of refueling the B-47 aircraft prior to long-range missions.

Crew Comfort and Survival Equipment (ME-44). This project, originated on 3 April, 1953, by Major Willis E. Frazier, has the purpose of investigating and making recommendations regarding the crew comfort problems existing in B-47 aircraft.

Fuel Tank Leaks, B-47 Aircraft (ME-53). This project was originated on 19 February, 1952, with Second Lieutenant C. B. Shive as the Project Engineer, for the purpose of reporting fuel tank leaks and recommending corrective action. During September, 1953, the 305th Bomb Wing recorded 78 aircraft-in-commission days lost due to fuel leaks, while the 306th reported 112. In October, the 305th had 36 days, and the 306th, 93.

Service Life of B-47 Surface Control Pump Assemblies (ME-64). This project, also under the direction of Lieutenant Shive, was originated on 12 June, 1952, for the purpose of monitoring the operation of 12 each subject assemblies, Part Number 4869-167 WQ 300, for the purpose of determining periodic replacement time.

Tow Target Reel Installation and Flight Evaluation (ME-69). This project has the purpose of determining the feasibility of

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installing a tow-target reel which can be readily removed or installed for towing winged targets with B-47 aircraft. The project was originated on 13 February. Major Willis E. Frazier is the Project Engineer.

Extruded Compressor Stator Blades J47-25 Engines (ME-75). Originated on 28 May, 1953, with Lieutenant Shive as Project Engineer, the project has the mission of monitoring effects on engine life of a modified extruded compressor stator blade.

Tool-Engine Mount Pin and Internacelle Fairing (ME-76). This project, originated on 19 June, 1953, with Lieutenant Shive as Project Engineer, has the purpose of evaluating and refining design of a locally devised multi-purpose tool for removing and installing engine mount pins and aft and forward internacelle fairings. Latest development was the preparation of SIR 115,[103] that includes drawings of a locally designed tool, and recommendation that the tool be authorized all B-47 wings, on a basis of issue of two each per combat and field maintenance squadron, and four each per periodic maintenance squadron.

Main Landing Gear Seal Failures (ME-78). This project, also engineered by Lieutenant Shive, was originated on 8 July, 1953, for the purpose of determining if soft strut servicing in accordance with T.O. 01-20EN-231 is the cause of "O" ring failures. Two forward main landing gear (O) seals failed in aircraft of the 305th Bomb Wing during the period of 1 September - 31 October, 1953. The 306th Bomb Wing has not experienced any failures of this nature.

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103. Rpt, B-47 OES 6AD, "Specific Item Report No. 115, Tool Engine Mount Pin and Internacelle Fairing (ME-76)," 20 October, 1953, DOES 452.0311. Exhibit 25.

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B-47 Operational Engineering Projects that have been completed and are awaiting further action by Headquarters, WADC are:

(EE-32) - Nosa Glass Control.

(EE-49) - Use of the B-7 Intervalometer in lieu of B-8.

(EE-51) - APN-76 Receiver-Transmitter Location.

(EE-59) - Comparative Evaluation of Methods of Swinging the Compass, B-47 Aircraft.

(ME-12) - Directional Damper.

(AE-4) - Analysis of B-47 Mission Capability.

(AE-13) - PDI Instrument Relocation.

(AE-18) - Evaluation of Alco Windshield Wiper.

(EE-14C) - Rendezvous Descent Preliminary to In-Flight Refueling of B-47B Aircraft.

(EE-30) - K-System Slewing.

(ME-15) - Observer's Ditching Harness.

(ME-36A) - Periscopic Sextant Mount in the Navigator's Position, B-47B Aircraft.

(ME-60) - Operational Suitability Test of Phase II Modified B-47B Aircraft.

(ME-68) - Multiplace Life Raft Installation of B-47 Aircraft.

(ME-70) - Leaking Power Control Unit Seal.

(ME-74) - J47-23 and -25 Engine Speed Switch.

(ME-77) - Functional Test of Fuel Tank Float Switches.

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A mock-up inspection of a proposed multiplace Mark IV life raft installation in a B-47 aircraft was held 10 September, 1953, at the Boeing Airplane factory, Wichita, Kansas. The mock-up consisted of the installation in the backbone of the aircraft, but did not include the installation of the door fastener or release mechanism. However, the engineering for the door and release system was discussed and appeared to be suitable for incorporation into the aircraft. Nevertheless, a complete installation had not been made, thus no flight testing had been accomplished.[104]

The Mark IV raft, having an inner vertical wall to divide the air chamber at the midpoint on each side of the raft, was used for the experimentation, and was proposed for the final installation. Accessories included three sunburn preventive cans, a new type fishing kit, a sea anchor, and three water bags. The raft is the same size as the originally proposed A3B, but has the CO_2 bottle at the center of one side of the raft and can be packed into a smaller envelope than can the A3B. The subject Mark IV raft is installed at the same location as was originally proposed in SIR 83.

Contrary to the configuration of the aircraft that the OES used during their experimentation, the mock-up aircraft, as well as production aircraft, have an electrical relay panel in the proposed life raft compartment. However, sufficient space is available to install the raft without changing the panel's location. The aircraft

104. Ltr, Hq 6AD B-47 OES to Comdr SAC, "Multiplace Life Raft Installation, B-47 Aircraft," 19 Sept., 1953, DOES 452.138. Exhibit 26.

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manufacturer proposed that the raft be installed in a molded plastic container having a split canvas cover which would be held by snaps running the length of the container. The raft would be packed within the container, and upon the release of the door, the raft would pop the snaps and rise from the then open top of the plastic container.

The present door of aircraft would be replaced with a "beefed-up structure" door, necessitated by the replaces of the present "Dzus" fasteners with seven latches. The new-type door would be hinged along the outer edge, opening up and out. One latch would be installed at the fore and aft ends of the door, perpendicular to the horizontal center line. Five additional latches would be placed on the door's unhinged side parallel with the horizontal centerline, while the most fore and aft hinges would be located as close as possible to the end of the door.

All latches would be operated from a common bell crank that would be operated in turn by a release cable. Initial movement of the bell crank would operate the door latches and further movement of the crank would pull the actuating cable on the raft bottle. There would be a small access door in the top of the life raft compartment door, which a mechanic working on the ground could open and enter to turn the bell crank and open the door.

Detailed discussion was held concerning the normal release system. A flight crew member, operating through the mechanic's access door, could open the other door, then reach in and pull the actuating cord

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of the bottle; however, this would be a tricky maneuver under duress and in high seas inasmuch as there is nothing on which to hold on on top of the aircraft until the door is opened. The decision was made that an additional release handle would be necessary for use under emergency conditions (normal ditching release). The decision was also made that the additional release handle should be located approximately 15 inches aft of the beam assembly of the canopy installation in the aircraft, and should actuate the door and raft with a pull of 35 pounds. It was conceived that the canopy will have been jettisoned and that the co-pilot could climb over the gun sight and pull the raft release handle, while he hung onto the canopy beam.

It was visualized that with the sectionalized canopy and with the canopy installed in aircraft 400 and subsequent thereto, the canopy will be jettisoned prior to hitting the water.

In those aircraft 400 and on, if the canopy is not jettisoned, a crew member would actuate the emergency canopy release system which would in the majority of cases open and throw the canopy back far enough that it would fall from the aircraft. In the event that it did not fall, the canopy would be physically pushed aside by the pilot and co-pilot in order that the co-pilot would have access to the life raft release handle. If this operation were not done, the pilot would have to crawl over the top of the canopy and down the backbone of the aircraft to release the life raft through the mechanic's access door. (In high seas this would be an exceedingly hazardous maneuver.) The

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co-pilot would exit through the opening between the windshield and the canopy, possibly from the pilot's position.

In aircraft 235 through 400, the same condition pertains to the use of the canopy emergency release system. In these cases, however, the canopy cannot be jettisoned prior to ditching. It must be actuated after landing, and then if it has not cleared the aircraft, would be removed by the pilot and the co-pilot.

After inflation, the raft is held to the aircraft by a cord which will be disconnected by either the crew opening a snap ring at the end of the cord which fastens to the life raft, or the aircraft sinking which would cause the cord to break when subjected to a 100-pound pull.

The weight of the Mark IV complete life raft and release installation weighs about 32 pounds. The installation of the handle to be located to the rear of the canopy weighs one and one-half pounds. If kits would be made available, the depot or field organization could make the installation in the aircraft with 16 manhours.

As mentioned before, only the raft installation was viewed at the meeting at Wichita. The release mechanism had been engineered but not fabricated. Neither had flight testing been completed.

The kit was to be initially installed in production on the 721st aircraft. It was understood by MacDill authorities that the kit was to be incorporated also in the turn-around program beginning with the 617th aircraft; however, word was received by Boeing on 10 September that the installation of the life raft had been cancelled for the turn-around program. Therefore, plans for the incorporation of the

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life raft, etc., in production and for a retrofit program appeared to be uncertain at month's end.

In reference to the general and associated subjects of ditching and bail-out procedures, the 305th Bomb Wing submitted their views on certain phases concerning the abandoning of stricken KC-97G aircraft.[105] In reference to SAC Manual 50-16, February, 1952, Section III utilizes the upper forward escape hatches, over the wing, as the recommended primary bailout exits. According to the 305th, however, "it has been demonstrated that these primary escape hatches can only be removed under the most ideal situations." Such conditions would include airspeeds under 150 miles-per-hour and ample, able manpower. On the other hand, the upper aft hatches can be easily opened by one man at any time regardless of airspeeds. Opening of the upper aft hatches becomes an acute undertaking during gross loads. The 305th understood that the forward escape hatches had to be opened prior to opening the aft hatches that would be used to accommodate a large number of passengers.

The Wing recommended that the aft hatches be considered the primary bailout exits for normal crew operations.

According to Chapter Four, Section IV of SAC Manual 50-16, the engineer is required to leave through the left escape hatch and is assigned to man the left raft; the radio operator is assigned to the right side and that raft. In order to further simplify this ditching

105. Ltr, Hq 305th Bomb Wg to Comdr 2AF (via Comdr 6AD), "Ditching and Bailout Procedures, KC-97G Aircraft," 27 Aug., 1953, 305WA3 300.3. Exhibit 27.

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procedure, a plan was suggested in agreement with AN 01-200AH-1 which states that each crew member whose duties are on the left side of the aircraft are assigned to the left raft, and the other members are assigned to the right exit and raft. Of course, passenger assignments must be in accordance with the individual circumstances. This same method of distribution also is applicable to bailout procedures wherever practical. These procedures were deemed most suitable for the KC-97G emergency methods.

While SAC Manual 50-16 requires 2350 RPM during normal climbs, ILS, GCA, LF and OMNI Range letdowns, it was recommended by the 305th that the RPM be included also on the normal traffic pattern, rather than 2300 RPM, for the purpose of standardization of power settings.

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CHAPTER FOUR

MATERIEL and FACILITIES

The transfer of 12 KC-97 aircraft to the 44th Bomb Wing, Lake Charles Air Force Base, La., from the 305th Bomb Wing around the first part of September, 1953, shortly elicited caustic comments from the gaining organization regarding the major discrepancies found on the aircrafts' records.[106] According to Colonel Frank W. Ellis, 44th Bomb Wing Commander, the discrepancies consisted of: numerous forms missing from the records; many instances where the serial numbers of installed accessories did not correspond to the serial numbers recorded on the forms; and excessive numbers of outstanding Technical

106. Ltr, Hq 44th Bomb Wing to Comdr 806 AD, "Inspection of KC-97 Aircraft," 9 Sept., 1953, [illegible] Exhibit 28.

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Orders. The 44th, according to their complaint, "understood" that while the 305th Bomb Wing did not have the personnel available to accomplish 100-hour inspections (due to pending deployment of the MacDill unit to the United Kingdom on 90 days temporary duty), prior to transfer of the aircraft, the gaining organization had not anticipated that the KC-97's would be received in such an unsatisfactory condition. Forty-fourth Maintenance personnel, at time of writing, were correcting the discrepancies "which normally would have been corrected before transfer" at the 44th's estimated expenditure of 100 manhours per aircraft (1200 manhours total). This extra work reportedly would reduce the in-commission rate and flying time through September.

While Headquarters, 806th Air Division, Lake Charles AFB, La., agreed in their forwarding indorsement[107] that the additional work load would affect the maintenance capabilities of the 44th Wing, it was thought that "agressive action taken will preclude too great a reduction of the in-commission rate and flying time through September."

Headquarters, Second Air Force, in their indorsement,[108] observed that "this condition (as reported by the 44th in detail) can only be generated over a long period of time as a result of failure on the part of maintenance personnel to perform day-to-day duties."

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107. 1st Ind, Hq 806 AD to Comdr 2AF, 11 Sept., 1953, to ltr, Hq 44th Bomb Wing to Comdr 806 AD, "Inspection of KC-97 Aircraft," 9 Sept., 1953, DM 353. Exhibit 28A.

108. 2nd Ind, Hq 2AF to Comdr 6AD, 21 Sept., 1953, to ltr, Hq 44th Bomb Wing to Comdr 806 AD, "Inspection of KC-97 Aircraft," 9 Sept., 1953. 2AFMM 452. Exhibit 28B.

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In addition to forwarding the correspondence by official means,[109] Brigadier General H. K. Mooney, 6th Air Division Commander, wrote a personal letter to Colonel Elliott "Pete" Vandevanter, Jr., 305th Bomb Wing Commander.[110] In his letter, General Mooney observed that, "the receipt of such a report is an unforgivable sin, but the seriousness of the deficiencies is one that you, yourself, must determine by a thorough analysis of your Maintenance Control Section." General Mooney cited the fact that while "a quick glance" at the 44th report indicated that the overall maintenance was good, the substantiating records "leave a lot to be desired." However, according to the letter, this particular deficiency was prevalent throughout Strategic Air Command and which the parent command believed warranted special attention. "Therefore," concluded General Mooney, "to assure favorable comments from higher headquarters, I expect you to take whatever action is necessary to maintain current day-by-day operations in both the administrative and operational fields within your Maintenance Control Section."

In the replying indorsement,[111] Colonel Vandevanter pointed out that the transfer of the 12 KC-97 aircraft was accomplished per instructions from Headquarters, Second Air Force, and on the basis of a mutual understanding between the two wing commanders concerned.

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109. 3d Ind, Hq 6AD to Comdr 305th Bomb Wing, (undated) to ltr, Hq 44th Bomb Wing to Comdr 806 AD, "Inspection of KC-97 Aircraft," 9 Sept., 1953. DMA 452. Exhibit 28C.
110. Ltr, Brigadier General Mooney to Colonel Vandevanter, 29 Sept., 1953. Exhibit 28D.
111. 4th Ind, Hq 305th Bomb Wing to Comdr 6AD (undated) to ltr, Hq 44th Bomb Wing to Comdr 806 AD, "Inspection of KC-97 Aircraft," 9 Sept., 1953, 305WA4 452. Exhibit 28E.

While it was the desire of the 305th Bomb Wing materiel personnel to accomplish the transfer with the least amount of unsatisfactory conditions occurring, "ramifications were prevalent hindering the desired intent," according to the letter.

One of the major factors was the scheduled deployment of the 305th on or about 3 September. The emphasis on the combat readiness of aircraft accompanying the unit was of prime importance and consequently received top priority over other requirements. In addition, the volume of aircraft assigned to and possessed by the 305th during the period of 1 June to 31 August, 1953, was excessive "when consideration is given to the personnel manning authorizations and particularly so in view of the condition of aircraft records received with 'factory delivered' aircraft." During this cited period, the average number of aircraft assigned and possessed for June was 90; for July, 93.66; and for August, 84.74.

According to the receipts and transfers of aircraft in accordance with established schedules, 41 were transferred and 27 were gained during the three-month period. Of the 27 gained, 20 were KC-97G series obtained from the Boeing Airplane Company plant at Seattle, Washington, and seven B-47B series from the Lockheed Aircraft Corporation, Marietta, Georgia. After a reviewal of all historical records received pertaining to the newly assigned aircraft, a "new" Part V of Air Form I were initiated. The review of the historical records disclosed that an average of 50 Technical Orders (T.O.) per aircraft were either not

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entered on the forms, or else they were entered, but not complied with. This condition was reported to higher headquarters by means of Unsatisfactory Report (UR) Station Serial Number 305BW 53-1833. The condition of the historical records for the B-47 series aircraft required extensive efforts be taken to insure an accurate and complete T.O. compliance program for all of the newly assigned aircraft. The necessary work was accomplished by means of a "master" T.O. compliance chart that listed each existing technical order applicable to the series or type of aircraft. This system was in the developing process during the cited period, and later was perfected to the point where complete accuracy was assured.

In addition to the total aircraft assigned during the cited period, the workload was increased by aircraft records and technical order compliance responsibility for the 98th Air Refueling Squadron aircraft, which unit possessed 18 KC-97 Series airplanes but lacked trained personnel to support the trained personnel to support the maintenance of aircraft and allied historical records. To climax the situation, the 305th assumed the responsibility for the training of 98th ARS personnel until immediately prior to deployment to England. The Wing also assumed the responsibility for the maintenance of aircraft records and similar data during the cited period. All of this responsibility, coupled with the preparation of aircraft for deployment and the preparation of aircraft for transfer made the 305th unable to devote the additional emphasis to the support of the 12 KC-97G's

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assigned to the 44th Bomb Wing. These facts were explained, according to Colonel Vandevanter's official letter, to the 44th Bomb Wing maintenance team that arrived at MacDill to inspect and receipt for the aircraft consigned to their unit.

The functions of the Aircraft Records and Technical Order Compliance Unit were conducted in accordance with SAC Manual 66-12, July, 1952. Personnel manning is per authorization of T.O. 1-1047P, Medium Bomb, Jet. (Reference SAC Letter 24-1, 2 July, 1952). An additional adverse situation was prevalent during the time of the excessive maintenance program and the abnormal number of assigned and possessed aircraft.

This adverse situation resulted from the change to Second Air Force Manual 65-1, October, 1951, instituted by AF 62 SO Supply Memorandum 54, which subsequently become recognized as Change 1 to Second Air Force Manual 65-1. This change to the prescribed procedure was beneficial to the supply activity at the expense of the Aircraft Records Unit wherein the responsibility for ordering, storing, and issuing all technical order kits and "bits and pieces" was delegated to the aircraft records unit of the tactical organization. This change necessitated research by the Aircraft Maintenance Technicians of stock catalogues, which available only in the supply activity, accounting for property issued as technical order kits - or bits and pieces to these kits, etc., and required the full time services of one airman assigned to the maintenance activity for the maintenance of

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historical records. It was emphasized in the letter that "the provisions of SAC Manual 66-12, July, 1952, clearly defines the ordering, storing, and issuing of technical order kit responsibility.

The transfer of aircraft within the Strategic Air Command is done under the provisions of SAC Regulation 65-1. The 44th Bomb Wing complied with this directive and dispatched an inspection team to MacDill during the latter part of July, 1953. This team of aircraft maintenance personnel coordinated with the 305th Aircraft Records Section, and pointed out those areas of disagreement. It was believed that the cited discrepancies listed by the 44th Bomb Wing were resolved to the mutual agreement of both the transferring and the recipient organizations.

Colonel Vandevanter noted that "notwithstanding the excuses offered, I recognize that the aircraft historical record system of this Wing has either been operating in a very inefficient manner or not at all." He further commented that the Wing's Director of Materiel and the latter's subordinates who were concerned with the aircraft historical records function were informed that such conditions would not be tolerated. A system that required the frequent interinspection of all aircraft forms and records was subsequently established, and that in turn should prevent any recurrence of the condition reported by the 44th Bomb Wing. "I believe that the reported maintenance discrepancies are no more than normally encountered in the transfer of aircraft from one unit to another and I feel that the Tech Order

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non-compliance subject has been adequately covered. . .," Colonel Vandevanter concluded.

On the returning indorsement to Headquarters, Second Air Force, 6th Air Division commented that monitoring will be conducted of the 305th's records upon the unit's return to "insure adequate aircraft records maintenance."[112]

A conference was held 8 September concerning MacDill's logistical support of the 2512th Air Force Reserve Specialist Training Center (AFRSTC), which is headquartered at 4820 North Lois Street, Tampa 3, Fla., (Drew Field - former Drew Army Air Field - Area).

The 2512th AFRSTC is a Fourteenth Air Force unit, under the command of the Continental Air Command (CONAC). In accordance with Air Force Regulation 11-4 plus a directive from Headquarters, Fourteenth Air Force, Robins Air Force Base, Georgia,[113] which had been coordinated with Headquarters, Strategic Air Command, the 2512th was designated as an off-base facility of MacDill. This designation, which occurred in March, 1953, was accompanied by notice of the forwarding of $21,750 of Fiscal Year 1953 M&O (Maintenance and Operations) P449.1 funds to Orlando Air Force Base, Fla., for the rehabilitation of three buildings at Drew Field. The funds were made available to MacDill from Orlando.

The current problem was that MacDill was not aware of the

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112. 5th Ind, Hq 6AD to Comdr 2AF, 17 Nov., 1953, to ltr, Hq 44th Bomb Wing to Comdr 806 AD, "Inspection of KC-97 Aircraft," 9 Sept., 1953, DMA 452. Exhibit 28F.

113. Ltr, Hq 14th AF to CG 6AD, "Post Request FAF 1(B)-53, Drew Field, Tampa, Fla.," 27 March 1953, Instl 600.

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responsibility of providing logistic support for the 2512th AFRSTC at the time that the Fiscal Year 1954 Budget was submitted; therefore, MacDill requested of Fourteenth Air Force, via the 2512th, that the intermediate command either give an estimate of the funds required for the normal housekeeping, custodial services, and locally procured supplies and equipment that will be needed in order that MacDill could procure the necessary funds, or else that Fourteenth Air Force assume responsibility and continue in accordance with that command's present procedure.[114]

As of 9 September, MacDill was procuring administrative and housekeeping supplies through local purchase means; it recommended that the 2512th be authorized by Fourteenth Air Force the establishment of a petty cash fund for such purchases. (This recommendation was subsequently withdrawn; in fact, the MacDill Budget and Accounting Officer stated that the Reserve Training unit was not authorized such a facility).

Agreement was reached at the 9 September conference that MacDill would supply such R&U (repair and utilities) items as minor maintenance of buildings (on work order request by the Commander of the 2512th through Director of Materiel, 809th Air Base Group, to Air Installations) and the establishment of a Plant Account (M/R) for administrative supplies. Vehicle support would also be furnished by MacDill, with the receiving unit furnishing the necessary operators.

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114. Ltr, Hq 2512th AFRSTC to Comdr 14 AF, "Responsibilities with respect to 'Special Activities,' Air Force Regulation 11-4," 9 Sept., 1953.

Fourteenth Air Force replied[115] that the initial Unit Allowance List (UAL) worksheets were being prepared to separate the equipment in use by the 2512th AFRSTC and the companion 9189th VART (Volunteer Air Reserve Training) Group from the UAL for the AF 2464 SO, VART account. The inclusion of the 9189th equipment was ordered by CONAC. Later, a separate UAL would be published for the 2512th. Fourteenth stated that upon receipt of the approved UAL from their command headquarters, action would be taken to transfer, on paper, the accountability for all in-use property from AF 2464 SO, VART account at that headquarters (14th AF) to the MacDill Accountable Officer.

According to the indorsement, a total of $1850 was estimated as the expenditure of the 2512th for the balance of Fiscal Year 1954. These figures included:

Object Class 08 - Supplies	$600.00
Object Class 07 - Rental of and Repairs to Office Equipment	$500.00
Object Class 04 - Communications	$750.00
Total	$1850.00

Funding for temporary duty and activities peculiar to Reserve work would continue to be supplied by Headquarters, Fourteenth Air Force.

Upon receipt of this information, MacDill requested of the 2512th that "Fourteenth Air Force continue the funding responsibility for the remainder of FY (Fiscal Year) 1954 by issuing an Obligation Authority to this Base in the amount necessary to cover purchases for the support of your organization." In the event that the Fourteenth

115. 1st Ind Hq 14 AF to Comdr 2512th AFRSTC, 8 Oct., 1953, to ltr, Hq 2512th AFRSTC to Comdr 14 AF, Subject as above, SUP-3 400.

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would not issue the Obligation Authority, MacDill would need estimates for the remainder of Fiscal Year 1954 in the categories of:

Object Class 05 - Utilities
Object Class 05 - Rentals
Object Class 07 - Contractual Repair

In addition, information was required regarding the number of civilian personnel authorized and assigned, if any.[116]

FACILITIES

Seven members of the Programming Division, AFOAI, Headquarters, United States Air Force, visited MacDill on 24-25 September, 1953, for the purpose of familiarization with facilities required for jet bomber operations.[117] The party, which consisted of Colonel T. E. Griffin, Lieutenant Colonel J. F. McCarthy, Major L. E. Langford, Captain H. W. Wells, Mr. L. F. Williams, Mr. R. A. Gilman, and Mr. A. Fore, was briefed by Colonel B. H. Merchant, Base Commander; Colonel Robert E. Kimmel, 6th Air Division Director of Materiel; Major Sam Almon, Base Director of Materiel; and Major Robert G. Williams, Air Installations Officer, on current and projected construction programs under the Fiscal Year 1955 Public Works Program.

Later, the visitors were conducted on a tour of Bayshore Road, B-47 Flight Simulator, Fly-Away Kit Storage, Base Supply, Hangar Three, taxiways with demonstrations of the effect of jet blast,

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116. 3d Ind, Hq 6AD to Comdr 2512th AFRSTC, 30 Oct., 1953, to ltr, Hq 2512th AFRSTC to Comdr 14 AF, "Responsibilities with respect to 'Special Activities,' Air Force Regulation 11-4," 9 Sept., 1953, MCDKBF 400.
117. Ltr, Hq 809th AB Gp to Comdr 2AF, "Report of Visit by Headquarters USAF Representatives," 26 Sept., 1953, MCDCCO 333.

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special weapons area, squadron operations buildings under construction, aircraft parking ramp, and mobilization-type barracks.

Particular emphasis was placed upon the necessity for concrete run-up pads, additional warehousing, stabilization of runway approaches, and taxiways, barracks ventilation, spaces for fly-away kits storage, and the repair and widening of Bayshore Road.

The visitors generally expressed concurrence with the necessity for approval of the projects.

Insofar as the condition of runway and taxiway shoulders at other B-47 bases within the Command was concerned, MacDill apparently was in better condition than most. A directive was received from Headquarters, Strategic Air Command, requesting data that would be used in justifying the submission of two particular line items in the Fiscal Year 1955 Public Works Program.[118] Those items, "providing a 25' wide shoulder on each side of all 75' wide taxiways and providing a 50' wide shoulder on each side of all 200' wide runways," were deleted by higher headquarters from the original Fiscal Year 1954 Public Works Program. The reason given by SAC for the deletion was that "the justification for the required items . . . was very generalized in nature." In a letter to SAC, the Deputy Director of Installations, Headquarters, USAF, emphasized that resubmission of these two required line items must be complete and factual in order to stand any appreciable chance at all of materializing.

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118. Ltr, Hq SAC to Comdr 2AF, "Stabilization of Runway and Taxiway Shoulders at B-47 Bases," 14 Sept. 1953, DMTC. Exhibit 29.

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"It is essential," the SAC directive stated, "that adequate blast protection be provided at many of the bases now active or scheduled for activation with B-47 aircraft and in support of this requirement it is directed that a consolidated study of the blast problem be made by your Headquarters (2AF) to provide a detailed justification of the line items submitted by the bases concerned."

The directive was duly indorsed[119] to Headquarters, 6th Air Division, which replied that a line item for the construction of a 25-foot wide shoulder on each side of all the 75-foot wide primary taxiways had already been included in the FY 1955 Public Works Program.[120] In compliance with other information requested in the basic directive, SAC was informed that the primary runway at MacDill is 500 foot wide. Also, there is no necessity for stabilized shoulders on the primary runway. The secondary, or crosswind, runway is 150 foot wide with 75 feet of stabilized (sand seal only) shoulders on each side. Inasmuch as the crosswind runway is only 7,167 feet long and is not used by B-47 aircraft except under emergency conditions, the MacDill Air Installations Office believed that difficulties would arise in attempting to justify new and stronger shoulders for this particular runway. The crosswind runway has been in use for six years, and except for the need of resurface sealing, the shoulders are in "fair" condition. This runway cannot be considered as a B-47 facility.

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119. 1st Ind, Hq 2AF to Comdr 6AD, 17 Sept., 1953, to ltr, Hq SAC to Comdr 2AF, "Stabilization of Runway and Taxiway Shoulders at B-47 Bases," 14 Sept., 1953, 2AFMIA 686. Exhibit 29A.

120. 2nd Ind, Hq 6AD to Comdr 2AF, 7 Oct., 1953, to ltr, Subject as above, MCDMAI 686. Exhibit 29B.

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Air Installations Office in effect refuted the allegation made by the USAF Installations Representatives, South Atlantic Division, Atlanta, Ga., that the Bulk POL (petrol, oil, and lubricants) Storage Facilities, Port Tampa City, Fla., were being maintained improperly.[121] This subject office, according to their letter to this command, "had been informally advised" of such improper conditions as considerable erosion developing in the area outside the concrete walls surrounding the tanks, which if not corrected could develop into serious damage; all fittings on the fire protection connections at the tanks were not arranged for quick connection to MacDill foamite equipment; in-line meters had been damaged seriously by salt water to the extent that the mechanical parts of the metering device had been removed from the meter cases and that no attempts were made to replace them.

In the first place, reported MacDill authorities, "the Bulk Storage Depot complete, consisting of unloading dock, pipe lines from unloading dock to the tank farm, storage tanks, pumps, truck fill stands, and all other associated facilities," is the property of the Armed Services Petroleum Purchasing Agency (AFPPA) and has been since 1 April, 1953, at which time it was transferred from MacDill by means of a hand receipt signed by Commander L. G. Honey, SC, United States Navy.[122] The hand receipt was an interim measure pending the processing

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121. Ltr, DAF, Hq USAF, Installations Representatives Office, Atlanta, Ga., to Comdr, MacDill AFB, Fla., "Maintenance of Bulk POL Storage Facilities, Port Tampa," 17 Aug., 1953, SADAFIR-A. Exhibit 30.

122. 1st Ind Hq 6AD to DAF, HQUSAF Installations Representatives, Office, Atlanta, Ga., 11 Sept., 1953, to ltr, above office, "Maintenance of Bulk POL Storage Facilities, Port Tampa," 17 Aug., 1953, MCDMAI 670. Exhibit 30A.

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of the final Form 290 which will be issued to the accomplishment of certain minor changes. Subsequent to the transfer from MacDill, the ASPPA entered into negotiations with Redwing Carriers, Inc., Tampa, Fla., (Contract ASP-7226) for the operation and maintenance of the Bulk Storage Depot. Through an agreement with ASPPA and Redwing Carriers, Inc., Warner Robins Air Materiel Area (WRAMA), Ga., placed an Engineer Inspector at the Bulk Storage Depot.

MacDill admitted to the fact that it was amiss regarding the fittings on the fire protection connections at the tanks, but stated that corrections had been made under the supervision of a WRAMA fire chief.

Mr. Richard A. Marsh of Redwing Carriers, Inc., was contacted informally by MacDill Air Installations Office regarding the in-line meters. He indicated that his organization had removed the metering mechanism as the inoperative meter was restricting the flow of fuel, and that his organization would repair the meters.

The thorny problem of Gadsden Park Homes[123] took a step nearer to solution during the month when Air Installations Office furnished necessary information pertaining to rehabilitation and utilization of them to the Family Housing Group, Directorate of Installations, Headquarters, United States Air Force. The data forwarded will enable USAF and MacDill in eventually turning over the management of the Homes to a private individual (or corporation) who in turn would lease the[124]

123. History, 6th Air Division, July 1953, pp 28-39.
124. Ltr, DAF, Hq USAF, Directorate of Installations, Family Housing Group, Washington, D.C. to Comdr MacDill AFB, Fla., "Gadsden Park Homes, MacDill AFB, Fla.," 20 Aug. 1953, AFOAI-3. Exhibit 31.

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apartments within the project to military and civilian personnel of MacDill Air Force Base.

Request was received from the Air Force Directorate for information concerning the cost of repairing and/or rehabilitation of the units, both on a current and future estimation and basis, and proposed fencing of the Gadsden area. This data was needed for drawing up the basic lease instrument.

The target date for the turnover of the basic 100 units was established for 1 October, 1953.

MacDill Air Installations replied that of the 300 units comprising the Gadsden Park Homes, 66 were presently occupied. A few of them were in need of such minor repairs as replacement of door and window hardware, space heater repair, etc., but all needed some interior painting.[125] Thirty-four unoccupied units could be made rentable under $200 rehabilitation. In these units the greatest expense of rehabilitation would be for kitchen equipment (especially refrigerators), window shades, plumbing, space heaters, clotheslines, cleaning, and interior paint. A flat charge of $50 was established for the reconditioning of refrigerators, and is considered an average figure; the rate of $200 for rehabilitation is also considered to be an average amount.

There are 108 units which could be made rentable for $500 or less, but not less than $200. Many of these units could be rehabilitated in

125. 1st Ind, Hq 6AD to Directorate of Installations, Hq USAF, Washington 25, D. C., ATTN: Family Housing Group, 15 Sept., 1953, to ltr, Hq as above, Comdr MacDill AFB, Fla., "Gadsden Park Homes, MacDill AFB, Fla.," 20 Aug., 1953. MCDMAI 319. Exhibit 31A.

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$300, but there are indications of termite infestation which would require expensive termite irradication and subsequent repairs.

There are 89 units, also unoccupied, which would require between $500 and $1,000 for rehabilitation. In many of these places, kitchen equipment would have to be completely replaced, floors redone, partitions replaced, roofs repaired, and termite irradication and subsequent repairs performed.

There are three units which would cost more than $1,000 to rehabilitate.

MacDill was of the opinion that a flat utility charge should be added to the rent. This premise was based upon the fact that the complications and expense resulting from individual metering and billing for a housing project of this type with its inherent peculiarities would be all out of proportion to the benefit derived. It was recommended that the consideration be given to a flat charge of $5.00 per month, added to the rental, to pay for electricity, gas, water, sewage, garbage, and trash collections. Two of the conditions peculiar to this problem are that there are no master meters to record water or electricity consumption in Gadsden Homes, nor are there individual meters for measuring the consumption per individual unit of water, electricity, or gas. The cost of purchasing and installing both master and individual meters would run into the thousands of dollars and be almost entirely prohibitive from the standpoint of economy. Therefore, it would appear the most expeditious and most economical means would be

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the aforementioned flat rate. Space heaters use oil, whose procurement, it was believed, should be the responsibility of the individual tenant.

MacDill believed that $40.00 per month should be charged for monthly rental of a two-bedroom unit in multiple structures; $45.00 per month for two-bedroom individual units; and $45.00 per month for the three-bedroom multiples. It was further believed that these fees would meet local competition (particularly in the summer season when civilian rentals are both reasonably priced and exist in large quantities.) To these proposed added rentals would be added the $5.00 per month flat rate charge for utilities.

In certifying for occupancy, it was believed that the lowest four airman grades would be eligible, and civilian employees below the rating of GS-7. However, it was suggested that a clause be inserted into the agreement between the military authorities and civilian agency that would protect the present occupancy of approximately 40 first three pay grade airmen in Gadsden Homes. The remainder of the present 66 occupants are of the lower four pay grades of airmen. It was also suggested that a clause be placed into the lease that would permit necessary deviations from the instrument "at the discretion of the Base Commander" - in other, an escape clause.

It was estimated that the erection of a fence around the Gadsden Homes Area would cost $13,000. This total figure included $10,000 for the erection of 4,000 feet of 7-foot fence at $2.50 per foot; the

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demolition and removal of Building 103; and $2,000 for the extension of Pine Street to the existing north boundary road. Demolition and removal of Building 103 would be necessary to block off Palmetto Street.

One of the major problems concerning the fencing of the Gadsden Park Homes Area revolved around placing the fence at a sufficient distance from the front of the units facing MacDill Avenue so as to avoid the appearance of a penal area, yet not enroaching on the right-of-way parallel to the avenue which is the property of Hillsborough County. The County retains a 60-foot right-of-way along MacDill Avenue, or 30 feet each side of the center line of the pavement. Gadsden Home units facing MacDill are located 45 feet from the pavement center line, which allows only 15 feet of clearance from the right-of-way line. The erection of a 7-foot fence along the right-of-way line would result in the occupants of the 24 apartments having a high fence 15 feet from their front door with no front way access provided. In addition, those circumstances would necessitate the removal of fire hydrants, electric power lines, and telephone lines from the narrow area.

This problem was solved satisfactorily, however, when the Hillsborough County Engineer in effect agreed to permit the siting of the fence 22 feet from the center line of the street, thus placing the fence 23 feet from the front of the buildings. All fire hydrants and

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utility lines would remain in their present location, and be inside the fence. Occupants of the units facing MacDill Avenue could use the service door in the rear of their apartments for access purposes. In view of this, MacDill recommended that USAF obtain permission from Hillsborough County to site the fence 22 feet from the highway center line.

A formal Master Planning Board meeting was held 24 August, 1953, at which time the proposed 1955 Public Works Program was presented by Mr. C. C. Humphreys, Airport Engineer.[126] Nine priority items were discussed at this session which was attended by Brigadier General H. K. Mooney, 6th Air Division Commander; Colonel B. H. Merchant, 809th Air Base Group Commander; Colonel Elliott Vandevanter, Jr., 305th Bomb Wing Commander; Colonel M. F. Regner, 305th Medical Group Commander, and other staff officers.

Heading the priority list was a Base Warehouse with an area of 60,000 square feet. The estimated amount was not given. Second on the list were special hardstands in a total area of 40,000 square feet of $432,000 cost. Ventilation of 122 barracks held third priority; the cost was not announced. Next was a parachute and dinghy building with an area of 10,500 square feet at a cost of $147,000. Fifth on the priority list were eight Convair-type nose docks at a price of $576,000. Next were three electric generator plants at $77,000. Seventh on the priority list were shoulder and overrun areas with a

126. Rpt, Meeting of Master Planning Board, 6th AD, MacDill AFB, Fla., 24 Aug., 1953. Exhibit 32.

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total of 100,000 square yards at a price of $270,000. Eighth on the list were roads with a total of 58,000 square yards at a cost of $313,000. Last was the project of modernizing 122 mobilization-type barracks. The amount of that proposed job was not given.

This portion of the meeting was followed by a discussion of seven items in the Fiscal Year 1954 program but not approved, for further justification if they were still considered essential to the mission of the base, to be injected into the 1955 Public Works Program.

First was the item of the aircraft parking apron area. The Board agreed with Colonel Merchant that justification did not exist for this project.

The Board did agree, however, that the item for shoulder and end zone stabilization (Base Priority Seven) should be requested as a line item in the 1955 program.

Opinion was reached that Air Installations should add the amount necessary for communications projects on the cost for each building. Originally this figure was listed at $64,000, but later the estimation was dropped to $20,000.

No justification existed the Board felt for the construction of a technical laboratory with an area of 2,136 square feet at an estimated cost of $31,000.

Considerable discussion was held on a new base operations building that had been requested in the 1952 new construction program, but never funded although it had been authorized. General Mooney went on record

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against the erection of a new building at the approved location, which is at a considerable distance from the main building area. He asked if consideration had ever been given to the enlarging the administrative section of Base Hangar (Number One) to provide greater operation space. Mr. Humphreys related that the new buildings in new construction programs were in accordance with definitive plans authorized by USAF Headquarters and that such modifications were not in accord with conclusive plans; therefore, the modification had never been considered.

Following much discussion, it was established that an item was to be included in the 1955 Program for the construction of a parachute and dinghy shop that would relinquish a large amount of floor space in the Base Hangar which could then be used for Base Operations. The Board decided that efforts should be concentrated in obtaining the construction of the parachute and dinghy shop in order that necessary additional space could be made available in the hangar rather than requesting a new base operations building - at least for the present time. Thus, the decision was reached to eliminate the base operations building from the 1955 program.

General Mooney requested that both the ventilation and modernization of 122 mobilization-type barracks be separated into two line items for the 1955 program: ventilation, and modernization, with the latter project to be contingent upon approval of the former. Colonel Regner, 305th Medical Group, was informed that the project included hospital barracks.

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Another decision reached by the Board was that Air Installations item be eliminated.

In compliance with directive from Headquarters, Second Air Force,[127] six proposed Class "A" projects over $10,000 to be accomplished during Fiscal Year 1954, a list of six high priority items were forwarded for further consideration.[128]

The project that bore the first priority was the repair and resealing of 75-feet dust strips on each side of Runway 13-31, that consisted of approximately 127,000 square yards of flexible pavement. The work would include patching and application of a bituminous sand seal. Estimated cost of the overall project was $31,000. While the resealing of subject runway and the dust strip was included in the Fiscal Year 1955 program, deterioration of the dust strips had been so rapid that normal maintenance was ineffective. Lack of traffic and extreme heat had caused oxidation of the existing sand seal bituminous surface, and it was considered essential that repairs be accomplished as rapidly as possible to preserve the limerock base course.

Holding second priority at the estimated cost of $25,000 was the exterior painting of all exterior wood trims, eaves, and gable rakes on 10 administration buildings; exterior painting of wood eaves, and gable rakes on roofs, and the aqua media section on 33 barracks buildings, and painting of the exterior of five trainer buildings.

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127. TWX, Hq 2AF to Comdr 6AD, 2AFMI 2170, 17 July 1953, and TWX, Hq 2AF to Comdr 6AD, 2AFMI 2407, 19 Aug., 1953.
128. Ltr, Hq 6AD to Comdr 2AF, "Command Approved Class "A" Projects, MacDill Air Force Base, Fla.," (undated), MCDMAI 600.1. Exhibit 33.

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Extremely high humidity and corrosive action of salt air had caused considerable damage to wood surfaces, and remedial action was needed urgently.

The repair and resealing of approximately 60,000 square yards of parking areas on the base itself, which project would cost about $30,000 and would consist of patching and application of bituminous single surface treatment held third priority. The existing flexible pavement had deteriorated to the degree that normal maintenance was becoming quite difficult. Existing surface had eroded and the base course had pot holes to the extent that it was hazardous. The work was deemed necessary to preserve the present base course and was considered beyond the capabilities of the installation forces.

Fourth priority was granted to the exterior painting of five permanent hangars and 20 miscellaneous type concrete-block buildings at an estimated cost of $25,000. The work would consist of the application of waterproof paint to the exterior of the five permanent hangars and the sealing of walls and application of waterproofing type paint on the exterior of 20 concrete-block store rooms, supply, and administrative buildings. Five years had elapsed since the hangers were painted; consequently, the paint had deteriorated to a point where existing paint was peeling and sealing extensively because of the high humidity and extreme heat. The concrete-block buildings had not been painted within the past 10 years. Hairline cracks and mortar joints were badly in need of repair. In addition, the waterproofing of build-

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ings and hangars was needed urgently to protect the structures and property within the buildings.

The reclearing of second growth vegetation, and the regrading, fertilizing and seeding of approximately 200 acres of improved ground in the flying field area would cost about $50,000 and bore a fifth priority. The work would consist principally of clearing hazardous vegetation by means of heavy clearing equipment; this would be followed by reseeding and fertilization. This project was deemed necessary for reasons of proper surface drainage, removal of hazards to aircraft, establishment of conditions for better vision of the flying field area from the Control Tower for aircraft and ground vehicle control, establish more favorable conditions that will permit the installations forces to perform more proper grounds maintenance, eliminate soil erosion, and mosquito breeding, and improve the working conditions of aircraft maintenance personnel maintaining aircraft on hardstands in this area.

Last on the priority list was an estimated $15,000 project for the exterior painting of 23 miscellaneous type buildings in the USAF Hospital area: 10 wards, two quarters, one mess hall, five pump houses, one barrack, two storehouses, boilet plant, and Hospital Dental Clinic. Again, the combination of extremely high humidity and excessive heat had caused the deterioration of exposed previously painted wood surfaces to the degree that repainting was needed to eliminate costly repair costs in the immediate future.

In compliance with basic request, the construction drawings for

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the ILAS (Instrument Landing Approaching System) localizer site were forwarded to the Commander, Airways and Air Communications Service (AACS), 1st AACS I&M Squadron, Tinker AFB, Oklahoma City, Okla.[129]

Also forwarded, this time to Headquarters, Strategic Air Command were drawings of the site location plan of security facilities at MacDill AFB.[130]

129. 1st Ind, Hq 6AD to Comdr AACS Hq 1st AACS I&M Squsdron, Tinker AFB, Okla., 8 Oct., 1953 to ltr, Comdr AACS Hq 1st I&M AACS Sq, Tinker AFB, Okla., "Construction Drawings for ILAS Localizer Site," MCDMAI 676.3. Exhibit 34.

130. Ltr, Hq 6AD to Comdr SAD, "Security Facilities," 25 Sept., 1953, MCDMAI 600.96. Exhibit 35.

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CHAPTER FIVE

MISCELLANEOUS

The total elimination or partial curtainlment of certain specialties at the USAF Hospital became necessary during August, 1953, with the release from active duty of Captain Linus R. Cranmer, Otolaryngologist, and the release of Captain James M. San, Pediatrician, which resulted in a decline of that type of service. These officers were released under the provisions of Message, Headquarters, USAF, AFCSG AIMAJCOM 628/53, 3 July, 1953, which pertained to the release of medical officers with 17 months of service prior to the current tour of duty, provided they had no obligations under World War II ASTP (Army Specialized Training Program) or other United States-sponsored training.[131]

131. History, USAF Hospital, August, 1953, page 1.

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Urology and orthopedic services were similarly affected with the placement of First Lieutenant Alan J. Stevenson, Urologist, on 90 days temporary duty overseas, and the absence of First Lieutenant John E. Gottsch, Orthopedic Surgeon, on 30 days TDY.

Dr. Victor L. Streeter, Illinois Institute of Technology, Technology Center, Chicago, Ill., visited the USAF Hospital on 17-18 August in reference to parachute research - "Project Chutease." His visit was for the purpose of obtaining specific comments on harness and packs from B-47 flying personnel. This information will be helpful in making guture minor changes in the harness and pack of the C-9 back pack in order to make it more acceptable to crew members of the B-47, B-50, KB-29, C-124, and F-84 type aircraft. Unfortunately, the data which he obtained was not available for this historical report.

During the month of September, 1953, five medical officers, one dental officer, and 16 airmen, comprising personnel of the Headquarters Element and the four tactical squadrons elements returned from 90 days temporary duty with the 306th Bomb Wing in England.[132] A corresponding number of personnel conversely accompanied the 305th on its TDY to England. Thus, during the transition period of approximately three days, the staff of the USAF Hospital was reduced from 22 medical officers to 12, and the services of two dental officers and 35 airmen were lost temporarily.

The movement of the Wings' personnel and medical officers and

132. History, USAF Hospital, Sept., 1953, page 1.

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technicians reflected in the overall reduction of the workload for the Hospital. (Admissions to the hospital during August were 280, not including 100 newborn infants; for September admissions were 294 dependents, not including 105 newborn infants. The actual decrease was reflected in the Out-Patient Service with a total of 15,173 treatments (6474 military, 8699 civilian) in August, while there were 12,403 treatments in September (4869 military, 6615 civilian). For a period of two weeks, out-patient service and surgery (confined to emergencies only) was restricted due to the fluctuation of medical personnel. Special efforts were made, however, not to curtail dependent medical care while either of the Wings was on temporary duty obvious morale factors pertaining to families at MacDill and their men overseas.

During September, only one Neuropsychiatrist was assigned to the Hospital. There were no nurses assigned with special training in the care of neuropsychiatric patients. The Neuropsychiatric Ward was closed, due to the average census being from two to five patients for several months. Treatment was confined to out-patient care, and to in-patients who could be treated in the General Medical Ward. All other cases were transferred to hospitals which are properly staffed to treat such diseases.

Courts-Martial cases during August, 1953, totaled 10 Specials and 34 Summaries.[133] There were no General Courts-Martials.

Approval was granted by Headquarters, United States Air Force

133. Ltr, Hq 809th AB Gp to Comdr, All Orgns, MacDill AFB, Fla., "Courts-Martials Trials (August 1953)," 1 Sept., 1953, MCDCLC 250.4. Exhibit 36.

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(Supporting Components Division, Directorate of Research and Development, Office, Deputy Chief of Staff, Development) to the proposed 809th Air Base Group Emblem.[134] The design was created by Captain Matt H. Reiser, Assistant Base Photographic Officer, 809th Operations Squadron in May and submitted shortly afterward through channels.

The blazon is azure, with the gauntleted hand proper holding a triangular landing strip or, in chief, an aircraft argent, (silver (noun) silvery (adjective)). The significance of the design is that of the gauntleted hand supporting a landing strip below an aircraft, which symbolizes the mission of the 809th Air Base Group.

The wreath above the design is alternating yellow and blue colors embroidered. The shield is of blue applique with silver gray embroidery. The landing strip is of Spanish yellow embroidery with black embroidered shadows. The hand and covering of the wrist of the gauntlet is of medium gray (steel) embroidered with black outlines; and the fingers are of light gray (steel) embroidery with black outline and detail. The aircraft above the strip and gauntleted hand is of white embroidery, and represents in general a B-47 silhouette.

The scroll is of white applique with the outline embroidered in Spanish yellow, and the letters are embroidered in Spanish yellow with the outline embroidered in gold brown.[135]

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134. 1st Ind, DAF, Hq USAF, Washington, D.C. 31 Aug., 1953, to ltr Hq 809th AB Gp to CG 6AD, "809th Air Base Group Organizational Emblem," 29 May 1953, AFDRD-SC.

135. Drawing (in black and white) of the unit device for the organizational flag of the 809th AB Gp, Dept of Defense, Dept. of the Army, OQMG, 31 July, 1953, Drawing No. 16-103-17. Exhibit 37.

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On 24 August a storm warning was raised above the office of the Florida State Attorney General Richard Ervin that portends a blow of the first magnitude which, while delayed, is assuredly coming. It appears that the inevitable will clash with the immovable.

In short, "any move from the Department of Defense to end racial segregation in schools on air bases in Florida would mean immediate withdrawal of state funds from their support," Attorney General Richard Ervin said today.[136] According to the Associated Press report, the Department of Defense had announced the Fall of 1955 would be the target date for the establishment of non-segregated schools on military bases throughout the country.

This announcement by the Pentagon and the rejoinder by the Florida State Attorney General meant that MacDill's General Tinker Elementary School with its white student enrollment of 532,[137] would be caught squarely in the middle of the controversy, along with similar schools at Eglin AFB, Tyndall AFB, and Patrick AFB. Also equally affected would be the Negro children of MacDill personnel now attending Negro schools within Hillsborough County; their number was not available according to a query made of the Director of Negro Education. (However, 28 Negro students attended local schools in the 1952 school year.)

Under present arrangements, schools on Air Force Bases within

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136. Morning Tribune (Tampa, Fla.), Aug. 25, 1953. Page 1.
137. Query by M/Sgt. Shelby E. Wickam, Historian, of Mr. J. Gordon Smock, Principal of General Tinker Elementary School, MacDill AFB, Fla., on or about 20 Sept., 1953.

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Florida are an integral part of the individual county school systems, and receive funds from the State for operations and for paying the teachers (17 at General Tinker Elementary, including the principal) through the federal-state "Minimum Foundation Program."

Attorney General Ervin was reported as asserting, "The Florida Constitution would not permit the use of state or county funds for the support of non-racial schools." He also said that "State financial support would have to be withdrawn immediately and the counties could not exercise any supervision over the non-racial schools."

However, the Federal Government is not bound by state school segregation laws on military installations. Attorney General Ervin pointed out that the bases were ceded to the Federal Government "lock, stock and barrel, and the state exercises no civil jurisdiction over them. If the Federal Government chooses to pay all the costs and exercises all the supervision, it could set up non-racial schools at military bases in the state."

According to the news story, Florida, through the Minimum Foundation Program, contributed $114 per pupil to Hillsborough County for students of General Tinker Elementary School. The County School Board received approximately $196,000 from the United States Office of Education for the payment of MacDill school children of both races and all grades during the preceding school year.[138]

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138. History, 6th Air Division, May, 1953, page 17.

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NAME	HOME ADDRESS	DY PHONE	HOME PHONE
BRIGADIER GENERAL H. M. MOONEY Commander 6AirDiv	7002 Bayshore Dr. MacDill AFB, Fla	20-011	60-491
COLONEL D. C. [illegible] JR. Director of Operations	Apt. 2, Bayshore Dr. Transient Quarters	23-011	25-071
COLONEL R. D. [illegible] Director of Materiel	405 [illegible] Loop MacDill AFB, Fla	24-011	20-481
LT COL F. R. [illegible] Director of Personnel	3804 Wash Sterling Circle, Tampa, Fla.	21-011	68-6203
LT COL G. L. BISHOP Deputy Director of Operations	8118 Bayshore Dr.	24-681	60-3201
MAJOR W. L. WARREN Training Officer	8005 Bayshore Dr.	36-111	60-2254
MAJOR W. H. PATTON Asst Director of Materiel	3013 Meadows St # Tampa	39-681	None
MAJOR D. R. CHINNOCK Chief Arm & Elect Officer	16 Bridges Loop Apt 6	39-681	60-2822
1ST LT KENNETH TAYLOR Aide - de - Camp	BOQ 409, Rm 14, MacDill AFB, Fla	20-111	None
MAJOR B. J. MUNNERLYN Adjutant	6220 Foster Ave # Tampa, Fla	27-111	63-4774

( ) All home addresses on the base unless otherwise indicated.

B. J. MUNNERLYN
Major, USAF
Adjutant

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

ROSTER OF KEY PERSONNEL
1 September 1963

NAME	*HOME ADDRESS	DUTY PHONE	HOME PHONE
#Colonel B. H. Merchant Base Commander	4 Staff Loop	31-111	36-271
#Lt Col T. G. Sanford Deputy Base Commander	6313 Bayshore Dr.	36-021	60-2331
#Lt Col D. J. Nolan Base Executive Officer	33 Second Drive	26-321	60-3863
#Major B. J. Dunnerlyn Base Adjutant	6220 Foster Ave Tampa	27-111	63-4774
#WOJG C. A. Whittle Asst Base Adjutant	BOQ 368 Apt #3	27-111	35-211
#Lt Col W. B. Haynes Director of Personnel	5 Second Dr.	31-031	60-2303
Major A. J. DiLucido Mil Personnel Officer	8207 Bayshore Dr. Apt #4	35-611	60-3351
#Lt Col L. J. B. Mestier Jr. Director of Operations	4 Garden Dr.	32-501	60-2223
Major H. P. Killingsworth Asst Dir of Operations	6208 Foster Ave. Tampa	32-501	63-5743
#Major S. L. Almon Director of Materiel	3510 Vasconia Tampa	28-071	62-5754
#Major R. G. Williams Air Installations Officer	11 Second Dr.	31-051	60-3253
#Major H. C. Oakes Base Comptroller	3 Hillsborough Loop	25-301	60-2061
#Lt Col C. L. Lack Base Chaplain	9 Bridges Loop Apt #1	21-111	None
#1st Lt J. Thomas Personal Affairs	5502 Branch Ave. Tampa	25-061	32-9901
Major J. Puskoo Base Legal	1 Bridges Loop Apt #2	25-372	60-2373

#Major W. W. Howard Info Service Officer	2516 Sitios St. Tampa	22-311	82-2423
#Major J. H. Windsor Air Provost Marshal Comdr 809th Air Police Sq	4 Bridges Loop Apt #6	25-191	60-2833
#Major A. H. Haaf Transportation Officer	4735 West Anita Blvd. Tampa	38-011	63-2671
Lt Col R. N. Bailey Sq Comdr Hqs 809th ABG	106 S. Mantanzas Tampa	37-031	85-0732
Capt J. J. Karlonas Comdr Supply Sq	4211 Vasconia Tampa	32-031	63-1531
Capt J. H. Stoigor Comdr Mtr Veh Sq	4720 Bay Vista Tampa	39-311	61-6914
Capt G. P. Foster Comdr Food Sv Sq	3616 Omar St. Tampa	25-021	63-4053
Major H. P. Killingsworth Deputy Comdr Opns Sq	6209 Foster Ave. Tampa	34-791	63-5743

(*) All home addresses on the base unless otherwise indicated.
(#) Indicates officers on alert as designated by 809th Standing Directive No. 11-2, 7 October 1952.

C A Whittle

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

EXHIBIT 1

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 19)

28 August 1953

1. ORGANIZATION OF DETACHMENT #1 HQ, 305TH BOMBARDMENT WING. Detachment #1, Hq 305th Bombardment Wing (M) is organized at MacDill AFB Florida effective 0001 hours, 3 September 1953.

2. Concurrent with organization, Detachment 1 is attached to the 305th Medical Group, 305th Bombardment Wing (M), this station, for administration only.

3. Appropriate remark will be entered in the organizational status table of the morning report on the effective date of organization, in accordance with Chapter 2 SAC Manual 171-1.

4. Personnel and equipment will be furnished from sources under the control of the Commander, 305th Bombardment Wing (M).

5. Authority: AFR 30-38 and SAC Reg 20-5.

BY ORDER OF THE COMMANDER:

OFFICIAL:

C. A. Whittle

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

B. J. NUMERICH
Major, USAF
Adjutant

DISTRIBUTION:
"D" plus
2 cys CG 2AF

[redacted]

EXHIBIT 2

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HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 20)

1 September 1953

1. PLACEMENT OF 305TH BOMBARDMENT WING TDY TO UK. Pursuant to instructions contained in SAC Operations Order 71-53, dated 12 August 1953, the 305th Bombardment Wing (M), less Detachment #1 and the 305th Medical Group, will move to the UK for a period of approximately 90 days temporary duty, effective 0001 hours, 3 September 1953. Upon completion of temporary duty organization will return to station of assignment.

2. Appropriate remarks will be entered in the organizational status tables of 305th Bombardment Wing (M) Squadrons Morning Reports on the effective date of departure, in accordance with Chapter 2, SAC Manual 171-1.

3. AUTHORITY: SAC Operations Order 71-53 dated 12 August 1953.

BY ORDER OF THE COMMANDER:

OFFICIAL:

D. J. MUMMERLYN
Major, USAF
Adjutant

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

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SECURITY INFORMATION

EXHIBIT 3

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 22)

4 September 1953

1. DISCONTINUATION OF DET #1 HEADQUARTERS, 306TH BOMBARDMENT WING (M). Detachment #1 Headquarters 306th Bombardment Wing (M) MacDill Air Force Base Florida, being no longer required, is discontinued as of 2400 hrs, 6 September 1953.

2. Administrative attachment to 306th Medical Group is terminated concurrently.

3. Appropriate remakr will be entered in the organizational status table of the morning report on the effective date of discontinuance, in accordance with Chapter 2, SAC Manual 171-1.

4. Personnel and equipment furnished from sources under the control of the Commander 306th Bombardment Wing (Medium) will be returned to the source from which procured.

5. AUTH: AFR 30-28 and SAC Reg 30-2.

BY ORDER OF THE COMMANDER:

OFFICIAL:

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

B. J. MURRERLYN
Major, USAF
Adjutant

DISTRIBUTION:
"D"
Plus
2 cys CG 2AF
1 cy Base Sgt Major

EXHIBIT 4

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 23)

6 September 1953

RETURN OF 306TH BOMBARDMENT WING (MEDIUM) FROM TDY TO MACDILL AFB FLA. Pursuant to instructions contained in SAC Operations Order 26-53, dated 14 May 53 1953, the 306th Bombardment Wing (Medium) will move to MacDill Air Force Base, Florida, effective 0001 hours 7 September 1953.

Appropriate remarks will be entered in the organization status tables of the 306th Bombardment Wing (M) squadrons Morning reports on the effective date of return in accordance with Chapter 2, SAC Manual 171-1.

AUTHORITY: SAC Operations Order 26-53, dated 14 May 1953.

BY ORDER OF THE COMMANDER:

OFFICIAL:

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

B. J. MURPHERLYN
Major, USAF
Adjutant

DISTRIBUTION:
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plus
1 cy CG 2AF
1 cy Base Sgt Major

EXHIBIT 5

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDCCO 201.22 10 September 1953

SUBJECT: Message of Appreciation

TO: Staff Officers and Squadron Commanders
809th Air Base Group
MacDill Air Force Base, Florida

I take great pride and pleasure in forwarding to you the following radio message from the Commander, Second Air Force:

"2AFCG 0962. Personal fr Armstrong to Merchant. The return of one wing from TDY concurrent with the departure of the other wing located at the same station has been unprecedented in Air Force history. It is quite obvious to all that these missions could not have been undertaken without the whole-hearted support of your organization. Please extend my personal appreciation to all members of the 809th Air Base Group for the part they played in assuring the success of these missions."

Please pass this message on to all of your personnel. The job could not be accomplished without the exceptional devotion to duty which has been displayed by all concerned. I am sure that each member of this organization will derive personal satisfaction from the knowledge that his efforts are recognized and thoroughly appreciated.

B. H. Merchant

B. H. MERCHANT
Colonel, USAF
Commander

DISTRIBUTION:
"D"

—SAC—

MANAGEMENT CONTROL SYSTEM

AIR BASE GROUP

PREPARED BY:
BASE COMPTROLLER

809TH AIR BASE GROUP
MACDILL AIR FORCE BASE
SEPTEMBER 1953

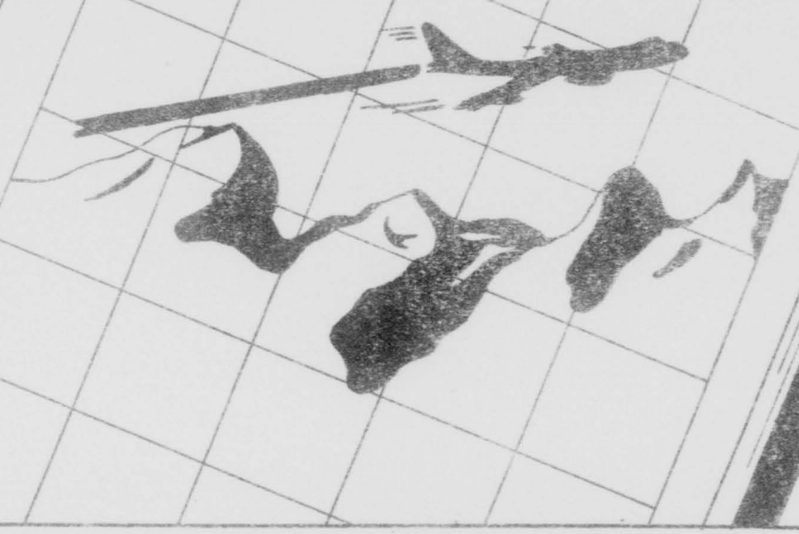


EXHIBIT 6

FOREWORD

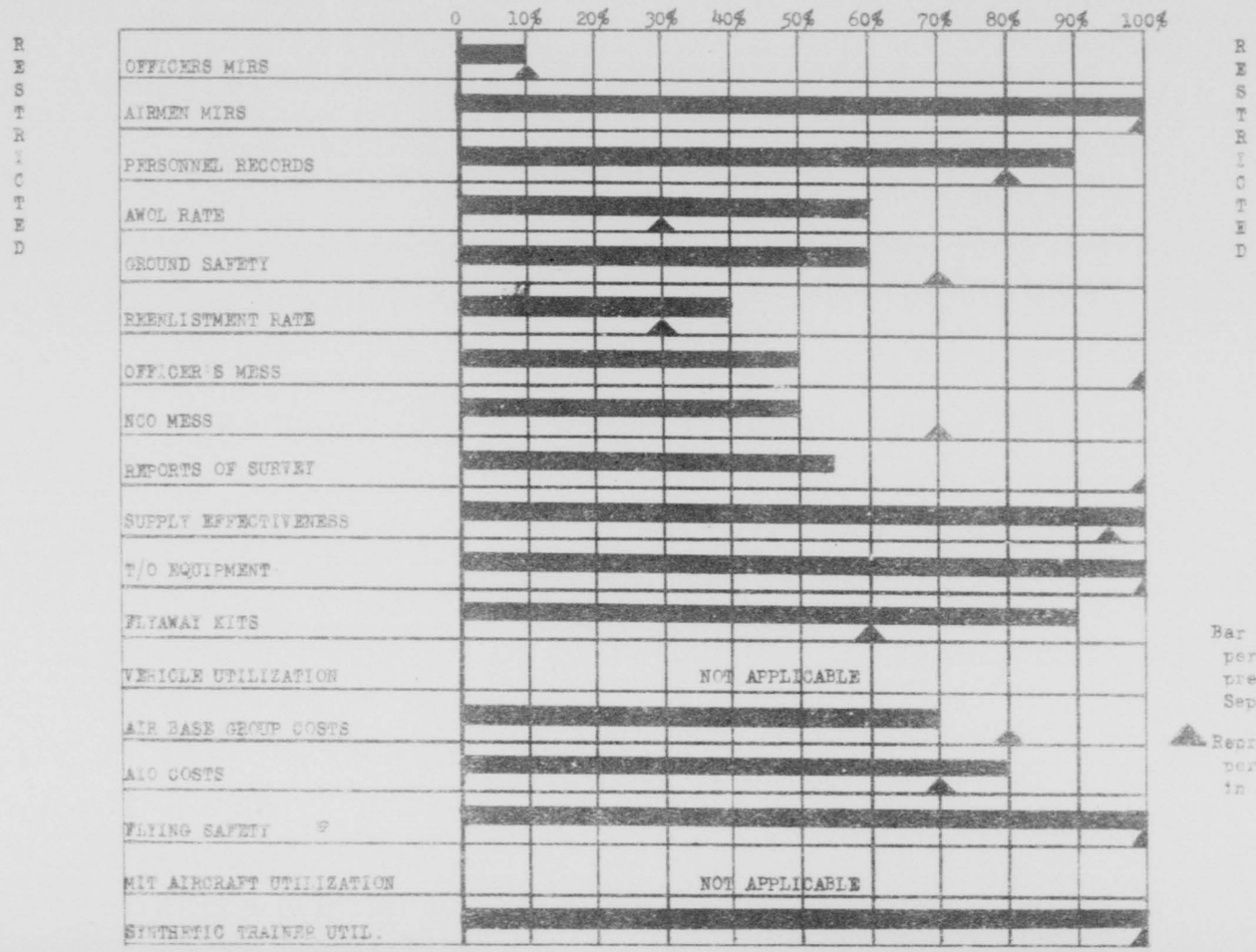
This detailed analysis of areas rated under the SAC Management Control System - Air Base Group was prepared by the Base Comptroller and provides predicted scores, graphic representation and appropriate analytical comments for the Commander and Staff. The Official SAC Scores for the previous month are compared with predicted scores for the current month, indicating point deviations and analysis of regression in the various areas.

In areas where 100% of the maximum score was achieved no analytical comment was made.

Graphic representation of performance for the current month is provided, as well as comparison columns indicating previous month's official SAC percentage of maximum score and current month's predicted MacDill percentage of maximum score.

H. C. OAKES
Major, USAF
Base Comptroller

SEPTEMBER 1953 - 809TH AIR BASE GROUP SAC MANAGEMENT CONTROL PERCENTAGES



SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
SEPTEMBER 1953

12 October 1953

	MAXIMUM SCORE	SAC AUGUST % MAX SCORE	SAC AUGUST SCORE	PREDICTED SEPTEMBER % MAX SCORE	PREDICTED SEPTEMBER SCORE
Manning:					
Officers MIRS	20	10	2	10	2
Airmen MIRS	80	100	80	100	80
Personnel Records	50	80	40	90	45
AWOL Rate	50	30	15	60	30
Ground Safety	70	70	49	60	42
Reenlistment Rate	50	30	15	40	20
Messes:					
Officers' Mess	25	100	25	50	12.5
NCO Mess	25	70	17.5	50	12.5
Reports of Survey	60	100	60	55	33
Supply Effectiveness	100	95	95	100	100
T/O Equipment, Air Base Group	20	100	20	100	20
Flyaway Kits	60	60	36	90	54
Vehicle Utilization	- - - - - - - - - - - -		NOT APPLICABLE	- - - - - - - - - - - -	-
Air Base Group Costs	80	80	64	70	56
AIO Costs - Incident to Maint.	60	70	42	80	48
Flying Safety	70	100	70	100	70
MIT Aircraft Utilization	- - - - - - - - - - - -		NOT APPLICABLE	- - - - - - - - - - - -	-
Synthetic Trainer Utilization	50	100	50	100	50
TOTAL SCORE	870		680.5		675
PERCENTAGE OF TOTAL SCORE			78		78

0950

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
SEPTEMBER 1953

12 October 1953

	MAXIMUM SCORE	SAC AUGUST SCORE	PREDICTED SEP. SCORE	POINT CHANGE	COMMENTS
Manning: Officers MIRS	20	2	2	NC	There were 112 spaces manned in required specialties out of 157 authorized for a 71.3% manning as compared to 120 manned out of 157 authorized in August (76.4% Manning). With an assigned strength of 121, 80.4% of assigned officers were MIRS in September.
Airmen MIRS	80	80	80	NC	100% of maximum score attained. There were 2,223 airmen MIRS out of 2,452 authorized.
Personnel Records	50	40	45	+5	Officer unknowns decreased for the second consecutive month, to 5 for September (9 in August), for a 99.71% completeness, or 90% of the maximum score. Airmen unknowns showed a large decrease, from 50 in August to 17 in September, for 100% of the maximum score. A check of Morning Reports shows that 10 of the 17 airmen unknown items appear to have been erroneously charged by Higher Headquarters since they were reported on M/R date of 12 September.

0951

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
SEPTEMBER 1953

12 October 1953

	MAXIMUM SCORE	SAC AUGUST SCORE	PREDICTED SEPTEMBER SCORE	POINT CHANGE	COMMENTS
AWOL Rate	50	15	30	+15	The 11 AWOLs in September resulted in a three-month total of 35. The rate of 3.5 per thousand for September compared with 4.4 per thousand for August resulted in a point increase from 15 in August to 30 in September. There have been 7 AWOLs through the 9th of October. A total of 11 AWOLs in October, based on the same mean strength, will result in 60% of the maximum score or 30 points.
Ground Safety	70	49	42	-7	A Ground Safety Index of 6.99 combined with an Accident Cost Index of $3.05 resulted in a score of 42 points (60% of the maximum). Had there been two less military accidents and one less motor vehicle accident, the September score would have remained the same as August.

0952

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
SEPTEMBER 1953

12 October 1953

	MAXIMUM SCORE	SAC AUGUST SCORE	PREDICTED SEPTEMBER SCORE	POINT CHANGE	COMMENTS
Reenlistment Rate	50	15	20	+5	The combined three-months immediate reenlistments (5) and regular terminations (13) result in a rate of 38.5% for 40% of the maximum score, or 20 points.
Messes: Officers' Mess	25	25	12.5	-12.5	Ten points were attained under the SAC "Financial Efficiency Index" for 50% of the maximum score. Points were lost in Factor 2 (Salary Expense 32%) and Factors 7 and 8 (Net Profit or Loss from Operations before dues for Month and Year to Date).
NCO Mess	25	17.5	12.5	-5	Ten points were attained under the SAC "Financial Efficiency Index" for 50% of the maximum score. Factor 3 (Current Ratio) and Factor 4 (Acid Test Ratio) were too low to attain points, also Factors 7 and 8 failed to attain points for September.

0953

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
SEPTEMBER 1953

12 October 1953

	MAXIMUM SCORE	SAC AUGUST SCORE	PREDICTED SEPTEMBER SCORE	POINT CHANGE	COMMENTS
Reports of Survey	60	60	33	-27	An Average Survey Dollar value of $515.11 combined with a 2.7 rate per thousand resulted in 55% of the maximum score, or 33 points.
Supply Effectiveness	100	95	100	+5	100% of maximum score attained.
T/O Equipment	20	20	20	NC	100% of maximum score attained.
Flyaway Kits	60	36	54	+18	Based on report as submitted (3-SAC-E21) the percentage of completeness of 98% attained 90% of the maximum score, or 54 points. No figures were available for the 305th or 306th Bomb Wings.

0954

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
SEPTEMBER 1953

12 October 1953

	MAXIMUM SCORE	SAC AUGUST SCORE	PREDICTED SEPTEMBER SCORE	POINT CHANGE	COMMENTS
Air Base Group Costs	80	64	56	-8	The Net Cost for the Air Base Group for September was $981,164, an $18,123 increase over August cost. The base population decrease of 252 from the August figure of 9,502 was the factor which caused the regression in score. The per capita cost increase to $106.07 from $101.35 resulted in a performance index of 103 for 70% of the maximum score.
AIO Costs - % Incid. to Maint.	60	42	48	+6	The percent of AIO Manageable Resources expended on maintenance and repair incident to maintenance was 97.5% for 80% of the maximum score, or 48 points. The improvement in score for September was due in part to the relatively slight increase in Accounts 09108.2A and 09108.3A (Cost of Minor Construction, Minor Additions, Alterations and Deletions) over August.
Flying Safety	70	70	70	NC	100% of maximum score attained.
Synthetic Trainers	50	50	50	NC	100% of maximum score attained.

0955

EXHIBIT 7

HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDPGS 14 September, 1953

SUBJECT: Final Evaluation, "Safe Wheels for 53"

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska
ATTN: Chief of Ground Safety

1. Subject report is submitted in accordance with paragraph 1, section IV of Safe Wheels for '53 Guide.

2. Before the 1953 campaign started a thorough review was made of the problems experienced in conducting the 1952 campaign. The SAC Pictorial Report of the 1952, command-wide experience was extremely helpful in determining which type of organizational setup would best fit the mission at MacDill. The Report contained a voluminous accounting of publicity stunts, feature articles, editorials, local community participation, etc.

3. The Base Executive Ground Safety Council, which acted as a steering committee for the "53" campaign, was presented an organization setup at their 15 April meeting. Various types of committee organizations were discussed before the final committee setup was adopted. (Committees Incl #1).

4. Following this meeting the Safe Wheels committee members were quickly selected and placed on orders. The chairmen and key personnel of the committee met with the council members one week before the program officially started, and were advised of the campaign's objective and command emphasis. Dates were also selected for the first meeting with their committee members. The "Safe Wheels for 53" guide book was reproduced in volume to allow each council member, committee personnel and squadron commanders the opportunity to study the campaign details.

5. A high degree of enthusiasm was displayed by the various committee members and the campaign was launched on 1 May with a wide variety of publicity and planned events. Safe Driver Pledges designed for everyone's signature were distributed and redistributed until it was determined that all squadrons had signed 100% or nearly 100% of their present-for-duty personnel. A large poster board was used to record a daily percentage score of pledges signed. Pictures of the board were distributed to all squadron commanders to maintain maximum commander level interest. (Picture Incl #2).

Ltr, Hq 4th Air Division, MacDill AFB, Fla., file CDPGS, subj: "Final Evaluation,"Safe Wheels for '53" (contd)

6. At the end of each month's experience, a large poster board was used to reflect the accident percentage effectiveness of each squadron. Pictures of the board were distributed to each Squadron Commander with an explanation of the point scoring system. This monthly reminder proved effective in further reminding the commanders of how each squadron was progressing or retrogressing. (Picture of board Incl #3).

7. Before the campaign had entered the second month, it was decided that a live goat should be utilized. The goat was to be awarded to appropriate squadron commander whenever a wheeled accident was classified as reportable to higher headquarters. After approval, the plan was widely publicized and when the goat arrived, pictures were taken of the presentation, and purpose of the goat was further publicized. Although a degree of humiliation was involved, as the custody of the goat changed it stirred a variety of interest from all levels. Squadron commanders and supervisory personnel managed to respond favorably in energizing their safety efforts to avoid custody of the goat.

8. A parade of the May victims of wheeled accidents was held on the base during June and indications are that it was quite successful in further emphasizing the needless waste and human suffering that was plaguing the program. By July, it appeared that although the record compared with 1952 had improved, we were far from a performance worthy of recognition from higher headquarters. One wing had departed the station during June and it appeared likely that their traffic problems in the United Kingdom might skyrocket the vehicle injury rate.

9. In July all the committees were reorganized by assigning personnel from the remaining wing and the air base group. The scheduling of regular meeting dates for the two main committees, "Project and Special Events" and "Publicity and Education," became more difficult as the remaining wing prepared itself for overseas training, and the extra burden the mobility plans had planned on the Air Base Group. Although fewer meetings were held, material was submitted weekly for publication in the "Airman" newspaper, and posters, stand up talks, and safety films were distributed weekly to all squadron commanders.

10. A graphic study of wheeled accidents and injuries during the period January through Labor Day in 1952 and 1953 was made for statistical analysis. Indications are that considerable improvement was made in the private vehicle injury experience. The experience in government vehicles accidents, however, appeared to show no improvement over 1952. Although there were fewer accidents in 1953, a close analysis indicated that the mileage exposure was considerably less in 1953. It was also noted that no fatalities were chargeable to government vehicle operators in 1953; however private vehicle operations registered one more fatality than in 1952. The record of no disabling injuries resulting from private vehicle accidents during the month of July established a record that had been unequalled in many months. Recognition of this unusual showing resulted in MacDill receiving the SAC "Achievement Award Plaque" for July. (Graphic Rpt Incl #4).

0957

Ltr, Hq 4th Air Division, MacDill AFB, Fla., File 4[illegible], subj: "Final Evaluation, 'Safe Wheels for 53'" (cont'd)

11. The three (3) most dangerous driving holiday week-ends during the campaign, namely Memorial Day, Fourth of July, and Labor Day, were accident and injury free. This record can be justly credited to the continuous and aggressive efforts of all commanders and supervisory personnel in promoting safety-mindedness down to the lowest echelon of personnel.

12. A tightening of traffic enforcement during the campaign was a definite asset to the program. Additional emphasis was placed on motorcycle operations, which resulted in the individual drivers exercising better driving habits and recording no injuries during the last seventy-seven (77) days of the campaign.

13. The 1953 overall program organization and execution was far more satisfactory when compared with 1952; however, weak spots developed as the campaign entered the last month. Indications were that the committee members should be replaced about three times during a campaign of 120 days duration. Recommendations are that a field grade officer should be appointed as project officer to stimulate and pressure organizations when they appear to be relaxing their support. Another improvement deemed advisable is to have regular monthly meetings with all government vehicle operators. This individual safety contact with each Air Force driver appears to be highly advisable since a large percentage of our government vehicle drivers today are being supplied by organizations requesting transportation. Indications are that the vehicle safety indoctrination of these drivers ceases when they graduate from the driver training school.

14. Omitting the 306th Wing as competing in the campaign, seventeen (17) of the remaining twenty-seven (27) squadrons recorded no wheeled accidents or injuries. The 306th Wing recorded an outstanding record of only two disabling injuries, leaving eight (8) of the ten (10) squadrons injury free. The 306th Wing recorded two (2) disabling injuries and three (3) fatalities resulting from private vehicle accidents, and recorded one (1) government vehicle accident. The 809th Air Base Group recorded six (6) disabling injuries in their private vehicle accident experience and nine (9) government vehicle accidents.

FOR THE COMMANDER:

4 Incls:
1. Committees
2. Picture of Safe Wheels Board
3. Picture of Safe Wheels Board
4. Graphic Report

C. A. WHITTLE
WOAC, USAF
Asst. Adj.

"A CERTIFIED TRUE COPY"

P. A. JOHNSON
2nd Lt., USAF

0958

PLANNING COMMITTEE

Executive Ground Safety Council

Publicity & Education Committee

Chairman: Senior Member present

Base PIO
306th Bomb Wing Rep
306th Bomb Wing Rep
Base Ground Safety Rep
800th AB Gp
2 NCO's
305th Wing
2 NCO's
306th Wing
2 NCO's

Project & Special Events Committee

Chairman: Senior Member present

Provost Marshal or Rep
Air Installations Officer or Rep
Base Motor Trans Officer or Rep
Base Motor Pool Officer
Base Ground Safety Rep
Sub-pool officers
AIO Pool
AP Pool
Supply Pool
Flight Line Pool
Fire Dept Pool
Hospital Pool
305 Wing
2 NCO's
306 Wing
2 NCO's

Awards & Contest Committee

Chairman: Senior Member present

Base Compt or Rep
305 Wing Compt or Rep
306 Wing Compt or Rep
Base Photo Off or Rep
1 - 1st Sgt 800 AB Gp
1 - 1st Sgt 305 Wing
1 - 1st Sgt 306 Wing

MACDILL AIR FORCE BASE
Safe WHEELS for '53
PLEDGES SIGNED
TO DATE 10th MAY
why take a chance
so little to GAIN
so much to LOSE

0960

MACDILL AIR FORCE BASE
Safe WHEELS for '53
ACCIDENT SCORE
MONTH OF MAY
809th AIR BASE Gp
HQ. SQ. 100 %
AP SQ. 70 %
FD SV SQ 100 %
INST. SQ. 75 %
M.V. SQ. 100 %
OPERS. SQ. 90 %
SUP. SQ. 100 %
TNG. FLT. 100 %
RESCUE FLT 100 %
740th BAND 100 %
305th B.M. WG.
HQ SQ 100 %
98th A.R. SQ 100 %
305th AR SQ 80 %
305th A&E SQ 60 %
305th F.M. SQ 100 %
305th P.M. SQ 0 %
364th BM. SQ 100 %
365th BM. SQ 100 %
366th BM. SQ 100 %
305th MED GP 100 %
306th B.M. WG.
HQ. SQ 100 %
306th ARS 100 %
306th A&E SQ 100 %
306th AVN. SQ 100 %
306th F.M. SQ 100 %
306th P.M. SQ 100 %
367th BM. SQ 100 %
368th BM. SQ 100 %
369th BM. SQ 100 %
306th MED GP 100 %
SUPPORT ORG.
307th A.B. GP 100 %
307th MED. GP 100 %
DET. 26-1 100 %
1928th AACS 100 %
DET. 3, 136th 100 %
DET. 21, 3944th 100 %
3908 SES 100 %
OSI 100 %
B-47-5 DET 100 %
KC-97-2 DET 100 %
6th AIR DIV. HQ 100 %

0961

MACDILL AIR FORCE BASE
Safe WHEELS for '53
ACCIDENT SCORE
MONTH OF JUNE
809th AIR BASE Gp.
HQ. SQ. 90 %
AP SQ. 100 %
F.D. SV. SQ. 100 %
INST. SQ. 70 %
M.V. SQ. 100 %
OPERS. SQ. 100 %
SUP. SQ. 100 %
TNG. FLT. 100 %
RESCUE FLT. 70 %
740th BAND 100 %
305th B.M. WG.
HQ. SQ. 100 %
98th A.R. SQ. 90 %
305th A.R. SQ. 100 %
305th A&E SQ. 100 %
305th F.M. SQ. 100 %
305th P.M. SQ. 100 %
364th B.M. SQ. 100 %
365th B.M. SQ. 60 %
366th B.M. SQ. 100 %
305th MED. GP. 100 %
306th B.M. WG.
HQ. SQ. 90 %
306th ARS 100 %
306th A&E SQ. 100 %
306th AVN. SQ. 100 %
306th F.M. SQ. 100 %
306th P.M. SQ. 100 %
367th B.M. SQ. 100 %
368th B.M. SQ. 100 %
369th B.M. SQ. 100 %
306 MED. GP. 100 %
6th AIR DIV. HQ. 100 %
SUPPORT ORG.
307th A.B. GP. 100 %
307th MED. GP. 100 %
DET. 26-1 100 %
1928th AACS 100 %
DET. 3, 136th 100 %
DET. 2, 1, 3944th 100 %
3908 SES 100 %
OSI 100 %
B-47-5 DET. 100 %
NC-97-2 DET. 100 %

MACDILL AIR FORCE BASE
Safe WHEELS for '53
ACCIDENT SCORE
MONTH OF JULY
809 AIR BASE GP.
HQ. SQ. 100 %
A P SQ. 75 %
F.D. SV. SQ. 100 %
INST. SQ. 100 %
M.V. SQ. 100 %
OPERS. SQ. 100 %
SUP. SQ. 100 %
TNG. FLT. 100 %
RESCUE FLT. 100 %
740 BAND 100 %
305 B.M. WG.
HQ. SQ. 100 %
98 A.R. SQ. 100 %
305 A.R. SQ. 100 %
305 A&E SQ. 100 %
305 F.M. SQ. 100 %
305 P.M. SQ. 100 %
364 B.M. SQ. 100 %
365 B.M. SQ. 100 %
366 B.M. SQ. 100 %
305 MED. GP. 100 %
306 B.M. WG.
HQ. SQ. 100 %
306 ARS 100 %
306 A&E SQ. 100 %
306 AVN. SQ. 100 %
306 F.M. SQ. 100 %
306 P.M. SQ. 100 %
367 B.M. SQ. 100 %
368 B.M. SQ. 100 %
369 B.M. SQ. 100 %
306 MED. GP. 100 %
6 AIR DIV. HQ. 100 %
SUPPORT ORG.
307 A.B. GP. 100 %
307 MED. GP. 100 %
DET. 26-1 100 %
1928 AACS 100 %
DET. 3, 136 100 %
DET. 2, 13944 100 %
3908 SES 100 %
OSI 100 %
B-47-5 DET. 100 %
KC-97-2 DET. 100 %

EXHIBIT 8

REPORT OF PROCEEDINGS OF THE EXECUTIVE GROUND SAFETY COUNCIL:

Headquarters
MacDill Air Force Base, Florida

Proceedings of a meeting of the Executive Ground Safety Council which convened at MacDill Air Force Base, Florida, under provisions of Second Air Force Regulation 32-2, 28 June 1952, and pursuant to Letter Order MCDGAC - 28, 18 February 1953, Headquarters, 309th Air Base Group, MacDill Air Force Base, Florida.

The Council met pursuant to the foregoing order at Headquarters MacDill Air Force base at 1400 hours, 22 September 1953.

Members present:

Lt Col Tom G. Sanford - Base Deputy Commander (Acting President)
Lt Col William B. Haynes - Base Plans Staff Officer
Lt Col D.W. Rains - Commander 309th Air Base Group
Major Sam L. Allmon - Base Materiel Staff Officer
Capt J.H. Steiger - Commander 309th Motor Vehicle Squadron
Capt H.H. Mohr - for Commander 305th Bomb Wing (H)
1/Lt Dixie Clamp - for Commander 306th Bomb Wing (H)
2/Lt R.B. Gillman - for Base Surgeon
Civ Frank Joseph - Base Fire Chief
Civ Geo E. White - Ground Safety Director (Recorder)

1. Discussion

a. Action taken on recommendations of 13 August minutes is listed as follows:

(1) The "Bucks for Safe Wheels" were air-dropped on 29 August. Cash value of recovered "Bucks" amounted to $98.85. The original authorization was $150.00. A balance of $51.15 has been returned to the Central Base Fund.

(2) Certain United Kingdom vehicle code requirements were reproduced and delivered to the 305th Bomb Wing (H) for indoctrination of motorcycle and scooter operators.

(3) The system of notifying the wing commanders in writing on each reportable injury or accident has been placed in effect. Reports will be hand carried to the appropriate commander as quickly as circumstances surrounding the accident can be determined.

b. Injury and accident experience for the month of August was reviewed and discussed. The accident and injury statistical summary was presented and reviewed. The accident, injury and cost picture

was further studied by reviewing graphic charts of the experience to-date this year. (Statistical Summary Incl # 1)

c. The results of the "Safe Wheels for 53" campaign was reviewed and the final evaluation discussed. To present a clearer picture of the private and government vehicle accident experience a graphic study was presented which compared the 1952 experience with 1953. The members were advised that it had been indicated by Second Air Force Ground Safety, that seven of the Second Air Force bases had placed in the first eight places, in the Strategic Air Command contest. Also that MacDill had placed eighth this year as compared with fifteenth, last year. (Graphic Study Incl # 2)

d. The members were advised of circumstances surrounding the Euclid vs B-47 accident that occured in the 306th Bomb Wing area, Saturday morning, 12 September 1953. The members were advised that the accident was the direct result of the driver falling asleep at the wheel. The driver will be tried by Special Courts Martial under Article 108.

e. At this time two USAF Ground Accident Abstracts subject: "Moving Aircraft with Aid of Cletrac" and "Wearing of Finger Rings", were read and discussed. Methods to be used to curb the wearing of finger rings by certain operating personnel was discussed at length.

f. Considerable discussion was held on the upward trend of the government vehicle accident rate and measures considered necessary to curb this trend.

2. Recommendations:

a. That the base personnel staff officer draft a letter to the Dew Bloom Dairy, thanking the owner for his cooperation and assistance in loaning a goat to MacDill for use in the Safe Wheels Campaign. Letter to be signed by the Base Commander.

b. That the Ground Safety Director draft a regulation which would prohibit the wearing of finger rings in certain areas and/or when performing certain duties on the base.

c. That the Ground Safety Director study the feasibility of requiring monthly or periodic safety meetings of all licensed government vehicle operators. Plan to be submitted at next council meeting.

d. That an article be published in the next issue of the Airman newspaper pointing out the punitive action taken in three of the recent government vehicle accidents.

e. Meeting adjourned 1520 hours.

/s/ William B. Hoynes
WILLIAM B. HOYNES, Lt Col., USAF
Member

/s/ Geo R White
GEO R WHITE
Ground Safety Director
Recorder

0965

2 Incls:
1. Statistical Summary
2. Graphic Study

HEADQUARTERS, MACDILL AIR FORCE BASE, FLORIDA, 29 September 1953

Approved:

/s/ B. H. Merchant,
B. H. MERCHANT, Col., USAF
Commander

0966

Month of AUGUST

MACDILL Air Force Base Command

RATES AND COSTS	309th AB Gp	305th Wing	306th Wing	307th Wing	SAC-DET	NON-SAC DET	6TH AIR DIV + TOTAL:
Mil Non-Disab Inj (on)	9	4	2	0	0	0	15 plus 1 96th ARS
Mil Non-Disab Inj (off)	7	5	6	1	1	0	19 plus 1 96th ARS
Civ Non-Disab Inj	0	0	0	0	0	0	0 36
Mil Disab Inj (on-duty)	2	0	2	0	0	0	4
Mil Disab Inj (off-duty)	4	0	3	0	0	0	7
Civ Disab Inj	0	0	0	0	0	0	0
Mil fatalities	0	1	0	0	0	0	1 12
USAF Veh accidents	5	0	0	0	0	0	5
Aircraft accident cost	.00	.00	.00	.00	.00	.00	.00
Property damage cost	.00	.00	.00	.00	.00	.00	.00
USAF Veh accident rate *	2.31	.00	.00	.00	.00	.00	2.08
USAF Veh repair cost	$653.00	.00	.00	.00	.00	.00	$653.00
Mil disab inj rate - on	5.67	.00	9.77	.00	.00	.00	3.96
Mil disab inj rate - off	5.67	2.05	7.32	.00	.00	.00	3.96
Total disab inj rate-Mil *	5.67	1.37	8.14	.00	.00	.00	3.96
Civ disab inj rate *	.00	.00	.00	.00	.00	.00	.00
Mil inj cost/capita	.41	13.39	.79	.00	.08	.00	3.53
Civ inj cost/capita	.00	.00	.00	.00	.00	.00	.00
Total cost/capita *	.58	13.37	.74	.00	.08	.00	3.41
Cost of mil injuries	$ 1,402.00	$31,563.00	$ 1,556.00	$ .00	$ 7.00	$ .00	$34,542.00
Cost of civ injuries	.00	.00	.00	.00	.00	.00	.00
Total accident costs	$ 2,055.00	$31,563.00	$ 1,556.00	$ .00	$ 7.00	$ .00	$35,195.00
Effectiveness %	70	75	60	100	100	100	65
Points Scored	49	52 1/2	42	70	70	70	45 1/2

* Effectiveness % and score based on figures in this column (except 309th AB Gp)
\+ 6th Air Div. figures do not include experience of SAC and NON-SAC Detachments.

FVI [illegible]
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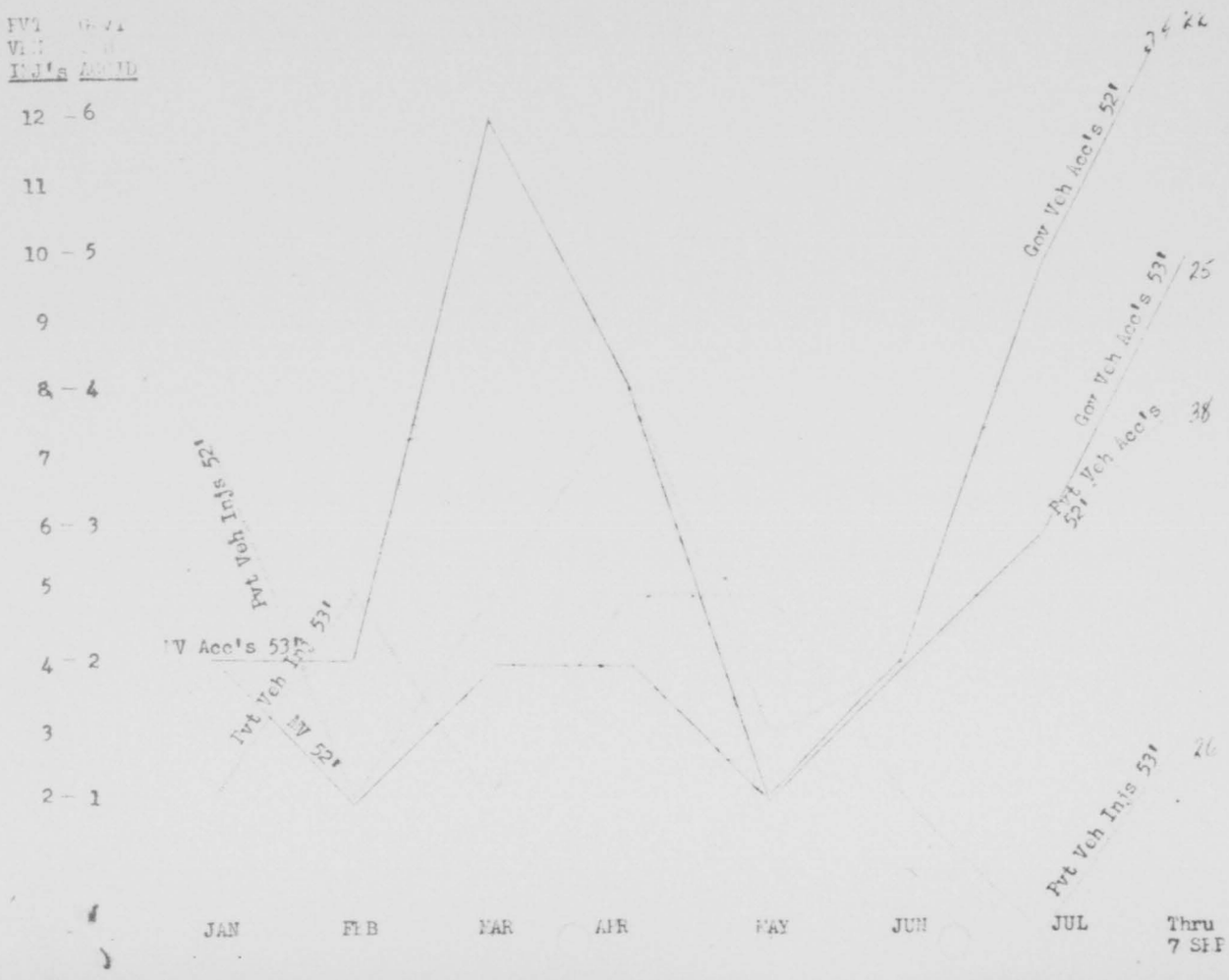
Inj's Accid



SAFETY GOALS BULLETIN - JANUARY - 7 SEPTEMBER 1953

15 Accid's in S/M's period
Vehicle Rate .99
32% more mileage in 52
36% more accidents
one fatal

25 — 10 Accid's in S/M's period
Vehicle Rate .95
No Fatals

38 — 21 Inj's in S/M's period
[illegible] 41% of all Injs
Two fatals

26 — 10 Inj's in S/M's period
Per's 21% of all Injs
Three fatals

EXHIBIT 9

COPY

HEADQUARTERS STRATEGIC AIR COMMAND
Offutt Air Force Base
Omaha, Nebraska

COPY

DPIMD 320

21 August 1953

SUBJECT: B-47 Cadre Requirements

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In view of the recent reorganization of the 340th Bombardment Wing under B-47 tables of organization, the inclosed augmentation is authorized the 6th Air Division for the purpose of training the required B-47 cadre.

2. Since spaces required for the B-47 training cadre for the 340th Wing are available from within the table of organization authorization of the wing, it will not be necessary to allocate additional spaces.

3. A programming plan for the B-47 cadre will be forthcoming from this headquarters in the near future. The necessary adjustment in personnel authorizations between the 340th Bombardment Wing and 6th Air Division is reflected in the August, 1953 issue of the Manning Authorization Program.

BY ORDER OF THE COMMANDER:

/s/ Claude S. Putman, Col.
for
/t/ J. P. MC CONNELL
Major General, USAF
Director of Plans

1 Incl
B-47 Training
Augmentation

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 9A

COPY

Hq SAC, Offutt AFB, Nebr., DPIMD 320, Subj: B-47 Cadre Requirements

2AFPIC 320 (21 Aug 53) 1st Ind

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana
10 Sept 53

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. Forwarded for your information and planning purposes.

2. The programming plan, reference paragraph three (3) of the basic correspondence, will be forwarded to your organization when received.

BY ORDER OF THE COMMANDER:

1 Incl
r/c

/s/ R. S. Stauffer
/t/ R. S. STAUFFER
CWO USAF
Asst Adjutant

cc: Sedalia

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

0970

EXHIBIT 9B

Letter, Hq SAC, Offutt AFB, Nebr., file DPLMD 320, subj: "B-47 Cadre Requirements." (contd)

MCDPC 320 (21 Aug 53) 2nd Ind 24 September, 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, 306th Bombardment Wing Medium, MacDill Air Force Base Florida
Commander, 305th Bombardment Wing Medium, Brize-Norton Air Force Base, Oxford, England

1. Attention is invited to basic communication and 1st Indorsement. Programming plan mentioned in paragraph 3, basic communication, will be forwarded upon receipt.

2. The original allocation of spaces for manning the 340th Bombardment Wing has been broken down between the two (2) tactical wings assigned to the 6th Air Division. The spaces were furnished your headquarters in Manpower Notice Number 32, dated 21 September, 1953.

3. Pending receipt of the programming plan from higher headquarters, the following will apply:

a. Filler personnel will be obtained from Technical School graduates and overseas returnees.

b. Effective immediately, each wing will, wherever possible, identify all personnel in the 5 and 7 skill level in the AFSC listed on Manpower Notice Number 32. In those instances where either wing is unable to identify an individual at the 5 and 7 level to fill the AFSC requirement for subsequent reassignment to the 340th Bombardment Wing, identification can be withheld until an input at the 3 skill level is received.

c. All airmen personnel selected to fill a cadre position must have twelve (12) months retainability subsequent to 1 April 1954.

d. Substitution of one (1) grade lower than authorized grade is permissible, but personnel must possess the required AFSC at the 5 or 7 skill level as indicated by Manpower Notice Number 32.

e. No personnel will be reassigned to fill a position vacancy in the 340th Bombardment Wing who have a record of courts-martial within the six (6) months preceding 1 April, 1954.

0971

Letter, Hq SAC, Offutt AFB, Nebr., file DPLMD 300, subj: "B-47 Cadre Requirements." (Contd)

MCDPC 300 (21 Aug 53) 2nd Ind (Continued)

4. An initial report will be submitted to arrive at this headquarters not later than 10 October, 1953. This report will include the following:

a. Rank

b. Name

c. AFSN

d. Primary AFSC

e. Months service retainability subsequent to 1 April 1954.

f. Organization

5. Any additions to the initial report will be forwarded to this headquarters within five (5) days subsequent to such change. No substitutions will be made without prior approval of this headquarters.

BY ORDER OF THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

1 Incl: w/d
Info cy to:
Comdr, Det #1
305th Wg, MATS, Fla.

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

0972

EXHIBIT 10

HEADQUARTERS 809TH AIR BASE GROUP
Manpower and Organization Office

MANPOWER NOTICE)

NUMBER 32) DATE: 21 September 1953

This Manpower Notice is published to disseminate information affecting manning document authorizations.

SUBJECT: B-47 Training Augmentation

TO: Comdr, Det 1, 306th Bomb Wing
Comdr, 306th Bomb Wing
Director of Personnel, 6th Air Div
Base Personnel, 809th AB Gp

1. Attached letter and 1st Indorsement thereto are forwarded for your information.

2. Personnel spaces listed below are authorized your wing, in the functions shown, for immediate manning.

B-47 TRAINING AUGMENTATION - 306TH BOMB WING

WING HEADQUARTERS FLIGHT

AFS	AFSC	GRADE	AUTH
Director of Material	0046C	Col	1
Operations Staff Officer	1416	Lt Col	1
Aircraft Maintenance Staff Officer	4316	Lt Col	1
Aircraft Maintenance Officer	4344	Maj	1
Production Control Officer	4355	Maj	1
TOTAL			5
Abn Elect Comm & Nav Equip Maint Supv	30170	M/Sgt	1
Bomb Nav Systems Supervisor	32170	M/Sgt	1
[illegible] Series Systems Technician	32171E	T/Sgt	1
[illegible]rret Systems Technician	32371	T/Sgt	1
Aircraft Maintenance Supervisor	43170	M/Sgt	2
Aircraft Maintenance Technician	43171J	M/Sgt	4
Production Scheduling Technician	80270	M/Sgt	1
TOTAL			11

BOMB SQUADRONS FLIGHT

Commander	0066A	Lt Col	2
Pilot AOR	1244	Maj	1
Air Operations Officer	1425	Maj	2
Aircraft Maintenance Officer	4344	Maj	1
TOTAL			6
Aircraft Mechanic	43151J	A/1C	9
Senior Aircraft Mechanic	54151J	S/Sgt	10
Senior Aircraft Jet Engine Mechanic	43153	S/Sgt	9

Manpower Notice #32, dated 21 Sep 53 (Cont'd)

AFS	AFSC	GRADE	AUTH
Aircraft Maintenance Supervisor	43170	M/Sgt	5
Aircraft Maintenance Technician	43171J	M/Sgt	9
Vehicle & Motorized Equip Engine Mech	47151	A/2C	1
Sr Vehicle & Motorized Equip Elect	47155	S/Sgt	2
TOTAL			45

PERIODIC MAINTENANCE SQUADRON FLIGHT

Aircraft Maintenance Officer	4344	Maj	1
TOTAL			1
Aircraft Mechanic	43151J	A/2C	1
Senior Aircraft Mechanic	43151J	S/Sgt	2
Senior Jet Engine Mechanic	43153	S/Sgt	4
Aircraft Electrician	43154B	A/2C	1
Senior Aircraft Instrument Mechanic	43156	S/Sgt	1
Aircraft Maintenance Supervisor	43170	M/Sgt	1
Aircraft Maintenance Technician	43171J	T/Sgt	1
Senior Vehicle Operator	69350	S/Sgt	1
Senior Organizational Supply Specl	64151	S/Sgt	1
TOTAL			13

A & E MAINTENANCE FLIGHT

Armament Staff Officer	3216	Lt Col	1
Air Electronics Officer	3054	Maj	1
Armament Systems Officer	3234	Maj	1
TOTAL			3
Sr Airborne Elect Comm Equip Repmn	30150	S/Sgt	3
Sr Airborne Elect Nav Equip Repmn	30151	S/Sgt	2
Abn Elect Comm & Nav Equip Maint Tech	30171	T/Sgt	1
Sr K Series Stab & Optics Specl	32150B	S/Sgt	1
Sr K Series Computer Specl	32150D	S/Sgt	1
Sr K Series System Mechanic	32150S	S/Sgt	5
Comb Nav Systems Technician	32171E	M/Sgt	3
Sr Gunlaying Systems Mechanic	32350C	S/Sgt	5
Turret Systems Supervisor	32370	M/Sgt	1
Turret Systems Technician	32371C	T/Sgt	2
Sr Electrical Instrument Repmn	40453	S/Sgt	2
Instrument Overhaul Technician	40471	T/Sgt	1
Sr Weapons Mechanic	46250	S/Sgt	3
Weapons Maintenance Supervisor	46270	M/Sgt	1
TOTAL			31

FIELD MAINTENANCE SQUADRON FLIGHT

Sr Electrical Instrument Repmn	40453	S/Sgt	1
Instrument overhaul Supervisor	40470	M/Sgt	1

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Manpower Notice #32, dated 21 Sep 53 (Cont'd)

AFS	AFSC	GRADE	AUTH
Aircraft Hydraulic Technician	42571	M/Sgt	1
Senior Aircraft Mechanic	43151J	S/Sgt	1
Senior Aircraft Jet Engine Mechanic	43153	S/Sgt	2
Aircraft Jet Engine Mechanic	43153	A/1C	3
Senior Aircraft Electrician	43154B	S/Sgt	5
Senior Aircraft Instrument Mechanic	43156	S/Sgt	2
Aircraft Maintenance Supervisor	43170	M/Sgt	2
Aircraft Maintenance Technician	43171J	M/Sgt	1
Senior Aircraft Jet Engine Repairman	43352	S/Sgt	2
Aircraft Jet Engine Overhaul Supv	43372	M/Sgt	1
Sr Vehicle & Motorized Equip Eng Mech	47154	S/Sgt	1
Machine Shop Supervisor	53170	M/Sgt	1
Metal Processing Supervisor	53270	T/Sgt	1
Sr Airframe Repairman	53450	S/Sgt	2
Airframe Repair Supervisor	53470	M/Sgt	1
Parachute & Fabric Supervisor	58170	M/Sgt	1
Vehicle Operator	60350	A/1C	1
Organizational Supply Specialist	64151	A/1C	1
TOTAL			31

1 Incl
Ltr, Hq SAC & 1st Ind thereto

P. S. DICKEY
Captain, USAF
Manpower Officer
Ext 25051

A CERTIFIED TRUE COPY

B. A. Johnson

B. A. JOHNSON
2d Lt, USAF
Asst. Adjutant

0975

EXHIBIT 16D

HEADQUARTERS 809TH AIR BASE GROUP
Manpower and Organization Office

MANPOWER NOTICE)

NUMBER 32) DATE: 21 September 1953

This Manpower Notice is published to disseminate information effecting manning document authorizations.

SUBJECT: B-47 Training Augmentation

TO: Comdr, Dst 1, 305th Bomb Wing
Comdr, 306th Bomb Wing
Director of Personnel, 6th Air Div
Base Personnel, 809th AB Gp

1. Attached letter and 1st Indorsement thereto are forwarded for your information.

2. Personnel spaces listed below are authorized your wing, in the functions shown, for immediate manning.

B-47 TRAINING AUGMENTATION - 306TH BOMB WING

WING HEADQUARTERS FLIGHT

AFSC	GRADE	AUTH
Director of Operations	00360	Col	1
Deputy Commander	00660	Col	1
Air Operations Officer	1435	Maj	1
Communications-Electronics Staff Officer	3016	Maj	1
Flight Test Maintenance Officer	4334	Maj	1
TOTAL			5

Abn Elect Comm & Nav Equip Maint Supv	30170	M/Sgt	1
Abn Elect Comm & Nav Equip Maint Tech	30171	T/Sgt	1
Bomb Nav Systems Supervisor	32170	M/Sgt	1
Turret Systems Supervisor	32370	M/Sgt	1
Turret Systems Technician	32371	T/Sgt	1
Aircraft Maintenance Supervisor	43170	M/Sgt	2
Aircraft Maintenance Technician	43171J	M/Sgt	3
Warehouse Supervisor	64171	T/Sgt	1
TOTAL			11

BOMB SQUADRONS FLIGHT

Commander	0066A	Lt Col	1
Pilot ACS	1244	Maj	2
Air Operations Officer	1435	Maj	1
Aircraft Maintenance Officer	4344	Maj	2
TOTAL			6

Manpower Notice #32, dated 21 Sep 53 (Cont'd)

AFSC	GRADE	AUTH
Aircraft Mechanic	43151J	A/2C	9
Senior Aircraft Mechanic	43151J	S/Sgt	11
Senior Aircraft Jet Engine Mechanic	43153	S/Sgt	9
Aircraft Maintenance Supervisor	43170	M/Sgt	1
Aircraft Maintenance Technician	43171J	T/Sgt	9
Vehicle Motorized Equip Engine Mech	47154	A/2C	2
Sr Vehicle & Maintenance Equip Elect	47155	S/Sgt	1
TOTAL			45

PERIODIC MAINTENANCE SQUADRON FLIGHT

Commander	4316	Lt Col	1
TOTAL			1

Senior Aircraft Mechanic	43151J	S/Sgt	3
Senior Jet Engine Mechanic	43153	S/Sgt	4
Senior Aircraft Electrician	43154B	S/Sgt	1
Aircraft Maintenance Supervisor	43170	M/Sgt	1
Aircraft Maintenance Technician	43171J	T/Sgt	1
Vehicle & Motorized Equip Engine Mech	47154	A/2C	1
Sr Organizational Supply Specialist	64361	S/Sgt	1
Sr Vehicle & Motorized Equip Elect	47155	S/Sgt	1
TOTAL			13

A & E MAINTENANCE FLIGHT

Armament Systems Officer	3254	Maj	1
Armament Systems Officer	3234	Capt	1
TOTAL			2

Sr Abn Elect Comm Equip Repmn	30150	S/Sgt	2
Sr Abn Elect Nav Equip Repmn	30151	S/Sgt	2
Abn Elect Comm & Nav Equip Maint Supv	30170	M/Sgt	1
Abn Elect Comm & Nav Equip Maint Tech	30171	T/Sgt	3
Sr E Series Radar-Interconnect Specl	32150C	S/Sgt	1
Sr K Series System Mechanic	32150B	S/Sgt	6
Bomb Nav System Supervisor	32170	M/Sgt	1
Bomb Nav Systems Technician	32171B	T/Sgt	2
Sr Gunlaying Systems Mechanic	32350C	S/Sgt	4
Turret Systems Supervisor	32370	M/Sgt	1
Turret Systems Technician	32371C	T/Sgt	1
Sr Electrical Instrument Repairman	40453	S/Sgt	2
Instrument Overhaul Supervisor	40470	M/Sgt	1
Senior Weapons Mechanic	46250	S/Sgt	3
Weapons Maintenance Supervisor	46270	M/Sgt	1
TOTAL			32

FIELD MAINTENANCE SQUADRON FLIGHT

Aircraft Maintenance Staff Officer	4316	Lt Col	1
TOTAL			1

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Manpower Notice #32, dated 21 Sep 53 (Cont'd)

AFSC	APSC	GRADE	AUTH
Sr Electrical Instrument Repairman	40453	S/Sgt	1
Aircraft Hydraulic Supervisor	42570	M/Sgt	1
Aircraft Electrical Accessories Supv	42670	M/Sgt	1
Senior Aircraft Mechanic	43151J	S/Sgt	1
Aircraft Jet Engine Mechanic	43153	A/3C	2
Senior Aircraft Jet Engine Mechanic	43153	S/Sgt	3
Senior Aircraft Electrician	43154B	S/Sgt	4
Senior Aircraft Instrument Mechanic	43156	S/Sgt	2
Aircraft Maintenance Supervisor	43170	M/Sgt	3
Aircraft Maintenance Technician	43171J	M/Sgt	2
Sr Aircraft Jet Engine Repairman	43352	S/Sgt	2
Aircraft Jet Engine Overhaul Technician	43373	T/Sgt	1
Sr Vehicle & Motorized Equip Eng Elect	47155	S/Sgt	1
Senior Airframe Repairman	53450	S/Sgt	2
Airframe Repair Technician	53471	M/Sgt	1
Vehicle Operator	60350	A/3C	1
Organizational Supply Specialist	64151	A/3C	1
Material Estimator Technician	80271	M/Sgt	1
TOTAL			30

1 Incl
Ltr, Hq SAC & 1st Ind thereto

P. S. DUCEY
Captain, USAF
Manpower Officer
Ext 25051

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D. A. JOHNSON
2d Lt, USAF
Asst. Adjutant

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SUMMARY COST

OF

B-47 OPERATIONS

6TH AIR DIVISION
MACDILL AFB, FLA.

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PREPARED BY

6TH AIR DIVISION COMPTROLLER

EXHIBIT 11

GAP-B-7241-A

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Secret
CLASS:
AUTH: Code & AD
DATE: 11 SEPTEMBER 1956
LAST NAME: Oakes

SUMMARY COST
OF
B-47 OPERATIONS

6TH AIR DIVISION
MACDILL AFB, FLA.

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PREPARED BY:
6TH AIR DIVISION COMPTROLLER

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PREFACE

THE PURPOSE OF THIS STUDY IS TO IDENTIFY, SUMMARIZE AND PROJECT COST DATA RELATIVE TO THE OPERATION OF THE B-47 AIRCRAFT. THE FOUR OBJECTIVES OF THE STUDY ARE AS FOLLOWS:

1. TO PRESENT A SUMMARY COST OF B-47 OPERATING STATEMENT WHICH BREAKS DOWN THE COST OF OPERATING A B-47 AIRCRAFT INTO COST CLASSIFICATIONS. THESE COST CLASSIFICATIONS ARE FURTHER REDUCED TO COSTS PER FLYING HOUR, SUCH AS DIRECT OPERATING COST PER FLYING HOUR, WING INDIRECT COST PER FLYING HOUR, WING TOTAL COST PER FLYING HOUR, BASE AND DIVISION COST PER FLYING HOUR AND TOTAL MACDILL AIR FORCE BASE COST PER FLYING HOUR.

2. TO PRESENT A SERIES OF GRAPHIC ILLUSTRATIONS DEPICTING THE MONTHLY COST PER FLYING HOUR IN RELATION TO THE MONTHLY TOTAL COST FOR THE FOLLOWING COST CLASSIFICATIONS: (A) DIRECT OPERATING COST, (B) WING SUPPORT COST, (C) DIVISION OVERHEAD COST, (D) BASE SUPPORT COST.

3. TO PRESENT GRAPHICALLY THE RELATIONSHIP BETWEEN THE MONTHLY B-47 DIRECT OPERATING COST PER FLYING HOUR AND MONTHLY TOTAL HOURS FLOWN.

4. TO PRESENT B-47 FLYING HOUR COST PROJECTED FROM 10 TO 40 FLYING HOURS PER MONTH PER AIRCRAFT IN 5 HOUR INCREMENTS AND TO DETERMINE MINIMUM MONTHLY COST TO ACCOMPLISH COMBAT CREW TRAINING REQUIREMENTS.

THE COMBINED EXPERIENCE OF THE 305TH AND 306TH BOMB WINGS FROM DECEMBER 1952 THROUGH APRIL 1953 FURNISHED THE MATERIAL FOR THIS STUDY.

SUMMARY OF FINDINGS:

1. PROJECTED DIRECT OPERATING COST PER HOUR RANGES FROM $822 PER 10 FLYING HOURS PER AIRCRAFT TO $309 FOR 40 FLYING HOURS PER AIRCRAFT.

2. COMBAT CREW TRAINING REQUIREMENTS CAN BE ACCOMPLISHED AT AN HOURLY COST OF $434 PER AIRCRAFT, ASSUMING A FULL WING COMPLEMENT OF B-47'S. THIS COST IS EQUIVALENT TO THE HOURLY COST IN A MONTH IN WHICH 32 HOURS PER AIRCRAFT ARE FLOWN.

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SUMMARY OF FINDINGS (CONT'D)

3. TOTAL MACDILL AFB COST PER B-47 PER FLYING HOUR IS $1,592. THE INCLUSION OF HOURLY ATTRITION COST PER AIRCRAFT OF $960 AND HOURLY ENGINE REPLACEMENT COST PER AIRCRAFT OF $122 RESULTS IN A GRAND TOTAL COST PER B-47 PER FLYING HOUR OF $2,674 FOR THE PERIOD UNDER STUDY.

4. B-47 DIRECT OPERATING COST PER HOUR SHOWS AN INVERSE RELATIONSHIP TO THE MONTHLY TOTAL HOURS FLOWN. AS THE TOTAL B-47 FLYING HOURS INCREASED FROM 1,152 IN DECEMBER TO 3,002 IN APRIL, THE HOURLY B-47 DIRECT OPERATING COST DECREASED FROM $650 IN DECEMBER TO $413 IN APRIL.

5. FUEL AND OIL COST PER HOUR PER B-47 AVERAGES $256 AND THE FUEL CONSUMPTION FOR B-47 AIRCRAFT IS COMPUTED AT 1,708 GALLONS PER FLYING HOUR. THIS COMPARES WITH THE 1,759 GALLONS CONSUMED PER HOUR AS INDICATED BY AF LETTER 150-10, PEACETIME PLANNING FACTORS, DATED 2 FEBRUARY 1953.

6. (A) BASED ON 40 CHANGES DURING THE FIVE-MONTH PERIOD AS REPORTED IN AIRCRAFT ENGINE REMOVAL OR LOSS REPORT, AF FORM 250, THE J47-GE-23 AND J47-GE-25 ENGINES HAD AN AVERAGE OF 92 FLYING HOURS PRIOR TO REMOVAL FOR OVERHAUL AS COMPARED WITH A STANDARD OF 100 FLYING HOURS AS LISTED IN SAC MANUAL 150-1, PROGRAM AND MANPOWER PLANNING FACTORS, OCTOBER 1952.

(B) BASED ON 31 CHANGES MADE IN THIS SAME PERIOD, THE J47-GE-11 ENGINES AVERAGED 255 FLYING HOURS PRIOR TO REMOVAL FOR OVERHAUL AS COMPARED WITH A STANDARD OF 175 AS LISTED IN SAC MANUAL 150-1. DURING THIS FIVE-MONTH PERIOD ENGINES OF THIS TYPE WERE GRADUALLY REPLACED BY ENGINES OF THE TYPE IN PAR. (A) ABOVE.

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SOURCES:

JET ENGINE CHANGE SUMMARY, ROS 1-AF-A19

A & E EXPENSE SUMMARY, MACDILL A F B

AF FORM 110A, 305TH & 306TH BOMB WINGS

AFL 177-4, USAF MANUAL OF COST REPORTING

AFL 150-10, PROGRAM AND MANPOWER PEACETIME PLANNING FACTORS, 2 FEB 1953

AIRCRAFT ENGINE REMOVAL OR LOSS REPORT, AF FORM 250

AVIATION FUEL ISSUES AND DEMANDS REPORT

AIR TRAINING REPORT, BOMBARDMENT CREWS (1-SAC-T12)

DISPATCHER'S LOG - BASE OPERATIONS

SAC MANUAL 150-1, PROGRAM AND MANPOWER B-47 PLANNING FACTORS, OCTOBER 1952

FACTS BEARING ON THE STUDY:

1. COST DATA WAS OBTAINED FROM EXPERIENCE OF THE 305TH AND 306TH BOMB WINGS FOR THE PERIOD DECEMBER 1952 THROUGH APRIL 1953 INCLUSIVE.
2. COMBAT CREW TRAINING WAS PREDOMINANT DURING THE PERIOD UNDER CONSIDERATION.
3. THE FOLLOWING COSTS WERE INCLUDED IN THE COMPILATION OF B-47 DIRECT OPERATING COST: (a) FUEL AND OIL COST (b) FLYING MILITARY PERSONNEL PAYROLL (c) MILITARY AND CIVILIAN PERSONNEL PAYROLL COST AND LOCALLY PURCHASED AND CENTRALLY PROCURED SUPPLIES COST FOR B-47 ORGANIZATIONAL MAINTENANCE, FIELD MAINTENANCE, PERIODIC MAINTENANCE AND A & E MAINTENANCE.
4. FUEL COSTS WERE EXTRACTED FROM AVIATION FUEL ISSUES AND DEMANDS REPORT AND COSTED AT 15 CENTS PER GALLON FOR JP-4 FUEL AND 63 CENTS PER GALLON FOR OIL.
5. DIRECT PAYROLL EXPENSES FOR B-47 FLYING MILITARY PERSONNEL WERE DERIVED FROM ACTUAL MAN-DAYS OF PERSONNEL FOR THE FIVE MONTH PERIOD IN THE 305TH & 306TH WINGS AND COSTED AT STANDARD COST AS SET FORTH IN AFL 177-4, USAF MANUAL OF COST REPORTING.
6. B-47 MAINTENANCE SUPPLY EXPENSES REPRESENT ONLY SUPPLY COSTS THAT WERE ACTUALLY EXPENDED DURING THE PERIOD DECEMBER 1952 THROUGH APRIL 1953 AND DO NOT INCLUDE SUPPLY EXPENSES OF ISSUES PRIOR TO THAT PERIOD WHICH WERE IN INVENTORY. SUPPLY EXPENSES FOR DIRECT OPERATING COST EXCLUDE CERTAIN NON-EXPENDABLE PECUNIARY ITEMS WHICH WERE COSTED WHEN SATISFIED AND WERE INCLUDED IN TOTAL BASE SUPPORT COST.
7. DURING THE PERIOD UNDER STUDY, IT WAS FOUND THAT NO VALID DIRECT CORRELATION BETWEEN MAINTENANCE SUPPLY COST AND HOURS FLOWN EXISTED; THEREFORE, FOR THE PURPOSE OF PROJECTING HOURLY COST FROM 10 TO 40 FLYING HOURS PER MONTH, ONLY FUEL AND OIL COST WAS TAKEN AS A DETERMINABLE VARIABLE; ALL OTHER DIRECT COST WAS ASSUMED AS FIXED COST.

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8. A FIGURE OF $3,000,000 WAS ASSUMED AS THE INITIAL CAPITAL COST OF ONE B-47 AIRCRAFT WITH COMBAT CONFIGURATION (K SYSTEM INSTALLED). THIS COST WAS USED TO COMPUTE THE HOURLY ATTRITION COST OF $960 PER FLYING HOUR. THE ATTRITION RATE OF 32 AIRCRAFT PER 100,000 FLYING HOURS FROM WHICH THE FOREGOING ATTRITION COST WAS DERIVED IS GIVEN IN AFL 150-10, PROGRAM AND MANPOWER PEACETIME PLANNING FACTORS, 2 FEBRUARY 1953. THE ATTRITION FACTOR INCLUDES LOSSES DUE TO FLYING ACCIDENTS, GROUND ACCIDENTS, FAIR WEAR AND TEAR AND NATURAL PHENOMENA.

9. ALL REPLACED ENGINES CONSIDERED IN THIS STUDY WERE ASSUMED TO BE DEPOT REBUILT OR REPAIRED AT A COST OF $20,000 EACH. LOCAL ENGINE WORK WAS INCLUDED IN DIRECT OPERATING COSTS. THE ENGINE REPLACEMENT COST PER HOUR OF $122 WAS OBTAINED BY DIVIDING THE TOTAL NUMBER OF HOURS FLOWN IN THE FIVE MONTH PERIOD (11,650) BY THE TOTAL REPLACEMENT COST OF $1,420,000 (71 ENGINES REPLACED BY DEPOT IN THE PERIOD MULTIPLIED BY $20,000).

10. IT WAS DETERMINED FROM THE FIVE MONTH TRAINING EXPERIENCE AS REPORTED ON AIR TRAINING REPORT, BOMBARDMENT CREW, (1-SAC-T12) AND FROM AF FORM 110A THAT A FACTOR OF 1.04 HOURS IS REQUIRED TO ACCOMPLISH ONE ITEM OF COMBAT CREW TRAINING.

11. A FIGURE OF 20 FLYING HOURS PER MONTH WAS CONSIDERED AS A POSSIBLE FLYING HOUR PROGRAM SINCE ONE YEAR'S EXPERIENCE (JULY 52 - JUNE 53) AS REPORTED IN THE SAC SUMMARY OF OPERATIONAL DATA, 1 JULY 53 INDICATES THE AVERAGE HOURS FLOWN PER B-47 PER MONTH WAS 20.6. THIS FIGURE WAS USED AS ONE OF THE POINTS IN PROJECTING THE INCREASE IN QUALITY OF COMBAT CREW TRAINING THROUGH THE INCREASE OF FLYING HOURS.

12. THE FOLLOWING AIR BASE GROUP COSTS WHICH MADE NO CONTRIBUTION (DIRECT OR SUPPORT) TO B-47 OPERATIONS AT MACDILL AIR FORCE BASE WERE EXCLUDED FROM THE STUDY: RESERVE COMPONENTS, SPECIAL MISSIONS - HOMESTEAD AFB, AND ASSET AND CLEARING ACCOUNTS.

E. V. CAVES
MAJOR, USAF
DIVISION COMPTROLLER

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MACDILL AIR FORCE BASE, FLORIDA
SCHEDULE A
SUMMARY COST OF B-47 OPERATIONS STATEMENT
306TH & 306TH WINGS, FOR FIVE MONTH PERIOD, DECEMBER 1952 - APRIL 1953, TWO WING BASE

						COST PER FLYING HOUR
TOTAL COST						
B-47 DIRECT OPERATING COST						
FUEL AND OIL COST		$ 2,985,100				$ 256
FLYING MILITARY PERSONNEL PAYROLL		793,880				64
MAINTENANCE:						
PAYROLL	$ 1,356,189					
SUPPLY	282,991	1,639,180				141
TOTAL B-47 DIRECT OPERATING COST			$ 5,368,160			461
TOTAL DIRECT OPERATING COST, ALL OTHER AIRCRAFT			4,289,575			368
TOTAL DIRECT OPERATING COST, ALL WING AIRCRAFT				$ 9,657,735		829
WING INDIRECT OPERATING COST						
COMMAND, STAFF & HQ EXPENSE		570,790				
CHASE UTILITY CRAFT, MOTOR TRANSPORT, COMMAND TRAINING		19,664				
ALL OTHER WING COST		1,340,729				
TOTAL WING INDIRECT OPERATING COST				$ 1,931,182		166
TOTAL WING OPERATING COST					$ 11,588,918	995
BASE SUPPORT COST						
COMMAND, STAFF & HQ EXPENSE		$ 262,467				
BASE OPERATIONS		601,743				
MEDICAL		763,908				
SUPPLY		684,013				
INSTALLATIONS MAINTENANCE		929,965				
SPECIAL MISSIONS & TENANT		62,653				
ALL OTHER BASE COST		3,571,373				
TOTAL BASE SUPPORT COST					6,876,302	590
TOTAL DIVISION OVERHEAD COST					86,364	7
TOTAL MACDILL AFB COST					$ 18,551,624	$1,592
ATTRITION COST PER B-47 PER FLYING HOUR FY 53						960
ENGINE REPLACEMENT COST PER FLYING HOUR FY 53						122
GRAND TOTAL COST PER B-47 PER FLYING HOUR						$2,674

TOTAL B-47 FLYING HOURS PRODUCED BY THE ABOVE COST = 11,650

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MACDILL AIR FORCE BASE, FLORIDA

SUMMARY COST OF B-47 OPERATIONS STATEMENT

305TH & 306TH WINGS, FOR FIVE MONTH PERIOD, DECEMBER 1952 - APRIL 1953, TWO WING BASE

B-47 DIRECT OPERATING COST BY MONTHS

SCHEDULE A-1

COST CLASSIFICATIONS	DECEMBER 1952	JANUARY 1953	FEBRUARY 1953	MARCH 1953	APRIL 1953	TOTAL
FLYING MILITARY PERSONNEL PAYROLL	$ 127,073.70	$ 134,363.97	$ 156,189.00	$ 157,732.00	$ 166,611.00	$ 743,879.67
FUEL COST	301,524.90	573,988.80	631,561.80	737,368.35	740,560.65	2,985,100.50
CIVILIAN PAYROLL (MAINTENANCE)	8,836.04	10,755.46	9,550.48	7,735.78	6,286.78	43,164.02
ORGANIZATIONAL MAINTENANCE & SUPPLY						
MILITARY PERSONNEL PAYROLL	134,457.96	159,170.51	173,208.00	155,530.00	149,073.00	771,439.47
L.P. SUPPLY COST	330.75	195.33	570.77	130.36	198.36	1,424.81
C.P. SUPPLY COST	70,341.43	11,992.40	18,033.95	15,964.47	44,907.52	161,990.77
FIELD MAINTENANCE & SUPPLY						
MILITARY PERSONNEL PAYROLL	47,216.94	50,643.86	30,309.00	30,810.00	22,830.00	181,209.80
L.P. SUPPLY COST	4.25	31.40	66.53	15.98	9.20	127.36
C.P. SUPPLY COST	11,107.84	11,850.00	15,126.05	9,240.81	6,849.36	54,817.06
PERIODIC MAINTENANCE & SUPPLY						
MILITARY PERSONNEL PAYROLL	28,135.28	13,046.61	20,426.00	33,811.00	33,580.00	129,000.89
L.P. SUPPLY COST	233.88	980.70	---.--	98.06	105.12	1,358.76
C.P. SUPPLY COST	65.21	(58.75)	35.85	2,136.05	699.58	2,765.94
A & E MAINTENANCE & SUPPLY						
MILITARY PERSONNEL PAYROLL	23,939.06	47,649.85	49,310.00	56,591.00	53,885.00	231,374.91
L.P. SUPPLY COST	---.--	---.--	8.36	---.--	---.--	8.36
C.P. SUPPLY COST	108.35	6,456.35	2,803.55	17,224.00	4,246.34	31,338.59
TOTAL B-47 DIRECT OPERATING COST 305TH & 306TH WINGS	$749,325.00	$1,014,873.00	$1,149,197.00	$1,244,499.00	$1,239,[illegible].00	$5,[illegible],349.00

TOTAL FIXED DIRECT OPERATING COST (TOTAL MAINTENANCE COST & FLYING PERSONNEL PAYROLL) = $2,[illegible],[illegible]

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MACDILL AIR FORCE BASE, FLORIDA
SUMMARY COST OF B-47 OPERATIONS STATISTICS
JOINT & JOINT WITH THE FIVE MONTH PERIOD, DEC. 1952 - APRIL 1953, TWO WITH BASE

SCHEDULE A-1
B-47 FLYING STATISTICS

	Average No of A/C	Total Hours Flown	Average Flying Time Per A/C
DECEMBER	51	1152	22.6
JANUARY	80	2113	26.4
FEBRUARY	99	2465	24.9
MARCH	98	2918	29.8
APRIL	93	3002	32.3
TOTAL	421	11650	27.7

SCHEDULE A-3
FLYING HOUR COST PER B-47

COST CLASSIFICATIONS	Dollar Cost	Total Flying Hrs.	Cost Per Flying Hr.
Fuel & Oil Cost	$2,985,100	11650	$256
Flying Personnel Payroll	743,880	11650	64
Total Maintenance Cost	1,639,180	11650	141
Total Direct Operating Cost	5,368,160	11650	461
Total Direct Operating Cost, Other A/C	4,289,575	11650	368
Total Direct Operating Cost, All Wing A/C	9,657,735	11650	829
Total Wings Indirect Operating Cost	1,931,183	11650	166
Total Wings Operating Cost	11,588,918	11650	995
Total Base Support Cost	6,896,342	11650	590
Total Division Overhead Cost	86,164	11650	7
TOTAL MACDILL AFB COST	18,551,424	11650	1,595
Attrition Cost Per Flying Hour			969
Engine Replacement Cost Per Flying Hour			122
GRAND TOTAL COST PER FLYING HOUR			2,674

PROJECTION OF DIRECT OPERATING COST PER HOUR PER A/C IN 5 HOUR INCREMENTS FROM 10 TO 50 FLYING HOURS PER MONTH

FACTORS

1. Total Average No. of A/C (See Sch. A-2)	=	421
2. Total Fixed Direct Operating Cost (See Sch. A-1)	=	$2,789,100
3. Total Fixed Direct Operating Cost Per A/C Per Mo	=	$ 3,660
4. Total Hours Flown (See Sch. A-2)	=	11650
5. Total Fuel & Oil Cost (See Sch. A-1)	=	$2,985,100
6. Total Fuel & Oil Cost Per A/C Per Hour	=	$ 256

SCHEDULE A-4

PROJECTED FLYING HOURS PER MONTH PER A/C		AVERAGE COST PER HR PER A/C
10 Hours	$256 X 10 Hr / $3660 = 10 Hr	$822
15 Hours	$256 X 15 Hr / $3660 = 15 Hr	$633
20 Hours	$256 X 20 Hr / $3660 = 20 Hr	$539
25 Hours	$256 X 25 Hr / $3660 = 25 Hr	$482
30 Hours	$256 X 30 Hr / $3660 = 30 Hr	$445
35 Hours	$256 X 35 Hr / $3660 = 35 Hr	$418
40 Hours	$256 X 40 Hr / $3660 = 40 Hr	$398

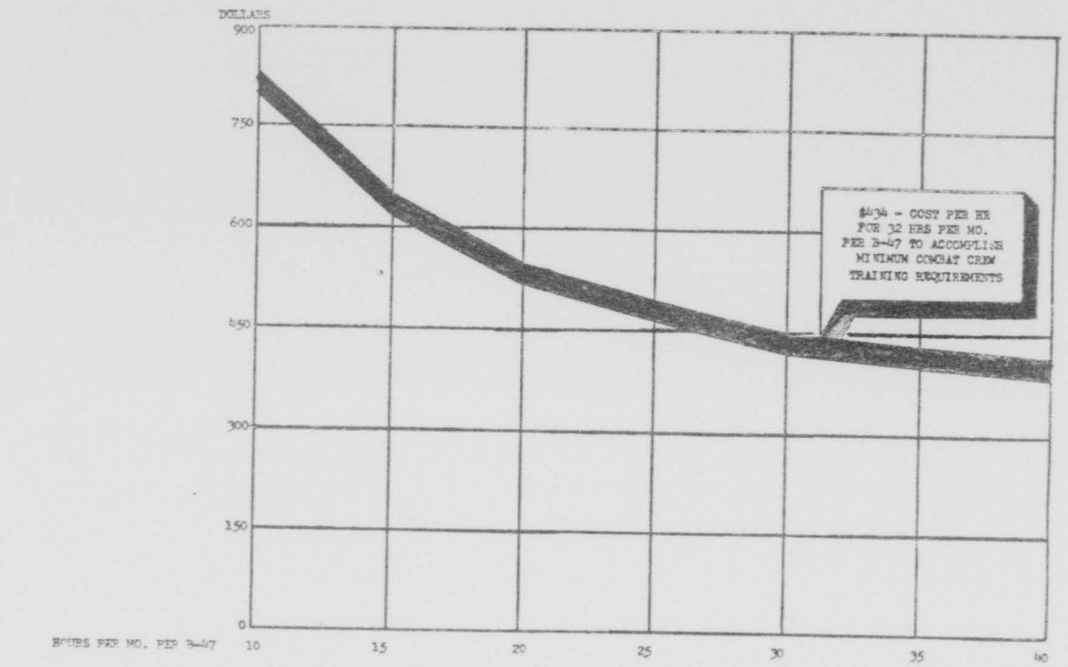
SECRET

SECURITY INFORMATION

0987

SECRET

PROJECTED DIRECT COST PER B-47 FLYING HOUR



DOLLAR COST	822	633	539	482	445	418	398

SECRET

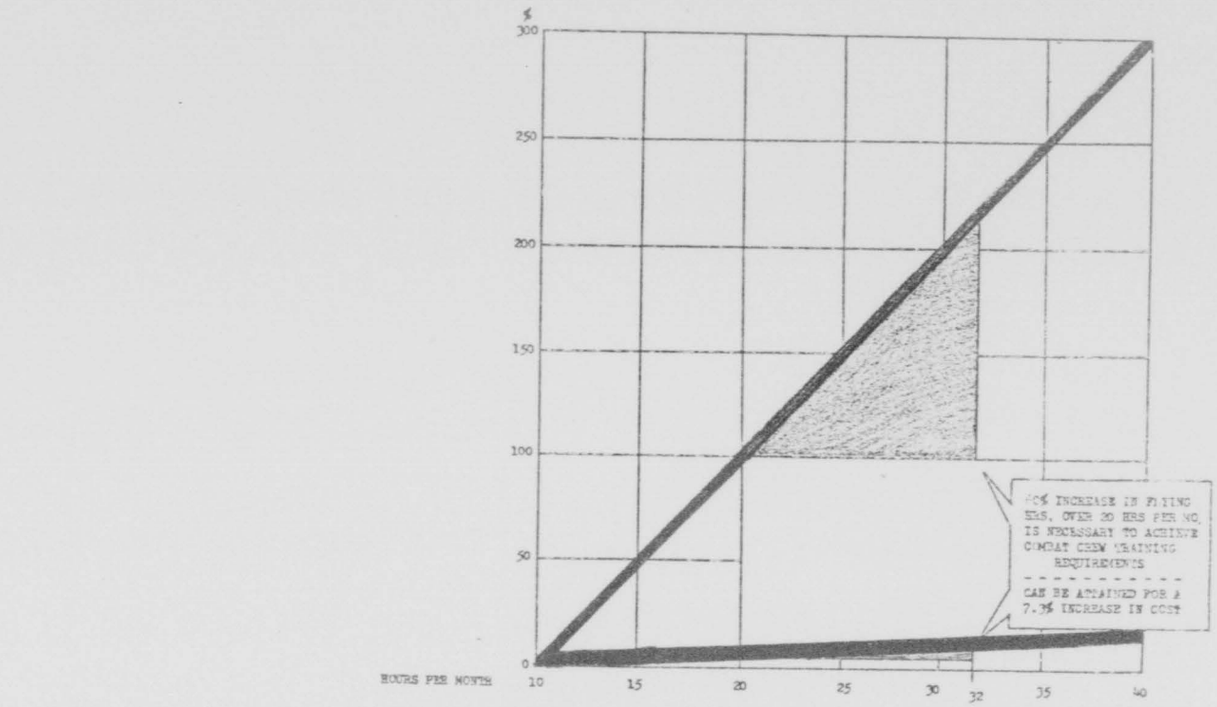
SECURITY

INFORMATION

0988

COSTS SECRET

EXCLUDING ATTRITION AND ENGINE REPLACEMENT FOR A WING OF 45 B-47 AIRCRAFT ON A TWO WING BASE

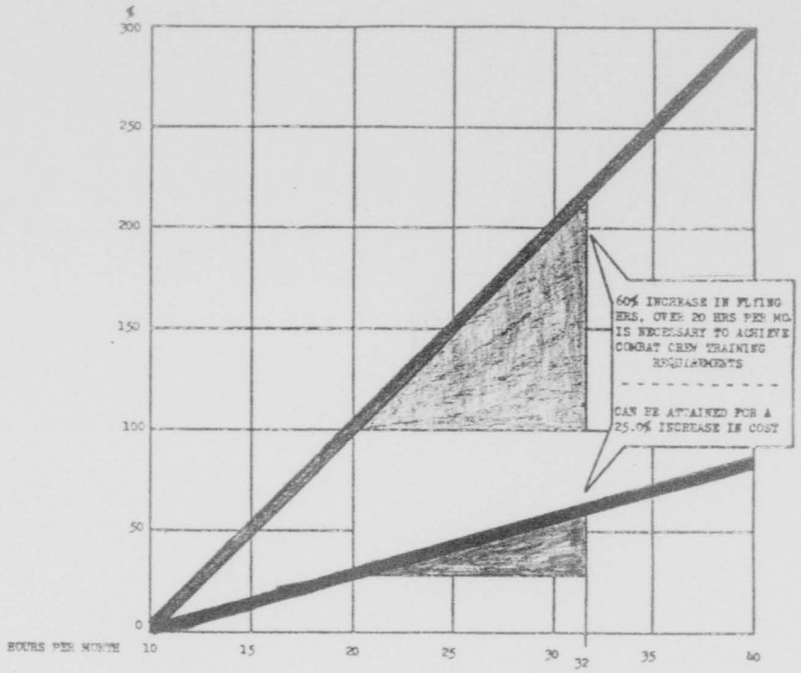


COST PER ONE WING	$1,779,700	$1,834,900	$1,894,500	$1,958,100	$2,009,200	$2,067,300	$2,124,900
PERCENT INCREASE IN FLYING HOURS FROM 10 HRS PER MO.		50	100	150	200	250	300
PERCENT INCREASE IN COST FROM 10 HRS PER MO.		3	6	9	12	16	19

0989

TOTAL COST SECRET

BASED ON ONE WING OF 45 B-47 AIRCRAFT ON A TWO WING BASE



TOTAL COST PER OPT WING	$2,266,200	$2,567,250	$2,868,300	$3,169,350	$3,470,850	$3,771,900	$4,071,600
PERCENT INCREASE IN FLYING HOURS FROM 10 HRS PER MO.		50	100	150	200	250	300
PERCENT INCREASE IN COST FROM 10 HRS PER MO.		13	27	40	53	66	80

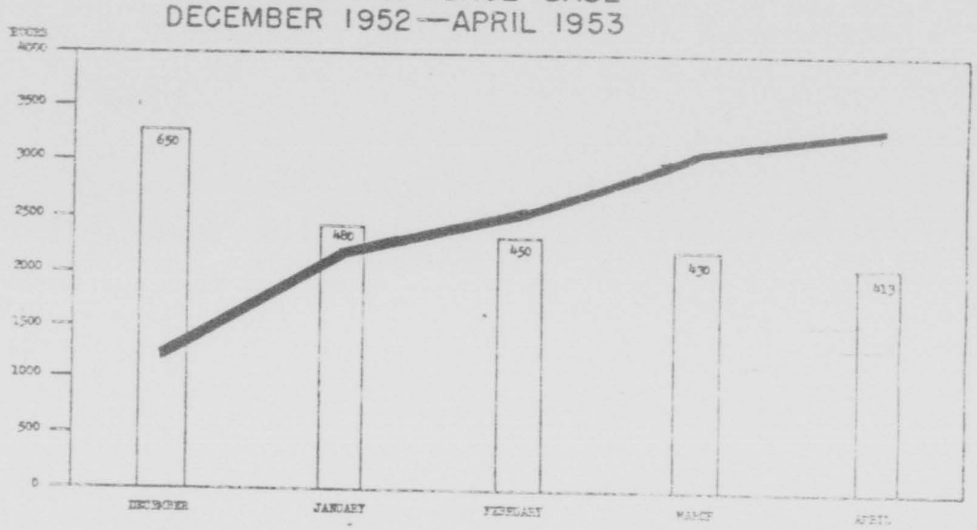
SECRET SECURITY INFORMATION

0990

SECRET

DIRECT COST PER FLYING HOUR

6TH AIR DIVISION
MACDILL AIR FORCE BASE
DECEMBER 1952—APRIL 1953



COST PER FH FLOWN	$ 650	$ 480	$ 450	$ 430	$ 413
[illegible]	1145	2113	2464	2918	[illegible]

THOUSANDS OF DOLLARS

TOTAL COST	$ 749	$1016	$1109	$1255	$1240
MAINTENANCE COST	321	307	339	[illegible]	333
COMBAT OIL COST	127	134	145	159	167
FUEL COST	301	574	625	737	[illegible]

GALLONS

FUEL CONSUMPTION	1745	1811	1709	1654	1614

SOURCE: A & E EXPENSE SUMMARY, AVIATION FUEL ISSUES & DEFUELS, 110A REPORT

PREPARED BY: 6TH AIR DIVISION COMPTROLLER

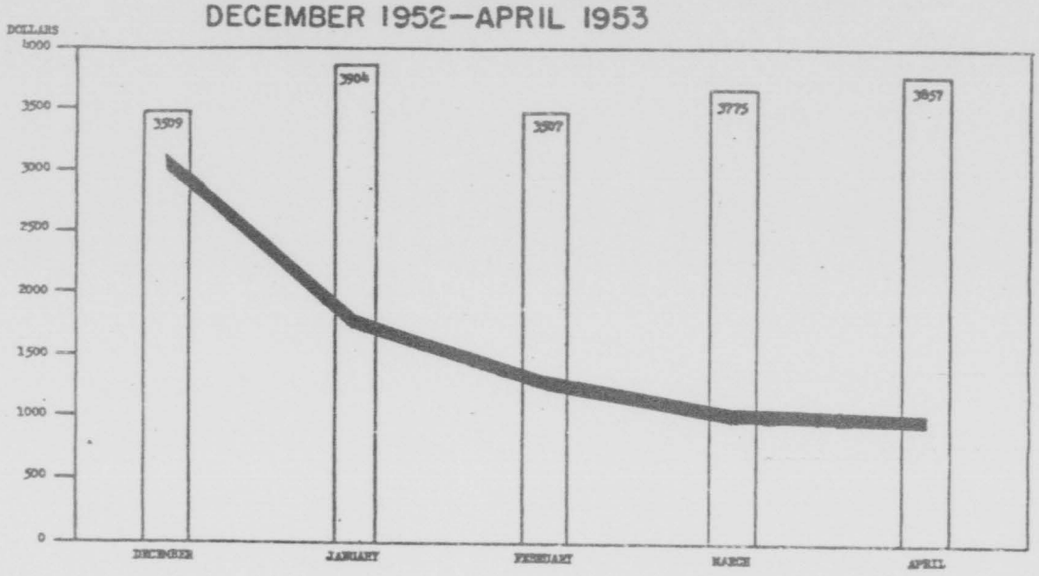
SECRET SECURITY INFORMATION

0991

TOT. . B-47 OPERATING COST PER HOUR

SECRET

6TH AIR DIVISION
MACDILL AIR FORCE BASE
DECEMBER 1952—APRIL 1953



COST PER HOUR	$3046	$1848	$1423	$1294	$1285
TOTAL COST (THOUSANDS OF $)	$3509	$3904	$3507	$3775	$3857
FLYING HOURS	1152	2113	2465	2918	3002

SOURCE: A & E EXPENSE SUMMARY, 110A REPORT

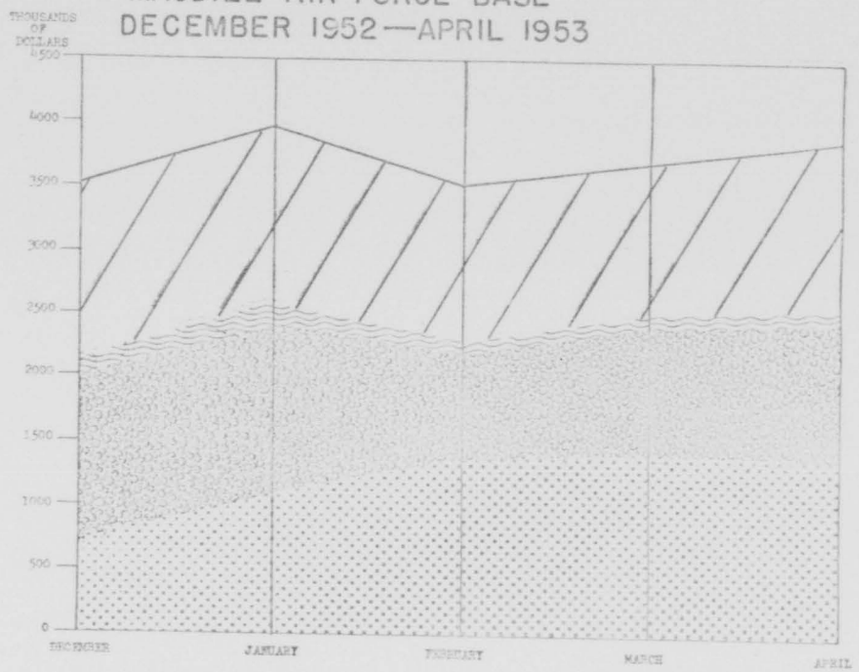
PREPARED BY: 6TH AIR DIVISION COMPTROLLER

SECRET SECURITY INFORMATION

0992

B-47 OPERATING COST SECRET

6TH AIR DIVISION
MACDILL AIR FORCE BASE
DECEMBER 1952—APRIL 1953



	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL
TOTAL COST IN THOU.	$3609	$3904	$3907	$3975	$3857
BASE SUPPORT COST	1369	1477	1217	1372	1341
DIV. OVERHEAD COST	14	19	20	17	16
WINGS SUPPORT COST	1277	1393	1161	1131	1060
DIR. B-47 OPR. COST	749	1015	1109	1255	1240

SOURCE: AAF EXPENSE SUMMARY, 110A REPORT, AVIATION FUEL ISSUES & DEFUELS - PREPARED BY: 6TH AIR DIVISION COMPTROLLER

SECRET SECURITY INFORMATION

14

19

0993

CONFIDENTIAL MWR/jep EXHIBIT 12

DOP 319.1 Sep 16 1953

SUBJECT: Final Report from SAC Senior Controller, Limestone Air Force Base, Maine

TO: Commander
Strategic Air Command
Attention: DOCO
Offutt Air Force Base
Omaha, Nebraska

1. This is Final Report from SAC Senior Controller of operations of Second Air Force Operations Order 71-53, in two (2) parts.

2. Part I - Comments.

a. Communications at Limestone Air Force Base are inadequate. Switchboard for Long Line is inoperative due to long standing lack of relay switches. Most advantageous location for Control Team is in Base Operations, but normal Long Line terminal through Eighth Air Force was not available, and without switchboard, all calls had to be made from or relayed to the terminal in the Wing Headquarters Building Control Room, approximately a mile away.

b. A direct wire terminal to SAC Headquarters was located in Base Operations. Request for activation was made and authorized Friday by SAC Headquarters, but terminated without notice to Controller Saturday Noon. Urgent requests for reactivation were not granted. This caused delay and great inconvenience to team for communications other than submission of routine reports. The team had to be available twenty four (24) hours a day during the four (4) days of aircraft movement and was not manned to cover several different posts continuously.

c. TWX messages were consistently slow in arriving, even with Operational Immediate Precedence, thus telephone or telecon must be utilized for any communications requiring quick answer or discussion.

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SERIES

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6AD-C-7040

SECURITY INFORMATION

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File: DOP 319.1
Subject: Final Report from SAC Senior Controller, Limestone Air Force Base, Maine

d. Control Tower needed details of tanker operations in this area and movement of 306th Bombardment Wing B-47 and support aircraft, since queries from SAC and emergency variations of 306th Flight Plans required knowledge and decisions on part of Senior Controller.

e. Strike Reports from tankers refueling 306th B-47 aircraft were not received at Limestone for relay to SAC Headquarters as indicated in Second Air Force Operations Order 71-53. Our message to Westover requested Strike Reports by radio rather than TWX summary at end of day but results were negative.

f. Many calls, day and night, were received from Wire Services in Portland and Boston for pertinent and current information regarding the operations. With only the instructions from the Operations Order for guidance, the Senior Controller could do nothing to stem the mounting bitterness of the Press until Colonel Tilley, SAC Public Information Officer, was contacted by phone. Even then, we did not know what information was being released by SAC; therefore, we were unable to give the latest development concerning the stock releases.

g. Numerous changes in communications procedures for B-47 operations were somewhat confusing from standpoint of planning, briefing, and execution.

h. Other than communications, Base facilities were adequate and Base support excellent, even with weekend operation.

3. Part II - Recommendations.

a. That a prototype Control Room for operations of this type be established as a requirement and vigorously supported by SAC supply-wise. Communication by Long Line, TWX, Telecon, Air-Ground and Point to Point Radio, including MASS, from this Control Room, with adequate Base Intercom, are basic requirements. Location of this Control Room, in Base Operations, giving ready access to its information and facilities, and to the Control Tower in event of aircraft emergencies, is highly desirable. Further, sleeping facilities adjacent to this Control Room are required for twenty four (24) hour instant availability of supervisors during extensive operations such as the one just completed involving movement of F-84 aircraft, B-47 aircraft going overseas, as well as returning from overseas, and tanker aircraft refueling operations in this area.

File: DOP 519.1
Subject: Final Report from SAC Senior Controller, Limestone Air Force Base, Maine

b. That officers on duty in Headquarters SAC Control Room not only have all Operations Orders and information concerning the operation on hand for ready reference, but that they also have authority to activate or authorize any available means of communication that will expedite reporting and/or controlling the operation any hour, any day of the week.

c. That communications equipment and supply capability be determined for every unit involved in the operation and the Communications Plan be issued as late as possible prior to start of operation to eliminate as many planning changes as possible. Further, a Communications Officer from the Planning Staff be assigned to the Control Team for observation of communications, especially if located at a station designated as the primary communications control station for air ground reporting such as was Bermuda for the F-84 flight to North Africa.

d. That the controlled publicity releases to the Press be sent to the Control Team also, as a basis for releasing to the local offices of the Wire Services current information relative to the progress of the mission with any restrictions necessary for security.

Copy furnished
Comdr, 2AF
Comdr, 8AF
Comdr, 306BW
Comdr, 42d BW

HARRY W. ROBB
Lt Colonel, USAF
SAC Senior Controller
Limestone AFB, Maine

A CERTIFIED TRUE COPY
B. A. JOHNSON
2d Lt, USAF

CONFIDENTIAL

EXHIBIT 13

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDCI 311 26 September, 1963

SUBJECT: (Unclassified) Handling of Category Baker Messages

TO: See Distribution

1. Reference letter Hq 2AF, 2AFCSB 311, dated 3 September 1963, Subject as above, procedures have been established by Hq 2AF for the handling of Category Baker Messages. This has been necessitated by the requirements for handling, storing, and safeguarding these messages as TOP SECRET material.

2. For the purpose of this directive, all messages encoded by means of AFSAI 5JC/ are Category Baker Messages.

3. The following procedures are applicable in the handling of this type message:

a. The base cryptographic section will be responsible for monitoring and safeguarding subject messages received at this station.

b. Pony circuits will be utilized by receiving units to transmit subject messages to the base communications center in original form as received. Other organizations or sections of the pony circuits are not authorized to receive or decode this type message.

c. Serial numbers for all Category Baker Messages will be assigned by the base cryptographic section.

d. The encrypted traffic volume report will be maintained by the base cryptographic section.

e. Decoding will be accomplished by the base cryptographic section and a clear text copy of the message will be delivered to the addressee. During normal duty hours, the cryptographic section will notify the addressee, who will dispatch an armed courier to pick up and deliver subject messages. During other than normal duty hours, the clear text copy will be delivered directly to the 6th Air Division Control Room Officer by personnel of the cryptographic section.

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6AD-C-7259

SECURITY
INFORMATION

CONFIDENTIAL

MCDOSL 311, Subject: (Unclassified) Handling of Category Baker Messages

f. A classified material destruction report will be prepared in duplicate by the addressee and the original submitted to the base cryptographic section on all messages received during the month. This report is due in the cryptographic section on the third day of the month following the reported period.

g. Each copy of all messages will be accounted for.

h. Units receiving subject messages are not authorized to make additional copies without approval of the Cryptosecurity Officer.

i. The following information is for the base cryptographic section only:

(1) When decoding subject messages, the clear text will be copied on a separate sheet of paper and not written on the coded text copy.

(2) Files of coded text will be kept for a period of one month and then destroyed.

(3) Clear text copy will not be retained within the cryptographic section.

(4) Any message decoded by this system will be assigned a minimum security classification of CONFIDENTIAL and will be handled and stored as TOP SECRET material.

BY ORDER OF THE COMMANDER:

B. A. JOHNSON
2nd Lt., USAF
Assistant Adjutant

DISTRIBUTION: (Special)
1 - Director of Operations, 6th AD
1 - Communications Officer, 305th BW
1 - Communications Officer, 306th BW
1 - Base Operations Officer, 809th ABGp
1 - Comdr, 1928th AACS Sq
1 - Cryptosecurity Officer, 809th ABGp
1 - Hq 2AF (ATTN: Comm-Elect) Barksdale AFB, La.
1 - 809th ABGp (Adj)

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

SECURITY
INFORMATION

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EXHIBIT 14

HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

CCCSD 360 23 September, 1953

SUBJECT: Transmittal of Aircraft Incident Report - TCS: SAC-F2

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

Transmitted herewith in compliance with SAC Regulation 62-9 dated 15 August 1952 is an Aircraft Incident Report on T-33 type aircraft for the 306th B embardment Wing Medium.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst. Adj.

1 Incl in sextuplicate
IR, T-33 #6029

"A CERTIFIED TRUE COPY"
(Including Inclosure)

R. A. JOHNSON
2nd Lt., USAF

SECURITY
INFORMATION

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RESTRICTED

RESTRICTED (When filled in)
Security Information

AIRCRAFT INCIDENT REPORT Reports Control Symbol
SAC-72

TO: (Enter Wing and Station)
Commander, 306th Bomb Wing (M)
MacDill Air Force Base, Florida
ATTN: Wg Flying Safety Officer

FROM:
Squadron Flying
Safety Officer
367th Bm Sq

SECTION I - AIRCRAFT INCIDENT (To be filled in by person reporting incident and submitted to Squadron Flying Safety Officer)

1. Place of Incident: Wichita, Kansas
2. Base Reported: MacDill AFB, Fla.
3. Date & Z Time of Incident: 22 Sept
4. DAY
5. YEAR
6. MAY BE TECH

7. NATURE OF FLIGHT: Taxiing

8. ACFT: a. Type, T-33 b. Number, 6029 c. Org. 367th Bomb Squadron

9. PERSONNEL: a. Person at controls, Col. W. H. W. McCoy b. Same as a.

10. No damage to aircraft.

11. NARRATIVE REPORT: Landed T-33 at Wichita AFB for fuel. I had previously been cautioned by Chief of Maint, Major Wink, and by the crew chief of the T-33 at MacDill not to fill the tip tanks above the 330 gal level. Since this acft had been modified by having the tip tanks installed which (sic) filler neck at the top of the tank instead of on the side, it is possible to fill the tank, thus allowing no space for expansion of fuel. I warned the alert crew of this condition at Wichita. During preflight I noticed the fuel level in the tanks to be about one inch from the top when it should have been four inches. I called this to the attention of the alert crew. They pointed out that the aircraft had been refueled at approximately 75°F and it was then about 99°F, which probably accounted for the fuel level. I started the eng and turned on the tip tanks in order to burn the fuel down to the desired level before take-off. After running the engine at idle for about ten minutes I applied power which caused the cabin pressurization system to spray fuel throughout the cockpit. It is estimated that approximately four gallons of fuel came out of the pressurization system. I shut the engine down and contacted the T-33 Maint Off at Wichita who informed me that they had had similar trouble with the check valves in the pressurization line to the tip tanks. They had UR'd the valves but replacement valves received were less reliable. Their only solution was to keep the tank level from four to six inches from the top. I called a fire truck and proceeded to run the eng until the lines were dry. Allowed acft to dry out for 12 hrs and tried it again. A small amount of fuel came out this time. Again ran the eng until no fuel or fumes were coming out of the vents. Allowed to dry for about 2 hrs and started eng again. This time no fuel or fumes came out at 100% power. As the gear came up on take-off the cockpit became filled with blue smoke and fuel fumes. I went on 100% oxygen and turned the heat control to full hot. This cleared the cockpit in about three minutes.

SECURITY INFORMATION

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INCIDENT REPORT, [illegible] 40929 (contd)

WHAT DO YOU RECOMMEND TO PREVENT RECURRENCE? Do not fill tip tanks on this model beyond the 230-gal level.

SECTION II

FROM YOUR INVES, WHAT DID YOU DETERMINE TO BE THE CAUSE OF THIS INCIDENT? Overfilling or expansion of fuel in tip tanks. Faulty check valves in pressurization system.

WHAT ACTION HAS BEEN TAKEN REGARDING THIS INCIDENT? All pilots cautioned and informed of this condition.

WHAT DO YOU RECOMMEND TO PREVENT RECURRENCE OF SIMILAR INCIDENTS: Do not overfill tip tanks about (sic) 230-gal level.

Date of Report	Squadron	Name & Grade of Flying Safety Off (Print or type)
18 Sept 53	367th Bm Sq	O. E. Buckley, Major, USAF

SAC Form 5 (15 Jul 52) Replaces SAC Form 62-9 which is obsolete (When filled in) RESTRICTED

SECURITY
INFORMATION

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1001

EXHIBIT 15

COPY

DETACHMENT 2
3908TH STRATEGIC EVALUATION SQUADRON
MacDill Air Force Base, Florida

JDS/dfs
10 September 1953

SCSEC

SUBJECT: Support Requirements of Detachment 2, 3908th SES

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

1. Headquarters, Strategic Air Command has directed that Detachment 2, 3908th Strategic Evaluation Squadron begin evaluation of B-47 crews at MacDill Air Force Base, Florida, on or about 1 October, 1953.

2. The operational planning phase of the B-47 evaluation program has been completed and the following listed support equipment and facilities are requested of the 6th Air Division:

Avon Park Bombing Range
Avon Park CQ Range
Sarasota Gunnery Range
MacDill Base Photo Lab
Transportation
B-47 Flight Simulator
Special Weapons
Practice Bombs (S6GGA, GP, 500 lb AN-64)
Ammunition

3. The exact time of utilization and quantity requirements of the above listed equipment and/or facilities will be amplified in the inclosures to this letter.

4. The support requested is in accordance with the organizational relationship of the 3908th Strategic Evaluation Squadron and the 6th Air Division as announced in Strategic Air Command General Order 32, dated 10 June 1953.

COPY

Det 2, 3908th SUS, MacDill AFB, Fla., SCEDQ, Subject: Support Requirements of Detachment 2, 3908th SUS, cont'd.

/s/t/ ROBERT C. CZLOTTO
Lt Col USAF
Commander

9 Incls:
1. Avon Park bb rg rqmt (tr)
2. Avon Park CQ rg rqmt (tr)
3. Sarasota GR rqmt (tr)
4. MacDill Base Photo Lab rqmt (tr)
5. Trans rqmt (tr)
6. B-47 Flight Sim rqmt (tr)
7. Special Weapons rqmt (tr)
8. Practice Bombs rqmt (tr)
9. Ammunition rqmt (tr)

"A CERTIFIED TRUE COPY"
(Including Inclosures)

L. A. JOHNSON
2nd Lt., USAF

AVON PARK BOMBING RANGE REQUIREMENTS

1. The evaluation program of Detachment 2 will require the utilization of a bombing target at Avon Park Bombing Ranges for release of 250 lb or 500 lb sand-filled bombs on the following dates and times during the initial month of operations:

8 October 1953 - 1000 to 1230 hours EST
15 October 1953 - 1000 to 1230 hours EST
22 October 1953 - 1000 to 1230 hours EST
29 October 1953 - 1000 to 1230 hours EST

2. Requirements for November and December are estimated to be the same, every Thursday, through 18 December at the times indicated in paragraph 1 above. Requirements will be forwarded direct to Base Operations after original coordination has been established.

3. In the event that a target for releases of practice bombs is not available at Avon Park, the requested times are for Target Alpha and a visual camera attack will be accomplished.

INCL 1

AVON PARK BOMBING RANGE REQUIREMENTS

1. The evaluation program of Detachment 2 will require the utilization of a bombing target at Avon Park Bombing Range for release of 250 lb or 500 lb sand-filled bombs on the following dates and times during the initial month of operations:

8 October 1953 - 1000 to 1230 hours EST
15 October 1953 - 1000 to 1230 hours EST
22 October 1953 - 1000 to 1230 hours EST
29 October 1953 - 1000 to 1230 hours EST

2. Requirements for November and December are estimated to be the same, every Thursday, through 18 December at the times indicated in paragraph 1 above. Requirements will be forwarded direct to Base Operations after original coordination has been established.

3. In the event that a target for release of practice bombs is not available at Avon Park, the requested times are for Target Alpha and a visual camera attack will be accomplished.

INCL 1

AVON PARK GUNNERY RANGE REQUIREMENTS

1. The gunnery phase of the B-47 evaluation program will require the utilization of the B-47 gunnery equipment and necessary range time for firing at the Avon Park CQ Range on the dates indicated below:

2 October 1953
9 October 1953
16 October 1953
23 October 1953
30 October 1953
6 November 1953
20 November 1953
4 December 1953
18 December 1953

2. Refresher gunnery training for B-47 crew personnel assigned to the Headquarters, 3908th Strategic Evaluation Squadron and Detachment 2 will be accomplished on October 2, 16, and 30. Regular B-47 gunnery evaluation will be conducted on all the other requested dates.

3. The actual checking and grading of B-47 crew members undergoing evaluation will be accomplished by gunnery personnel assigned to this organization.

4. All requirements will be forwarded direct to the local range control agency following original coordination.

INCL 2

SARASOTA GUNNERY RANGE REQUIREMENTS

1. The requirements of the B-47 evaluation program for the use of Sarasota Gunnery Range are listed below in two separate schedules. The first schedule covers air firing requirements; the second schedule covers the times that the evaluations missions will, of necessity, fly through the Sarasota Gunnery Range.

FOR AIR FIRING

8 October 1953	1100 to 1300 hours EST
15 October 1953	1100 to 1300 hours EST
22 October 1953	1100 to 1300 hours EST
29 October 1953	1100 to 1300 hours EST

FOR FLY THROUGH		ENTER	DEPART
5 October 1953	2300 to 0100 EST	27-15N 83-07W	27-10N 82-40W
8 October 1953	1300 to 1500 EST	26-25N 82-15W	26-50N 83-20W
12 October 1953	2300 to 0100 EST	27-15N 83-07W	27-10N 82-40W
15 October 1953	1300 to 1500 EST	26-25N 82-15W	26-50N 83-20W
19 October 1953	2300 to 0100 EST	27-15N 83-07W	27-10N 82-40W
22 October 1953	1300 to 1500 EST	26-25N 82-15W	26-50N 83-20W
26 October 1953	2300 to 0100 EST	27-15W 83-07W	27-10N 82-40W
29 October 1953	1300 to 1500 EST	26-25N 82-15W	26-50N 83-20W

INCL 3

1 1

BASE PHOTO LAB REQUIREMENTS

The requirements for the services of the Base Photo Lab, in support of the B-47 evaluation program, consist of developing and printing (visual runs only) radar film from the G-14 and G-23 cameras following each mission. Current schedule will be for two (2) evaluation missions per week with two (2) to four (4) crews flying each mission during the month of October. Future requirements will be coordinated directly with the Base Photo Lab. Priority is requested for the development and printing of the film used on scheduled evaluation missions in order to have mission results available in time for the critique held the day following the mission. The evaluation missions will be flown on Monday and Thursday each week during October. Initial photo lab requirements will be to process the radar film from the Monday night mission between the hours of 0200 and 1000 hours on Tuesday morning. Film from the Thursday mission will be available to the lab by 2000 hours and required to be completed by 1000 hours on Friday. All other photo requirements of Detachment 2 will be processed through the photo lab on the regular schedule (non-priority) basis.

INCL 4

TRANSPORTATION REQUIREMENTS

It is requested that the following required transportation for Detachment 2 be made available on or about 1 October 1953.

Item 1. For dispatch 6 days per week: driver to be furnished by using organization - one (1) 1/2-ton pickup truck with top installed.

Justification: To be used by Supply and Maintenance Section, Operational Section, Headquarters; Operational Section, Detachment 2 for transportation of personnel to and from the flight line, procuring supplies, etc.
Estimated Utilization: 75 miles per day.

Item 2. For dispatch on flying days (every Monday and Thursday) 5 October through 17 December - driver to be furnished by Base Motor Pool - One (1) 1/2-ton pickup truck with top installed or a carry-all.

Justification: Transportation of crews to the aircraft, transportation of crews from aircraft to Base Operations and Flight Kitchen and return to aircraft, and transportation of crews from aircraft to squadron area following missions. These B-47 crews consist of four (4) members.
Estimated Utilization: 150 passenger miles per day.

Item 3. For dispatch, as required, a carry-all for transportation of from four (4) to six (6) personnel from MacDill AFB, Florida, to Avon Park OC Range and return the same day, driver to be furnished by the Motor Pool. Depature time from MacDill will be scheduled for 0500 hours. During the month of October, the vehicle will be required every Friday. During the months of November and December, estimated requirements will be two round trips per month.

INCL 5

B-47 FLIGHT SIMULATOR REQUIREMENTS

Requirements for the utilization of the B-47 Flight Simulator consist of two periods (four hours) each week, beginning Tuesday, 6 October and each Tuesday thereafter. One half of the above time will be used for emergency procedure checks for pilots undergoing evaluation and the remaining time for proficiency training of pilots assigned to the organization. Scheduled periods required during the first month of the evaluation program will be the second morning and the first afternoon period each Tuesday. Coordination will be maintained between the Operations Section of this detachment and the OIC of the Flight Simulator to handle future requirements.

These requested times, stated above, are in addition to the refresher training on the Flight Simulator required for all assigned pilots during the month of September.

INCL 6

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SPECIAL WEAPONS REQUIREMENTS

The Special Weapons phase of the B-47 evaluation program will require the use of two (2) complete units and two (2) loading teams on the 16th and 30th of October. The Detachment 2 Special Weapons Officer will join this organization on 1 October and will coordinate all required schedules for equipment and personnel. Future requirements will be coordinated by our Special Weapons Officer.

Maximum support in this area is requested in accordance with Headquarters Strategic Air Command Letter DWSC/71.4 dated 14 August 1953, Subject: "Special Weapons Equipment for the 3908th Strategic Evaluation Squadron," and Headquarters Second Air Force Letter 2AFXMM 471 dated 20 August 1953, same subject.

INCL 9

1011

REQUIREMENTS FOR PRACTICE BOMBS

Detachment 2 will require approximately sixteen (16) practice bombs, 6400# GP, 500 lb AN-M64 or 250 lb T-42 or T-61 during the month of October 1953. Coordination of these requirements was made with MCAD Green, the Assistant Munitions Officer on 10 August 1953, at which time he indicated that the 250 lb bombs were not available at MacDill.

It is requested that the bombs be delivered and loaded on the aircraft as required during the evaluation program. No A & E personnel are authorized this organization.

The schedule for bombs and bomb loading requirements will be coordinated by our Operations Section with the Munitions Officer and the Agency designated to accomplish the loading.

INCL 8

AMMUNITION REQUIREMENTS

The gunnery phase of the evaluation program will require the firing of 400 rounds of caliber .50 ammunition by each B-47 crew. It is requested that the supply and loading of this ammunition be the responsibility of the parent Wing of the B-47 crews undergoing evaluation during the initial period, October through December, 1952. Subsequent gunnery and ammunition support requirements will be coordinated as the need develops. Specific requirements during the period October through December 1952 will be four loadings of 400 rounds or 1600 rounds of caliber .50 ammunition per month.

Time and place of loading will be coordinated by our Operations Section and the activity responsible for the loading.

INCL 9

EXHIBIT 15A

1st Ind 3 Oct., 1963

HQ/DO/BARRIERS 4TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Detachment 2, 3908th Strategic Evaluation Squadron, MacDill Air Force Base, Florida

1. Information requested in basic communication is hereby submitted. Your attention is invited to the comments and/or recommended changes in the following listed support equipment and facilities:

a. Avon Park Bombing Range:

(1) Reference inclosure #1. At the present time there is no Radar Target available. A radar reflector is cleared but will not be available during the month of October, or possibly November, 1963. When the installation of the radar reflector is completed, a schedule will be formulated. Visual bombs may be dropped at any time. Avon Park Bomb plot is not equipped with UHF at this time. Equipment has been requested, but supply or procurement is unknown at this time. In a recent telephone conversation, Lt. Col. Collette, 3908th Strategic Evaluation Squadron, and Major Griffin, 870th Operations Squadron, concurred that Avon Park Bombing Range requirements would be withheld until the installation of UHF radio equipment and radar reflectors.

(2) Reference inclosure #2. Avon Park Gunnery Range will be available as indicated.

(3) Reference inclosure #3. The Sarasota Gunnery Range will be available as indicated.

b. MacDill Base Photo Lab: Reference inclosure #4. The Base Photo Lab will be capable of supporting this program.

c. Transportation: Reference inclosure #5.

(1) Transportation requirements are not excessive and will be made available.

1014

1015

B/ltr fm Det 2, 3908th SSSq, MacDill AFB, Fla., SSSDO, subject: Support Requirements of Detachment 2, 3908thSES

MCDOO 353 (10 Sep 53) 1st Ind (CONTINUED)

c. Practice Bombs: Reference inclosure #8.

(1) Five hundred (500) pound practice bombs, sand filled, are not available for issue to the 3908th Strategic Evaluation Squadron during the month of October, due to the non-availability of bombs at Base Supply. For the interim, the 306th Bomb Wing will furnish practice bombs to the expended by the 306th Bomb Wing crews undergoing evaluation with the 3908th Strategic Evaluation Squadron.

(2) The units and loading team from the 800th Air Base Group required for the 16th and 30th of October will be available. The 306th Bomb Wing will provide a loading supervisor to supervise the loading function of base ammo personnel when loading practice bombs in 306th Bomb Wing aircraft.

d. Ammunition: Reference inclosure #8.

(1) Caliber fifty (.50) ammunition will be requisitioned and loaded in 306th Bomb Wing aircraft by 306th A & E munitions personnel.

(2) Coordination between the 3908th Strategic Evaluation Squadron and the 306th Gunnery Officer, extension #36-771, should be effected at least two (2) days prior to loading ammunition in 306th Bomb Wing aircraft.

FOR THE COMMANDER:

B. A. JOHNSON
2nd Lt., USAF
Assistant Adjutant

9 Incls:
n/c

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1016

CONFIDENTIAL

EXHIBIT 16

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, La.

2AFIGSV 333 10 Sep 1953

SUBJECT: USCM Vulnerability Test, 28 Aug 53 - 2 Sep 53 (RCS: 2-SAC-Y1)

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

1. Forwarded herewith is report of USCM Vulnerability Test conducted at your station during the period 28 August through 2 September 1953 in compliance with SAC Regulation 205-4, dated 24 July 1953.

2. Report should be processed in accordance with paragraph 7b, SAC Regulation 205-4.

BY ORDER OF THE COMMANDER:

1 Incl
Rpt of USCM Vul Test
28 Aug - 2 Sep 53

ZEAK M. BUCKNER, Jr.
Captain USAF
Asst. Adjutant

A CERTIFIED TRUE COPY
(Including 1 Inclosure)
B. A. Johnson
B. A. JOHNSON
2d Lt, USAF

6AD-C-7044

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USCM VULNERABILITY TEST TEAM
MacDill Air Force Base, Florida

3 September 1953

SUBJECT: Report of USCM Vulnerability Test, 28 August 53 - 2 Sep 53

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

I. SUMMARY

1. USCM Vulnerability Team, consisting of one (1) officer and four (4) airmen, arrived by commercial air in Tampa, Florida, Thursday, 27 August 1953. Team leader reported to the Commander, 6th Air Division on Friday, 28 August 1953.

2. During the five (5) day period from 28 August 1953 to 1 September 1953, inclusive, team members performed espionage and reconnaissance for the purpose of:

a. Determining unit and details of deployment of the forthcoming mission.

b. Determining location of, and degree of security around Category I items.

c. Acquainting team members with the physical layout of the installation.

3. Details of the mission were obtained from military and civilian personnel, both on and off the base, through the medium of casual contact and routine conversation.

4. On Wednesday, 2 September 1953, at 0800 hours, the actual simulated sabotage was attempted. It was successful to the extent that thirty-seven (37) B-47 and two (2) KC-97 aircraft were theoretically destroyed. In addition, team members gained access to base communications'

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INCL 1

1018

relay and switchboard room.

5. After completing the penetration, the team leader again reported to the Commander of the 6th Air Division.

II. NARRATIVE

A. RECONNAISSANCE

6. For five (5) days prior to the penetration, the USCM Vulnerability Team, as previously mentioned, attempted to uncover facts and details concerning the mission.

7. Team members, working alone, contacted military and civilian personnel in such areas as "the PX, the PX Snack Bar, the Officers' Club, the NCO Club, etc." Also, contacts were made off the base; on busses and in civilian establishments in and around Tampa.

8. In general, most people contacted were extremely tacit and tried to avoid any discussion of the mission. Many of them mentioned that they had been instructed that the movement was highly classified and not to be discussed. Some of them felt though that this was rather paradoxical since certain infomation had been published in local newspapers.

9. After five (5) days of repeated contacts; however, the team members were able to obtain the following information.

a. Some maintenance people had already left the station and were placed along the route the tactical aircraft would follow.

b. Other support personnel were le ving on MATS aircraft prior to E-day and would still be leaving up to a week afterwards.

c. Tactical aircraft would leave in three (3) phases. One-third (1/3) would leave on E-day, Thursday, 3 September 1953, and an additional third on each of the following two (2) days.

d. Tactical aircraft would proceed from MacDill Air Force Base to Limestone Air Force Base and from there to their destination in England.

10. The information about the tactical aircraft leaving in three (3) phases and the dates, was obtained from the woman working behind the music counter in the PX. The fact that the tactical aircraft would go to England via Limestone Air Force Base was obtained from an unknown Captain in the PX Snack Bar.

11. It was virtually impossible to find out specific details, such as times, aircraft numbers, etc., to fill in around the general information uncovered. This is contributed to the fact that the people contacted, the average airman, did not have access to this information.

12. Civilians in downtown Tampa contributed almost nothing. Bartenders, and other people in this line of work, that were contacted showed no indication of possessing any information.

B. PENETRATION

13. On the basis of the information uncovered and the instructions received during the briefing, it was decided to launch the penetration attempt at 0500 hours, Wednesday, 2 September 1953.

14. At 0400 hours that morning, team members assembled in Tampa and proceeded to the base by commercial taxi. The team entered the base in civilian clothes through the MacDill Avenue gate. Identification was required at this point, but it was not checked very closely and could have been compromised.

15. At the bus station in the center of downtown Tampa, team members changed into fatigues and disposed of civilian clothing.

16. At 0450 hours one (1) team member acquired from Barracks S-166, a flight line pass (SAC Form 1) #007349, issued to A/2 B. J. Hillman, AF 19 398 862.

17. At 0520 hours two (2) team members, S Sgt Floyd and A/1C Derry entered the flight line area by crawling under the gate crossing the railroad tracks, which is referred to as the refueling gate. A clearance of approximately 18 - 20 inches between the gate and the ground made this possible. From this time until 0800 hours when the simulated destruction was to begin, these two (2) men hid in the latrine of the hangar immediately adjacent to the gate.

18. At 0730 hours the third team member, S Sgt Burnthorne, displaying the stolen pass, entered the flight line through gate #9.

10. At 0800 hours, the three (3) airmen inside the flight line began approaching, and placing simulated bombs on the aircraft. They were able to gain access to the following listed aircraft.

KC-97	#240			
	333			
B-47	#192	231	315	329
	202	237	316	330
	210	243	317	332
	211	289	319	334
	215	290	320	335
	216	303	322	336
	217	306	323	340
	224	308	324	341
	227	314	326	342
			327	

20. During this period one (1) team member was wearing the stolen flight line pass, the other two were wearing no pass, either valid or invalid. At no time during this period were they stopped, challenged or questioned.

21. In most cases, at least one member of the crew was present at the aircraft checked. However, he was usually positioned in front of the airplane making approach from the rear relatively simple.

22. At approximately 0845 the three (3) team members met and left the flight line through gate #8.

23. At 0800 hours the fourth team member and the team leader stole a government carryall from Base Operations and drove to the Base Communications building. Since the rear door which gives access to the relay boxes and switchboard can be operated only from the inside, access could not be gained immediately. In a short time though, A/3C R. W. Thomason, 809th Operations Squadron opened the door and came out. A/1C Izett, team member, caught the door before it closed, and witnessed by the team leader and the aforementioned A/3C gained access to the building. From this position, it would have been possible to destroy the equipment and eliminate all communications operating through this medium.

24. At 0830 hours the team leader and member returned the carryall and entered the flight line through hangar #3, which allowed unobstructed access. From this point, they proceeded to the 305th Wing Headquarters and made off with the Buick staff car assigned to Colonel Vandevanter. With this vehicle, a complete unchallenged tour was made of the flight line, plus exit and entrance through several flight line gates.

SECURITY INFORMATION

25. Although no actual destruction of Category I items was accomplished by this move, it would have been possible, if necessary. Had the other team members been apprehended and prevented from accomplishing the mission, we were in a position to carry it on.

26. At 0910 hours the staff car was returned, and the team leader and member left the flight line through hangar #3.

27. The team assembled at 0930 hours, compared notes, and at 1000 hours reported to the Executive Officer of the 6th Air Division.

28. At 1200 hours the team leader gave the Commanding General and his staff a briefing on the details and results of the test.

29. At 1400 hours, Major Windsor, the Provost Marshal; the entire team and Lt Col Bozzelli, Assistant Operations Officer, 305th Bombardment Wing; held a meeting to review step by step the penetration test. It was hoped that a meeting of this type would more clearly acquaint the Operations personnel with their security weaknesses so that effective remedial action could be taken.

III. REMARKS

30. The degree of success attained by the USCM Vulnerability Team in this test clearly indicates that security is virtually non-existent at MacDill Air Force Base. This deficiency cannot be blamed on the system, for this same system has worked at other installations. However, any system, like any tool, is only as good as the person using it. It was clearly evident at MacDill Air Force Base that the personnel being utilized as security guards, were not only few in number, but they were poorly indoctrinated and poorly motivated. Had they been doing their jobs in an efficient manner, the team member wearing the stolen flight line pass would have been apprehended at the flight line gate and never been allowed to pass. Such an apprehension might also have served to alert the base and prevented further success by the other team members.

31. In addition, had personnel on the flight line been alert, the two (2) team members without flight line passes would also have been apprehended. The fact that they gained access to the flight line by crawling under the gate, uncovered a structural deficiency that can easily be corrected.

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32. In summary, the success of the USCM Vulnerability Test can be attributed primarily to outright negligence and inefficiency on the part of poorly indoctrinated, improperly motivated personnel.

THOMAS A. MARTIN
2d Lt, USAF
USCM, Vulnerability Team
Leader

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EXHIBIT 16A

Hq 2AF, Barksdale AFB, La, 2AFIGSV 333, USCM Vulnerability Test, 28 August 53 - 2 September 53 (RCS: 2-SAC-Y1)

MCDODC 337 (10 Sep 53) 1st Ind

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida
Sep 16 1953
TO: Commander, 305th Bombardment Wing Medium, APO 147, c/o Postmaster, New York, New York

1. Forwarded herewith is report of USCM Vulnerability Test conducted on MacDill during the period 28 August through 2 September 1953.

2. The indorsement will include a statement indicating the extent to which accomplishment of the primary mission of the tested unit would have been affected if the simulated sabotage had been, in fact, hostile in nature and corrective action taken or contemplated as required by paragraph 7b, SAC Regulation 205-4, dated 24 July 1953.

3. Report will be returned this station not later than 5 October 1953.

BY ORDER OF THE COMMANDER:

1 Incl
n/c

B. A. JOHNSON
2d Lt, USAF
Assistant Adjutant

A CERTIFIED TRUE COPY
B. A. Johnson
B. A. JOHNSON
2d Lt, USAF

COPY 3 OF 6 COPIES

305-C-4452
6AD-C-7044

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CONFIDENTIAL EXHIBIT 16B

Hq 2AF, Barksdale AFB, La, 2AFIGSV 333, USCM Vulnerability Test, 26 Aug 53 - 2 Sep 53 (RCS: 2-SAC-Y1)

305WA3 333 (10 Sep 53) 2d Ind Oct 14 '53

HEADQUARTERS 305TH BOMBARDMENT WING MEDIUM, APO 147, c/o Postmaster, New York, New York

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. The results of the USCM Test had they been enemy directed would have left the 305th Bombardment Wing 35% effective, as of H day, had total destruction been effected. Previous tests indicate that total destruction of all aircraft sabotaged is very unlikely and therefore through maintenance effort by H + 1 three of the aircraft would have been flyable, and by H + 2 another five would have been flyable. Taking H + 2 as the last day of the mission we would then have an effectiveness of 49%.

2. This test and prior tests show that point guards at Category I items is the only system which can give position security to 305th Bombardment Wing equipment. This system is now in effect at this time and a recent attempt under 205-4 bears out this thought in that only two aircraft were considered sabotaged, and actually these were not entered, the sabotuer being able only to loiter in the vicinity of the aircraft.

3. Indoctrination of guard personnel to there responsibilities has been made through a 305th Bombardment Wing Aircraft Guard Briefing Folder which outlines guard duties and should prevent further instances of sabotage due to poor job knowledge.

FOR THE COMMANDER:

1 Incl
m/c

THOMAS J. FOWLER
Lt Col, USAF
Adjutant

A CERTIFIED TRUE COPY

E. A. Johnson

E. A. JOHNSON
2d Lt, USAF

6AD-C-7044
305-C-4452

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CONFIDENTIAL EXHIBIT 16C

Hq 2AF, Barksdale AFB, La, 2AFIGSV 333, USCM Vulnerability Test, 28 Aug 53 - 2 Sep 53 (RCS: 2-SAC-Y1)

WCDCCO 333 (10 Sep 53) 3d Ind Nov 4 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Barksdale Air Force Base, Florida

1. The security failures as cited in the attached USCM Vulnerability Test have been personally brought to the attention of the tactical wing and subordinate commanders.

2. Report as to the extent the primary mission of the tested unit would have been affected is as indicated in the 2d indorsement.

3. Overall corrective action taken to improve security awareness or consciousness of each individual concerned with the mission of this command is as follows:

a. Continuing command impetus is being given the security indoctrination program. The provost marshal has indoctrinated the wing commanders, squadron commanders, engineering officers, and the squadron security officers in the proper method of apprehending unauthorized personnel on the station. For example, immediately upon discovering an individual who has no business in an area, he is taken into custody and security forces are immediately contacted. He is taken to the security forces headquarters where, if he is determined to be hostile, the internal security operations plan is placed in effect. The individual is then taken to the OSI for further questioning. Upon decision of the senior commander the base alert plan may then be put into effect.

b. Air police and organizational testing teams make daily inspections of the tactical aircraft access and guard procedures. Reports of these tests are made to the air division commander for corrective action. Also unknown to the provost marshal, tests are made by the base commander against the security forces.

c. Air police testing teams make daily inspection of billets for improperly secured area restricted badges. Disciplinary action is then taken when passes are found to be improperly secured.

d. Sentry boxes have been located on the flight line adjacent to Category I elements as entry points to specific aircraft to preclude unauthorized personnel from approaching aircraft.

SECURITY INFORMATION

6AD-C-7044

CONFIDENTIAL

Hq 2AF, Barksdale AFB, La, 2AFIGSV 333, USCM Vulnerability Test, 26 Aug 58 - 2 Sep 58 (RCS: 2-SAC-V1)

e. In research of a system to provide a minimum of human error and positive means of identification, an exchange pass system is being set up for two squadrons of the 306th Bombardment Wing on a trial basis. The "Identification Card" DD 2AF will be exchanged at a flight line turnstile for the individual's restricted area badge.

f. Action has been taken by the provost marshal to generate the use of positive identification procedures by the restricted area gate guards in the form of daily instruction and supervision. In addition, testing procedures are utilized to keep the men on the alert and disciplinary action is taken on any failure that can be attributed to an individual.

4. Frequent and regular inspections of the physical safeguards presently in place in and around the restricted area are conducted by the security control officer. The space under the cited flight line gate has been eliminated and entrance through hangar #3 has been blocked. However, due to the manpower limitations on patrols and the large area of coverage, the fence is considered only as a psychological deterrent to entry. The desired relocation of fencing and installation of protective lighting on the outer fringe of the tactical aircraft parking area which would greatly aid the air police must be held in abeyance due to present budget limitations.

FOR THE COMMANDER:

1 Incl
n/c

B. J. MUNNERLYN
MAJOR, USAF
ADJUTANT

A CERTIFIED TRUE COPY
B. A. Johnson
B. A. JOHNSON
2d Lt, USAF
Assistant Adj.

SECURITY
INFORMATION

EXHIBIT 17

HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

[illegible] 19 August, 1959

SUBJECT: Evaluation of AN/APQ-T2 Trainer

TO: Commander
Strategic Air Command
Offutt Air Force Base
ATTN: DOTRG
Omaha, Nebraska

1. The following information is submitted as requested in your message DOTRF 17722, dated 7 August, 1959.

a. Man hours required to uncrate, assemble, and render operational - none.

(1) During uncrating of the AN/APQ-T2 trainer it was discovered that one computer unit had been damaged as a result of rail shipment. It was not known at that time the extent of damage caused. It was obvious, however, that this accident would delay the installation of the trainer. Had this trainer been received undamaged the man hours required to make it operational would have been reduced to approximately 1700 man hours.

b. Percent operational versus non-operational time, 1% operational/ 99% non-operational.

(1) Actual trainer operational time in a training capacity has been zero (0). The 1% of operational time indicated above has been utilized in performance of tests and evaluations by well qualified observer personnel.

c. Space requirements.

(1) The AN/APQ-T2 trainer occupies a space 15'7" by 21'6" x 7'10." The assembly is in a smaller area than recommended by the manufacturer. However, this assembly created no major problem, and no time delay can be traced to this re-arrangement of components.

MCDOCF 363 Subj: Evaluation of AN/APQ-T2 Trainer

d. Adequacy of operating and maintenance instructions.

(1) Due to time expended by technical representatives in assembling and rendering trainer operational, operating and maintenance instructions received by Air Force personnel to date has been very limited.

(2) It is the opinion of this headquarters that the one factory representative remaining at this station, Mr. Edward McKenzie, is well qualified and will be able to render desired operating and maintenance instructions once the trainer is operating satisfactorily.

e. Advantages of AN/APQ-T2 over AN/APQ-T3.

(1) Until further tests and evaluations are accomplished on the T-2 trainer, this headquarters is not in a position to obtain a true picture for the purpose of comparing the T-2 with the T-3 trainer.

f. Available spare parts and tubes to support repair.

(1) An estimated requirement of spare parts and tubes has been requisitioned through normal supply channels. To date only spare tubes and resistors have been made available.

2. In general the AN/APQ-T2 trainer serial number 3 has been a burden to this command from date of receipt. In addition to the device the trainer received, the schematic diagrams furnished by the manufacturer were not complete, and further delayed making the trainer operational. At one time the installation of the T-2 trainer was so near a complete stand-still that the Director of Operations, 4th Air Division, requested that highly qualified engineers from the American Machine and Foundry Co. be sent to this base to assist in the installation. Two representatives were sent and many of the malfunctions were corrected. But at no time to date has the trainer operated satisfactorily.

3. Mr. McKenzie recently returned from a field trip (authorized by American Machine and Foundry's home office) at Mather AF Base, California, where a comparison of installation techniques were made. Mr. McKenzie took with him various parts of the trainer and compared these parts with those in operation on their trainer. He also interchanged some of our parts with those on the trainer to test the comparable efficiency.

[illegible] 353 Subj: Evaluation of AN/APG-32

In Mr. McHarrie's opinion the results of the trip were favorable. The past difficulties of the trainer have been pinpointed to the ultrasonic of the trainer, specifically the #6000 and #6000 units. At present the trainer is being worked on with this viewpoint in mind, and Mr. McHarrie expects our trainer to show remarkable operational improvement in approximately ten (10) days.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

cc: [illegible]

"A CERTIFIED TRUE COPY"

L. A. Johnson
L. A. JOHNSON
2nd Lt., USAF

1030

EXHIBIT 17A

HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

[illegible] 452.32 19 September, 1953

SUBJECT: Status of AN/APQ-T2 Trainer

TO: Commander
Hill Air Force Base
ATTN: OOAMA
Ogden, Utah

1. Reference your message OOMTMS-9-[illegible]-E, dated 10 September, 1953, concerning status of AN/APQ-T2 Radar Trainer.

2. Subject trainer is currently in operational status. However, the picture presentation furnished is not considered adequate for desired use. It is the opinion of the Radar Advisor, this headquarters, that the design of the reflector assembly of the Antenna unit was in error, causing an undesirable beam pattern which in turn produces a search light type of return on the indicator. This creates a rapid attenuation of the transmitted energy as the tilt is varied which in turn causes a loss of signal strength returns. The beam width of the reflector is not sufficient to permit the desired definition in conjunction with transmitted frequency.

3. As to difficulties during the installation period, it is my opinion that most of those encountered were peculiar to this base. Specifically, the trainer at this base was damaged while in shipment, and many of our installation difficulties are attributed to that cause. One of the pieces of wood holding this trainer in place was rammed through part of the trainer while in shipment. This caused internal failures. In assembly of the trainer, many of the parts damaged by this accident had to be returned to the manufacturer for repair. At the time the installation of this trainer was undertaken, it was found that some of the schematics were missing and of those received, many were inaccurate. This was a contributing factor to the difficulties encountered in the installation. Another factor that contributed to the difficulty in installing this trainer was the building in which this trainer was to be housed not being large enough to house it in the factory design. As a result, it was necessary to remove the air conditioning unit which was not needed since the building housing the trainer has temperature and humidity control equal or better than those provided by this unit. It was also necessary to remove the roof from the trainer, since the ceiling of this building was not high enough to permit installation.

Hq 4th ADiv., WDDCTF 452.31, Subj: Status of AN/APG-T? Trainer

None of these changes have in any way affected the operation of the trainer and all such changes made were made with the approval of the American Machine and Foundry Company, and the Air Material Command.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

Info cy CAF
ATTN: DAFCTG
Info cy SAC
ATTN: DOTRG

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 17B

HEADQUARTERS
[illegible] DIVISION
MacDill Air Force Base, Florida

15 September, 1953

SUBJECT: Operational Suitability of AN/APQ-T2 Radar Trainer

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska

1. As requested in your message DWGDMI 25654, dated 11 September 1953, the following information is submitted:

a. Supply Difficulties:

(1) No replaceable component parts are available through normal supply channels. This does not include tubes, resistors, condensers, etc., which are obtainable through normal supply channels.

b. Supply Action Taken:

(1) Direct supply act on taken by American Machine and Foundry Representative in residence at MacDill and the American Machine and Foundry Company in Boston. For example, a complete power unit had to be dismantled from the T-2 trainer at MacDill and sent back to factory to Boston to be rebuilt and have parts replaced.

c. Supply Action Received:

(1) No supply action has been received through normal supply channels on the above stated difficulty. This activity was informed by the American Machine and Foundry representative, Mr. Edward McHarris, that replaceable component parts of the AN/APQ-T2 Trainer were not available through normal supply channels, because no contract between the government and the aforementioned Company has been negotiated covering replaceable parts.

ATDOOTF 363 Subj: Operational Suitability of AN/AP C-T-2 Radar Trainer

d. Availability and adequacy of Technical Publications:

(1) This activity has had access to all available publications but has found them inadequate because of incompleteness and not being up to date.

e. Estimate of Man Hours maintenance required versus one hour operating time:

(1) This Trainer has been declared operational but not for the purpose of instructing students. Therefore, sufficient information is not available to answer this question accurately.

f. Question Six (6) cannot be answered because all personnel qualified to answer this question are presently TDY to American Machine and Foundry Co. for conference on matters pertaining to subject Trainer. Desired information will be furnished your Headquarters upon their return.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 17C

HEADQUARTERS
(TC AIR DIVISION
McGill Air Force Base, Florida

[illegible] 31 September 1953

SUBJECT: Installation and Operation Difficulties of AN/APQ-27 Radar Trainer

TO: Commander
WADC
Wright Patterson Air Force Base
ATTN: WCLSCP
Dayton, Ohio

1. In reference to your message WCLSCP-4-53, dated 2 September 1953, the following information is submitted.

a. Nature and extent of difficulties.

(1) Nature: Very poor picture presentation.

(2) Extent: It is the opinion of the Radar Advisor, this headquarters, that the trainer is providing approximately 10% to 15% of the desired range and definition.

b. Number of hours trainer has been in operation since contractor stated trainer was operational: 451.5 hours.

c. Number of hours of trainer operation lost due to maintenance difficulties since date trainer declared operational by contractor: 107 hours.

d. Difficulties attributable to engineering design deficiencies: Again it is the opinion of the Radar Advisor this headquarters that the design of the reflector assembly on the antenna unit is in error, causing an undesirable beam pattern which in turn produces a searchlight type of return on the indicator. This creates a rapid attenuation of the transmitted energy as the tilt is varied which, in turn, causes a loss of signal strength returns. The beam width of the reflector is not sufficient to permit the desired definition in conjunction with the transmitted frequency.

e. Recommended solution for difficulties encountered:

(1) Redesign the reflector required in the vertical plan to approach a cosecant squared pattern.

Hq 6th Army, AFDCCTP 353, Subj: Installation and Operation Difficulties of AN/APS-4" Radar Trainer.

(c) Tests be performed on the improvement of the beam width against the increase in transmitted frequency.

FOR THE COMMANDER:

C. A. WILLIS
Major, USAF
Asst Adj

A TRUE COPY

S. A. Johnson

1036

EXHIBIT 17D

HQ BOMARC
47TH AIR DIVISION
MacDill Air Force Base, Florida

MCBOOMT 465.30 17 October, 1953

SUBJECT: Evaluation and Comparison of the AN/APQ-T2 and AN/APQ-T2A Trainers

TO: Commander
Strategic Air Command
Offutt Air Force Base
Nebraska

1. A civilian Radar Advisor from this headquarters, Mr. John Pelko, recently visited SAC headquarters in connection with a provisioning conference as directed by DAF message 2A CW 0770. While he was attending this conference, Lt. Col. Lipscomb requested him to make a limited evaluation of the AN/APQ-T2A and a comparison between the AN/APQ-T2 and AN/APQ-T2A Ultrasonic Trainers.

2. In order to make the desired evaluation and/or comparison, Mr. Pelko felt it necessary to perform navigation, bombing, and control response checks on the AN/APQ-T2A trainer. However, at that time the trainer was in the process of receiving a performance check by a representative from WADC. The performance check would continue through 23 September, 1953, and after that the Company would need all available time to correct the discrepancies. As a result, time was not available for Mr. Pelko to make an evaluation and/or comparison.

3. Mr. Pelko discussed with the WADC representative, Mr. Eybakmans, the product from the standpoint of the operational value to SAC in view of the indicator presentation for identification, range of presentation, definition of land, sea, and targets. Target breakup and the effects of tilt variation on targets during mission performance were also discussed.

4. Following this conversation, Mr. Eybakmans did permit Mr. Pelko to view the indicator presentation of the AN/APQ-T2A trainer. He found the range to be approximately 170 miles and the definition a considerable improvement over the AN/APQ-T2 Trainer. However, this brief view was made only from one position of the aircraft and at one range and one position of tilt setting. To determine if the trainer would maintain this response, navigation and bombing missions should be performed to enable sufficient observation to be made. Control response could not be made and one very important factor, in Mr. Pelko's opinion, is that the units of the "X" systems are not located in positions similar to their location in the B-47 aircraft. Mr. Pelko does not believe this is being taken into consideration in present checks.

So (4th AD (CDOOTF /50.3" Subject: Evaluation and Comparison of the AN/APG-63A Trainers

5. It is believed that an observer should be included as part of the check team. All the performance checks that are now made do not produce the required accurate evaluation for proper radar set simulation. With this factor in mind, and to eliminate any further discord that may occur, it is recommended that your headquarters dispatch as soon as possible at least one, preferably three, observers to the American Machine and Foundry Company, Boston, Mass. There they can perform the missions and conform with a check sheet that shows the acceptability of the trainer for observer training. An example check sheet is attached with this report in order to indicate a pattern for items to be considered. Mr. Delko would appreciate being informed as to the outcome of this recommendation.

6. Mr. Delko highly recommends that further acceptance of the AN/APG-63A Trainers be terminated until such time as observers be permitted to perform checks from the operational standpoint. Reports of these checks could be used to help WADC determine the feasibility of such purchases.

FOR THE COMMANDER:

C. A. WHITTLE
MCJG, USAF
Asst. Adj.

1 Incl:
Check Sheet

"A CERTIFIED TRUE COPY"

D. C. JOHNSON
2nd Lt., USAF

AIR BASE TRAINING FLIGHT
809th Operations Squadron
809th Air Base Group
MacDill Air Force Base, Florida

RADAR SCHOOL

OBSERVERS QUESTIONAIRE

A. Ground returns_____miles to_____miles.

B. Isolated targets out to____miles.

C. Searchlighting effect _____

D. Target Definition _____

E. Target Brake-up _____

F. A/C orientation _____

G. Tilt effect on navigation _____

H. Tilt effect on track & Bomb _____

I. Target break-up on Bomb run _____

J. Target lost at____seconds before release point_____

K. Picture distortion _____

L. Receiver gain _____

M. Video gain _____

N. Altitude whole and measurement _____

O. Contrast control _____

P. Beacon _____

Q. Jamming _____

R. Receiver Tuning effect _____

S. Wind Determenation REPEATABILITY _____

All q uestions are for comparison with an actual air mission.

EXHIBIT 18

HEADQUARTERS AIR AID DIVISION
MacDill Air Force Base, Florida

[illegible] 19 September, 1953

SUBJECT: Cost Estimate For Radar Reflector, Avon Park Air Force Base, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In accordance with request in teletype message SAFOTA 1575, dated 16 September, 1953, from your headquarters, the following information is furnished:

a. Estimate of cost for subject work is $1,751.00. If resolution target is required in this project, $900.00 should be added to the above estimate.

b. Photostatic copy of drawing for Radar Reflector Target, Drawing [illegible], is attached.

FOR THE COMMANDER:

C. A. WHITTLE
Major, USAF
Asst Adj

1 Incl
Dwg No D-10

[illegible] COPY

L. A. Johnson

L. A. JOHNSON
Cpt, USAF

1040

EXHIBIT 19

HEADQUARTERS 4TH AIR DIVISION
MacDill Air Force Base, Florida

EDDIT 600.1 07 September, 1953

SUBJECT: Construction of Visual Bombing Target and Night Photography Target, Avon Park Air Force Base, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. Confirming telephone conversation between Lt. Col. Singleton, Operations Division, your headquarters, and Captain Lynch, Deputy Air Installation Officer, this headquarters, on 03 September, 1953, there is submitted herewith DAF Form 96 requesting approval of operability for submission of a project for construction of a visual bombing target and night photography target at Avon Park Air Force Base, Florida.

2. The work consists of clearing and grubbing an equilateral triangular area one thousand feet on each side, the construction of a radar reflector for visual bombing, and the construction of a resolution target for night reconnaissance crews. The construction will be midway between Bombing Targets "A" and "C" in the Avon Park Bombing Range Area.

3. This facility is urgently needed immediately to provide adequate operational facilities required by the base mission, and outlined in 2AF Regulation 50-8 and Second Air Force Regulation 50-10 which pertains to visual bombing for B-47 crews, and night photography runs for reconnaissance crews. The Avon Park Bombing Range area is the only area suitable for B-47 bombing practice under jurisdiction of Second Air Force. Complete justification is covered on the attached DAF Form 96.

4. This headquarters is unable to list a project on the approved FY 1954 Major Repair and Minor Construction Program or a substitution as only two (2) projects of high priority have been approved. The first approved project, MacDill 58-54, Jet Engine Test Stand, is of highest priority and urgently required at this headquarters. The second subject, MacDill 34-54, 13.2 KV Overhead Line, has also been technically approved and funded by SAC. Bids were issued 17 September, 1953.

[illegible] 60Y.1, Subj: Construction of Visual Bombing Target and Night Photography Target, Avon Park Air Force Base, Florida

6. In view of the urgency in performing the work covered in this project, it is requested that approval of essentiality be obtained and that funds be made available in the most expeditious manner to allow early submission of a formal project request.

FOR THE COMMANDER:

C. J. WHITTLE
Lt Col, USAF
Asst Adj

1 Incl
DAF Form 95 (quad)

[illegible] DAF Form [illegible]

L. A. Johnson

[illegible]
[illegible]

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EXHIBIT 20

RESTRICTED

B-47
OPERATIONAL ENGINEERING SECTION

BI-MONTHLY PROGRESS REPORT

1 September through 31 October 1953

6TH AIR DIVISION

MAC DILL A.F.B., FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.092 1 November 1953

SUBJECT: B-47 Operational Engineering Bi-Monthly Progress Report.

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

1. The Monthly Progress Report is being replaced by a bi-monthly report in accordance with SAC Regulation 80-2, dated 21 September 1953. Same is submitted herewith, covering the period from 1 September through 31 October 1953. This report is divided into three parts: (I) new projects initiated during the period, (II) active projects being conducted by the Operational Engineering Section, and (III) B-47 Operational Engineering Section projects completed, awaiting action by your Headquarters.

2. New projects initiated during the period by this Section:

EVALUATION OF LANDING SPEED INDICATOR, ANGLE OF ATTACK INDICATOR AND ANGLE OF YAW INDICATOR INSTALLATION: (AE-24).

Headquarters SAC and WADC have directed this Section to conduct a comprehensive evaluation program to determine the value of the landing speed indicator, manufactured by Safe Flight Instrument Corporation, and the angle of attack and yaw indicators, manufactured by Specialties, Inc., installed in B-47 aircraft. Two B-47 aircraft assigned to 306th Bomb Wing are currently at Wright-Patterson AFB for the installation of the subject instruments by WADC personnel. A questionnaire has been prepared jointly by the WADC and OES Project Officers for pilots' evaluations. Upon the return of these aircraft to MacDill AFB, the evaluation will be initiated and continued until conclusive results are obtained.

DETERMINATION OF KC-97G, B-47 AERIAL REFUELING SPEEDS AND REFUELING ALTITUDE LIMITS: (AE-25).

As one of the results of the conference at WIBAC held 22 and 23 July 1953, covering the suitability of the B-47 - KC-97 aerial refueling data curves available in the applicable technical orders, Headquarters SAC has directed this Section to conduct further flight tests. Purpose is to determine the minimum practical aerial refueling speeds for

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the B-47 bomber formating with the KC-97 tanker, and to check the KC-97 rated power performance for accuracy and the effects of army hot day upon same. Rated power data for KC-97G with refueling configuration is currently being collected and reduced for a sea level standard condition plot, preparatory to initiating the B-47 phase of this project.

SERVICE TEST OF FRS-2 CONTROL ASSEMBLY FOR JACK AND HEINTZ INVERTERS: (EE-47A)

WADC has requested this Section to service test a new type of frequency and voltage control assembly, type FRS-2, which has been designed by the Jack and Heintz Company for retrofit of their type AN-3516 inverter, as well as for use in the new 50,000' inverters which they are developing. Six of these FRS-2 control assemblies will be installed in type AN-3516 inverters manufactured by Jack and Heintz, and will be placed in service under typical operating conditions. The running time, control stability and operation of these test items will be monitored and compared with the performance of three standard assemblies.

COMPASS ERRORS IN K-SYSTEMS: (EE-59A).

When the compass portion of the K-System is swung, normal operating conditions are not duplicated. Therefore, there is a possibility that appreciable compass errors exist. If these errors exist, they may be attributable to: (1) the magnetic fields of the operating engines and associated equipment, and (2) the errors introduced by the tow vehicle and ground power unit used during the compass swing. The purpose of this project is to determine the magnitudes of these errors, and, if appreciable, to establish procedures for their elimination. This project was initiated at the request of Headquarters Second Air Force.

RADAR TARGET FOLDER VIEWER: (EE-63).

Headquarters SAC has requested this Section to evaluate a Radar Target Folder Viewer. This newly developed device projects the pictures of the target, which are normally contained in a Target Study Folder, directly above the radar presentation. This permits rapid and continuous comparison of the two presentations and makes it unnecessary for the radar observer to move his eyes away from the hood, as when a standard target folder is used. The suitability and the feasibility of this device will be based upon the comments of observers utilizing it as well as upon the comments of the personnel who must prepare the films used with the viewer.

FUNCTIONAL TESTS OF NEW BRUSHES FOR THE B-47 STARTER-GENERATOR, MANUFACTURED BY THE NATIONAL CARBON COMPANY: (EE-64).

Headquarters ARDC and SAC have requested that functional service tests be made of a starter-generator brush manufactured by the National Carbon Company, a new supplier of these brushes. Five starter-generators

utilizing these brushes will be installed on service aircraft as soon as received by this Section from WADC and will be monitored for a period of 250 aircraft flying hours. The starter-generators will be returned to WADC for evaluation when the tests are completed.

APS-23 MODIFICATIONS TO IMPROVE PERFORMANCE AND UNIFORMITY OF SIGNAL RETURN: (EE-65 and 65A).

At normal operating altitudes, B-47 radar observers have difficulty adjusting antenna tilt to give adequate signal strength and range independence of signal strength simultaneously. Rings of strong and weak returns are encountered and fading of the target frequently occurs during the bomb run. In addition, excessive maintenance time must be expended in tuning and adjusting the receiver-transmitter to provide a usable radar presentation at these altitudes. Two modifications will be tested to determine if they will increase the performance and return uniformity and eliminate these deficiencies. One modification consists of repositioning the cosecant reflector of the antenna, AS-361/APS-23, and thus improve its radiation pattern. The second modification permits the operator to increase the transmitted pulse length from 3/8 to 1 microsecond and decrease the receiver bandwidth to 3 megacycles, thus increasing the performance by 3 to 4 db.

USE OF THE K-SYSTEM IN CONJUNCTION WITH AN APN-11 BEACON AS A BLIND APPROACH LANDING SYSTEM FOR B-47 AIRCRAFT: (EE-66).

Headquarters SAC has requested this Section to evaluate the possibility of utilizing the K-System in conjunction with an APN-11 beacon as a blind approach landing system. The K-Systems on several aircraft will be modified to permit the tracking and beacon functions to be used simultaneously. An APN-11 beacon will be placed adjacent to the active runway and landing approaches will be made with this system, under visual conditions, to determine its suitability and operating limitations. In addition, a study will be made to determine if the system has other tactical applications.

SUITABILITY TEST OF B-47 CANOPY SUNSHADE: (ME-26A).

Headquarters SAC and Headquarters Second Air Force have arranged for shipment of three (3) sunshades, P/N F30075, for B-47 aircraft, one each to the 301st Bomb Wing, the 44th Bomb Wing and the 6th Air Division, and have directed each of these units to conduct a suitability test of 60 days duration. The B-47 OES will evaluate the sunshade being shipped to the 6th Air Division at MacDill AFB with particular attention directed to handling, installation, and ability of sunshade to withstand wind conditions encountered during normal usage. Results of this evaluation will be published in an SIR upon completion of the test.

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FOURTH CREW MEMBER POSITION, B-47 AIRCRAFT: (ME-80).

The B-47 has no permanent position for flight accommodation of a fourth person such as an instructor, crew chief, or combat crew evaluator. Therefore, Headquarters SAC directed that the OES construct a mock-up of a minimum suitable installation. The mock-up will include a safety belt, an oxygen station, and an interphone station. Upon approval of the installation by representatives of SAC, WADC and Fifteenth Air Force, the schematic drawings and specifications necessary to accomplish a standardized field installation will be published as an SIR. This SIR will be used as the basis of a T.O. after Headquarters USAF has granted authority for this installation as a SAC requirement.

SERVICE TESTING THE LETOURNEAU A-3 AIRTOW VEHICLE: (ME-81).

This vehicle is capable of towing the B-47 aircraft and supplying all required power. The vehicle is driven by four 50 h.p. electrical motors, located one in each wheel, and receiving their power from a gas engine generator unit. The engine is also the primary source of power for A.C. and D.C. power required for K-System operation, and D.C. power required for engine start. The evaluation will include a study covering suitability from the standpoint of the operator, a determination of capability as a tow vehicle and as a source of electrical power, and an economic and performance comparison with other equipment which provides fully or in part the same functions. One of two LeTourneau A-3 airtow vehicles, purchased by the Air Force, has been sent to MacDill AFB. In accordance with verbal instructions from the Requirements Branch, D/Mat, Headquarters SAC, this Section in conjunction with the 306th Bomb Wing will conduct an operational suitability and capability test.

ESECO GROUND POWER EQUIPMENT: (ME-82).

Wright Air Development Center has requested that a service test and evaluation be conducted at MacDill Air Force Base on two sets of ESECO ground power equipment for B-47 aircraft, each set for support of five (5) aircraft. The OES will determine the operational suitability and capability of the equipment. A comparative evaluation will be made with the Gremco equipment from the standpoint of electrical output and stability, physical construction, and maintenance requirements.

WATER-ALCOHOL INJECTION FOR B-47 WINGS: (ME-83).

A project has been established at the request of WADC to evaluate the impact of employment of water-alcohol injection by a B-47 Wing. The evaluation will include an analysis and recommendations of procedures for preparing the water-alcohol solution in the field and a determination of the equipment required and its suitability to support the operational employment of water-alcohol injection by a tactical Wing. Information from the B-47 Project Office indicates that servicing equipment will not be ready until sometime in December.

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3. Old projects completed during the period are:

B-47 WEIGHT REDUCTION PROGRAM: (AE-11).

As a result of two weight reduction conferences, the removal of most components installed in the aircraft has been reviewed for possible weight saving items by USAF, AMC, WADC, SAC and Boeing Airplane Company. Approved weight reduction items have been integrated into production and retrofit programs. Technical Orders are being written which will authorize the combat commander to remove training equipment from the aircraft prior to entering combat. Specific items of weight reduction will be considered as specific projects in the future. No additional work on this particular project will be accomplished.

B-4 ARMAMENT SYSTEM DEFICIENCIES: (EE-42).

Specific Item Report 111, dated 18 September 1953, subject: Improved Air System for the B-4 Fire Control System, has been submitted to your Headquarters. This report stated that the proposed improvements to the system will increase the reliability of gun firing. However, it was recommended that the present system not be modified, except for combat. This recommendation was made because only a limited number of B-4 equipped aircraft are assigned to combat Wings and these systems will be replaced in the near future. No further action will be taken on this project by this Section.

TRACKING RANGE OF K-4 BOMBING-NAVIGATION SYSTEM IN B-47 AIRCRAFT: (EE-43).

Classified Specific Item Report 85A, dated 16 September 1953, subject as above, has been completed and forwarded to your Headquarters. The monitoring of the test systems will continue, but no additional reports will be submitted unless serious system discrepancies are found.

K-SYSTEM DUAL OFFSET UNIT: (EE-53).

Specific Item Report 114, dated 8 October 1953, subject: Evaluation of the K-System Dual Offset Unit in B-47 Aircraft, has been forwarded to your Headquarters. In general, this report recommends adoption of the dual offset feature in future systems, as the evaluation revealed that this capability is very desirable, particularly for strange target runs. This completes action on this project by this Section.

ARN-14 ANTENNA CONNECTOR: (EE-57).

Specific Item Report 113, subject: Coaxial Connectors in ARN-14 and ARC-27 Antenna Cables, B-47 Aircraft, dated 3 October 1953, has been forwarded to your Headquarters. This report recommends that the UG-21/U connectors, which fail frequently because of the withdrawal of the center pin, be replaced with PL-259 and PL-258 connectors when a

failure occurs. In addition, it was recommended that the PL-258 and PL-259 connectors be installed during retrofit and production in place of the UG-21/U connector. This project is considered complete.

DEFICIENCIES OF B-47B INTERPHONE SYSTEM PRIOR TO THE 45YPH AIRCRAFT: (EE-60).

Specific Item Report 116, dated 26 October 1953, subject: Inadequacies of the Combat Interphone System Installed in B-47B Aircraft, has been submitted to your Headquarters. This report outlines the recognized deficiencies in the B-47B interphone system and simple "fixes" for them. Also, it recommends that future systems, such as the AIC-10 which is installed on later B-47 aircraft, be analyzed to ascertain if analogous deficiencies exist. This completes action on this project.

INSTRUMENT LANDING FACILITIES IN THE CO-PILOT'S POSITION, B-47 AIRCRAFT: (EE-61).

Specific Item Report 110, subject: Installation of ILAS and Omni Range Indicators in the Co-Pilot's Position, B-47 Aircraft, has been forwarded to your Headquarters. This report recommends that subject indicators should be installed in the co-pilot's position of B-47 aircraft to facilitate instrument checks for B-47 pilots and practice approaches by the co-pilot. This report also delineates the most practical mounting location of these indications on the instrument panel, and describes the effort necessary to install the instruments at the base level. This completes action on this project.

ALTERNATOR WATER SEPARATOR: (ME-73).

The requirement for a water separator in the cooling air inlet to the alternator no longer exists. The Boeing right angle air inlet was proved by Boeing test to be the best interim fix to meet the problem. The window bracket alternator design by Westinghouse, wherein the cooling air does not pass over the brushes, and tested by this Section (Ref SIR No. 112, dated 5 October 1953), has proved to be the final fix (Ref also Project EE-46, Part II, this Report).

Until the window bracket type alternator is available in sufficient quantity for equipping all operating B-47's, there is a Boeing retrofit kit, ECP 1407 MK, which is recommended for the installation of the Boeing right angle air inlet on the alternators.

Consequently, this project will be dropped from the record and no SIR will be published to cover the work done on same.

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TOWING OF B-47 AIRCRAFT TO RUNWAY PRIOR TO TAKE-OFF: (ME-79).

This project was established at the direction of Headquarters Second Air Force and Strategic Air Command and was to be in the form of an analytical study of the feasibility of towing B-47 aircraft to the end of the runway prior to starting engines for the purpose of economy. A special interim report, SIR No 109, dated 25 August 1953, was made and forwarded to Second Air Force and Strategic Air Command through Headquarters 6th Air Division. This report recommended a service test by an operating Wing as the only positive way to determine and evaluate the practical effects of certain aspects of such a plan. After consideration by higher Headquarters, it was determined that no such service test would be run at this time and that the consideration would be shelved for at least six months, at which time it would be reconsidered. This interim report was not given standard distribution and will not be so distributed. This Section will conduct no further work on this project until directed to do so.

THOMAS P. SAVAGE
Major, USAF
Chief, O.E.S.

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PART II

of

B-47 OPERATIONAL ENGINEERING SECTION

BI-MONTHLY PROGRESS REPORT

ACTIVE PROJECTS BEING CONDUCTED BY THE OPERATIONAL

ENGINEERING SECTION

PROJECT NO. AE-22: Flight Analyzer Installation, B-47 Aircraft

PROJECT ENGINEER: Capt John T. Ball, Jr.

DATE OF ORIGIN: 30 April 1953

PURPOSE: To record flight conditions of airspeed, altitude, and vertical acceleration for study by the WADC Structures Analysis Branch.

SUMMARY AS OF 31 OCTOBER 1953: In accordance with a letter from Commander, SAC, No. DMMDS1C 452.2, dated 2 April 1953, subject: Flight Analyzer Installations on F-84G and B-47 Series Aircraft, this Section initiated a project to monitor and collect recorded data from flight analyzers installed on five (5) B-47 aircraft assigned to 305th Bomb Wing. A goal of 2000 recorded flight hours was established, but was reduced to 1600 hours when 400 hours of similar flight data recorded for NACA under B-47 OES Project AE-12 was made available to WADC. Some difficulty was experienced, at first, due to faulty installation, instrument malfunctions, and lack of knowledge of the instrumentation by maintenance specialists; however, all instruments are functioning properly and the collection of data is progressing satisfactorily. The subject aircraft are presently TDY overseas where data under different climatic conditions is being obtained. At this time the project is approximately 25% complete.

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PROJECT NO. AE-23: B-47 Instrument Calibration Requirements

PROJECT ENGINEER: Captain John T. Ball, Jr.

DATE OF ORIGIN: May, 1953

PURPOSE: To determine the extent of instrument calibration required for effective operation of B-47 aircraft.

SUMMARY AS OF 31 MAY 1953: In compliance with a written directive from the Commanding General, Strategic Air Command, contained in a joint messageform file number DM4DS8U68345, dated 1st April 1953, this Section has initiated a project to determine the extent of instrument calibration required for effective operation of B-47 aircraft. An initial study to determine the most pertinent instruments has been completed. A Specific Item Report will be submitted covering the present instrument limitations and requirements and possible master calibration equipment necessary but not presently authorized.

30 JUNE 1953: A study of the limitations and calibration requirements of the present instrument installations is being continued.

31 JULY 1953: The study of calibration requirements and limitations of the present instruments installed in B-47 aircraft has been concluded and the results of these studies are being evaluated and compiled for the Specific Item Report.

31 AUGUST 1953: With the return of the 306th Bomb Wing from their overseas tour and with the receipt of a Boeing document on Airspeed Calibration, additional information will be obtained and evaluated along with previous findings. This will complete the research and evaluation phase of this project.

31 OCTOBER 1953: The research and evaluation of the instrument calibration requirements for the B-47 has been completed and SIR #117 has been prepared containing the findings of this project.

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PROJECT NO. EE-10: Inverter Malfunctions

PROJECT ENGINEER: S/Sgt Michael W. Huber

DATE OF ORIGIN: 19 September 1952

PURPOSE: To evaluate, on a competitive basis, nine (9) AN-3516 inverters from four different manufacturers.

SUMMARY AS OF 31 OCTOBER 1953: This project was established as a result of SIR No. 39, dated 25 April 1952, recommending competitive evaluation of inverters manufactured by Eicor, Eclipse-Pioneer, Royal, and Jack & Heintz. WADC concurred with this recommendation, and this Section was to receive nine (9) typical AN-3516 inverters from each of the four manufacturers. The inverters were received from Eicor and Eclipse-Pioneer, and evaluation of these inverters was initiated in November 1952.

The test on the Eicor inverters was closed with the concurrence of WADC in May 1953. SIR No. 108, dated 19 August 1953, concerning these inverters has been submitted to your Headquarters.

Eclipse-Pioneer inverters meet the dimensional requirements of specification AN-3516; however, they will not fit in the spare position due to the location of the input leads. Modified ventilating sleeves are required in the secondary position.

The eight (8) Eclipse-Pioneer inverters remaining in service have accumulated an average total operating time of 671:00 hours, and an average air operating time of 348:03 hours. The average total operating time of the original nine (9) inverters is 644:14 hours, and the average air operating time is 355:06 hours. The original nine (9) inverters have accumulated a total of fifteen (15) malfunctions and sixteen (16) minor adjustments.

PROJECT NO. EE-16: Fuel Boost Pump Failure

PROJECT ENGINEER: Major W. E. Frazier

DATE OF ORIGIN: 18 March 1952

PURPOSE: To monitor failures of modified fuel boost pumps at this station.

SUMMARY AS OF 31 OCTOBER 1953: Due to the excessive number of boost pump failures, particularly due to seal leakage on the earlier models, this project was initiated and SIR #41, dated 6 May 1952, was submitted. Later, it was decided that a continuation of this project would be worthwhile, and monitoring of the modified B-18B Thompson pumps was commenced during Operation Sky Try, when twelve (12) B-18B pumps, P/N TF 52400-6, were installed in each of fifteen (15) B-47 aircraft for a total of 180 such pumps. At this time, it was the intention that this project also include the monitoring of eighty-four (84) B-5C pumps, P/N 31400-25. However, the latter pumps were not delivered for Sky Try. Although eighty-four (84) B-5C pumps were monitored on these aircraft, they were not of the modified type. As of 30 September 1953, it was decided to explore the aircraft records of fifteen (15) other aircraft having the unmodified B-18B pumps installed for a like period of time in order to obtain a comparison of failures between the modified and unmodified pumps.

The table below shows the results of this monitoring as totals to date.

TYPE PUMP	NO. FAILURES TO DATE	AVG HRS OF FAILED PUMPS	AVG HRS OF PUMPS STILL OPERATING	AVG SERVICE LIFE OF TEST GROUP (HRS)
B-5C (Unmodified)	19	267	454	442
B-18B (Unmodified)	48	181	308	275
B-18B (Modified)	8	254	344	340

It will be noted that the comparison between B-18B modified and unmodified pumps is on a substantially equal basis, covering a like number of pumps over the same period of time during which the aircraft accumulated almost equal amounts of flying time. Failure ratio was

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PROJECT NO. EE-16: Fuel Boost Pump Failure (CONT'D)

48 to 8 or 6 failures of unmodified pumps for every failure of a modified pump.

Average hours operating time of failed pumps was 254 to 181 or time accumulated for each failed modified pump was 140% of that for each unmodified pump.

Future monitoring will be confined to the modified and the unmodified B-18B pumps only.

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PROJECT NO. EE-44: Remote Radar Indicator ID-218 in Co-Pilot's Position

PROJECT ENGINEER: Captain Enoch T. Naversen

DATE OF ORIGIN: 5 February 1953

PURPOSE: To investigate the feasibility and advantages of installing an auxiliary radar scope in the co-pilot's position.

SUMMARY AS OF 31 OCTOBER 1953: An auxiliary indicator in the co-pilot's position was evaluated as regards target identification assistance and navigational assistance by the co-pilot. The results of this evaluation were covered in Specific Item Report No. 107, Confidential, dated 31 July 1953.

A similar installation, which incorporates a separate synchronizer and power supply, will be made when construction of the additional components is completed. These units are presently 90% complete; however, further construction has been delayed because of a lack of parts. The evaluation of this installation will include tests on the station keeping capability.

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PROJECT NO. EE-46: Westinghouse 20 KVA Alternator Malfunctions.

PROJECT ENGINEER: S/Sgt M. W. Huber

DATE OF ORIGIN: 25 February 1953

PURPOSE: To decrease the number of alternator malfunctions.

SUMMARY AS OF 31 OCTOBER 1953: The following comments are applicable to six aircraft which had test configurations on the alternators and which were monitored by this Section:

Alternator Failures Caused by Precipitation: Tests of the window-bracket alternator indicate that it is a satisfactory fix for this failure. Specific Item Report No. 112, dated 5 October 1953, subject: Water Separators for 20 KVA Alternators in B-47 Aircraft, has been forwarded to your headquarters. This report covers the tests conducted with the Boeing water separators as well as the window-bracket alternators.

Bearings: A program to evaluate the life expectancy of different types of bearings utilizing special types of greases has been approved by WADC. This program will be implemented when alternators with the test bearings are made available.

Field Flashing Circuits: The problem exists that alternator output is not always restored by flashing the field at operating altitudes with the Boeing designed field flashing circuit. A change in the operating procedure is currently being evaluated to determine if this problem can be eliminated. This problem should not exist on later aircraft utilizing the Westinghouse field flashing circuit.

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PROJECT NO. EE-47: Service Test of Improved Speed Governor for Jack & Heintz AN-3516 Inverters.

PROJECT ENGINEER: S/Sgt M. W. Huber

DATE OF ORIGIN: 26 February 1953

PURPOSE: To evaluate a new speed governor for the Jack & Heintz Type AN-3516 Inverter.

SUMMARY AS OF 31 JULY 1953: Unofficial TWX dated 20 January 1953 from B-47 Project Office, subject: Flight Test Evaluation of Inverters, requested this Section to conduct service tests of six (6) Jack & Heintz AN-3516 inverters equipped with improved speed governors. These six inverters have been installed in 306th Bomb Wing aircraft and are undergoing tests. Three (3) Jack & Heintz inverters with the old type of speed governors are being used as control items. The frequency and frequency stability of all nine (9) inverters will be checked every twenty-five (25) flying hours, since these characteristics are functions of speed governor operation. A SIR will be submitted when the inverters have accumulated sufficient operating time to establish conclusive indications of speed governor operation.

The six (6) test inverters have accumulated an average total operating time of 197:00 hours and an average air operating time of 91:11 hours. Frequency adjustments have been necessary on three of the test items, at an average total operating time of approximately 140:00 hours. No adjustments have been required on the control items.

31 AUGUST 1953: No information regarding the operating time of these inverters is available at this time. Information has been received that this speed governor must be adjusted more frequently than the old type of governor.

31 October 1953: While the 306th Bomb Wing was TDY, one test item, serial number 471, was removed from service for an undetermined reason at approximately 260:00 total operating hours and 125:00 air operating hours. This inverter has not been recovered. The remaining five (5) test inverters have accumulated an average total operating time of 417:00 hours, and 231:06 air operating hours. The six (6) test inverters have accumulated a total of two (2) malfunctions, and eight (8) adjustments.

One control item was removed due to a failed speed governor at approximately 221:00 total operating hours, and 121:30 air operating hours. The other two control items, one of which is in the spare position, have accumulated an average total operating time of 257:00 hours and an average air operating time of 226:10 hours. There have been two (2) malfunctions of the control items, and two (2) adjustments.

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PROJECT NO. EE-48: Failure of 1N-23BCrystals in RT-124/APS-23.

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: 2 March 1953

PURPOSE: To investigate excessive 1N-23B crystal failures which have occurred at this station in the past two months.

SUMMARY AS OF 31 JULY 1953: This project was initiated because of the excessive rate of failures of the 1N-23B crystals during project "Sky-Try". The effects of the following items on the crystals in the RT-124/APS-23 are being monitored: (1) faulty or abnormally short life TR tubes, (2) vibration due to lack of shock mounts on the RT-124, (3) proximity of other operating radar sets on flight line, and (4) effect of normal leakage past TR tube during long (5 micro-second) pulse operation.

Another aspect was revealed when local Western Electric Representatives advised that future systems were to have the 5 micro-second pulse length reduced to 3.75 micro-seconds to reduce failure of the crystal. OES felt that this would adversely affect Beacon operation, as the U. S. Coast Guard Depot, which maintains the Radar beacon at Egmont Key, indicated that their instructions were to adjust the beacon to respond to pulse from 2 to 5 micro-seconds long. The Armament Lab was advised of this fact and no further action can be taken on this matter by the OES, as inter-service coordination is required to assure that beacon stations respond to pulses of the correct length.

31 AUGUST 1953: WECO reported that although the AS-361 drops when the equipment is off, enough power is reflected from the ground to burn out the crystals if the antenna is pointed toward aircraft parked nearby with their radars on. Therefore, Mr. Parlee of WECO suggested that the crew members and maintenance personnel of the 306th Bomb Wing stop the antenna facing aft before every turn-off. This is being done and the OES will monitor both the compliance with this new SOP and the 1N-23B replacement rate for appreciable change.

31 OCTOBER 1953: The program, initiated by Mr. Parlee, the WECO Technical Representative, requiring that the antenna be stopped pointed aft at turn off, has been SOP in the 306th Bomb Wing since last August. Compliance has been nearly 100%. OES is monitoring both compliance and 1N-23B crystal replacement rate. Although no trend has been observed in the crystal failure rate (12 to 15 crystals per month), this is not conclusive because of the short time involved.

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PROJECT NO. EE-52: Emergency K-System Bombing Computer

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: February 1953

PURPOSE: To determine the feasibility of utilizing an emergency bombing computer in the B-47 aircraft when a failure of the computing section of the K-System exists.

SUMMARY AS OF 31 OCTOBER 1953: At the request of Headquarters Second Air Force, the OES will evaluate an emergency bombing computer. The purpose of this computer is to provide an emergency radar bombing capability when the A-1 computer fails. It has been determined that the auxiliary indicator, which has a separate synchronizer, incorporates the same features as the emergency bombing computer, i. e., variable range mark and sweep and individual azimuth control. Since construction of this unit was given a higher priority by the Commander of the 306th Bomb Wing, it was decided that the feasibility of the emergency computer would be based on the results of the Auxiliary Indicator tests. The auxiliary indicator is approximately 90% complete. Tests will be made to determine if this equipment can be: (a) calibrated with sufficient accuracy to be used as an emergency bombing computer, and (b) if it is feasible for the co-pilot to utilize this equipment to drop bombs when the normal bombing equipment has failed. Continuation of the emergency computer test project will be predicated upon the results of these tests.

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PROJECT NO. EE-54: Evaluation of New Thermal Delay Relay, A-1 Power Supply, in Conjunction with Fast Blow Fuses, K-System

PROJECT ENGINEER: Captain J. L. Balega

DATE OF ORIGIN: May 1953

PURPOSE: To evaluate the new type thermal delay relays, K-301, located in the A-1 power supplies of the K-System.

SUMMARY AS OF 31 MAY 1953: Alternator malfunctions in B-47 aircraft have frequently caused failures of the thermal delay relay, K-301, located in each of the two A-1 power supplies of the K-System. This has resulted in air aborts. The relay manufacturer has produced a new type relay wherein the gage of the wire which has been burning out consistently has been enlarged from 16 mils to 25 mils. Four of these new type relays have been procured by OES and installed in aircraft of the 305th Bomb Wing in order to evaluate their reliability. Simultaneously, the use of 8 amp fast blow fuses in place of the 8 amp slow blow fuses for F-8806 and F-8809 is being monitored to determine the practicability of using a combination of a fast blow fuse and an old type relay as an interim fix until the new type relays are available.

30 JUNE 1953: To date a total of forty (40) flights have been accomplished with aircraft containing the new type thermal delay relays. All but two of these flights have been trouble free in respect to this particular malfunction. On one flight F-8609, the fuse which protects the thermal delay relay, burned out. On this particular aircraft an 8 amp slow blow fuse and a new type relay were installed. The fuse burned out before the new type relay did. On the other flight which had trouble, the thermal delay relay burned out. This aircraft contained a combination of an 8 amp slow blow fuse and an old type relay. These results, though meager, substantiate the fact that the old type relay will burn out before the 8 amp slow blow fuse, and said fuse will burn out before the new type relay. One hundred (100) new type thermal delay relays have been procured for the aircraft in the 305th Bomb Wing. These particular relays have the gauge of the wire in question increased from 16 mils to 20 mils. All A-1 Power Supplies in the wing will be equipped with these new type relays. Upon completion of this change, action by OES will be concluded and an SIR will be forwarded.

31 JULY 1953: All A-1 power supplies in the 305th Bomb Wing have been equipped with the new type thermal delay relay, K-301, with the 20 mil wire. Of ten (10) flights on which malfunctions have occurred, results are as follows: On two (2) flights the relay blew and the fuse did not,

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PROJECT NO. EE-54: Evaluation of New Thermal Delay Relay, A-1 Power Supply, in Conjunction with Fast Blow Fuses, K-System (CONT'D)

on three (3) flights the fuse blew and the relay did not, and on five (5) flights both the relay and the fuse blew. All fuses were the slow-blow type. This indicates that the new type relay alone is not the final fix for this malfunction, but that proper fusing also is required. Attempts have been made to obtain appropriate fast blow fuses without success. The assistance of WADC has been solicited in obtaining these fuses. If this type fuse can be acquired, an evaluation of its use with the new type relay will be made.

31 AUGUST 1953: WADC has informed the CES that 8 amp fast blow fuses have been ordered and will be forwarded upon receipt. An informal recommendation has been made to A. C. Spark Plug Field Engineers that their home office conduct a study of surge voltages and transients in the circuits related to K-301 to better determine the proper fusing of subject relay. A study of various types of 5 amp slow blow fuses is being conducted to determine the feasibility of their use in subject equipment to reduce failures caused by voltage fluctuation of the alternators.

31 OCTOBER 1953: Fast blow 8 amp fuses have been installed in F-8806 and F-8609 on fifteen (15) aircraft for 30 days without any failures of the fuses or of the new type relays, K-301. This lack of failures is attributed to the stable operation of the alternator which has resulted since the Boeing water separators were installed.

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PROJECT NO. EE-55: Radome Failures, K-System

PROJECT ENGINEER: Captain J. L. Balega

DATE OF ORIGIN: May 1953

PURPOSE: To determine whether an unreliable radome can be restored to usable condition by drying it out with heat lamps, and to determine whether a reliable radome can be coated with a sealing agent to prevent contamination.

SUMMARY AS OF 31 MAY 1953: Poor APS-23 radar definition during high altitude flights of B-47 aircraft has become apparent. Investigation revealed that radomes are becoming contaminated, because of moisture or hydraulic fluid saturating the inside of the radome or because of damage to the innerliner. Requirements for replacement radomes exceed the supply availability, therefore, this project was initiated to determine the feasibility of restoring contaminated radomes to a usable condition by heat application. Simultaneously, sealing agents are being studied to determine if they can be used on the inner surface of the radomes to seal them and prevent this deterioration.

30 JUNE 1953: A contaminated radome was procured for testing purposes and subjected to heat from banks of infra-red lamps. Capacitance measurements of the radome were taken periodically as the radome was being dried out, and curves of capacitance versus drying time were constructed. After 540 hours of drying, the radome was judged to be serviceable as far as capacitance measurements were concerned. Whether or not permanent physical damage had been incurred, resulting in increased reflection characteristics of the radome, could not be determined at this time. The radome then was placed on an aircraft, and flight tests are being made to evaluate radar presentation and definition. On the first test flight, the range presentation and definition were satisfactory at an altitude of 42,000 feet, indicating that dehydrating the domes has favorable possibilities.

WADC indicated that the Goodyear Erosion Resistant Coating Systems 23-56 and 23-56S should be tested. At present, this sealant is being applied to a radome which is known to be good. On completion, the radome will be reinstalled on an aircraft and flight tests will be made.

31 JULY 1953: The dehydrated radome has been flown during two flights, both of which were successful. Engineering difficulties have been encountered with the aircraft, on which the coated radome was installed, keeping it grounded most of this period. The OES and the 305th Bomb Wing coated the radomes on two additional aircraft with the Goodyear

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PROJECT NO. EE-55: Radome Failures, K-System (CONT'D)

Erosion Resistant Coating System 23-56 which utilizes neoprene. Four flights have been made with these neoprene coated radomes, but radar malfunctions have prevented an accurate evaluation of this coating. Further flight testing will continue until a complete evaluation can be obtained. SIR #104, dated 23 July 1953, subject: Determination of AN/APS-23 Radome Transmission Characteristics by Use of the Capacitance Checking Method, has been published; this report deals with the test equipment required to determine deterioration of radomes.

31 AUGUST 1953: Four additional flights have been accomplished with the dehydrated radome. With the exception of minor APS-23 malfunctions, all results were quite satisfactory and provided further proof of the feasibility of reclaiming radomes by drying them out with heat. Capacitance measurements on this radome indicate that no contamination has occurred. Four additional flights were accomplished on neoprene coated radomes, with three flights on one radome providing satisfactory results, and the remaining flight on the second radome providing relatively unsatisfactory results. This second radome is developing an area just forward of the drain hole which has capacitance readings in excess of the allowable standard, thus showing that some contamination has occurred even though the radome is coated with neoprene.

WADC reports that after 50 simulated flights to operating altitudes in an altitude chamber, neoprene coated radomes show no deterioration. WADC also has made simulated flights on two partially contaminated but usable radomes which were uncoated and both radomes were completely unusable after 7 flights. Their results indicate that radomes "breathe" during ascent and descent, and that this "breathing" is a contributing factor in the deterioration of uncoated radomes.

The radome manufacturer, Zenith Plastic Company, is developing a new production process to seal both the interior as well as the exterior surfaces of the radomes. Until these items become available, the B-47 Project Office is requiring that Zenith coat all radomes with neoprene prior to delivery.

This Section has attempted to remove moisture from various contaminated radomes with the aid of a suction pump, but these attempts have met with no success.

AMC is not preparing a T. O. to authorize and direct the coating of all radomes. Because of the possibility of the 2-4% attenuation caused by the neoprene coating causing unforeseen problems, the OES has requested that Hq SAC obtain authority for 20 domes to be coated

PROJECT NO. EE-55: Radome Failures, K-System (CONT'D)

and a more comprehensive service test be made by the OES. In addition, it was suggested that the publication of the T. O. be postposed until these service tests are completed.

31 OCTOBER 1953: A Specific Item Report is currently being prepared on this subject.

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PROJECT NO. EE-56: Evaluation of O-23 Camera

PROJECT OFFICER: Captain E. T. Naversen

DATE OF ORIGIN: May, 1953

PURPOSE: To evaluate the capability of the O-23 Camera

SUMMARY AS OF 31 OCTOBER 1953: Headquarters Strategic Air Command has requested the OES to evaluate the O-23 camera installation in B-47 aircraft for reliability and resolution and to determine adequate operating procedures. The evaluation of this camera is nearly complete. Tests on wide latitude film (Kodak Linograph Pan Film) in conjunction with the 50% light transmissibility camera filter in the Y-4 periscope remains to be accomplished. It is anticipated that these tests and the Specific Item Report will be completed in two weeks.

Basically, the SIR will recommend retention of the 023 camera in the Y-4 periscope and that a program be initiated to correct the existing deficiencies.

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PROJECT NO. EE-58: Evaluation of 10" Radar Scope

PROJECT ENGINEER: Capt E. T. Naversen

DATE OF ORIGIN: 8 June 1953

PURPOSE: To evaluate the 10 inch radar indicator in B-47 Aircraft.

SUMMARY AS OF 31 JULY 1953: Headquarters SAC has directed the OES to evaluate the ten inch radar indicator in B-47 aircraft. One installation was completed in B-47B 51-2220 prior to its deployment with the 306th Bomb Wing to the U. K. The indicator was removed from the test aircraft after four missions were flown (1) because the radar operator felt that it was adversely affecting his bombing accuracy, and (2) in order to remount the indicator in a tubular shock mount and to install a larger visor. No formal test reports have been received but informal reports indicate that the ten inch indicator had good definition in NAV position but very poor definition in TRACK and BOMB positions. In addition, the bias control range does not seem adequate for operation under all conditions. A ten inch indicator is installed in 305th Bomb Wing B-47 S/N 51-2332 for concurrent evaluation with other K-System components. One flight has been accomplished.

31 AUGUST 1953: Five test flights were completed during the month of August. Side by side installation of the ID-218 five inch indicator (with and without a magnifier) and the IP-231 ten inch indicator discloses that the definition and general presentation are about the same for both tubes in the NAV position. The definition of the five inch indicator remains good on the bomb run whereas the ten inch indicator presentation deteriorates from approximately 15 n.m. to the bomb release point. The evaluation has been completed but an SIR is being held in abeyance pending word from the B-47 Project Office as to whether the future production 10" scope will have the same electrical and electromechanical feature as the present model. This information is required to determine if research on defects in the IP-231 should be initiated.

31 OCTOBER 1953: The Armament Lab, WADC, has advised that the future 10" scopes will not have the same features as the present models, and that no development work should be accomplished on the present scope. However, this Lab has requested that OES flight test a circuit which is designed to eliminate the definition problem of such scopes. The SIR on the 10" scope will be held up until these tests are completed.

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PROJECT NO. EE-62: Jump of Radar Presentation on ID-218/APS-23 Caused by O-15 Camera

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: 27 July 1953

PURPOSE: To prevent "jump" of the radar picture on the indicator, ID-218, when the O-15 scope camera is actuated.

SUMMARY AS OF 31 JULY 1953: The presentation on the radar indicator, ID-218/APS-23, is distorted, i.e., jumps each time an exposure is made by the O-15 scope camera. This distortion is particularly distracting to the operator during a bomb run when an exposure is being made on every scan. This deficiency is apparent on approximately 60% of the systems in use at MacDill AFB. This project will be concerned with the cause and an engineering fix will be recommended.

31 AUGUST 1953: It was experimentally determined that an adapter to move the camera further from the indicator is impractical, primarily because of the distance required to remove jump in all cases and because of the increased object distance for both camera and operator.

Two soft iron shields were tried and rejected as ineffectual, since maximum possible shielding reduced picture jump only about fifty per-cent.

Unless some way is found to modify the camera, the following solutions, although considered unsatisfactory in that they do not remove the source of the trouble, will be evaluated:

a. A switch giving the operator the option of blanking the clockwise scan on the ID-218 would be helpful whenever picture jump or backlash is excessive.

b. Locating the O-15 camera on a remote indicator. This is another argument in favor of an auxiliary indicator installation in the co-pilot's position.

31 OCTOBER 1953: A simple circuit change which eliminates picture jump has been designed and successfully tested by this Section. The change is made entirely within the P-8 exposure frequency control box and consists of the addition of a relay, a condenser and two resistors. This change causes the camera solenoid to be pulsed at the end of the sweep so that it is not energized during the useable part of the sector scan. This can also be done by means of the "Direct Radar" circuits in the P-8 with slight wiring changes. An SIR is being prepared on these fixes plus a variation of the first change, mentioned above, which will pulse the camera at the opposite end of the sweep.

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PROJECT NO. ME-28: Fuel Loading Procedures

PROJECT ENGINEER: Major Lomax Gwathmey

DATE OF ORIGIN: February, 1952

PURPOSE: To develop a firm method of refueling the B-47 aircraft prior to long range missions.

SUMMARY AS OF 31 OCTOBER 1953: Multiengine jet bombers carrying unusually large volumes of fuel in the fuselage called for new techniques in fuel loading. A project was set up by the OES to collect data over a period of time under various operating conditions and make an analysis of the various variables involved for the purpose of recommending the best and most practical system of fuel loading for the B-47 aircraft.

As an auxiliary project under this project, the practicability of providing ground servicing (refueling and electrical power for starting engines) of B-47 aircraft from the KC-97 aircraft was explored during July, 1952. With the use of a kit to contain certain equipment for refueling and certain electrical cables, it was determined that refueling and starting engines of B-47's from the KC-97 was entirely practical. Specific Item Report No. 59, 30 August 1952 covered this project.

Another additional auxiliary project was the replenishing of fuel used by a B-47 for engine start and taxi at the end of the take-off runway with all engines running. Such a procedure is considered to be practical and not excessively dangerous when certain rules are obeyed and certain precautions taken. This procedure will permit the aircraft to take-off with only 300# less fuel than its fuel system will hold, and for average conditions of taxi out will add 100 to 150 n.m. to its range capability. It is considered a useful procedure for certain combat operations. SIR #101, dated 3 June 1953 covers this project. An SIR will be prepared covering the main project.

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PROJECT NO. ME-44: Crew Comfort and Survival Equipment

PROJECT ENGINEER: Major Willis E. Frazier

DATE OF ORIGIN: 3 April 1953

PURPOSE: To investigate and make recommendations regarding the crew comfort problems existing in the B-47 aircraft.

SUMMARY AS OF 31 OCTOBER 1953: Undue aircrew fatigue and inadequacies in survival equipment became apparent in B-47 aircraft operation at MacDill AFB. Accordingly, SIR No. 27, subject: Crew Comfort and Survival Equipment, dated 3 April 1952, recommended that ARDC take the following action (1) initiate a program to determine what items are causing excessive crew member discomfort and fatigue, and (2) take positive measures to improve the design of, or completely eliminate various items which are causing crew fatigue. An ARDC Human Factors B-47 Research Team investigated the above recommendations, and published a report entitled: "Human Factors in B-47 Operation", dated 18 November 1952. This report received wide dissemination. A subject of current interest is an evaluation of a light underarm life preserver, type MA-1. An SIR on the life preserver has been prepared, and will be published shortly.

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PROJECT NO. ME-53: Fuel Tank Leaks, B-47 Aircraft

PROJECT ENGINEER: 2nd Lt C. B. Shive

DATE OF ORIGIN: 19 February 1952

PURPOSE: To report fuel tank leaks and to recommend corrective action.

SUMMARY AS OF 31 OCTOBER 1953: This Section has been monitoring fuel tank leaks for 18 months. The major problems have been brought to the attention of the proper agencies. WADC, in conjunction with Boeing Airplane Company, has developed various fixes for the deficiencies which have been discovered, and many of these fixes have been incorporated in the B-47 fuel tank system.

Since the Bomb Wings are making a weekly fuel leak summary report to Headquarters SAC, this information, being on a wider scale, will provide a statistical study superior to any that this Section can make on a local basis. Therefore, to avoid duplication, this Section will in the future concern itself primarily with a monitoring of the various fixes and will report upon their effectiveness. To indicate the overall trend of the fuel leak situation, the single item of aircraft in commission days lost due to fuel leaks for each of the MacDill Bomb Wings will be reported monthly.

At the present time this Section will be concerned with that portion of T. O. 01-20EN-346 which has to do with the new type "O" ring seal heavy spider interconnects. The Boeing team has spent several weeks at this station demonstrating the correct installation technique for the new type interconnect and training personnel for this work. The effectiveness of this interconnect will be carefully monitored and reported upon in each bi-monthly report.

Aircraft in commission days lost due to fuel leaks have been as follows:

	305TH BOMB WING	306TH BOMB WING
September.	78	112
October	36	93

NOTE: 1. The 306th Bomb Wing has had the Boeing Team present during October and has been actively engaged in accomplishment of T. O. 01-20ENB-346.

2. The 305th Bomb Wing figures for October go to the 21st only, or at a rate of 53 in commission days lost per month.

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PROJECT NO. ME-54: Service Life of B-47 Surface Control Pump Assemblies.

PROJECT ENGINEER: 2nd Lt. C. B. Shive, Jr.

DATE OF ORIGIN: 12 June 1952

PURPOSE: To monitor the operation of twelve each subject assemblies, Part Number 4869-167 WQ 300, for the purpose of determining periodic replacement time.

SUMMARY AS OF 31 AUGUST 1953: SAC message to OES, dated 9 January 1953, concurred with a modified project to monitor twelve (12) surface power control unit pumps. During the month of April, two (2) of the PCU pumps were changed, S/N A-1113 after 202:05 hours and S/N A-1202 after 180:05 hours. No additional units failed through July 1953, at which time the average time on the ten (10) remaining PCU pumps was 254:07 hours. Information on pump failures for August, which is not presently available at MacDill AFB, will be included in the September Progress Report.

31 OCTOBER 1953: No additional failures have occurred through 31 October 1953 on the units being monitored. The average operating time on the ten (10) remaining units is 348 hours. The average operating time of the test group (12 units) is 322 hours.

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PROJECT NO. ME-69: Tow Target Reel Installation and Flight Evaluation

PROJECT ENGINEER: Major Willis E. Frazier

DATE OF ORIGIN: 13 February 1953

PURPOSE; To determine the feasibility of installing a tow-target reel which can be readily removed or installed for towing winged targets with B-47 aircraft.

SUMMARY AS OF 31 OCTOBER 1953: In accordance with Hq SAC Message DMAS3 56603, dated 14 February 1953, a project to determine the feasibility of a tow-target reel installation in a B-47 aircraft was initiated. An A-2 reel was installed in the tail cone of a B-47 at MacDill AFB, and a glider tow-target, Type A-1, was modified to a 45° swept wing, single vertical fin tail configuration. This target was lost on its second test flight when the cable snapped as a result of violent maneuvers by the target at Mach .81. A similar target was then furnished by the Air Force Armament Center, Eglin AFB, for a continuation of the project.

Following is a summary of the four evaluation flights to date:

The target is stable during take-off and climb, both at 400' and 600' behind the aircraft.

On the third flight the target achieved Mach .82 in stable flight at 40,000'. This performance can probably be duplicated on the majority of flights.

The target cannot be reeled in by the A-2 reel under any condition.

With 600' of cable out, the reel assembly is capable of reeling in the cable.

With 4000' of cable, the reel assembly is not capable of reeling in the cable.

The target was successfully landed on 600' of cable.

The target landed short of the runway when landed with 4,000' of cable. It continued to descend after the tow aircraft leveled out, and did not respond to climb of the tow aircraft.

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PROJECT NO. ME-69: Tow Target Reel Installation and Flight Evaluation. (CONT'D.)

In conclusion, the A-2 reel is considered to be underpowered for such an installation, and to have a marginal braking capability. No further flights are contemplated utilizing the A-2 reel assembly. An interim SIR will be published covering the experience with the A-2 reel assembly and A-1 tow target. SAC has requested that two A-3 type tow reel assemblies, mounting seven horsepower motors, be made available to the OES at MacDill. Upon receipt and installation of this equipment evaluation flights will be continued.

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PROJECT NO. ME-75: Extruded Compressor Stator Blades J47-25 Engines

PROJECT ENGINEER: 2nd Lt. C. B. Shive, Jr.

DATE OF ORIGIN: 28 May 1953

PURPOSE: To monitor effects on engine life of a modified extruded compressor stator blade.

SUMMARY AS OF 31 OCTOBER 1953: The engine contractor furnished this station with six (6) J47-25 engines which were supposed to have been equipped with the new extruded compressor stator blades that are being installed on all production engines. These blades are cheaper to manufacture than the forged blade previously used, and can be replaced individually. The subject engines were installed on B-47 A/C 51-2269 on 18 May 1953, and were run up on the ground immediately after installation. During the pre-flight inspection prior to the first flight with the new engines, the #1 engine was noted to have nicked compressor blades, and was replaced on 25 May 1953 with an old type engine.

The remaining five (5) engines operated normally until 26 September 1953, and accumulated 151:25 hours each until that time. On this date the #4 engine was changed due to a leaking air oil seal. Inspection of this engine revealed that it did not have extruded compressor stator blades as previously believed. Further investigation by the engine contractor's representative revealed that an error in regard to engine serial number was made in correspondence by the engine contractor. The erroneous serial number caused an old type engine to be shipped and installed with the initial installation.

The four (4) remaining engines are operating normally and have accumulated 193:30 hours each as of 31 October 1953.

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PROJECT NO. ME-76: Tool-Engine Mount Pin and Internacelle Fairing

PROJECT ENGINEER: 2nd Lt. C. B. Shive, Jr.

DATE OF ORIGIN: 19 June 1953

PURPOSE: To evaluate and refine design of a locally devised multi-purpose tool for removing and installing engine mount pins and aft and forward internacelle fairings.

SUMMARY AS OF 31 AUGUST 1953: The original tool used during May and June was removed from service and replaced by a second model, which incorporated features to protect the user and the aircraft.

The second model proved highly satisfactory from the standpoint of time saved and safety for both the user and the aircraft. After approximately one month use in the docks, a critical part of the tool broke under the severe impact loading inherent in an impact type puller.

A third model of the tool with the critical part made of a steel less resistant to wear but more suitable for severe impact loading is now being evaluated. An SIR to include working drawings for fabrication of the tool will be prepared during September 1953.

31 OCTOBER 1953: SIR No. 115, dated 20 October 1953, has been forwarded to Hq WADC. The SIR included working drawings of a locally designed tool, and recommended that the tool be authorized all B-47 Wings, on a basis of issue of two (2) each per Combat and Field Maintenance Squadron, and four (4) each per Periodic Maintenance Squadron.

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PROJECT NO. ME-78: Main Landing Gear Seal Failures

PROJECT ENGINEER: 2nd Lt. C. B. Shive, Jr.

DATE OF ORIGIN: 8 July 1953

PURPOSE: To determine if soft strut servicing in accordance with T. O. 01-20EN-231 is the cause of "O" ring failures.

SUMMARY AS OF 31 JULY 1953: Six main landing gear "O" ring seals have failed on B-47 aircraft of the 305th Bomb Wing, operating from MacDill Air Force Base, Florida. These aircraft had an average of 114.8 landings following compliance with T. O. 01-20EN-231 (soft strut servicing) and an average of 161.4 total landings at the times of seal failure. Of these failures, five have been on the aft main strut and one has been on the forward main strut. At present, failed "O" ring seals are being removed from the struts and sent to WADC for study. The 306th Bomb Wing, operating from RAF Fairford Station, England, has reported no failures.

31 AUGUST 1953: Three main landing gear "O" ring seals failed during the month of August in the 305th Bomb Wing. This brings the total number of main landing gear strut failures to nine, of which six are aft main struts and three are forward main struts. At the time of the seal failure the struts had an average of 96 landings following compliance with T. O. 01-20EN-231 (soft strut servicing), and an average of 138 total landings. No main landing gear struts or seals were changed by the 306th Bomb Wing during August because of failure of "O" ring seals.

31 OCTOBER 1953: Two forward main landing gear "O" ring seals have failed during the period 1 September 1953 through 31 October 1953. Both failures occurred in aircraft of the 305th Bomb Wing. Information as to the number of landings prior to failure is unavailable at this station, as both aircraft and their records are now TDY in the U. K., but will be furnished in the next Progress Report. The 306th Bomb Wing still has experienced no failures of main landing gear "O" ring seals.

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PART III

of

B-47 OPERATIONAL ENGINEERING SECTION

BI-MONTHLY PROGRESS REPORT

B-47 OPERATIONAL ENGINEERING SECTION PROJECTS COMPLETED

AWAITING ACTION BY

HEADQUARTERS WRIGHT AIR DEVELOPMENT CENTER

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EE-32:	Nesa Glass Control	SIR #73, dated 23 December 1952, forwarded to Hq WADC. The status of the improved control unit is unknown.
EE-49:	Use of the B-7 Intervalometer in Lieu of B-8	SIR #95, dated 14 April 1953, forwarded to Hq WADC. Hq AMC letter, dated 16 October 1953, has requested OCAMA to prepare an information T. O. describing the use of B-7 intervalometers as substitutes for the B-8. OCAMA expects the B-8A intervalometers to be available, to fulfill ANFE requisitions, in February 1954. Preparation of the information T. O. to permit SAC organizations to utilize the B-7 has been approved by Hq USAF. This constitutes closing action for this project.
EE-51:	APN-76 Receiver-Transmitter Location	SIR #99, dated 27 May 1953, has been forwarded to Hq WADC. WADC has initiated action to have the changes recommended in this report incorporated in production and retrofit. Reference WADC letter, file WCSH, subject: Approval of SIR #99, dtd 30 September 1953. This constitutes closing action on this project.
EE-59	Comparative Evaluation of Methods of Swinging the Compass, B-47 Aircraft	SIR #105, dated 25 July 1953, and SIR #105A, dated 9 September 1953, have been forwarded to your Headquarters. WADC concurs with the Tow Circle procedures for compass swinging the B-47 aircraft. WADC has recommended to AMC that this procedure be incorporated in T. O. 01-20ENB-2. However, this procedure was not recommended for inclusion in T. O. 05-15-3.
ME-12:	Directional Damper	SIR #100, dated 26 June 1953, forwarded to Hq WADC. Although the Laboratory approved the recommended procedures for pre-flight inspection of the damper, no action will be taken in view of indorsement by Hq SAC which indicated that it was desired that the modification be held in abeyance until WADC tests determine the desirability of retaining the damper in the aircraft. Boeing has initiated flight tests on this installation.

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SUMMARY LIST OF B-47 OES COMPLETED PROJECTS AWAITING AMC ACTION

Project No. and Title		Status
AE-4:	Analysis of B-47 Mission Capability	SIR's #53, #53A and #53B are being considered by Hq WADC.
AE-13:	PDI Instrument Relocation	SIR #82, dated 24 January 1953, forwarded to Hq WADC. A Technical Order authorizing the interchange of the PDI and the machmeter on the pilot's panel is under consideration at OCAMA.
AE-18:	Evaluation of Alco Windshield Wiper	SIR #102, dated 30 June 1953, has been forwarded to Hq WADC. Testing of rain deflectors and dams installed in front of the windshield has been completed by WADC Flight Test Section without obtaining a configuration which prevents the excessive flow of water over the windshield. Boeing is to initiate tests of deflector, dams, and clear vision panel.
EE-14C:	Rendezvous Descent Preliminary to In-Flight Refueling of B-47B Aircraft.	SIR #76C, dated 27 May 1953 forwarded to Hq WADC. Although it is reported that the rendezvous procedures will be incorporated in 01-20ENB-1, the status of the T.O. revision is unknown.
EE-30:	K-System Slewing	SIR #97, dated 8 May 1953, forwarded to Hq WADC. WADC concurs with the requirement for a feature to preclude excessive slewing. However, the method proposed by Sperry will be incorporated during an autopilot improvement program. It will include a variable control which will permit the pilot to preset the maximum angle of bank desired. The time period for getting this change into the aircraft will be reviewed and, if excessive, consideration will be given to authorizing service units to modify the sets locally, utilizing the OES "fix."

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ME-15:	Observer's Ditching Harness	SIR #45, dated 21 May 1952, and SIR #64, dated 27 October 1952, were forwarded to Hq WADC. ECP 1284-1 calls for installation of a safety belt and shoulder harness on step in the aisle adjacent to the co-pilot. It is committed for the 880th aircraft; however, retrofit has not been established although kits will be available some time in the future.
ME-36A:	Periscopic Sextant Mount in the Navigator's Position, B-47B Aircraft.	SIR #13A, dated 4 November 1952, forwarded to Hq WADC. Two new experimental mounts have been fabricated, one for the co-pilot's and one for the observer's position, will be tested by Boeing and WADC. Both mounts will permit accurate shooting with a tilt of 4°. However, the observer will still have to leave his seat and, in some cases, remove his helmet and mask to take shots, and no program to improve this situation is contemplated by WADC.
ME-60:	Operational Suitability Test of Phase II Modified B-47B Aircraft.	SIR #75, dated 9 January 1953, forwarded through channels to Hq WADC. No further information is available.
ME-68:	Multiplace Life Raft Installation of B-47 Aircraft	SIR #83, dated 29 January 1953, forwarded to Hq WADC. SAC, WADC, AMC and OCAMA approved static mock-up of Mark IV life raft installed in backbone of B-47. Although committed for production, no final plan for retrofit has been established. The Mark IV raft has not been approved by the Aero Med Lab. Boeing will make a live mock-up and will flight test a complete installation when the first kit is delivered.

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ME-70:	Leaking Power Control Unit Seal	SIR #91, dated 18 March 1953, forwarded to Hq WADC. The use of a -11 "O" ring seal is considered to be an interim fix, although it is uncertain as to whether the installation of these seals is authorized by T.O. as yet. The contractor is still attempting to develop a permanent fix.
ME-74:	J47-23 and -25 Engine Speed Switch	SIR #103, dated 22 July 1953, forwarded to Hq WADC. No further information is available.
ME-77:	Functional Test of Fuel Tank Float Switches	SIR #106, dated 30 July 1953, forwarded to Hq WADC. No official answer has been received from WADC although it is understood that the Laboratory did not concur with the OES recommendations. Additional data is to be presented to WADC.

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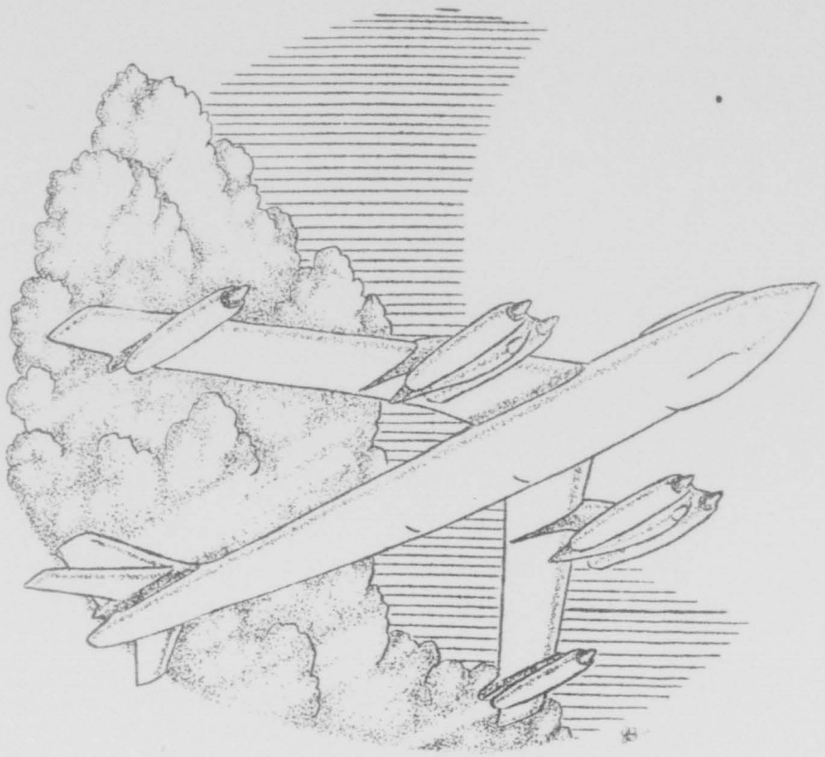
EXHIBIT 21

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 60-A



6TH AIR DIVISION

MACDILL AFB, FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 16 September 1953

SPECIFIC ITEM REPORT NO. 85A

SUBJECT: Evaluation of K-System Extended Tracking Range Computer, B-47B Aircraft. (EE-43)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOMH (B-47)

I. PURPOSE:

To report the results of the evaluation of the extended tracking range systems installed in two 305th Bomb Wing B-47B aircraft.

II. FOREWORD:

A. The present twenty-five (25) mile tracking range of the K-4 bombing and navigation system was reported as marginal in a high speed aircraft by Project WIRAC radar operators in August 1951.

B. SIR No. 75, dated 9 January 1953, subject: Operational Suitability of Phase II Modified B-47 Aircraft, and SIR No. 85, dated 3 February 1953, subject: Tracking Range of K-4 Bombing-Navigation System in B-47 Aircraft, recommended that the tracking range be increased to fifty (50) miles. Subsequently, Headquarters SAC initiated action to make the fifty (50) mile tracking range a requirement for the K-System.

C. Headquarters SAC message DM6DA22 10195, dated 2 March 1953, advised that Headquarters WADC would make the first two experimental models of the extended range system available for evaluation in 6th Air Division B-47 aircraft and authorized the testing of these items. These two systems were received by the OES on 4 May 1953 and were bench checked and the existing malfunctions were repaired. The flight tests were initiated on 25 June 1953 when the installation was completed in the test aircraft.

D. One of the extended range computers was tested in conjunction with a dual offset unit and a 10" indicator for approximately one-half of the missions. Deficiencies in the IP-231 10" indicator precluded its use during the bomb runs. The dual offset capability was found to

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be a definite aid in identifying targets. These units are discussed herein, but more complete details on the evaluation of the units will be covered in separate Specific Item Reports.

III. CONCLUSIONS:

A. The 50 n.m. tracking range system is considered superior to the present 25 n.m. system.

B. The bombing accuracy of the extended tracking range K-System is equal to the standard twenty-five (25) n.m. system.

C. Fifty (50) n.m. is the optimum useful tracking range.

D. It is desirable to have the cross-hairs at the outer edge of the scope at 50 n.m. range, track into the center of the scope, and remain centered from twenty-five (25) miles to the cross-over point.

E. Fewer gross errors and more successful strange target runs can be expected with the fifty (50) n.m. tracking range system.

F. Bomb releases made by extended offset aiming will have greater errors than direct aiming releases due to deficiencies in the heading and azimuth stabilization servo loop.

G. The present Range Calibrator and Data Repeater Indicator cannot be used for field and flight line tests on the extended tracking range system without being modified.

H. WADC should determine if any changes will be required in test equipment used at depots to maintain this type of computer.

IV. RECOMMENDATIONS:

A. Hq AMC take expeditious action to fulfill Hq SAC's requirement for installing the 50 n.m. tracking feature in all K-Systems.

B. The method of presenting the target and cross-hairs on the indicator in track and bomb mode, as in the subject computer system, be retained in the production version of the fifty (50) n.m. computer because of advantageous target magnification at the start of a bomb run.

C. WADC, Sperry, and Boeing investigate and eliminate heading errors which preclude accurate offset bombing, if feasible.

D. The OES monitor the reliability and operation of the extended tracking range system in two 306th Bomb Wing aircraft for a period of ninety (90) days.

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E. AMC procure the test equipment necessary to support the extended tracking range system, prior to the time that these systems are placed in service aircraft.

V. DISCUSSION:

A. The extended tracking range system permits tracking in "track" and "bomb" position from a distance of fifty (50) n.m. to the target. The present system installed in all K-System equipped aircraft permits tracking for only twenty-five (25) n.m. The increased tracking range was achieved by doubling the computing values. A description of the changes made to the standard twenty-five (25) n.m. system to make it a fifty (50) mile system is contained in Appendix No. I. A brief comparison of computer input data for the twenty-five (25) mile system and the fifty (50) mile system follows:

	25 N.M. System	50 N.M. System
Trail	0 to 30,000 ft.	0 to 60,000 ft.
Time of fall	15 to 150 Secs.	15 to 197 Secs.
Time to Impact	20 to 190 Secs.	20 to 380 Secs.
Time to go	0 to 180 Secs.	0 to 367 Secs.
Altitude	5 M to 50 M Ft.	10 M to 60 M Ft.
Tracking Range (X_n, X_e) with - without offset	150,000 ft. (25 n.m.)	300,000 ft (50 n.m.)
Offset Distance K_n, K_e	50,000 ft.	100,000 ft.
Wind W_n, W_e	200K	200K

D. The extended tracking range system was evaluated during the combat crew training phase of the 305th Bomb Wing. Two B-47B aircraft had the fifty (50) mile range system installed. One aircraft completed four (4) missions and the second aircraft completed twelve (12) missions.

E. The test program proposed to establish the following:

1. The accuracy of the extended tracking range system on simple and complex targets.

2. Determine if further extension of the system was necessary or desirable.

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3. To point out deficiencies in the system that might affect the bombing capability or reliability of the equipment.

4. To determine if any increase in the ground position indicator (Sharkey) bombing capability is afforded by the tracking range extension.

5. To establish any new operating and maintenance procedures which may be required.

6. To maintain records of any component failure and parts replacement to determine whether system reliability and maintenance support changed as a result of the modification.

F. The extended tracking range system was tested on sixteen (16) combat crew training missions. A total of fifty-two (52) radar bomb scoring (RBS) and nineteen (19) actual releases were accomplished. Four (4) RBS releases were not included in the overall average due to incorrect data input. The RBS runs are separated into two categories: (1) direct and offset releases, and (2) extended offset releases.

G. RBS Releases:

1. The CEP for forty-one (41) releases using the extended tracking range was satisfactory and almost identical with the 305th Bomb Wing CEP for the test period. Offset checking was used on thirty-two (32) releases, offset aiming on three (3) releases and six (6) releases were made direct.

2. Extended offset aiming on seven (7) bomb runs resulted in a CEP approximately 1300 feet greater than the CEP obtained for direct runs and direct runs with offset checking. The average offset distance used was 82,000 feet. Sperry Company publication 148048, Mechanics' Maintenance Manual indicates that a heading deviation of $\pm 1\frac{1}{2}^{\circ}$ maximum magnitude is allowed in the K-System, even after a compass swing. In addition, a yaw error can also exist. Heading error does not affect direct runs but does affect offset aiming releases. The mathematical expression, impact error = $2 \sin \frac{\phi}{2}$ X offset distance, indicates the maximum error that can exists due to heading error when offset is used.

Where ϕ is the heading error

$2 \sin 3/4^{\circ}$ (82,000) = 2148 feet.

The greater magnitude bombing errors experienced with extended offset bombing is probably attributable to random errors in the heading system.

It should be noted that a maximum error of 2620 feet can be caused by a $1\frac{1}{2}^{0}$ heading error when the offset distance is 100,000 feet.

3. Actual releases - Nineteen (19) actual releases were made on target #36, Eglin Air Force Base, Florida with excellent results. Two (2) releases by optic mode were not considered in the overall average due to erection cut-off troubles. The average circular error was almost identical to the Bomb Wing circular error for the test period. This is rather surprising inasmuch as the computer error was doubled when the computer values were doubled. However, all other system (optic, radar) errors were not affected when the computer was modified for extended tracking. The results indicate that more accurate tracking is possible because of the increase in tracking range.

4. Ground position indicator (Sharkey) bombing. Three Sharkey releases were made with no apparent difference from the Bomb Wing's average score.

H. The bombing summary is contained in Appendix II. For security reasons, Headquarters SAC will control the distribution of actual bombing results. Interested organizations can obtain copies of Appendix II from that Headquarters.

I. Twelve (12) radar operators participated in the extended tracking range evaluation program. The longer time for synchronization on the run was favorably commented on by all the test operators, who agreed that fifty (50) n.m. was the optimum tracking range. No operator felt that bombing accuracy could be improved by starting the bomb run from ranges greater than fifty (50) n.m. On some isolated land-water contrast targets, the specific aiming point or target could be identified from the 50 n.m. range. However, on Class IIA targets the target was not identifiable until three (3) to four (4) minutes time to go (28 to 35 n.m.) and the distance was less on more complex type targets. The first part of the bomb run was used to make an initial memory point wind run, check ballistic and offset information, and for setting switches, etc. From twenty-five (25) n.m. to bomb release, another memory point run was initiated when the aimpoint became more clearly defined. Only small displacements were necessary to keep the cross-hairs on the target area. The remaining time was used for target study and tuning the radar indicator and finally to displace the cross-hairs on to the target on break-up. Although the CEP for the fifty (50) and twenty-five (25) mile systems was practically identical, it is expected that with the extended tracking range system fewer gross errors will occur and the circular error on strange target bomb runs will be less because of the additional time available for target identification.

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J. The two systems tested had a feature which seems desirable for retention in the production model. The cross-hairs are initially at the outer edge of the scope at fifty (50) n.m. range. The cross-hairs and target track into the center of the scope and remain centered from twenty-five (25) n.m. to the cross-over point. All test radar operators preferred this feature to a system which would have the cross-hairs at the center of the scope throughout the run. At fifty (50) n.m. range with the scope in sector scan and the cross-hairs at the outer edge of the scope, one inch is equal to 10 n.m. With the cross-hairs at the center of the scope and the range knob at 50 n.m., one (1) inch represents 20 n.m. on the scope, as the scope presentation now covers 100 n.m. Having the cross-hairs at the edge of the scope at the early part of the bomb run, then, gives a 2 to 1 linear magnification of the target area over the conventional system which has the cross-hairs at the center at the start of a run. No target or cross-hair smearing was apparent during any of the bomb runs. Figure 1 illustrates the appearance of the cross-hairs and target at 50, 35, and 25 n.m., for this condition.

FIG 1

K. The dual offset unit was installed in conjunction with one of the computers. It was found that the possibilities that dual offset offers can be better realized with extended tracking than with the standard twenty-five (25) tracking range system. Time for synchronization is lost during the time required for the cross-hairs to change from one offset aiming point to the other or to the target. This time is a function of the distance between offsets and is of the order of five (5) to ten (10) seconds. The time loss is more tolerable when the bomb run is of five (5) minute duration than when it is only two and a half ($2\frac{1}{2}$) minutes in duration. The greater time for tracking with the fifty (50) n.m. system permits more checking between the two offset points and the target to better isolate the aiming point before target breakup occurs. The dual offset capability is considered to be a valuable addition and greatly aids the operator in identifying strange targets.

L. The IP 231/APS-23 ten (10) inch radar indicator was mounted in one test aircraft below and to the right of the ID-218/APS-23 five (5) inch indicator. The installation was far from optimum but it was possible to compare the presentation of both indicators at all stages of the bomb run. The presentation in "Nav" position was slightly better on the larger indicator. On the bomb run, the presentation was equal down to fifteen (15) n.m., when the presentation on the ten (10) inch scope deteriorated while that of the five (5) inch scope remained good. The main difficulty with the ten (10) inch scope seemed to be due to an uneven

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brightening of the target by a series of bright radial lines which obscures the target at ranges below fifteen (15) n.m. The light hood on the ten (10) inch scope was inadequate and troubles were experienced with stray light reflections on the scope. All testing officers refused to make complete runs using this indicator because of these deficiencies.

M. During the time the extended tracking range computer was installed no malfunctions attributable to the modified components occurred. Normal system maintenance was performed on I.C.E., computer, and APS/23 components under the supervision of a Sperry Field Engineer but no unusual malfunctions occurred.

N. Flight line maintenance test equipment for the twenty-five (25) mile system can be used for the fifty (50) mile system except for the range calibrator T101005, and the Data Repeater Indicator T101023. No attempt has been made to determine if changes in test equipment used at depot level will be required.

1. A Range Calibrator was modified as shown in Figure 2 in order to check the sine wave generator at 81.94 KC. Although no troubles were experienced with this modification it is not recommended for production articles, as a more precise frequency standard can be provided by changing the oscillator circuit parameters to give a frequency of 81.94 KC.

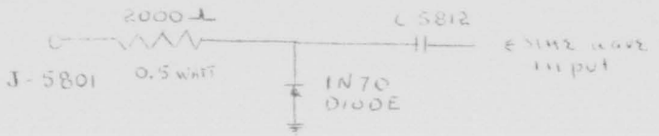

FIG. 2

2. The slant range (R_S) dials of the Data Repeater Indicator will have to be modified to correspond to the dials in the polar converter (50 mi system). The sighting angle, "Beta" and the true bearing of the line of sight, "Phi", would not be affected.

O. The extended tracking range systems have been removed from the 305th Bomb Wing aircraft and will be installed in two 306th Bomb Wing aircraft for further testing. The OES will monitor the reliability of the equipment and the bombing results to corroborate the results of this initial program.

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P. No increase in weight is caused by the extended range modification. The time and man-hours required to bench test and install the equipment is the same as that required for a standard 25 mile tracking range computer. The maintenance of these systems does not require any additional skill or formal training of maintenance personnel, as they only need to become familiar with the changes in maintenance adjustments, and operating tolerances and limits.

Enoch T. Naversen

2 Appendices
I. Prototype Extended Tracking Range Systems, X-1 and X-2
II. Bombing Summary (To be distributed by SAC Hq for security reasons.)

ENOCH T. NAVERSEN
Captain, USAF
Project Officer

APPROVED:

Thomas P. Savage

THOMAS P. SAVAGE
Major, USAF
Chief, O.E.S.

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APPENDIX I

TO SIR #85A, DATED 16 SEP 53

EXTENDED TRACKING RANGE SYSTEMS

X-1 and X-2 (Source Sperry Letter 368B)

1. Double range for both bombing and tracking is provided by the K-Bombing and Navigation Extended Range System. The altitude limits are raised to 10,000 through 60,000 feet. No wiring changes were required in the computer to extend the optical range. For radar sighting, ECP 128 was accomplished and the ICE required extensive wiring. The following is a short resume of wiring changes:

a. SN57-Synchronizer:

(1) Supply 115v to pedestal generator sub assembly for filament transformer power.

(2) Add 100 ohm terminating resistor to J3705 only if PP353 and RAI are not used.

(3) Frequency of sine wave is halved to 81.94 kilocycles.

(4) Bridge circuit of phase shift unit modified for lower frequency.

(5) A new pedestal generator is used to provide for the inincreased cross-hair range.

(6) The mixer circuit of the range mark generator is changed slightly.

(7) Range servo amplifier and azimuth mark generator are not affected.

(8) The PPI offset unit is removed and a jumper is placed between pins 11 and 12 on P370 in SN-57 for sweep expansion to accomodate ECP 128.

b. A wire is added from the J438 junction box to the polar converter to supply +300v for sweep expansion circuit (ECP 128).

c. Resistor R922 in the SN-47 is jumpered to increase the range of the sweep delay maximum and minimum adjustment.

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d. Polar converters:

(1) ECP 128 accomplished.

(2) Resistors are added to the hyperbolic sweep network, R3136, to change the altitude range from 5000-50,000 feet to 10,000-60,000 feet.

(3) A 1.5 megohm resistor from R3116-1 to R3116-3 was added.

2. The mechanical changes are made in the tracking computer, polar converter and meter unit.

a. Tracking Computer:

(1) Main shaft from C.S.M. was 180 RPM, now 90 RPM, but the constant speed motor operates at the same speed.

(2) Inputs to memory point and earth rate synchros have 2:1 gear ratio to bring their gearing inputs to the original RPM.

(3) All data transmitter shaft rotations scale factors of X, X-T_iW, T_i, T_g and $T_i V_a$ are doubled.

(4) V_a and A_t are the same as before.

b. Polar Converter:

(1) "H" coarse dial and "H" transmitter changed to 64,000 ft/rev by gearing changes.

(2) "H" input to sighting angle mechanism is doubled through gearing changes and R_g is doubled.

(3) Since the "H" input to the Beta mechanism is doubled, the "H" input to R_g cam has also been doubled. The cam then could cover 110,000 feet altitude "H" and 304,000 ground range R_g.

(4) Altitude stops set at 60,000 feet so only one-half of altitude cam is used.

(5) Dial changes are made to altitude ("H") coarse, ground range (R_g) fine and coarse, and slant range (R_s) fine and coarse. Sighting angle (Beta) and true bearing of the line of sight (Phi) dials remain the same.

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(6) Shaft value of R3114, the sweep expansion potentiometer is maintained at 1800 ft/rev but an overtravel mechanism stops the potentiometer at 150,000 feet of R_g while the gearing continues up to the 50 mile limit.

c. Meter Unit:

(1) Altitude transmitter changed to 60,000 feet.

(2) True Air Speed (TAS) mechanism changed for rarified atmosphere at 60,000 feet altitude.

d. D-2 Navigation Control:

(1) 2:1 reduction to latitude and longitude synchros.

(2) X_n and X_e values are doubled.

3. Dial changes are also made to the following units:

a. Pilot's data indicator - "time to go" doubled.

b. Time to go indicator - "time to go" doubled.

c. Ballistics control - Trail (L), offset (K), and altitude (H) are changed, L and K are doubled and H coarse is changed to read from 10,000 to 60,000 feet.

d. Bombing computer - (T_1V_a-L) is doubled.

4. Test Equipment:

a. In general, all tolerances are doubled except constant speed motor tolerance.

b. T101005 range calibrator will not operate with these systems without redesign.

c. Sweep delay minimum is set up now at 10,000 feet altitude (20.4 microseconds) and sweep delay maximum at 35,000 feet altitude.

d. The recommended gate width of the pedestal generator is 640 microseconds. This will gate 52 cycles of the sine wave.

e. The recommended pedestal width is 13 microseconds.

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f. The alignment potentiometers R3717, R3118 and R3137 in the polar converter require careful setting up to assure the range mark remaining on the sweep at fifty (50) n.m. ground range.

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APPENDIX II

SPECIFIC ITEM REPORT NO. 85A

Dated 16 September 1953

BOMBING SUMMARY

For security reasons, Headquarters SAC will control the distribution of actual bombing results. Interested organizations can obtain copies of Appendix II from that Headquarters.

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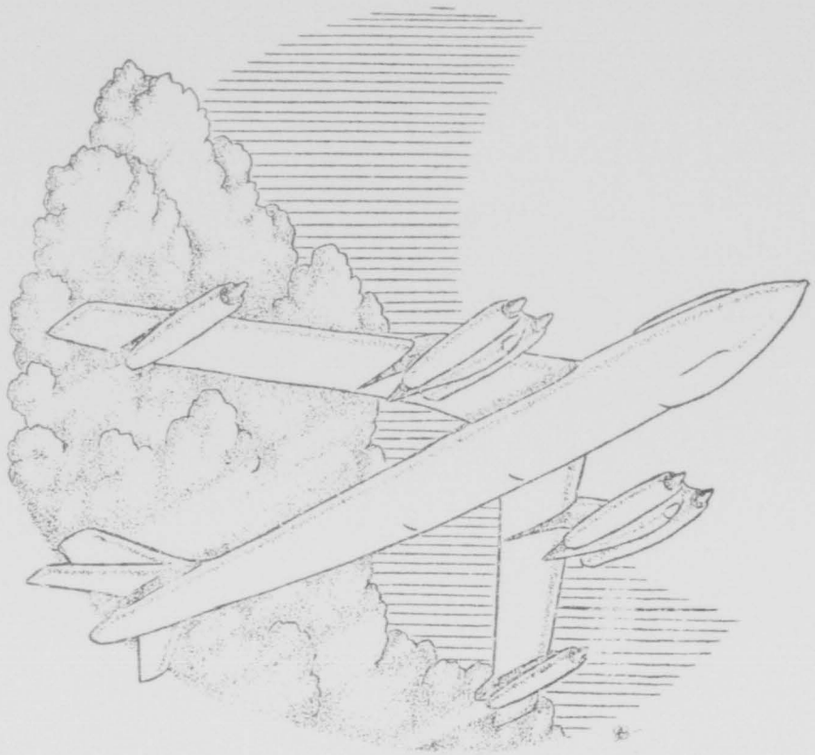
RESTRICTED EXHIBIT 22

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 116



6TH AIR DIVISION

MAC DILL AFB., FLORIDA

SECURITY INFORMATION

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 26 October 1953

SPECIFIC ITEM REPORT NO. 116

SUBJECT: Inadequacy of the Combat Interphone System Installed in B-47B Aircraft. (EE-60).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To point out several aspects of B-47B operation in which the interphone system for aircraft prior to 51-2357 is inadequate and to recommend simple fixes to alleviate the interphone problems of tactical units still equipped with B-47B aircraft.

II. FOREWORD:

A. Principally due to the fact that in B-47 aircraft prior to 51-2357 only the pilot has interphone mixer facilities, the co-pilot and observer often must constantly switch back and forth on their interphone control boxes to monitor the various communications necessary to the type flying being accomplished.

B. Deficiencies of the B-47B interphone system were reported in Unsatisfactory Reports submitted by the 3520th Combat Crew Training Squadron in October 1951 and by the 306th Bomb Wing in January 1952 (UR No. WATB-51-134 dated 18 October 1951 and UR No. 306BW-52-103, dated 23 January 1952). Specific corrective action was recommended by this Section for the deficiencies covered in paragraphs V, 1, 3, 4, 5, 10 and 11 of this report as the 1st Indorsement to WADC letter dated 4 April 1952, file WCSWB/LWB:lm/F-UR, subject: B-47 Airplane Interphone System. No action has been taken concerning these deficiencies or the recommended corrections. This report summarizes all interphone requirements of crew personnel during typical missions so that personnel in other than SAC organizations can consider these demands during modification or development programs of this or other types of interphone equipment.

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C. This report itemizes all known defects of the combat interphone system in the B-47 aircraft prior to No. 51-2357, as well as the fixes which will correct them. The AIC-10 interphone system which is installed in B-47 51-2357 and on is not covered in this report, as this system is not in use at this station.

III. CONCLUSIONS:

The combat interphone system installed in the B-47B aircraft prior to aircraft No. 51-2356 contains deficiencies which are annoying, impair crew efficiency, and at tines constitute a hazard to flight. These inadequacies could be removed by the modifications discussed herein at the base level by flight line radio maintenance personnel assigned to the A&E Squadron.

IV. RECOMMENDATIONS:

A. That technical orders be issued as soon as possible directing field modification of the B-47B aircraft interphone system as set forth in this report, to remove subject deficiencies.

B. That future interphone systems be analyzed to insure that they do not contain analogous deficiencies.

V. DISCUSSION:

A. Crew members of the 305th and 306th Bomb Wings have reported the interphone system installed in their B-47B aircraft prior to 51-2357 to be inadequate in the following respects:

1. The co-pilot cannot hear COMMAND when on INTERPHONE. He needs to do this when reading check lists to the pilot so that he will not interrupt communications between the pilot and the tower or the GCA unit. At present, the co-pilots read check lists by monitoring COMMAND and pressing the override button (wheel INPH switch) to talk; this is undesirable since other crew members can hear nothing except the co-pilot until he releases the override button.

2. The co-pilot cannot hear the omni-range. He should be able to do this when on COMMAND, because he gives his position reports on COMMAND and the omni-range station replies on its own VHF frequency. The pilot is the only crew member in the B-47B airplane, whose position is equipped to hear omni-range transmissions. He hears these on MIXED SIGNALS AND COMMAND by turning on the LOCALIZER mixer switch and the ARN-14 omni-range receiver.

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3. The co-pilot should be able to hear INTERPHONE on COMMAND when flying RBS runs so he can monitor the RBS frequency and still hear the observer's comments and instructions.

4. The instructor-pilot should be able to hear INTERPHONE on COMMAND, when riding in the back seat on transition flights, so he can hear the best approach speeds, etc., read off by the pilot in the nose while monitoring the tower frequency. This same requirement was made for a different reason in the preceding paragraph.

5. The pilot flying under the hood (instrument checks or hood time) in the rear seat (so the instrument examiner or safety observer can ride in the front seat) should be able to hear COMPASS on COMMAND so he can monitor the "approach control" frequency while making a range letdown.

6. Most observers desire the option to hear or not to hear COMMAND on INTERPHONE for one or both of the following reasons: They like to know what is going on during take-off, landing, pattern, instrument flying, etc. On RBS, they like to hear the transmissions made by both the site and the co-pilot while still on INTERPHONE. However, many observers prefer to have silence on the run from the IP to release and would therefore like to hear INTERPHONE only, at that time.

7. Some pilots state that they would like to have a mixer switch for LIAISON (on the C-695). The mixer switch that is now used for MARKER could be used for LIAISON. MARKER could come through the COMPASS mixer switch whether the compass was on or not (Figure 2).

8. The navigator should be able to monitor the APN-76 to see if it is being triggered without disconnecting his headset from the aircraft interphone system. This could be done simply by wiring the APN-76 test jack output to one of the unused positions on his C-701 interphone control box through the call relay, and affixing an appropriate decal. (Figure 3).

9. Many observers cannot reach the microphone foot switch when using the ID-218/APS-23 indicator because of leg length, flying boots, and/or floor

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covering making the switch difficult to find. An auxiliary switch mounted on a bracket two or three inches above the floor beneath the ID-218 radar indicator would eliminate this problem. It could be wired in parallel with the existing switch (Figure 4).

10. Unused positions of each interphone control box should be wired to the INTERPHONE position so the crew member cannot inadvertently place himself out of contact with the rest of the crew (Figure 5).

11. Interphone facilities should be provided in the aisle for a fourth crew member for standardization board checks, etc. A jack for a headset and microphone would provide the stand-board crew member with facilities to talk on interphone and to hear INTERPHONE and COMMAND (the co-pilot would have to turn on his "COMMAND TO INTERPHONE" mixer switch recommended in paragraph V B 2 so the fourth crew member could hear COMMAND). This jack should be located so the observer could also use it when away from his position, working on the K-System amplifier racks, etc. A three wire jack (JK-33), (see Figure 6), located to the left of the aisle above the K-System spare amplifier rack, near station 188, would require only a six foot extension cord to reach both ends of the aisle.

B. The deficiencies noted above have been investigated and fixes for the B-47B installation have been finalized.

1. The deficiencies mentioned in paragraph V A 2, 3, 4 and 5 could be corrected by wiring the pilot's MIXED SIGNALS AND COMMAND position to the co-pilot's interphone control box (Figure 1). The AM-142 is capable of driving both headsets simultaneously. The DECAL on the COMMAND position of the co-pilot's interphone control box would have to be changed to read MIXED SIGNALS AND COMMAND. Both the pilot and the co-pilot would hear the same mixed signals but the pilot would still have to control the signals to be mixed according to the type flying being performed, since he would still have the only set of mixer switches. None of the pilots interrogated had any objections to this arrangement. However, M/Sgt Mings, the 306th A&E Squadron radio shop NCOIC,

pointed out that neither pilot would have COMMAND reception if the AM-142 mixer amplifier failed. Eight (8) AM-142 mixer amplifiers have failed in the past year in 306th Bomb Wing B-47 aircraft. For this reason, Sgt Mings suggested that a toggle switch be added at the co-pilot's position giving him either ordinary COMMAND from the ARC-27 UHF radio, as at present, or MIXED SIGNALS AND COMMAND from the AM-142. However, the B-47 OES feels that in the event of AM-142 failure, the observer could relay UHF reception to the pilot or co-pilot over INTERPHONE which they could hear while on MIXED SIGNALS AND COMMAND, or INTERPHONE. Or, if the modification described in the next paragraph were made, it would be possible for the co-pilot to hear COMMAND on INTERPHONE whenever desired.

2. The deficiencies mentioned in paragraphs V A 1 and 6 would be eliminated by providing a means for the observer and co-pilot to hear COMMAND on INTERPHONE when they wish. This is accomplished by a switch installed at the co-pilot's position connecting the ARC-27 UHF radio output to the AM-300 interphone amplifier input through a 1000 ohm dropping resistor (Figure 1). With the switch "ON", all crew members could hear COMMAND when on INTERPHONE. The switch should be labelled "COMMAND to INTERPHONE" and should have an OFF and an ON position.

3. Suggested corrections for the deficiencies listed in paragraphs V A 7, 8, 9, 10 and 11 are given in those paragraphs, and the details of the modifications are shown in Appendix I and referenced in each paragraph.

4. Each of these corrections is a simple one requiring less than 2 man-hours per airplane to accomplish. If accomplished concurrently, all modifications can be made in less than 5 man-hours per aircraft.

5. These modifications are aircraft wiring changes and do not affect interchangeability of the interphone components except for the decal alterations.

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1 Appendix
w/Figures 1 thru 6

APPROVED:

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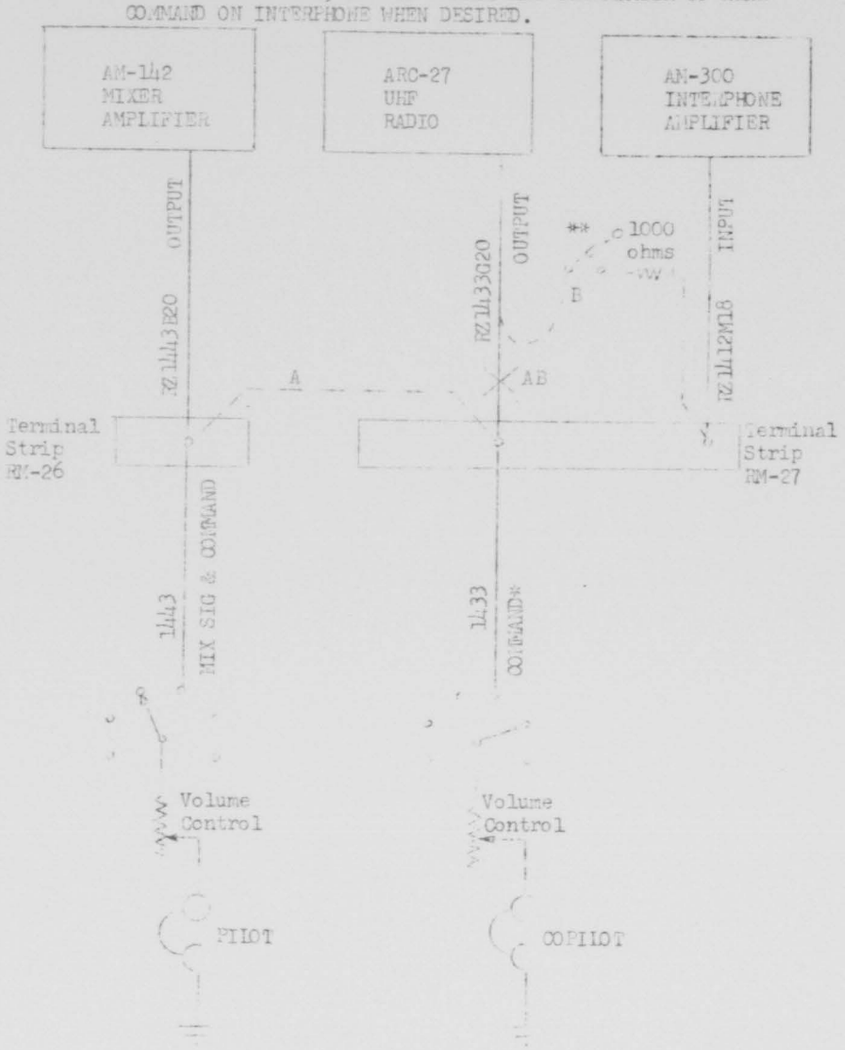
SIMPLIFIED SCHEMATIC OF PROPOSED MODIFICATIONS TO PERMIT THE COPILOT TO HEAR THE PILOT'S MIXED SIGNALS AND COMMAND IN B-47B AIRCRAFT, AND TO PERMIT ANY CREWMEMBER TO HEAR COMMAND ON INTERPHONE WHEN DESIRED.



A. The addition of wire A and the disconnection of wire AB permit the copilot to hear the pilot's MIXED SIGNALS & COMMAND. *Decal: MIX SIG & COMMAND.

B. The addition of the wire B, switch (at the copilot's position), and 1000 ohm resistor as shown permits any crewmember to hear COMMAND on the INTERPHONE position when the switch is on. **Decal: COMMAND TO INT, ON, OFF.

Figure 1

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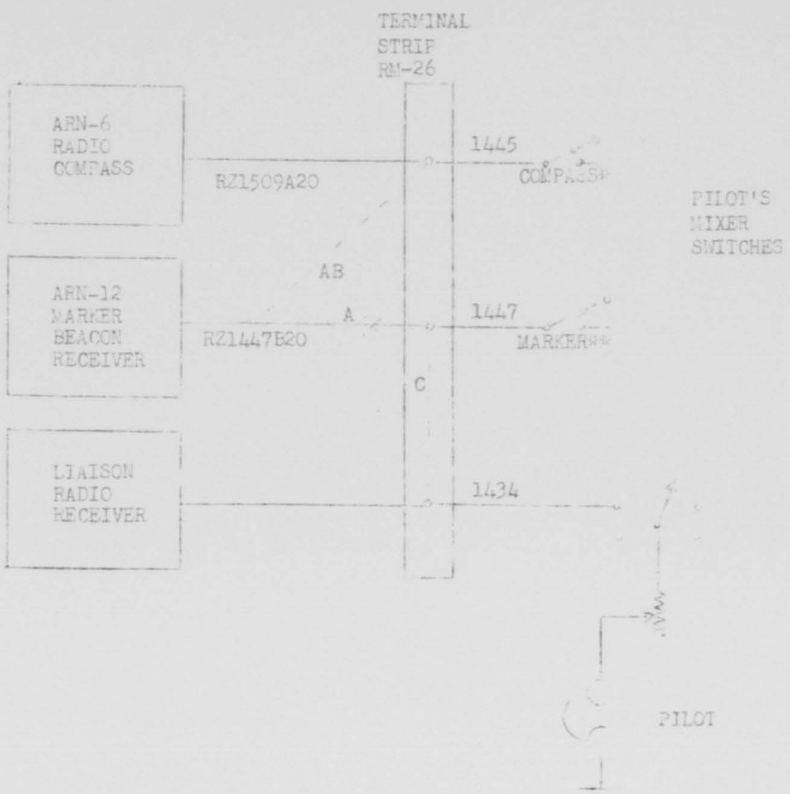
SIMPLIFIED SCHEMATIC OF MODIFICATION TO PROVIDE PILOT WITH A LIAISON MIXER SWITCH BY USING ONE SWITCH FOR BOTH MARKER BEACON AND COMPASS. LIAISON RECEIVER OUTPUT IS THEN FED THROUGH THE MIXER SWITCH FORMERLY USED FOR THE MARKER BEACON.



DISCONNECT WIRE A FROM TERMINAL STRIP AND RECONNECT IN POSITION AB AS SHOWN. ADD WIRE C.

*CHANGE DECAL TO READ: COMPASS AND MARKER

**CHANGE DECAL TO READ: LIAISON

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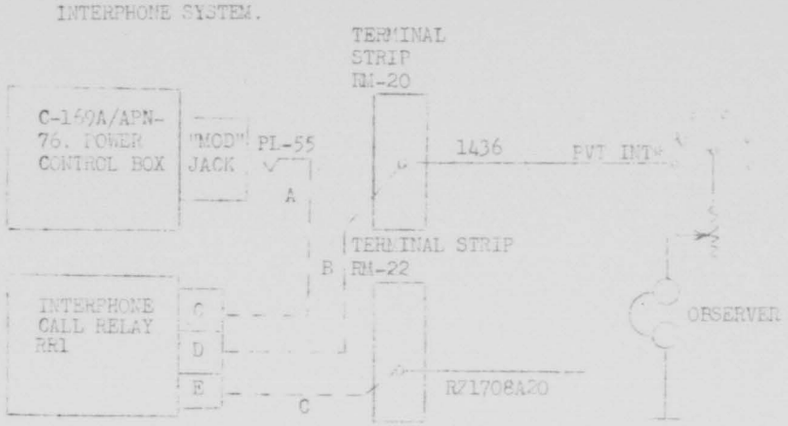
Figure 2

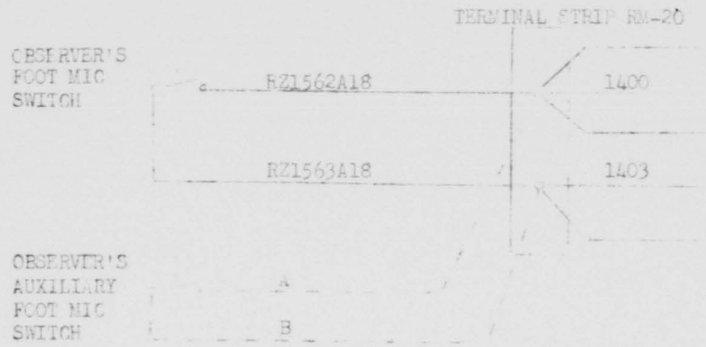
SIMPLIFIED SCHEMATIC OF MODIFICATION TO ALLOW OBSERVER TO MONITOR APN-76 WITHOUT DISCONNECTING HIS HEADSET FROM THE INTERPHONE SYSTEM.



* CHANGE DECAL TO READ: RENDEZVOUS. ADD WIRES A, B, AND C AS SHOWN. IT IS SUGGESTED THAT THE PL-55 BE USED ON WIRE A BECAUSE THE APN-76 WIRING (CABLES) IS NOT AVAILABLE ON TERMINAL STRIPS.

Figure 3

SIMPLIFIED SCHEMATIC OF MODIFICATION TO PROVIDE THE OBSERVER WITH AN AUXILIARY FOOT MICROPHONE SWITCH HE CAN REACH WHILE HIS SEAT IS TURNED TO FACE THE RADAR INDICATOR, ID-218/APS-23.



ADD WIRES A AND B TO CONNECT AUXILIARY FOOT SWITCH IN PARALLEL WITH EXISTING SWITCH.

Figure 4

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MODIFICATION TO PREVENT LOSS OF CREW CONTACT BY INADVERTENT USE OF UNUSED INTERPHONE CONTROL BOX POSITIONS. ADD WIRES A, B, C, AND D AS SHOWN. IF THE MODIFICATION SHOWN IN FIGURE 3 HAS BEEN PERFORMED, ADD ONLY WIRES B, C, AND D.

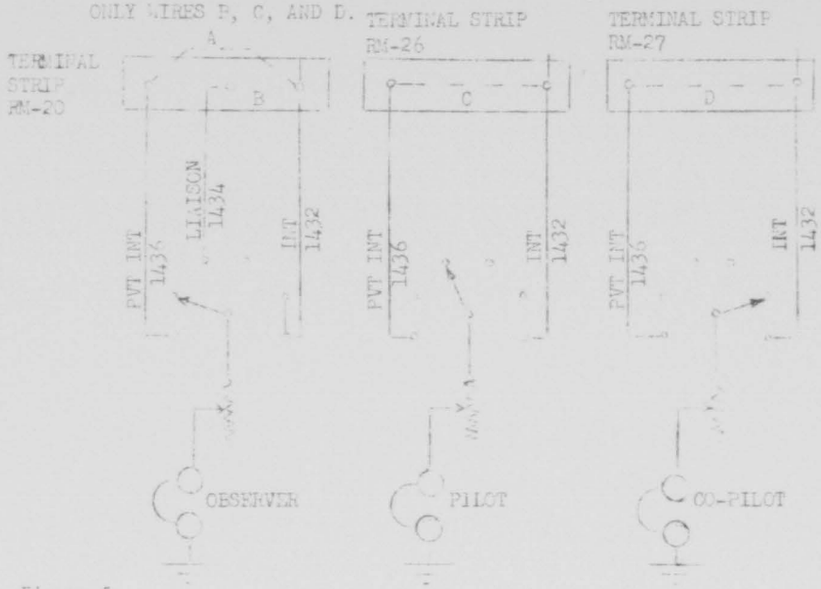

Figure 5

MODIFICATION TO ALLOW THE FOURTH CREWMEMBER TO HEAR INTERPHONE AND TRANSMIT ON INTERPHONE. IF THE MODIFICATION SHOWN IN FIGURE 1 HAS BEEN PERFORMED, THE FOURTH CREWMEMBER WILL BE ABLE TO HEAR COMMAND WHENEVER THE "COMMAND TO INTERPHONE" SWITCH IS ON.(SEE FIGURE 1). ADD WIRES A, B, AND C AND THE THREE WIRE JACK, JK-33, AS SHOWN.

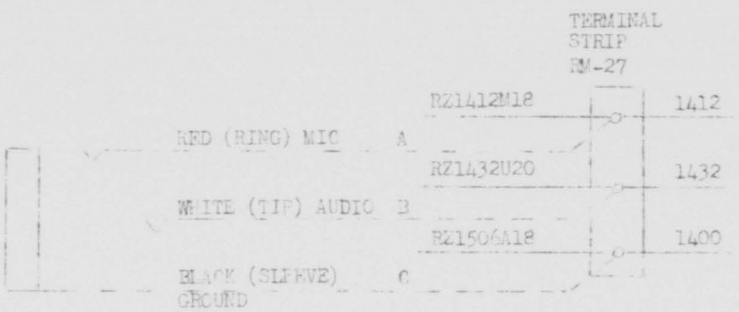

Figure 6

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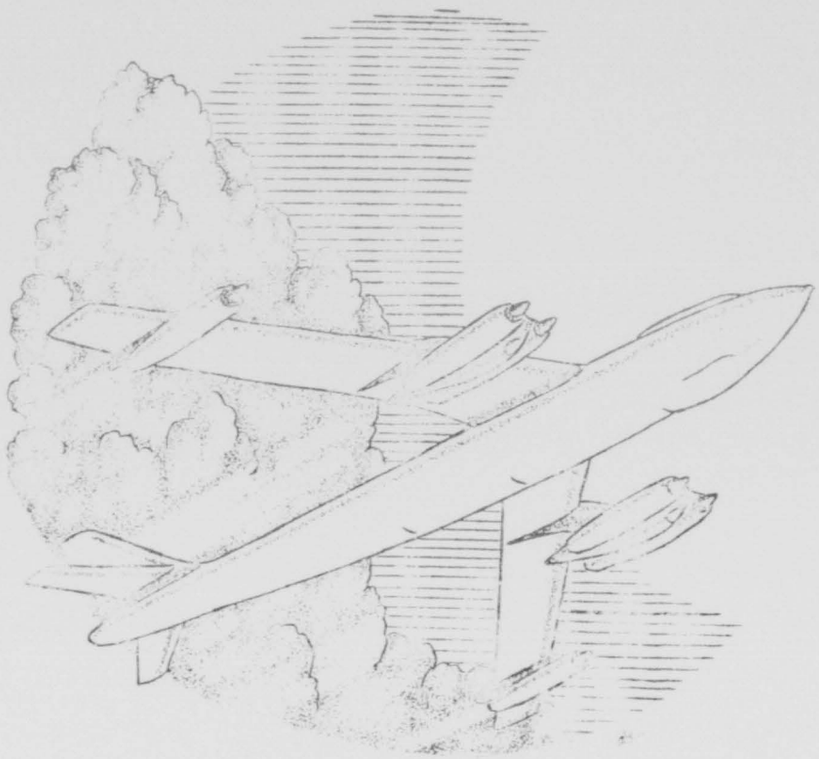
EXHIBIT 23

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 111



6TH AIR DIVISION

MACDILL AFB., FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 14 October 1953

SPECIFIC ITEM REPORT NO. 110

SUBJECT: Installation of ILAS and Omni-Range Indicator in the Co-Pilot's Position, B-47 Aircraft (EE-61)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To report on the installation of the ILAS indicator, ID-249, and the omni-range indicator, ID-250, in the co-pilot's position on B-47 aircraft, which was made to facilitate instrument practice and proficiency flight checks.

II. FOREWORD:

A. AFR 60-2 and AFR 60-4 require that B-47 pilot personnel be given instrument proficiency flight checks in B-47 aircraft.

1. The poor forward visibility from the co-pilot position in the B-47 aircraft dictates that the check pilot, during an instrument check, occupy the forward pilot's seat.

2. During instrument flight checks conducted by the 306th Bombardment Wing, the pilot demonstrating his instrument flying technique occupies the aft or co-pilot's seat. As the co-pilot's position does not provide the ID-249 and ID-250 instruments, the pilot must elevate his seat to the uppermost position and look over the shoulder of the check pilot in order that he may observe those instruments. Although it is very inconvenient and difficult for the student pilot to read these instruments, proficiency flight checks have been accomplished in this manner.

B. In an effort to overcome the limitations noted above, the 305th Bombardment Wing suggested the installation of these two indicators at the co-pilot's position. Headquarters Strategic Air Command message DM6 13703, dated 9 July 1953, authorized the

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installation of the two instruments in each of nine (9) aircraft. Subsequent to installation, the location of these instruments was inspected by representatives of the Fifteenth Air Force and Second Air Force. Many hours of flying time have been accumulated during instrument flight checks conducted with aircraft in which these additional instruments have been installed.

III. CONCLUSIONS:

A. For safety of flight, the instructor pilot must occupy the forward or pilot's seat during performance of the instrument proficiency flights required by AFR 60-2 and AFR 60-4.

B. The installation of the ID-249 and the ID-250 indicators on an extension panel in the co-pilot's position, as accomplished at MacDill Air Force Base, enables pilots to practice and execute the required instrument maneuvers. However, this installation does not afford optimum positioning of the subject indicators. (Refer to paragraph V, A, page 3, and Figure 1, Appendix I.)

C. Optimum positioning of these indicators can be obtained by incorporating them in the co-pilot's instrument panel as shown in Figure VI, Appendix I. (Also refer to page 8, Appendix I.)

D. Either configuration can be installed by the operating units and can be removed readily by field stripping prior to entering combat.

E. Although nine (9) modified aircraft per bomb wing would be sufficient for instrument flight proficiency checks, the modification of all aircraft will facilitate scheduling aircraft for instrument checks and will permit the co-pilot to practice instrument procedures during routine missions, thus increasing his proficiency.

IV. RECOMMENDATIONS:

A. That your Headquarters initiate action to incorporate subject indicators in the co-pilot's instrument panel, as proposed in Figure VI, Appendix I, on all production B-47 aircraft as soon as possible.

B. That your Headquarters take action to authorize and supply the TOC kits necessary to enable field modification of in-service aircraft, as shown in Figure VI, Appendix I. The Technical Order which directs this change should also authorize the removal of the instruments prior to entering combat.

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V. DISCUSSION:

A. The installation of the ID-249 and the ID-250 indicators in the co-pilot's position, as accomplished at MacDill Air Force Base, requires the addition of an extension panel to the co-pilot's instrument panel in order to afford space for mounting. This type of installation was utilized as an interim solution to avoid any changes to the instrument panel. Physical location and dimensions of this extension panel are shown in Figure I of Appendix I. Through flight testing, it has been learned that this location of the indicators has two limitations. A steep turn to the right brings the pilot's left arm into a position which blocks the indicators from his view. To see these instruments, the pilot must remove his left arm from the control column. Now, should the situation demand changing the throttles, valuable time is lost while the pilot repositions his arms before he can perform this operation. Another limiting factor is the distance that these instruments are located from the other flight instruments.

B. Despite these limitations, pilots report the extension panel installation to be a valuable aid in acquiring instrument flight proficiency. This installation allows pilots to perform all phases of instrument flight and to receive the necessary instrument proficiency flight examinations as required by Air Force Regulations 60-2 and 60-4 even though full use of the ID-249 is not attained (refer to paragraph V D below). Pilots further agree that subject installation should be incorporated on all B-47 aircraft to permit all pilots to maintain the high degree of instrument proficiency required for safety of flight and for the full accomplishment of the all-weather global mission of the Strategic Air Command.

C. The operating limitations noted above can be eliminated by mounting the subject indicators directly on the instrument panel. (See Figure VI, Appendix I.) The changes which must be made in the instrument panel to accomplish this installation are shown on page 8, Appendix I.

D. Operation:

1. Because the AFN-14 equipment is not designed to permit certain indicator functions to be duplicated, operation of the co-pilot's ID-249 differs from the operation of the pilot's ID-249 in the following manner: (a) the co-pilot's "Heading Indicator (Mag)" is not actuated, (b) the co-pilot's "To-From Indicator" is not actuated, and (c) the co-pilot has no control with his "Course Set Knob". Lack of these functions does not affect adversely the use of

the co-pilot's ID-249, as all the above information may be inserted or obtained at the pilot's indicator which performs in its normal manner.

2. Operation of the co-pilot's ID-250 is identical with the operation of the pilot's indicator; i.e., full information is received and indicated by both instruments.

E. Installation.

1. Wiring for the ID-249 indicator installation is contained in Figure III, Appendix I, page 4.

2. Wiring for the ID-250 indicator installation varies with the aircraft model because of different wiring configurations. Figures IV and V, Appendix I, detail the wiring required for aircraft currently in service. Figure IV shows the complete wiring of the co-pilot's ID-250 applicable to B-47 aircraft number AF 51-2045 through AF 51-2356. On these aircraft a 100 ohm, 10 watt resistor and two 47 ohm, 2 watt resistors must be added on terminal strip RM142. (Refer to Figure IV.) The 100 ohm dropping resistor is required to prevent the loop antenna selsyn from burning out; while the 47 ohm dropping resistors are required to prevent the #1 pointers of the ID-250 indicators from "motoring". On B-47 aircraft subsequent to number AF 51-2357 the 100 ohm resistor and one of the 47 ohm resistors have been added in production; therefore, these aircraft will require the addition of but one 47 ohm dropping resistor as shown in Figure V. All other wiring connections for the co-pilot's ID-250 on these aircraft are as shown in Figure IV.

3. Figure II, Appendix I, contains the list of materials required to accomplish the installation of these indicators here at MacDill Air Force Base in the manner depicted by Figure I, Appendix I, page 2. If the indicators are mounted directly on the instrument panel, these materials will be required in addition to those shown on page 8, Appendix I. All installations can be accomplished on aircraft already in the field by depot teams, or if necessary by Wing personnel with assistance from AMC depots.

4. Labor expenditures per installation as accomplished here at MacDill Air Force Base, including the fabrication of cables and brackets, are as follows: (a) initial installation required two (2) men working eight (8) hours a day for six (6) days, or a total of ninety-six (96) man-hours; (b) ensuing installations required two (2) men working eight (8) hours a day for four (4) days, or a total of sixty-four (64) man-hours.

5. If all cables and parts are provided in a kit, it is estimated that either installation can be made in 25-30 man-hours.

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F. The all-weather global mission concept requires that all B-47 pilots be thoroughly proficient in instrument flying. Subject installation provides the equipment necessary to allow the B-47 pilots to achieve a high degree of skill at a relatively low cost and at a weight penalty of only eleven (11) pounds. Therefore, it is strongly recommended that these instruments be incorporated in all B-47 aircraft on a production and retrofit basis as soon as possible. Authority for field stripping the instruments before entering combat should be provided in the directive authorizing the installation.

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1 Appendix
w/Fig I thru VI

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APPENDIX I

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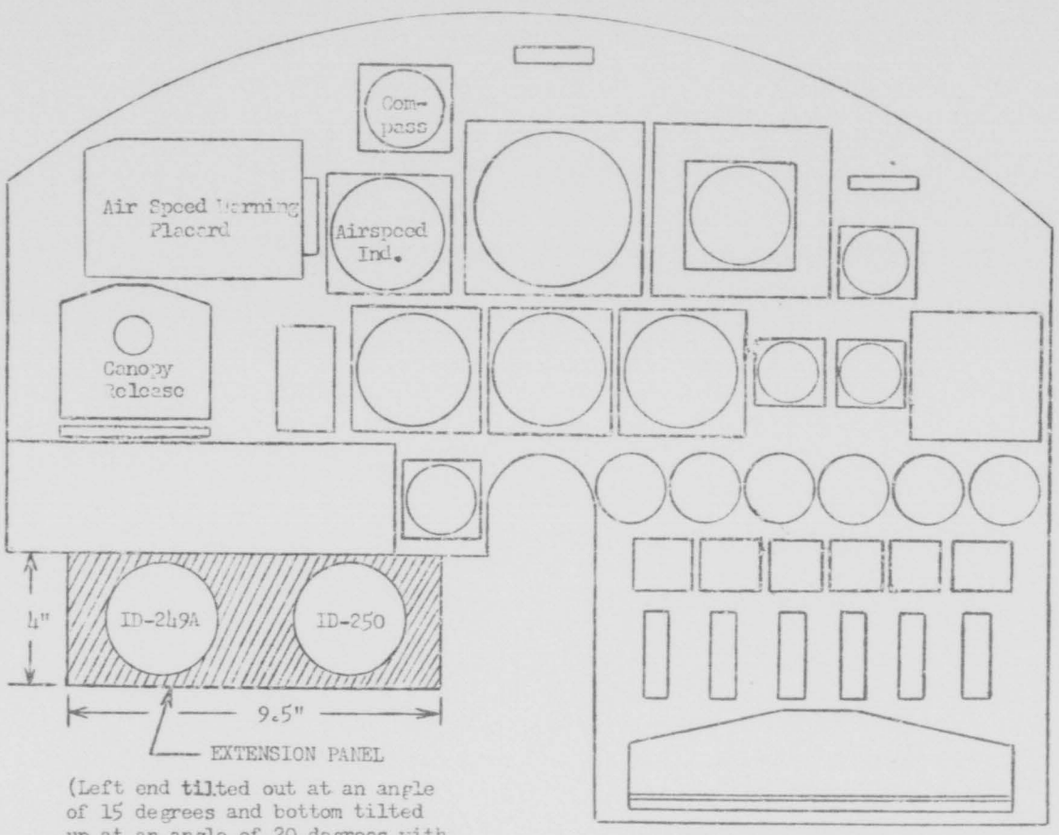

(Left end tilted out at an angle of 15 degrees and bottom tilted up at an angle of 20 degrees with respect to plane of present panel.)

FIGURE I. B-47 Copilot's Instrument Panel Modification

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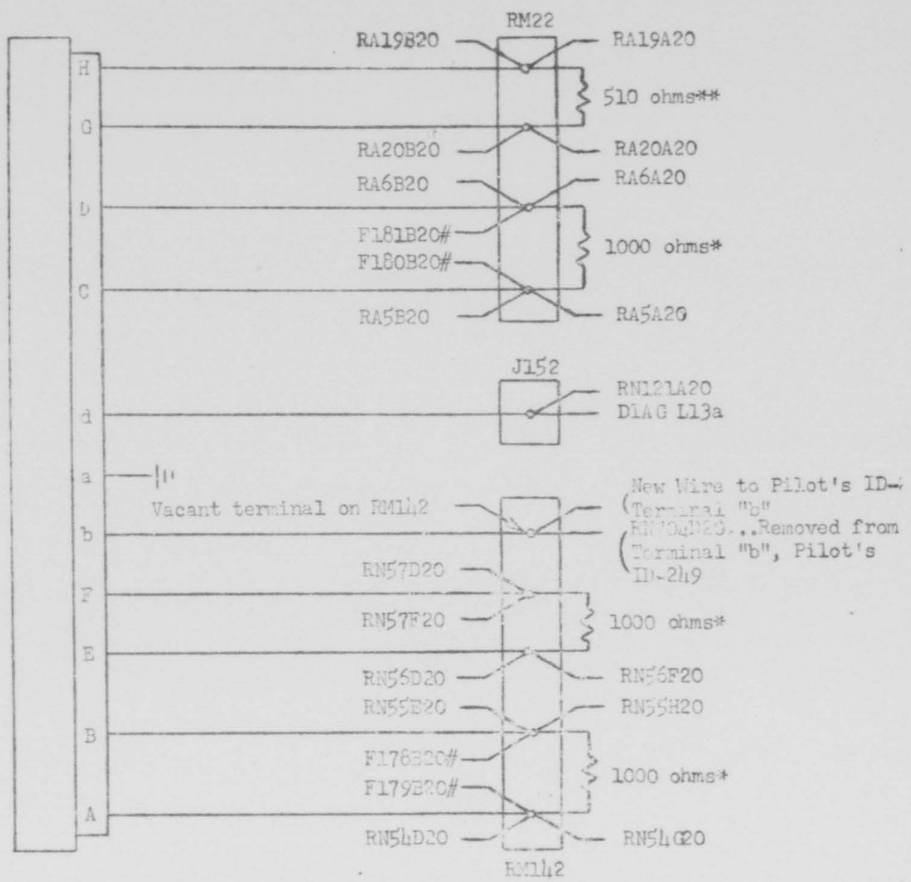
AMOUNT	NOMENCLATURE	STOCK NUMBER	COST	WEIGHT
2 ea.	47 ohm, 2 Watt Resistor	3300-381519620	$0.14	
1 ea.	100 ohm, 10 Watt Resistor	3300-390243796	.44	
100 ft.	#20 Aircraft Cable	8860-840000-785	.01/ft.	
1 ea.	Connector AN3106-28-12S	8850-387628	6.62	
1 ea.	Connector AN3106-22-14S	8850-367162	4.25	
1 ea.	Indicator ID-249	6234-7202	733.59	3.25 lbs.
1 ea.	Indicator ID-250	6234-36104	262.64	2.50 lbs.
25 ea.	Stakon Terminal Lugs	8880-741000-3825		

NOTE: Weight of resistors, cables, and connectors is approximately 5 lbs.
Total weight of complete installation is approximately 11 lbs.

FIGURE II. Materials Required For Installation of ID-249 and ID-250 Indicators in Co-pilot's Position of B-47 Aircraft



* --- Remove from Circuit
** -- Change to 1000 ohms
# --- For Use on Aircraft Number AF 51-2045 thru 51-2136, Change Wire Section Symbol from "B" to "A"

FIGURE III. Wiring Diagram For Installation of ID-2L9A/ARN Indicator in Co-pilot's Instrument Panel (Applies to B-47 Aircraft Number AF 51-2137 and on).

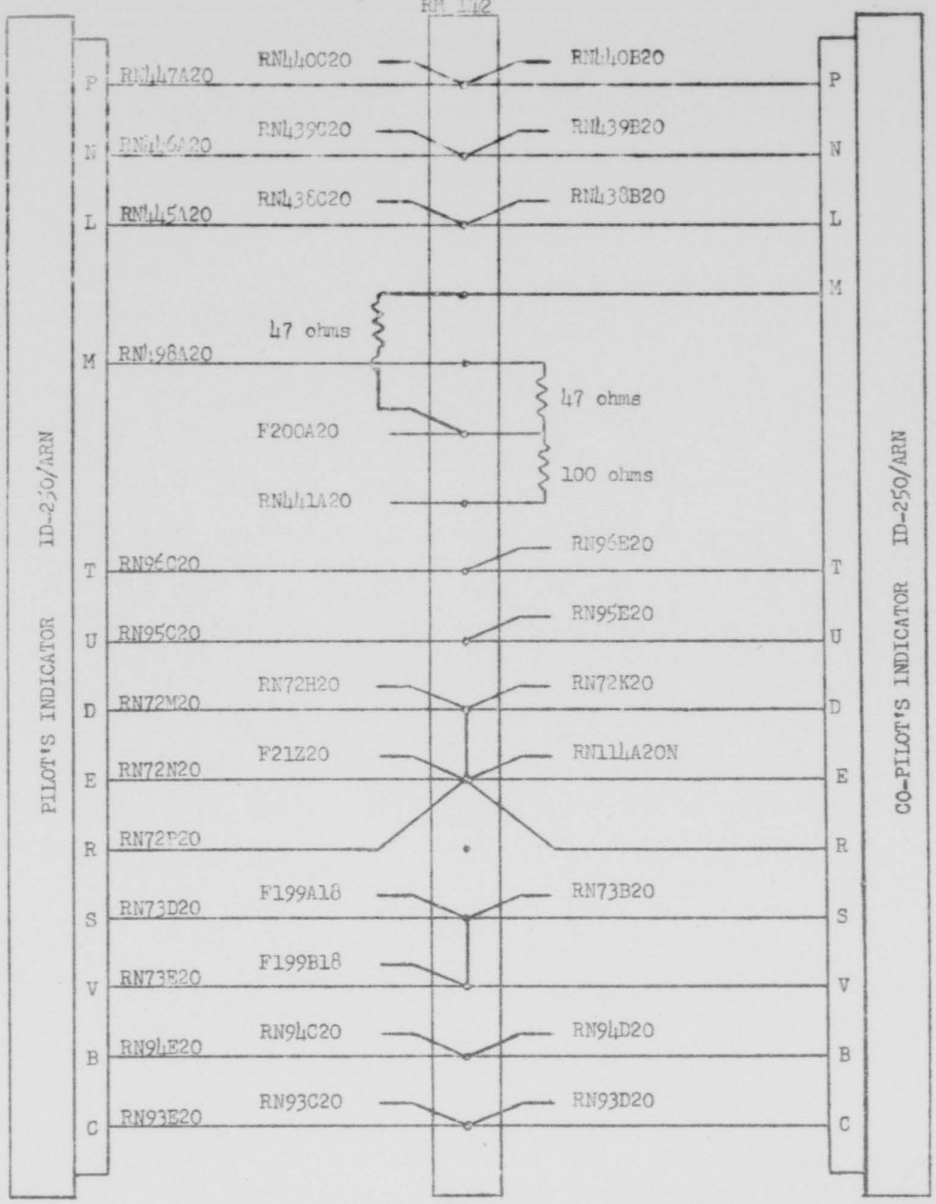
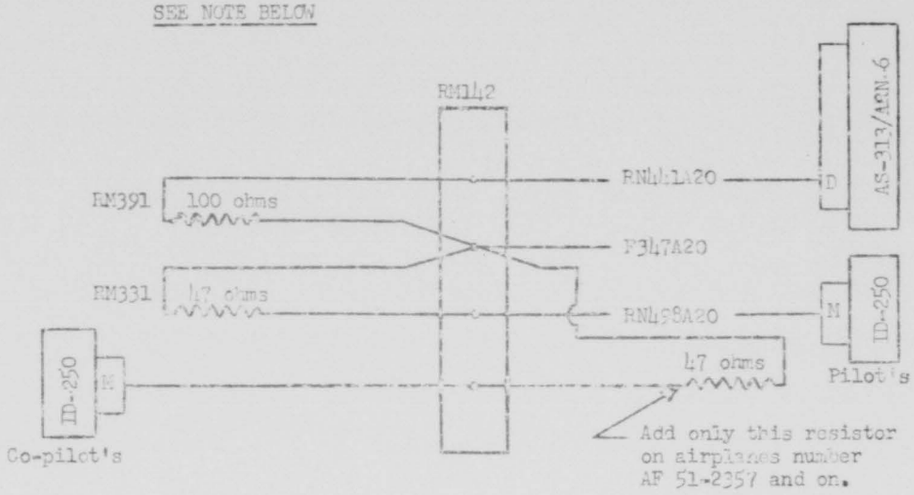


FIGURE IV. Wiring Diagram For Installation of ID-250/ARN Indicator in Co-pilot's Instrument Panel (Applies to B-47 Aircraft Number AF 51-2045 thru 51-2356. See FIGURE V For Applicable Wiring Diagram For Aircraft Number 51-2357 and on.)



NOTE: All other wiring connections of Co-pilot's ID-250 Indicator are made as per FIGURE IV, APPENDIX I, page 5.

FIGURE V. Modification of Wiring Diagram For Installation of ID-250/ARN Indicator in Co-pilot's Instrument Panel (Applies to B-47 Aircraft Number AF 51-2357 and on).

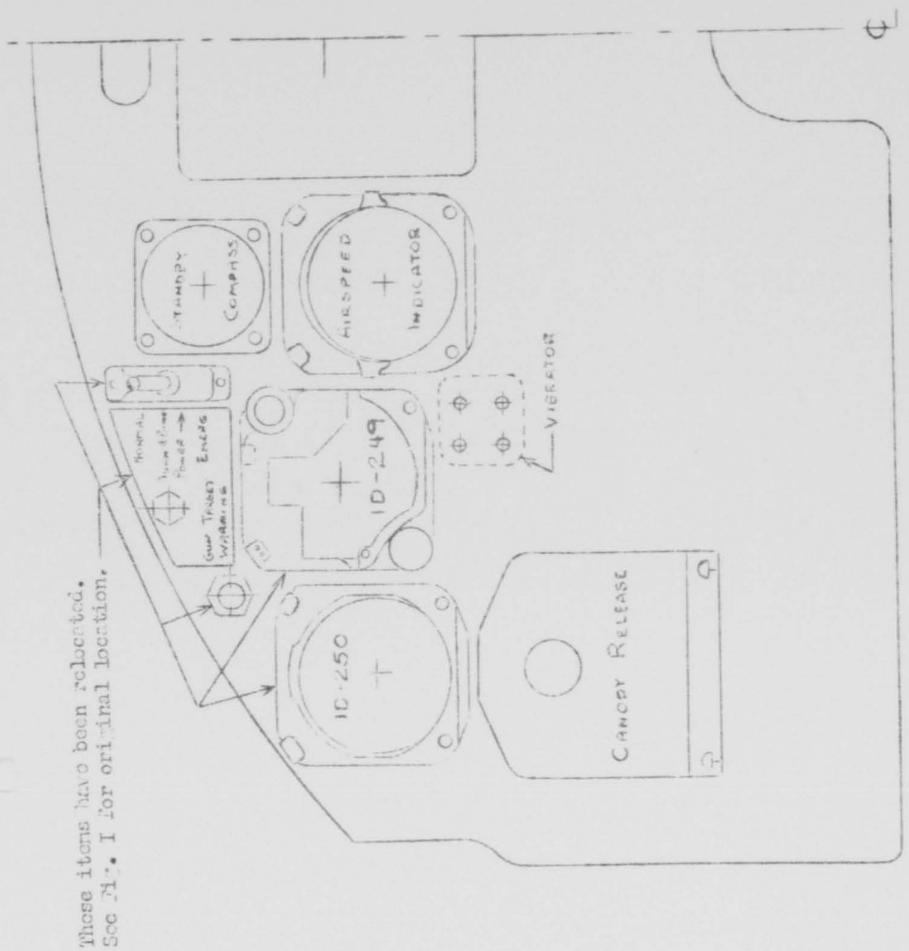


FIGURE VI. Proposed Modification of Co-pilot's Instrument Panel, B-47 Aircraft.

Retyped

INSTALLATION OF ID-249 AND ID-250 INDICATORS
ON CO-PILOT'S INSTRUMENT PANEL

The following changes are required to mount the ID-249 and ID-250 on the co-pilot's instrument panel in the space presently occupied by the AIR SPEED WARNING placard. These changes are shown in Figure VI of this Appendix.

1. Removal of the co-pilot's speed restriction placard from the instrument panel, cutting this placard so as to remove all but the necessary air speed limitation data, and then mounting the cut placard on the left side of the cockpit adjacent to the co-pilot's instrument panel in a manner similar to ECP #986, "Panel Installation, Pilot's Speed Restriction".

2. Relocation of the Turn and Bank Power Switch as shown in Figure VI.

3. Relocation of the Gun Target Warning Light as shown in Figure VI.

4. Manufacture of a placard giving "Gun Target Warning", "Turn and Bank Power", "Normal", and "Emergency" information and mounting of same, with associated lighting adjacent to the warning light and the "Turn & Bank" Power Switch, on the instrument panel.

5. Mounting the ID-249 and the ID-250 indicators directly on the instrument panel.

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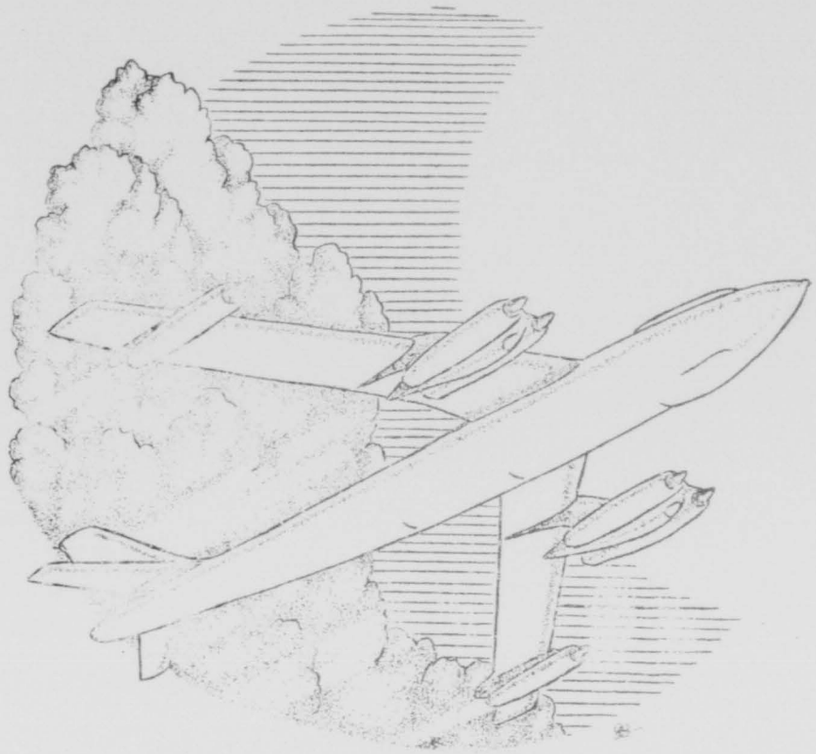
EXHIBIT 24

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 12



6TH AIR DIVISION

MAC DILL AFB., FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 5 October 1953

SPECIFIC ITEM REPORT NO. 112.

SUBJECT: Water Separators for 20 KVA Alternators in B-47 Aircraft (EE-46).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To recommend a solution to the problem of alternator outages due to moisture encountered in flight, as a result of flight tests of: (a) the Boeing designed water separator, and (b) the "window" type alternator.

II. FOREWORD:

Joint AMC-WADC B-47 Project Office message, dated 17 April 1953, subject: Flight Test of ECP 1407 Water Separator, requested this Section to test the Boeing water separator, scheduled to be provided for retrofit and production installation by ECP 1407, and the "window" type alternator to determine the reliability of these configurations when moisture is encountered in flight. These test items were developed to remedy the problem of alternator malfunctions experienced with the original 20 KVA alternator installation when moisture was encountered in flight.

III. CONCLUSIONS:

A. The Westinghouse window bracket alternator (P/N A35A9118) is a satisfactory solution to the moisture problem.

B. The Boeing water separator (ECP 1407) helps alleviate the problem, but is not effective under all conditions.

C. The system of baffles required in the accessory nose dome by the Boeing water separator is also required by the window type

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alternator. Therefore, conversion from the Boeing fix to the window alternator requires essentially only an alternator change.

D. This problem adversely affects the operational capability of the B-47 aircraft, and corrective measures should be expedited.

IV. RECOMMENDATIONS:

A. The Westinghouse window type alternator, P/N A35A9118, be adopted as the final solution to the moisture problem.

B. The window type alternator be made available for production aircraft and for retrofit as soon as possible.

C. That organizations provided with ECP 1407 kits (Boeing water separators) proceed with installation of these kits.

D. That organizations not yet supplied with ECP 1407 kits be so supplied, so that as an interim measure they may enjoy what protection the Boeing fix provides, and so that they will be prepared to use the window type alternators immediately upon receipt.

V. DISCUSSION:

A. Moisture encountered in flight in the form of clouds or rain has always caused malfunctions of the Westinghouse 20KVA alternator, P/N A35A9107 on B-47 aircraft. The problem is especially pronounced because the violent voltage fluctuations and high transient voltages accompanying the malfunctions cause extensive damage in the K-System. During flights through precipitation, moisture comes into the alternator with the cooling air and impinges on the exciter slip rings and commutator. This varies brush contact resistance at the slip rings and commutator, causing exciter field strength variations. These field variations occur too rapidly to be controlled by the voltage regulator which has a slight time delay; therefore, the regulator over-controls, causing an oscillation. When such oscillations reach a critical value, the over-voltage relay trips, removing the alternator from the line. However, this usually does not occur soon enough to prevent damage to the K-System.

B. This Section conducted flight tests of both the Boeing water separator, now being provided to B-47 using agencies as ECP-1407MC, and the window alternator as possible solutions to this problem. A summary of these tests is as follows:

1. Unmodified Alternators: A total of twelve (12) flights were flown with these alternators. Clouds and/or rain were encountered thirteen (13) times. The alternators failed or fluctuated severely enough to damage K-Systems on four (4) occasions, or in approximately 30% of the

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penetrations of rain and/or clouds. (On one occasion when an unmodified alternator failed, an alternator equipped with a Boeing separator on the same aircraft did not fail. One one other occasion, the Boeing separator equipped alternator failed after the unmodified alternator had failed. On two occasions both the Boeing separator equipped alternator and the unmodified alternator on the same aircraft failed or fluctuated. See Appendix II).

2. Boeing Water Separator Equipped Alternators: A total of fifty-five (55) flights were flown with these alternators. Clouds and/or rain were encountered fifty-one (51) times. The alternators failed six (6) times, or in approximately 12% of the penetrations of clouds and/or rain. (Two of these failures occurred on aircraft that also had window alternators, which did not fail. Two failures occurred on aircraft that also had unmodified alternators, which did fail. Two failures occurred at the same time on an aircraft which had both alternators equipped with Boeing water separators. See Appendix II).

3. Window Type Alternators: A total of thirty-five (35) flights were flown with these alternators. Clouds and/or rain were encountered thirty-six (36) times. There were no alternator failures. However, slight voltage fluctuations were noted on one occasion. (On this occasion, a Boeing water separator equipped alternator on the same aircraft fluctuated more severely. On another occasion, a Boeing water separator equipped alternator fluctuated while the window alternator on the same aircraft did not. On two occasions, Boeing water separator equipped alternators failed, while window type alternators on the same aircraft did not. See Appendix II).

C. Therefore, it is concluded that the window bracket alternator is a satisfactory solution to the moisture problem. It is also concluded that the Boeing water separator, while not completely satisfactory, affords some protection for the alternators.

D. The Boeing water separator, ECP 1407, requires that a baffle be installed in the engine nose dome to form a plenum chamber. (See Fig I, Appendix III). The window type alternator requires the same nose dome configuration (See Figure II, Appendix IV). ECP 1407 kits provide the proper parts for nose dome modification. Therefore, the only steps necessary to change from the Boeing water separator to the window alternator are: (1) change alternators, (2) reinstall alternator baffle (P/N 9-47819), and (3) fabricate and install the solid cover cap required for the window alternators. The solid cover cap is made from air connector, P/N P15C8679, by welding a plate across the end of it.

E. It is recommended, therefore, that using organizations provided with ECP 1407 kits proceed with the installation of these kits. It is further recommended that using organizations not yet provided with these

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kits be so provided, and that they also proceed with installation thereof. Thus, all organizations will be prepared to install the window type alternators immediately upon receipt, and pending receipt will have the limited protection that the Boeing water separators provide.

F. It is also recommended that window alternators, P/N A35A9118, be provided for retrofit as rapidly as possible, and installation on production aircraft be started at the earliest possible date.

Michael W. Huber
MICHAEL W. HUBER
S/Sgt, USAF
Project Engineer

APPROVED:

for Thomas P. Savage Major USAF
THOMAS P. SAVAGE
Major, USAF
Chief, B-47 OES

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A-P-P-E-N-D-I-C-E-S

I. SUMMARY, ALTERNATOR WATER SEPARATOR EVALUATION

II. DETAILED ACCOUNT OF TEST FLIGHTS.

III. FIGURE I - BOEING WATER SEPARATOR INSTALLATION

IV. FIGURE II - WINDOW ALTERNATOR INSTALLATION

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SUMMARY

ALTERNATOR WATER SEPARATOR EVALUATION

	TOTALS					
	NUMBER OF FLIGHTS	ENCOUNTERED RAIN	ENCOUNTERED CLOUDS	ALTITUDE COUDS ENCOUNTERED	ENCOUNTERED TURBULENCE	NO. OF ALTERNATOR MALF'NS
UNMODIFIED ALTERNATOR	12	Lt-4 Mod 3	Ci - 5 Str- 2 Cb - 3 Cu - 3	30 to 40 M' 10 Below 30M' 3	Lt 2 Mod 3	4
BOEING FIX	55	Lt 19 Mod 14 Heavy 1	Ci -18 Cb -20 Str- 6 Cu - 8	30 to 40M' 40 Below 30M' 12	Severe 2 Mod 11 Lt 20	6
WINDOW ALTERNATOR	35	Lt 7 Mod 11 Heavy 1	Ci - 9 Cb -15 Cu - 5 Str- 4	30 to 40M' 24 Below 30M' 9	Severe 2 Mod 6 Lt 20	0

NOTE: Ci = Cirrus
Str= Stratus
Cb = Cumulonimbus
Cu = Cumulus

Lt = Light
Mod = Moderate

APPENDIX I

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ALTERNATOR WATER SEPARATOR EVALUATION

B-47 No. 51-2333

#1 Alternator Unmodified

#6 Alternator Modified-Boeing

1953 DATE	ALTITUDE	IND. TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
20 Jun	0-40,000	-	1 Min	Light	Thunder-storm edge only	Unknown	None	None	None
22 Jun	During Climb	-	Unknown	Light	Cirrus	None	None	None	None
	Descent	-	Unknown	Un-known	Heavy Culmulus	Mod	None	None	None
25 Jun		NO RAIN ENCOUNTERED							
29 Jun	35,000	-19	3-5 Min	Mod to Heavy	Thunder-heads	Mod to Heavy	#1 Failed	Unknown	Field Flashed
1 Jul		NO RAIN ENCOUNTERED							
7 Jul	34,000	-17	3 Min	None	Dry Cir-rus	None	Both Fluctuated	Affected Crystal in R.T.	None
9 Jul	35,000	-22	15 Min	Very Light	Cirrus	None	#1 Failed	None	None

APPENDIX # II

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ALTERNATOR WATER SEPARATOR EVALUATION

B-47 No. 51-2333

#1 Alternator Unmodified

#6 Alternator Modified-Boeing

CONT'D.

1953 DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
9 Jul	35M'	-22	15 Min After leaving rain	None	None	None	#6 Failed	Damaged crystals in R.T. Unit	Alternator being changed due to bad bearing.
12 Jul	35-40,000	-26 -19	1 Hr	Light Moist	Stratus	Negligible	None		
15 Jul	35	-18	2 Hrs	None	Light Cirrus	Mod	None		
	21-18,000	∕ 2	4-5 Min	Mod	Cumulus	None	None		
20 Jul	35 M'	-16	In & Out 2 Hrs	No	Stratus	No	No		
	35 M'	-20	15 Min	No	Cumulus & Moisture	Light	Lost Both		Reset #1 OK - could not get #6 back on.
31 Jul	10 M'	∕15	10 Min	Mod	Cumulo-nimbus	Light	None	None	Window bracket alternator installed prior to flight.
3 Aug	35 M'	-18	Few Minutes	None	Wispy Cirrus scattered	None	None	None	

APPENDIX II

1130

ALTERNATOR WATER SEPARATOR EVALUATION
B-47 No. 51-2333

#1 Alternator } Prior to 20 Aug Modified
#6 Alternator Modified - Window

CONT'D

1953 DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
21 Aug	35M'	-22	½ -1 Min	Very Light	Top of Cu Nimb	Light	None	None	
24 Aug	19 M'	-1	3 Min	Light	Cumulus	None	#1 Fluctuate 3-5 Volts #6 steady	None	Test hop
	15 M'	≠5	2 Min	Light	Stratus	None	#6 Steady #1 Fluctuate	None	
3 Sep	NO RAIN OR CLOUDS ENCOUNTERED.								
4 Sep	37,000'	Unk.	Unk.	None	Cu Nimb	Slight	None	None	

1131

ALTERNATOR WATER SEPARATOR EVALUATION

B-47 No. 51-2335

#1 Alternator Boeing
#6 Alternator Window Alt

CONT'D

DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
15 Jul		-35	1½-2 Min	None	Top of cb	Moderate	None	None	
17 Jul	35-37M'	-20	1½ Hr	None	Thin to Heavy Cirrus	Light	None		
	1700'	?	3 Min	Light	Cumulus	None	None		
20 Jul	31M'	-10	1:30	None	Lt to Med Cirrus, w/ moisture	None	None		
	40M'	-34	2:00	None	In & Out of Heavy Cirrus	Light	None		
	40M'	-34		None	Top of cb, Heavy Cirrus w/ moisture. No rain	None	#1 Alt went out	None	Tried to reset at altitude but could not. Reset OK at 18M'
	40M'	-34		None	None	None	#6 Alt kicked off line	APS-23 went off, but came back OK after alternator reset	When #6 went out, were not in weather & had not been for some time. Were making instrument letdown and pilot pulled throttles back, probably below 52%. When throttles were

CONT'D

APPENDIX II

ALTERNATOR WATER SEPARATOR EVALUATION

CONT'D

B-47 No: 51-2335

#1 Alternator Boeing
#6 Alternator Window Alt.

DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
20 Jul (cont'd)									advanced, co-pilot reported #6 Engine at 60% RPM, alternator out. Reset alternator & it came on again. No effect on K-Systen. Pilot did not have chance to note lowest engine RPM, but it was probably above 40%.
7 Aug	3000'		1 Min	None	Cumulus	Slight	None	None	
10 Aug	Descent 8,000' Again to 3,000'		3 Min 10 Min	Yes Mod Yes Mod	Below Clouds	None None	None None	None None	
11 Aug	35M'	-20	10 Min	Light	Tops of cb	Light	None	None	
13 Aug				None	None	None	None	None	
17 Aug	25M' 3M'			None	None	Light	None	None	Transition Flight
19 Aug	35M'		½ Min	None	Tops of Cu Nimb	Light	None	None	Slip rings, commutators & brushes checked on 21 Aug 53 and are OK.

ALTERNATOR WATER SEPARATOR EVALUATION

B-47 NO. 51-2335

#1 Alternator Boeing
#6 Alternator Window Alt.

DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
22 Aug	AVOIDED RAIN & CLOUDS BECAUSE OF OTHER TROUBLE ON AIRCRAFT			None	None				
27 Aug	41M'	-33	1 Hr	None Visib	Cirrus or Cu Nimb	Mild	#1 Out #6 None	None	Could not reset.
5 Sep	NO RAIN OR CLOUDS ENCOUNTERED								
6 Sep	NO RAIN OR CLOUDS ENCOUNTERED								

1134

ALTERNATOR WATER SEPARATOR EVALUATION

B-47 No 51-2224

#1 Alternator Boeing
#6 Alternator Window Alt.

DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
14 Aug	25M'	-25		None	None	Light	None		
18 Aug	10M'	+15	10 Min	Mod	Under Cumul	None	None		Not set up high enough
	Climb to 35M'	-22	10 Min	Light	In Cumul	Light	None		
21 Aug 1st Flight				None	None	None	None	None	
21 Aug 2nd Flight	35M'	-20	30 Min	Light to Mod	Heavy Cirrus	Light	None	None	
			5 Min	Mod	Under Cumulus	Light	None	None	
25 Aug	NO RAIN OR CLOUDS ENCOUNTERED								
3 Sep	NO RAIN OR CLOUDS ENCOUNTERED								
4 Sep	37M'	Unk	Unk	None	Cb	Slight	None	None	

ALTERNATOR WATER SEPARATOR EVALUATION

B-47 No. 51-2227

#1 Alternator Boeing
#6 Alternator Window

DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON K-SYSTEM	REMARKS
14 Aug	35M'	-22		None	None	None	None		
19 Aug	32M'	-9	10 Min	None	Tops of Cu Nimb	Light	#6 Fluctuates 1-2 volts	None	No. 1 not checked.
	36M'	-16	30 Min	None	Tops of cb & Cirrus	None	#6 Same #1-3-5 V	None	No. 1 seems to fluctuate more than #6
	36M	-21	1:00	None	Alto Stratus	Light	Same Fluctuation	None	Pilot states that he has repeatedly lost other alt under these conditions.
	36M'	-21	1/2 Min	None	Cu Nimb	Light to Mod	Same	None	
24 Aug	1M' 24M'	+24 + 5	35 Min	Heavy	Heavy Stratus	Mild	None	None	
	34M'	-16	1:20	Light	Thick Cirrus	Mod	None	None	
	40M'	-34	3:10	Snow	Cu Nimb & Strat	Mild Severe	None	None	

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ALTERNATOR WATER SEPARATOR EVALUATION

B-47 No. 51-2227

#1 Alternator Boeing
#6 Alternator Window

CONT'D

DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON A. SYSTEM	REMARKS
24 Aug	40M' 75M'	-34 +26	30 Min	Rain & Snow	Cirrus & Heavy Stratus	Mod to Severe	None	None	
27 Aug	NO CLOUDS OR PRECIPITATION WAS ENCOUNTERED						None		
3 Sep	NO RAIN OR CLOUDS ENCOUNTERED								
4 Sep	37M'	Unk	Unk	None	cb	Slight	None	None	

Boeing Field

Boeing Field

ALTERNATOR WATER SEPARATOR EVALUATION
B-47 No. 51-2308

#1 Alternator Boeing
#6 Alternator Window

DATE	ALTITUDE	IND TEMP	DURATION	RAIN	CLOUDS	TURBULENCE	EFFECT ON ALTERNATOR	EFFECT ON SYSTEM	REMARKS
17 Aug	10M'		5 Min in Climb	Wet Mod	Cumulus	Mod	None	None	
	35M'	-21	In & Out	Mod Ice	Cirrus	Mod	None	None	
	35M'	-21	2 Min Inter-vals	Mod Ice	Thunder Storm Tops	Mod to Light	None		
4 Sep	NO RAIN OR CLOUDS ENCOUNTERED								
5 Sep	NO RAIN OR CLOUDS ENCOUNTERED								

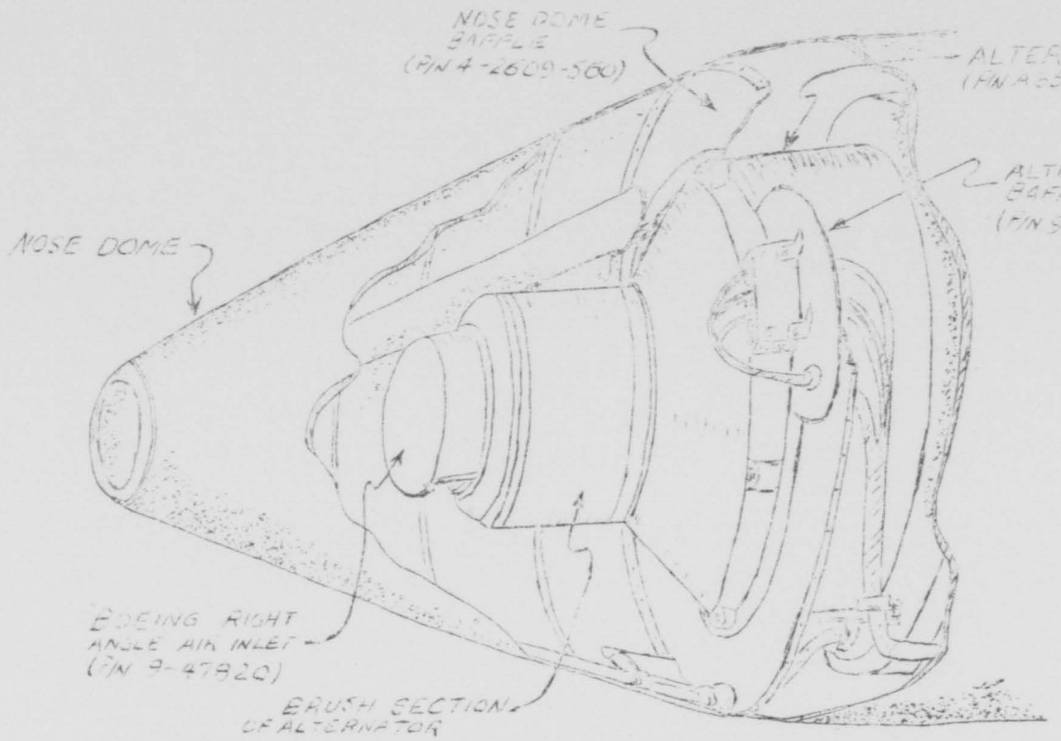

FIGURE I
BOEING WATER SEPARATOR INSTALLATION

APPENDIX III

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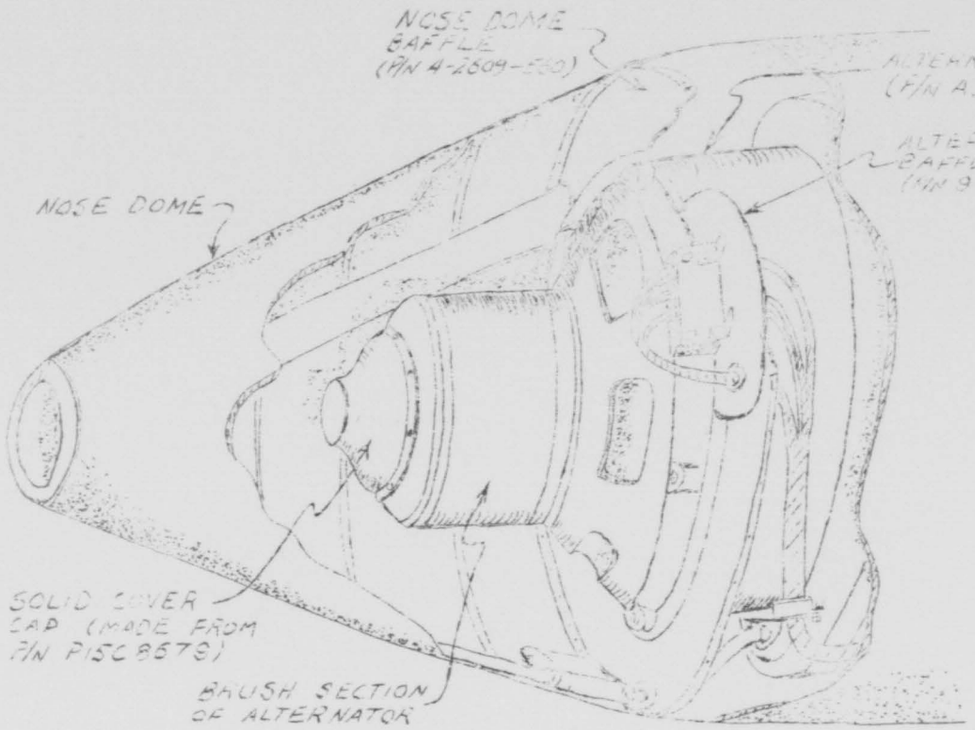

FIGURE II
WINDOW ALTERNATOR INSTALLATION

APPENDIX IV

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EXHIBIT 25

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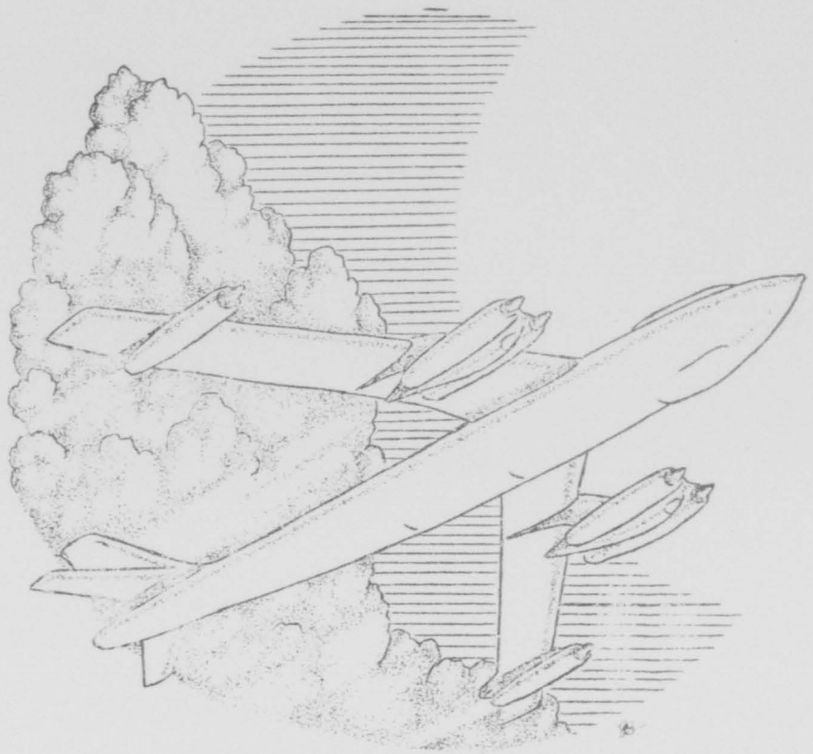
B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 115



6TH AIR DIVISION

MACDILL AFB, FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 20 October 1953

SPECIFIC ITEM REPORT NO. 115

SUBJECT: Tool-Engine Mount Pin and Internacelle Fairing (ME-76)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To present a design for an engine mount pin and internacelle fairing tool and to recommend that this tool be authorized for use in all B-47 Wings.

II. FOREWORD:

A. The subject engine mount pin assembly (P/N 5-32227-6) is installed in the engine mount saddles of the #2, #3, #4, and #5 engines on the B-47 aircraft and extends through the saddle into the engine support beam. The purpose of the pin is to keep the engine from rotating about the engine support bolt; it is sometimes called an anti-rotation pin.

B. A forward internacelle fairing assembly (P/N 5-31050-91 & -92) is utilized between the #2 and #3 engines and the #4 and #5 engines to streamline the engine pods.

C. There have been many difficulties encountered in the past when trying to remove these assemblies from the aircraft. Most of these difficulties can be attributed to improper or inadequate tools. The tool reported herein is considered superior to Boeing tool, Boeing P/N F-65731 (lever assy., engine mounting pin removal).

III. CONCLUSIONS:

A. Present methods for removing and installing the engine mount pin assembly and the forward internacelle fairing assembly result in excessive man-hours and damaged and broken parts.

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B. The tool presented herein has been used satisfactorily for five (5) months during inspections which dictate the removal and installation of the above assemblies.

C. This tool can also be used for removing the aft internacelle fairing assembly if this assembly is modified by the incorporation of a fairing adapter, shown on page 2 of the Appendix.

IV. RECOMMENDATIONS:

Your Headquarters authorize and provide to using organizations the tool described herein, in lieu of the Boeing tool which is considered to be unsatisfactory. Consideration should be given to authorizing local manufacture of the tool so that twelve (12) items can be made available per Wing in the shortest possible time.

V. DISCUSSION:

A. During every periodic inspection, fifty (50) hour post-flight inspection, and engine change of a #2, #3, #4, or #5 engine, the engine mount pin and internacelle fairings must be removed. The Boeing Airplane Company has designed a tool for the purpose of removing the engine mount pin but it has proved to be unsatisfactory in a number of ways. Frequently the engine mount pin is so firmly seated that the Boeing tool will not remove it. In these cases the pin has to be removed by sawing and then be replaced with a new pin. The proposed tool would eliminate a majority of these instances by being able to apply a greater amount of force directly to the pin.

B. Another advantage of this tool is the safety with which it can be used. The engine mount pin was formerly removed by a mechanic sitting on top of the engine and using a tool that would constantly slip and cause him to lose his balance. With the new tool, the engine mount pin can be removed from the front of the engine by the mechanic standing on a stable platform.

C. Use of the proposed tool will result in substantial savings in man-hours. Previously, it has taken approximately 45 minutes to remove the engine mount pin, the aft internacelle fairings, and the forward internacelle fairing. With this tool, the three units can not be removed in approximately 15 minutes.

D. Many man-hours of sheet metal work will also be eliminated by the use of this tool. The forward internacelle fairing can presently be removed only by prying with a screwdriver or some similar tool and beating with a hammer. With the recommended tool, it would be a simple matter to remove this fairing. A Fairing Fitting (P/N 9-18043-1) is already attached to the internacelle fairing and the subject tool would

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merely have to be inserted into this fitting to remove the entire fairing.

E. The same problem exists with the aft internacelle fairing (P/N 5-31050-179 & -180). Boeing Airplane Company has initiated ECP 885B which provides a nut plate and a bolt in the aft internacelle fairing. This modification permits removing the aft internacelle fairing in a manner similar to that of a wheel puller in that the fairing is removed as the bolt is screwed in. This ECP is to be incorporated in the 490th aircraft but, it is understood, will not be retrofitted.

F. The proposed tool can be satisfactorily used for removing the aft internacelle fairing if a fairing adapter is attached to the fairing as shown on page 3 of the Appendix. During the service test of the tool, all aft internacelle fairings within the 305th Bomb Wing were modified and removed easily with this tool. Installation of the adapter required approximately two (2) man-hours. If ECP 885B is not to be retrofitted in those aircraft prior to the 490th article, the use of this tool as well as the modification of the fairing in those aircraft should be authorized.

G. This tool was fabricated from chrome nickel steel, #2330. Two (2) man-hours were required for manufacturing the first article. It is conceivable that the most expeditious means of getting these tools to the using organization is to authorize local fabrication within each Bomb Wing.

H. Quantity authorizations for the tool in each B-47 Wing should be as follows:

Four (4) for each Periodic Maintenance Squadron.
Two (2) for each Field Maintenance Squadron.
Two (2) for each Bombardment Squadron.

1 Appendix

CHARLES B. SHIVE, JR.
2nd Lt., USAF
Project Officer

APPROVED:

THOMAS P. SAVAGE
Major, USAF
Chief, OES

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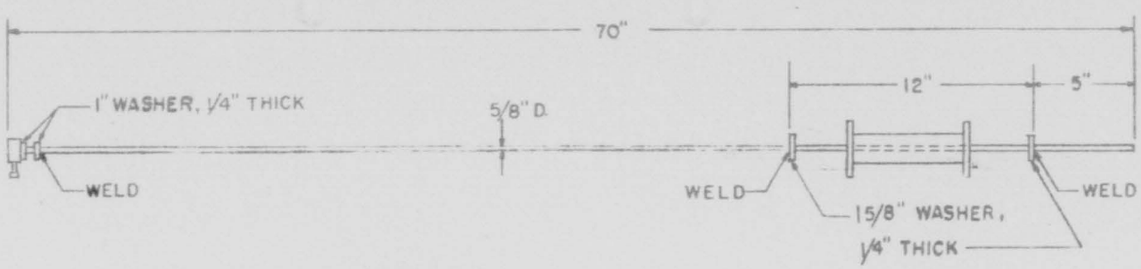

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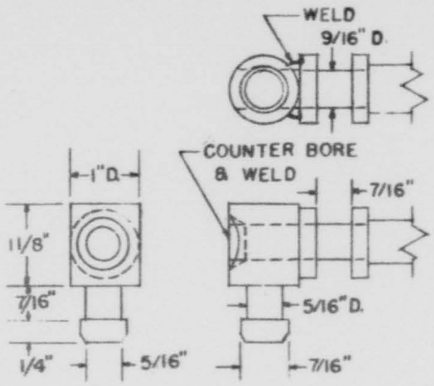

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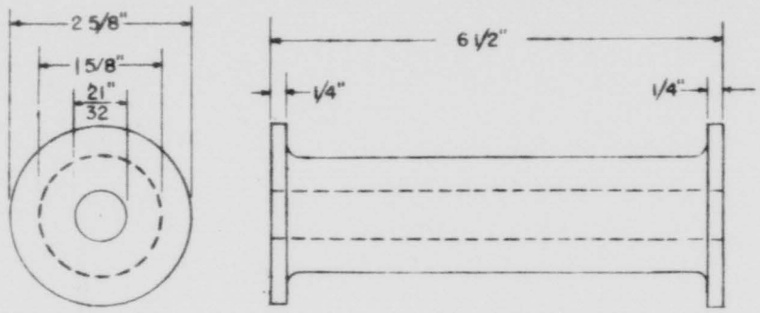
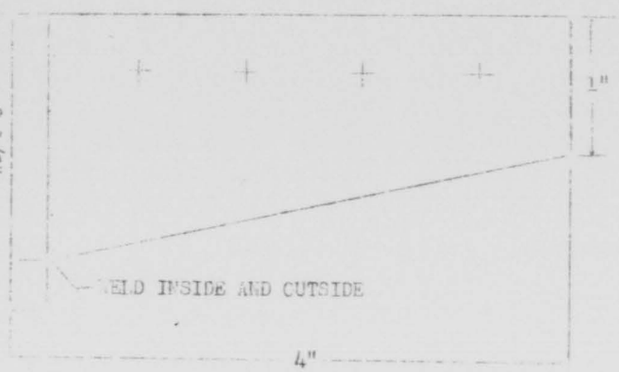


IMPACT HANDLE DETAIL 1/2 SIZE

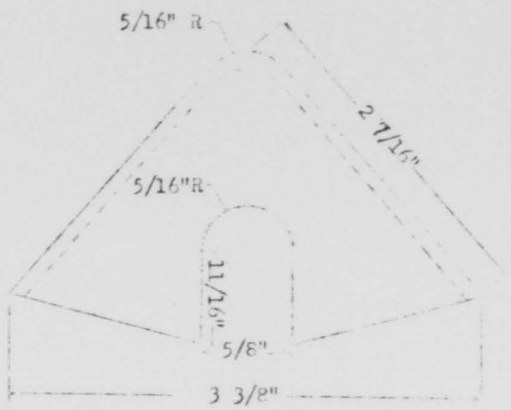
ENGINE MOUNT PIN & INTERNACELLE FAIRING TOOL

B-47 OES OCT., 1953

APPENDIX I TO SIR 115.



+ DRILL TO PICK UP EXISTING RIVETS AN426AD5-7



FAIRING ADAPTER (PROPOSED)

MATERIAL SPECIFICATIONS:

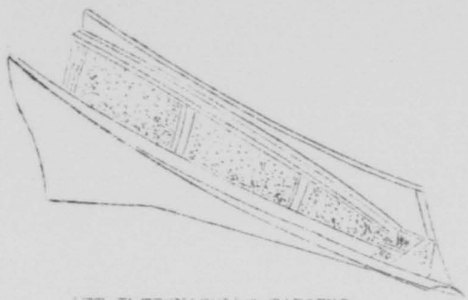
PULLER PLATE 1/4" AN-QQS685

HOLDER PLATE 1/8" AN-QQS685

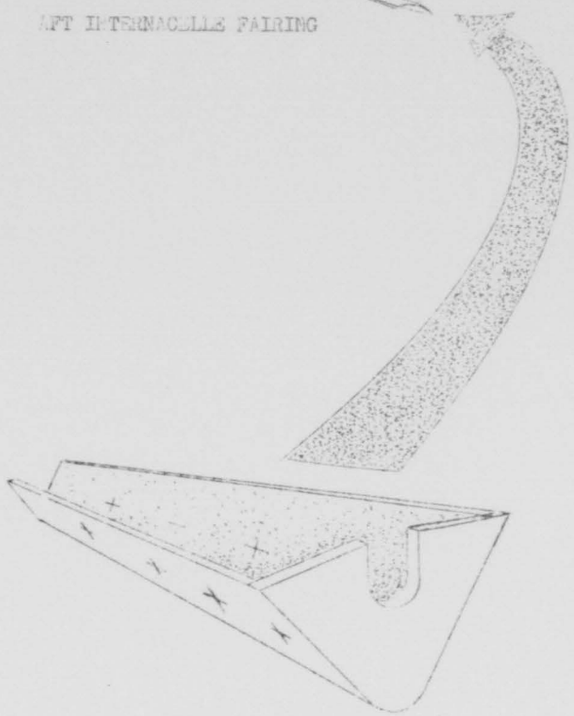
FINISH: CADMIUM PLATE

SCALE: FULL SIZE

Restricted



AFT NACELLE FAIRING



FAIRING ADAPTER
(PROPOSED)

FAIRING ADAPTER INSTALLATION

APPENDIX TO SIR #115

Restricted

EXHIBIT 26

HEADQUARTERS
[illegible] AIR DIVISION
MacDill Air Force Base, Florida

[illegible] 19 September, 1963

SUBJECT: Multiplace Life Raft Installation, F-4C Aircraft

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana
ATTN: Captain Robert J. Dantiste

CC: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska
ATTN: Lt Col O. F. Fowler

1. Forwarded as Inclosure #1 is a report of a mock-up inspection of the multiplace life raft installation in F-4C aircraft.

2. The installation of the Mark IV raft was viewed and is considered to be satisfactory. The engineering for the door and release system was discussed and appears to be suitable for incorporation in the aircraft. A complete installation has not been made in one aircraft and therefore no flight testing has been accomplished to date.

3. Upon completion of testing, it is recommended that the life raft installation be incorporated during depot and factory modification and recycling programs as soon as practicable. Consideration should be given to immediate field retrofit of those aircraft which will be flown on extended over-water missions. If the kits are made available, the complete installation can be accomplished with 16 man-hours per aircraft.

FOR THE COMMANDER:

C. [illegible]
MAJOR, USAF
Asst Adj

1 Incl:
Mock-Up Inspection
Report

[illegible]

F. A. Johnson

F. A. JOHNSON
2nd Lt., USAF

1148

[illegible] ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

[illegible] 15 September 1963

SUBJECT: Multiplace Life Raft Installation, B-47 Aircraft

1. The mock-up inspection of the proposed multiplace life raft installation in the B-47 aircraft was held on 10 September 1963 at Boeing Airplane Factory, Wichita, Kansas. The mock-up consisted of the installation in the backbone of the aircraft but did not include the installation of the door fastener or release mechanism.

2. The Mark IV raft, having an inner vertical wall to divide the air chambers at the mid point on each side of the raft, was used for the mock-up and is proposed for the final installation. Accessories included three sunburn preventive cans, a new type fishing kit, a sea anchor, and three water bags. This raft is the same size as the originally proposed 43P but it has the CO_2 bottle at the center of one side of the raft and can be packed into a smaller envelope than the 43P.

3. The raft is installed at the same location as originally proposed in OSC STR #93. Contrary to the configuration of the aircraft which the OSC used during their investigation, the mock-up aircraft as well as production aircraft have an electrical relay panel in the proposed life raft compartment. However, sufficient space is available to install the raft without changing the location of this panel. Boeing is proposing that the raft be installed in a molded plastic container having a split canvas cover, held by straps running the length of the container. The raft will be packed in the container, and upon the release of the door and the expansion of the raft, the raft will rip the straps and rise from the then open top of the plastic container.

4. The present door will be replaced with a door having a "tie fed-up structure," necessitated by the replacement of the present Dzus fasteners with cavan latches. The door will be hinged along the outer edge of the door, opening up and out. One latch will be installed at the fore and aft ends of the door, perpendicular to the horizontal center line. Five (5) additional latches will be placed on the unhinged side of the door parallel with the horizontal centerline; the most fore and aft hinges being located as close to the end of the door as possible.

5. All latches will be operated from a common bell crank which will be operated by a release cable. Initial movement of the bell crank will operate the door latches and further movement of this crank will pull the actuating cable on the raft bottle. There will be a small access door in the top of the life raft compartment door, which the mechanic can open and enter to turn the bell crank and open the door on the ground.

6. The normal release system was discussed in some detail. Through the mechanic's access door, the flight crew member could open the door and then reach in and pull the actuating cord of the bottle. This would be a tricky maneuver under duress and high g's inasmuch as there is nothing to hold on to on top of the aircraft until the door is opened. It was decided that an additional release handle was necessary for use under emergency conditions (normal ditching release). It was decided that it should be located approximately 18" aft of the beam assembly of the canopy installation in the aircraft and should actuate the door and raft with a pull of 35#. It is conceived that the canopy will have been jettisoned and that the co-pilot will climb over the gun sight and pull the raft release handle, while hanging onto the canopy beam.

a. As regards jettisoning the canopy, it is visualized that, with the sectionalized canopy and with the canopy installed in aircraft 400 and on, the canopy will be jettisoned prior to hitting the water.

b. In those aircraft 400 and on, if the canopy is not jettisoned, a crew member will actuate the emergency canopy release system which will in the majority of cases open and throw the canopy back far enough that the canopy will fall from the aircraft. In case it does not fall, the canopy will be physically pushed aside by the pilot and co-pilot so that the co-pilot will have access to the life raft release handle. If this is not done, the pilot must crawl over the top of the canopy and down the backbone of the airplane and release the life raft through the mechanic's access door. The co-pilot must exit through the opening between the windshield and the canopy, possibly from the pilot's position.

c. In aircraft 335 through 400, the same condition as regards the utilization of the canopy emergency release system applies. In this case, however, the canopy cannot be jettisoned prior to ditching; it must be actuated after landing and then if it has not cleared the aircraft, should be removed by the pilot and the co-pilot.

7. After inflation the raft is held to the aircraft by a cord which will be disconnected by: (1) the crew opening a snap ring at the end of the cord which fastens to life raft, or (2) the aircraft sinking which will cause the cord to break when subjected to a 100# pull.

8. The weight of the complete raft and release installation weighs approximately 30#. The installation of the handle which is to be located to the rear of the canopy weighs 1 1/2#. If kits are made available, the depot or field organization can make the installation in the aircraft with 1½ man-hours.

9. As indicated above, only the raft installation was viewed. The release mechanism has been engineered but not fabricated. No flight testing has been accomplished.

1150

10. The kit was to be initially installed in production on the 228st aircraft. It is understood that it was to be incorporated also in the turn-around program beginning with the 617th aircraft. However, word received Boeing on 10 September that the installation of the life raft had been canceled for the turn-around program. Therefore, plans for incorporation in production and for a retrofit program appear to be uncertain at this time.

THOMAS P. SAVAGE
Major, USAF
Chief, C.S.S.

"A CERTIFIED TRUE COPY"

S.A. Johnson

S. A. JOHNSON
2nd Lt., USAF

1151

EXHIBIT 27

FILE NO 252

CASE NO. FILE
Do Not Remove

HEADQUARTERS 306TH [illegible]
MacDill Air Force Base, Florida

306 [illegible] 300.3

27 August 1953

SUBJECT: Ditching and Bailout Procedures, KC-97G Aircraft

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. SAC Manual 50-16 dated Feb 1952, Section III utilizes the upper forward escape hatches - over the wing - as the recommended primary bailout exits.

2. It has been demonstrated during many local flights that these primary escape hatches can only be removed under the most ideal situations. These conditions include airspeeds under 150 MPH and ample manpower. Whereas, the upper aft hatches can easily be opened by one man at any time regardless of airspeeds. This problem becomes exceedingly acute during heavy gross loads. It is understood by this organization that the forward escape hatches must be opened prior to opening aft hatches as would be utilized to accomodate large numbers of passengers.

3. It is recommended that the aft hatches be considered the primary bailout exits for normal crew operations.

4. SAC Manual 50-16 Chap 4, Emergency Procedures, Section IV, requires the engineer to leave through the left escape hatch and assigns him to the left raft. The radio operator is assigned to the right side and raft. To further simplify this ditching procedure a suggested plan is in agreement with AN 01-20CAH-1 which states that each crew member whose duties are on the left side of aircraft are assigned to the left raft and the other members are assigned to the right exit and raft. Passenger assignments must, of necessity, be covered to meet the various individual situations.

5. This same method of distribution is also applied to bailout procedures where practical. These procedures are most suitable for the KC-97G emergency procedures.

Hq 305th Bm Wg M MAFB, Fla., Subject: Ditching and Bailout Procedures, KC-97G Aircraft, dated 27 August 1953, File 305WA3, 300.3.

6. Standardization of Power Settings. SAC Manual 50-16, requires 2350 RPM during normal climbs, ILS, GCA, LF and OMNI Range letdowns. It is recommended that this RPM is also included on the normal traffic pattern, instead of 2300 RPM, for the purpose of standardization of power settings.

E. VANDEVANTER JR
Colonel USAF
Commander

MCDCAG 300.3 (27 Aug 53) 1st Ind 31 August, 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 28

HEADQUARTERS 44TH BOMBARDMENT WING (M)
LAKE CHARLES AIR FORCE BASE
LAKE CHARLES, LOUISIANA

PLEASE ADDRESS REPLY TO:
COMMANDING OFFICER
44TH BOMBARDMENT WING (M)

EXHIBIT 28A

Hq 44th Bm Wg, AADM: 333, Subj: Inspection of KC-97 Aircraft

DM 353 (9 Sep 53) 1st Ind SEP 11 1953

HQ 806TH AIR DIVISION, Lake Charles AFB, Lake Charles, Louisiana

TO: Commander, Second Air Force, Barksdale AFB, Louisiana

1. Forwarded herewith are copies of inspection reports as pertains to inspection of KC-97 aircraft received from 305th Bombardment Wing, MacDill Air Force Base.

2. The additional work load of correcting the discrepancies in conjunction with the normal maintenance will affect the maintenance capabilities of the 44th Bombardment Wing. However, aggressive action taken will preclude too great a reduction of the in-commission rate and flying time through September.

FOR THE COMMANDER:

EVERETT E. HARDIN
2d Lt, USAF
Asst Adjutant

1 Incl
n/c

EXHIBIT 28

Hq 44th BW, 333, Subj: Insp of KC-97 Acft

2AFMM 452 (9 Sep 53) 2d Ind

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana
21 SEP 1953

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. Forwarded as an item pertaining to your command.

2. Basic report portrays a standard of aircraft records maintenance which is unsatisfactory. This condition can only be generated over a long period of time as a result of failure on the part of maintenance personnel to perform day-to-day duties.

3. Request return indorsement indicate action taken to insure adequate aircraft records maintenance.

BY ORDER OF THE COMMANDER:

1 Incl
n/c

KENNETH O. SANBORN
Colonel USAF
Chief of Staff

EXHIBIT 26C

Hq 44thBombardment Wing (M), Lake Charles AFB, La., 44DMM 333
Subj: Inspection of EC-97 Aircraft.

DMA 452 (9 Sept 53) 3d Ind

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, 305th Bombardment Wing Medium, APO 147, c/o Postmaster, New York, N.Y.

1. Forwarded for necessary corrective action, and reply to this headquarters.

2. A survey of Technical Orders listed in Incl. 1 reveals nine (9) that require kits. These Technical Orders and indicated supply action by AF-32-30 is forwarded as Incl. 2.

BY ORDER OF THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

3 Incls
Incl 1 n/c
Added 2 incls
2. TO Kit Listing w/Supply Action
3. Cy 2AF[illegible]D 3334, dtd 28 Sep 53

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 28D

HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

November 22, 1953

Colonel E. Vandevanter, Jr.
305th Bombardment Wing Medium
APO 147, c/o Postmaster
New York, N. Y.

Dear Pete:

We are forwarding to you under separate cover an unfavorable report regarding the condition of the KC-97 aircraft transferred from your organization to the 44th Bomb Wing at Lake Charles. The receipt of such a report is an unforgivable sin, but the seriousness of the deficiencies listed is one that you, yourself, must determine by a thorough analysis of your Maintenance Control Section.

A quick glance at the report from here indicates to me that your maintenance is good, but the records to substantiate it leave a lot to be desired. This shortcoming is prevalent throughout the command and one which SAC feels warrants special attention. Therefore, to assure favorable comments from higher headquarters, I expect you to take whatever action is necessary to maintain current day-by-day operations in both the administrative and operational fields within your Maintenance Control Section.

Sincerely,

H. K. HOOKEY
Brigadier General, USAF
Commander

EXHIBIT 28E

[illegible] Bombardment Wing (M), [illegible] Charles [illegible], [illegible]
Subj: [illegible] of B-47 Aircraft

[illegible] (Sep 53) [illegible]

[illegible], APO 117, c/o Postmaster, New York, New York

TO: Commander 7th Air Division, APO 611 [illegible] Air Force Base, [illegible]

1. The transfer of the B-47 Series Aircraft from the 306th Bombardment Wing (M) was accomplished in accordance with the instructions received from Headquarters Second Air Force, Barksdale Air Force Base, Louisiana, and on the basis of a mutual understanding attained between the agencies concerned. It was the desire of personnel concerned to accomplish the transfer with a minimum of unsatisfactory situations occurring, however ramifications were prevalent hindering the desired intent, some of which are as follows:

a. The deployment of the 306th Bombardment Wing (M) to the United Kingdom was scheduled for 3 September 1953. The emphasis on the readiness of combat ready aircraft to accompany the unit was of primary importance and received priority consideration over other existing requirements.

b. The volume of aircraft assigned and possessed by the 306th Bombardment Wing (M) for the period 1 June to 31 August 1953, was excessive when consideration is given to the personnel manning authorizations and particularily so, in view of the condition of aircraft records received with "factory delivered" aircraft. The average number of aircraft assigned and possessed for the cited period are:

(1) June - 90

(2) July - 93.66

(3) August - 84.74

c. The receipts and transfers of aircraft, in accordance with established schedules, reveals a total of forty-one (41) transferred and twenty-seven (27) aircraft gained during the three month period. The twenty-seven (27) aircraft gained consisted of twenty (20) B-47E Series from Boeing Airplane Company, Seattle, Washington and seven (7) B-47E Series from Lockheed Aircraft Corporation, Marietta, Georgia. The historical records received were reviewed and in all instances "Part V, AF Form 1" were initiated. The review of the historical records revealed an average of fifty (50) technical orders per aircraft either not entered on the forms, or entered and not complied with. This condition was reported through the medium of an Unsatisfactory Report.

1159

2. The transfer of aircraft within the Strategic Air Command is accomplished in accordance with [illegible] Regulation 65-1. The receiving organization complied with the provisions of this directive and discrepancies noted upon inspection upon [illegible] Florida, during the latter part of July 1953. This team of aircraft maintenance personnel coordinated with the 305th Bombardment Wing (H), Aircraft Records Section and "pointed out" those areas of discrepancies. Insofar as can be ascertained the cited discrepancies contained in the basic communication were resolved to the "agreement" of both the transferring and receipient organizations. To further substantiate the above, the extensive explanations contained in Inclosure #1 are cited for information and consideration.

3. In conclusion I will state that notwithstanding the excuses offered I recognize that the aircraft historical record system of this wing has either been operating in a very inefficient manner or not at all. The Director of Materiel and his subordinates concerned with this function have been informed that such a condition will not be tolerated. A system requiring the frequent inter-inspection of all aircraft forms and records has been established which should prevent any recurrence of this condition. I believe that the reported maintenance discrepancies are no more than normally encountered in the transfer of aircraft from one unit to another and I feel that the Tech order non-compliance subject has been adequately covered in Inclosure #1.

4 Incls
Incl 1, 2,
and 3 n/c
Added 1 Incl
4. Historical Records
Anaylsis of Acft
Trfd to 44th BMW

E. VANDEVANTER, JR.
Colonel, USAF
Commander

1160

EXHIBIT 7-SF

Hq 44th Bombardment Wing (M), Lake Charles AFB, La. 44DBM 333
Subj: Inspection of KC-97 Aircraft

DMA 452 (9 Sep 55) 5th Ind 17 November, 1955

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

1. The foregoing correspondence has been reviewed and is forwarded in compliance with paragraph 3, 2d Indorsement.

2. Reference paragraph 3 of 4th Indorsement, this headquarters has received extremely valuable information from the recent Second Air Force Staff visit. This information will be disseminated to the 305th Bombardment Wing upon their return from the United Kingdom. In addition, this headquarters will monitor and insure adequate aircraft records maintenance within the 305th Bombardment Wing.

3. Reference Incl. 2, request the 44th Bombardment Wing review and determine their present needs for TOC kits indicated as being on hand in Base Supply, this station.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

4 Incls
n/c

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 29

HEADQUARTERS STRATEGIC AIR COMMAND
OFFUTT AIR FORCE BASE
Omaha, Nebraska

DMTC 686 14 September, 1953

SUBJECT: Stabilization of Runway and Taxiway Shoulders at B-47 Bases

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. Included in the original submission of the FY 1954 Public Works Program were line items for shoulder stabilization of runways and taxiways at all B-47 bases. These line items included:

a. Provide a 25' wide shoulder on each side of all 75' wide taxiways.

b. Provide a 50' wide shoulder on each side of all 200' wide runways.

c. All shoulder stabilization to consist of 1-1/2" asphaltic surface applied to a stabilized subgrade. By letter, Headquarters USAF to Office, Corps of Engineers, dated 15 October 1952, file AFOAI-AS/R, Subject: "Criteria for Airfield Pavement Construction at Air Force Installations," the subgrade for blas areas has been determined to be "7 inches of material having a CBR of 80 - - - ."

2. The justifications for the required items as submitted with the original FY 1954 Public Works Program, were very generalized in nature and upon review by higher authority all items were deleted from the program. In this connection a recent letter from the Deputy Director of Installations, Headquarters USAF to the Commander Strategic Air Command has indicated that unless a complete factual justification is submitted the projects will also be deleted from the FY 1955 Public Works Program.

3. It is essential that adequate blast protection be provided at many of the bases now active or scheduled for activation with B-47 aircraft and in support of this requirement it is directed that a consolidated study of the blast problem be made by your Headquarters to provide a detailed justification of the line items submitted by the bases concerned. The studies submitted by the Numbered Air Forces will be further consolidated and submitted to Headquarters USAF by this Headquarters. The final consolidated study will also be condensed and used as justifications of the individual line items. Pictures showing existing conditions are to be included with the completed study.

DMTC 686
Subj: Stabilization of Runway and Taxiway Shoulders at B-47 Bases

4. Important facts to be considered in the preparation of a blast protection study are:

a. Dust condition caused by outboard engines that extend 81'-8" beyond the edge of a 75' wide taxiway.

b. Rocks and debris that are blown onto the taxiway by the outboard engine blast.

c. Loads applied on the shoulders when the aircraft is turned while fully loaded or encounters a crosswind while taxiing with a full load.

d. The necessity for and the cost entailed to keep taxiways clean. In this connection, information received from Headquarters 7th Air Division indicates that one UK base is using 6 rotary sweepers 12 hours per day, attempting to clean the 75' wide taxiways after each aircraft passes. Also, that B-47 pilots have been instructed to cut all outboard engines after landing.

5. The additional maintenance work on jet engines created by dust and stones being carried into the intakes should be brought out in terms of man hours and dollar cost. The cost of sweeping should be noted in a similar manner. These dollar costs will be weighed against the initial paving cost and an annual maintenance cost to establish an economic justification of the project. Where unusual conditions now exist pictures or sketches will be submitted as back-up for written descriptions.

6. It is desired that the consolidated reports will reach this Headquarters not later than 12 October 1953. Receipt of the reports will allow final consolidation and editing prior to submission of the FY 1955 Public Works Program to Headquarters USAF

BY ORDER OF THE COMMANDER:

/s/t/ C. J. BONDLEY Jr.
Brigadier General, USAF
Director of Material

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 29A

Hq SAC, Offutt AFB, Nebr. DMTC 686, Subj: Stabilization of Runway and Taxiway Shoulders at B-47 Bases

2AFMIR 686 (17 Sept 53) 1st Ind

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana
17 September 1953

TO: SEE DISTRIBUTION

1. Correspondence is forwarded for your compliance.

2. Requested information must be submitted to reach this headquarters not later than 8 October 1953. No time extensions will be granted.

BY ORDER OF THE COMMANDER:

/s/ R. E. Steuffer
/t/ R. E. STEUFFER
CWO, USAF
Asst. Adjutant

DISTRIBUTION
Comdr 4AD Barksdale AFB La
Comdr 6AD MacDill AFB Fla
Comdr 3BAD Hunter AFB Ga
Comdr 80IAD Lockbourne AFB Ohio
Comdr 806AD Lake Charles AFB La
Comdr 4002ABSQ Campbell AFB Ky
2AF Liaison Off Homestead AFB Fla
Comdr 340BW Sedalia AFB Mo

"A CERTIFIED TRUE COPY"
E. A. Johnson
E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 29B

Hq SAC, Offutt AFB, Nebr. DMOC 686, Subj: Stabilization of Runway and Taxiway Shoulders at B-47 Bases

MCDALI 686 (14 Sep 53) 2nd Ind 7 October 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

1. Reference is made to paragraph 1 of basic communication:

a. A line item for construction of a 25 ft wide shoulder on each side of all 75 ft wide primary taxiways has been included in the FY 1955 Public Works Program.

b. Pursuant to runways. The primary runway at this station is 500 ft wide. There is no necessity for stabilized shoulders on the primary runway. The secondary or crosswind runways is 150 ft wide with 75 ft of stabilized (sand seal only) shoulders on each side. However, inasmuch as the crosswind runway is only 7167 ft long and is not used by B-47 aircraft except under emergency conditions, it is believed that it would be difficult to justify new and stronger shoulders therefor. The crosswind runway has been in use some six years and except for the need of surface sealing, the shoulders are in fair condition. The crosswind cannot be considered a B-47 runway.

FOR THE COMMANDER

C. A. WHITTLE
MCJG, USAF
Asst Adj

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 30

DEPARTMENT OF THE AIR FORCE
Headquarters United States Air Force
Installations Representatives Office
P. O. Box 1889
Atlanta 1 Georgia

SAIREP-4 17 August 1953

SUBJECT: Maintenance of Bulk POL Storage Facilities, Port Tampa

TO: Commander
MacDill Air Force Base
Tampa, Florida

1. This office has been informally advised that subject facilities are not being maintained properly. Records in this office indicate that your headquarters is responsible for this maintenance.

2. Specifically, the following items were mentioned as requiring attention:

a. Considerable erosion has developed in the area outside the concrete walls surrounding the tanks. If not corrected, this erosion is liable to develop into serious damage.

b. The fittings on the fire protection connections at the tanks are not all arranged for quick connection to base fire-fighting equipment.

c. The in-line meters have been seriously damaged by salt water. At present the mechanical parts of the metering device have been removed from the meter house and no attempt is being made toward replacement.

3. It is requested that your office investigate the accuracy of this informal report.

4. Air Base Maintenance personnel from this office will discuss this problem with you on the next visit to your headquarters.

BY COMMAND OF THE CHIEF OF STAFF:

s/t/ PAUL C. BROWN
Colonel, USAF
CIC, USAF Installations
Representatives
South Atlantic Division

"A CERTIFIED TRUE COPY"

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 30P

MCDAI 670 (17 Aug 63) 1st Ind 11 September, 1963

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Department of the Air Force SOUSIF Installations Representative Office, Atlanta, Georgia.

1. Reference is made to paragraph 1 of basic communication. The Bulk Storage Depot complete, consisting of unloading dock, pipe lines from unloading dock to the tank farm, storage tanks, pumps, truck fill stands, and all other associated facilities, was transferred to the Armed Services Petroleum Purchasing Agency on 1 April, 1962. This transfer was accomplished by means of a hand receipt signed by L. G. Money, Commander, SC, USN, Contracting Officer of the ASPPA, pending the processing of the final Form 290 which will be issued subsequent to the accomplishment of certain minor changes. After the transfer, the ASPPA through their Contracting Officer entered into negotiations with Redwing Carriers, Inc., Tampa, Florida (Contract ASP-7076) for the operation and maintenance of the Bulk Storage Depot. Through an agreement between the ASPPA and Redwing Carriers, Inc., the WRAA have placed an Engineer Inspector at the Bulk Storage Depot at this station.

2. Reference paragraph 2 of basic letter.

a. A scheduled maintenance report for the period of 1 July 1962 through 31 December, 1963, from Redwing Carriers, Inc., to the Installations Engineer, WRAA, is attached for your information. Attention is invited to paragraph 1a. of report.

b. Fittings referred to in paragraph 2b, were corrected by personnel of this station under the supervision of Fire Chief Kennerly, Warner-Robins Air Materiel Area, Robins Air Force Base, Georgia.

c. Mr. Richard A. Marsh of Redwing Carriers, Inc., has been contacted by this headquarters, informally, regarding the in-line meters. Mr. Marsh indicated his organization had removed the metering mechanism because the inoperative meter was restricting the fuel flow. He further stated his organization would repair the meters.

Re: USAF Inactive Rep Off, Atlanta, Ga., File SADAFIR-4, dtd 17 Aug 53,
subj: Joint Bulk POL Storage Fcns, Fort Myers, MacDill AFB, Fla.

2. The authorized representative of the USPPA is L. G. Loney, Commander, USN, Armed Services Petroleum Purchasing Agency, Washington 25, D.C., if additional information is desired.

FOR THE COMMANDER:

C. A. WILLIS
Maj, USAF
Asst Adj

1 Incl
as

cc: Cmdr 2AF

"A CERTIFIED TRUE COPY"

C. A. JOHNSON
2nd Lt., USAF

EXHIBIT 31

DEPARTMENT OF THE AIR FORCE
Headquarters United States Air Force
Washington 25, D. C.

AFDRD-3 20 August, 1957

SUBJECT: Cadedan Park Annex, MacDill Air Force Base, Florida

TO: Commander
MacDill Air Force Base
Florida

Reference is made to recent staff visit by personnel of this Headquarters relative to the said utilization and rehabilitation of Cadedan Park Annex. In order that an early decision might be reached, it is requested that the following action on the part of the base be accomplished at the earliest practicable time:

1. Summary of detailed survey be compiled and forwarded to this Headquarters as soon as possible but not later than 15 September. This report will be utilized in drawing up the basic lease instrument and also as an indication of the amount of rehabilitation that might reasonably be expected within the next several years under the planned leasing procedure.

2. Information desired relative to the proposed fencing of the Cadedan area. It is the understanding of this Headquarters that there may exist real difficulties and objections to fencing the area of Cadedan Park Annex facing MacDill Avenue. As a practical matter, it would appear that fencing between housing units might suffice rather than running a full fence in front of the units. It is suggested that some form of low fence may suffice for this purpose enabling the units to be left in a more attractive condition. Upon reflection, it would appear to require a degree of confinement to the tenants facing the high fence immediately outside of their front doors. It appears that it is still desirable to block the entrance roads from the project to MacDill Avenue; however, we will leave this matter to the discretion of the base, realizing that if these entrances are blocked off the Air Force will be required to demolish one building and to extend Pine Street about 200 ft. to the existing north boundary road. Unless this extension appears to be essential to property security within the housing area, this Headquarters believes that such work, which costs money, should be eliminated.

Subj: Cadrian Park Annex, MacDill Air Force Base, Florida

3. A usual description should be furnished outlining, in general terms, the prospect vs physical condition that the basic units of 100 will be in as of the target d te of 1 October for the turnover of this project to a lessee. The sole purpose of this comment will be to assist in arriving at the amount of money that must be placed in the project immediately by the lessee to enable him to rent the units. For example, if units the prospective lessee must clean up, repair windows, paint, and in general repair before they may be rented will affect the leasing arrangements.

4. Include here recommendations as to rent, utility charges, any particular terms desired in the lease instrument and attachment relative to the proposed method of certifying personnel for occupancy.

BY COMMAND OF THE CHIEF OF STAFF:

/s/ Albert J. Wetzell
/s/ ALBERT J. WETZELL
Colonel, USAF
Deputy, Family Housing Group
Directorate of Installations,
DCS/C

"A CERTIFIED TRUE COPY"

F. A. Johnson

F. A. JOHNSON
Lieut., USAF

EXHIBIT 318

Hq USAF, Washington, D.C. File #AFOAI-3, dtd 20 Aug 53, subj:
Gadsden Park Homes, MacDill AFB, Fla.

WDDGI 319 (20 Aug 53) 1st Ind 15 September, 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Directorate of Installations, Headquarters United States Air
Force, Washington 25, D.C.
ATTN: Family Housing Group

1. Summary of detailed survey is submitted herewith as inclosure No. 1.

2. This headquarters is of the opinion that the installation of the fence around the Gadsden Homes area is desirable for the following reasons:

a. It will provide the area with police protection.

b. It will provide a means of traffic control to and from the area.

c. It will prevent the entrance of unauthorized and undesirable persons into the area.

d. It will establish, visually, definitely, and legally the limits of non-taxable areas.

It is accordingly recommended that the fence be installed.

3. There are certain problems pursuant to the installation of the required fencing. The County retains a 60 ft right-of-way along MacDill Avenue or 30 ft each side of the center line of the pavement. Buildings numbers 141, 140, 139, 138, 137, and 136 are located 45 ft from the pavement center line, which allows only 15 ft of clearance from the rightofway line. The erection of a 7 ft fence along the right-of-way line would result in the occupants of the six buildings (24 apartments) having a high security fence 15 ft from their front door with no front way access provided and the exclusion of certain fire hydrants, electric power lines, and telephone lines from the area. This headquarters inquired of the County Engineer if the County would consider authorizing construction of the fence within the right-of-way under the circumstances. The County Engineer stated there would be no difficulty in obtaining such authorization. By placing the proposed fence 22 ft from the center line of

Subject: Gaisden Park Homes, MacDill AFB, Fla.

the street, the fence would be 73 feet from the front of the buildings and all fire hydrants, electric power poles, and telephone poles would be inside the fence. There is a service road in the rear of the buildings that can be used by the occupants and will be satisfactory for access purposes. It is recommended that authorization be requested from the County and the fence be constructed 33 ft from the highway center line.

7. It is estimated that the cost incidental to the erecting of the fence will be around $13,000 as follows:

4000 ft of 7 ft fence @ $2.50	$10,000
Demolish and remove Bldg. 103	1,000
Extend Pine Street	2,000
Total	$13,000

These funds are not available at this station and it is requested they be made available from other sources.

8. There is submitted herewith a detailed report setting forth, in diagrammatic form, the following information:

Plan 1. Layout plan indicating type of buildings without regard to condition.

Plan 2. Plan designating presently occupied apartments.

Plan 3. Showing location of unoccupied units which can be made rentable for $200 or less.

Plan 4. Plan indicating unoccupied units which can be made rentable for $500 or less.

Plan 5. Plan indicating unoccupied units which can be made rentable for $1000 or less.

Plan 6. Plan indicating unoccupied units which will require more than $1000 to make rentable.

Plan 7. Plan showing proposed location of fence and extension of Pine Street, etc.

Plan 8. Series of detailed cost sheets covering every unit in the project.

a. Occupied Units: There are 66 Units occupied. The numbers of occupied apartments are: 102B, 102D, 104A, 105A, 105B, 106A, 133D, 134A, 134B, 136D, 140B, 141A, 141D, 142D, 143C, 144A, 144B, 145A, 145B, 146A, 146B, 147A, 148A, 149A, 151A, 152A, 153A, 157A, 158A, 158B, 159B, 160A, 163A, 164D, 166C, 167D, 168A, 168C, 171B, 175A, 175B, 176A, 176B, 177A, 177B, 178A, 178B, 180A, 181 & 182A, 183A, 183B, 184A, 184B, 186A, 188A, 188C, 188D, 189A, 190C, 192A, 193A, 194A, 196B, and 200B. A few

of these occupied units need minor repairs such as replacement of door and window hardware, screen heater repair, etc.; but all need some interior painting. This is shown on the detailed sheets. Location of occupied units is shown on Plan 2 of the report.

b. Unoccupied Units which can be made rentable under $500: There are 34 unoccupied units which can be made rentable within a $500 expenditure. The numbers of these apartments are: 100C, 106B, 107A, 109C, 116A, 120A, 121A, 122A, 122C, 122B, 123D, 124B, 130A, 131C, 155A, 156B, 163D, 164A, 164B, 164C, 168B, 169A, 169B, 172B, 173A, 173B, 187A, 187C, 199C, 200A, 200D, 201A, 201B, and 201D. In these units, the greatest expense of rehabilitation will be for kitchen equipment (especially refrigerators), window shades, plumbing, space heaters, clotheslines, cleaning, and interior paint. In most cases, when a refrigerator has been standing idle for some time new door gaskets, gland seals, and inside refinishing will be required. To over such repairs to refrigerators, a flat charge of $50 was set up. This is an average charge, may be less in some cases and more in others. The total estimate of $200 for rehabilitation of each of the 34 units in this class is also an average figure. Location shown on Plan 3 of the report.

c. Unoccupied Units which can be made rentable for $500 or less, but not less than $200: There are 108 units in this class. Many of these units can be made rentable within $300 but there are indications of termite infestation in this class and termite irradication and repairs are expensive. Identification of these 108 units will be found on Plan 4 of the report.

d. Unoccupied Units which can be made rentable for $1000 or less (between $500 and $1000): There are 89 units in this group. In many of these, kitchen equipment will have to be completely replaced, floors redone, partitions replaced, roof repaired, and termite irradication and repairs. Identification of these units will be found in Plan 5 of the report.

e. Unoccupied Units which will require expenditure in excess of $1000 to rehabilitate: There are only three units in this class. Their location is shown on Plan 6 of this report.

6. It will be noted on the detailed sheets (8 through 14) in the report that the last two columns are headed "Minimum" and "Optimum." In the minimum column indicates the minimum cost of making the unit rentable. The optimum column indicates the cost of exterior waterproofing and

Subject: Golfdale Park Homes, MacDill AFB, Fla.

painting, replacing of entrance overhangs, etc., facilities that are not required to make the place rentable but that should be accomplished in the distant future, when and if funds are available.

7. Reference is made to paragraph 4 of basic letter. This headquarters is of the opinion that a flat utility charge should be added to the rent. The complications and expense resulting from individual metering and billing for a project of this type are out of all proportion to the benefit derived. It is recommended that consideration be given to a flat charge of $6.00 per month, added to the rental, to compensate for electricity, gas, water, sewer, garbage, and trash collection. Incidentally, there are no master meters to record water or electricity used in the Golfdale Homes Area. There are no individual meters for water, electricity, or gas for the individual units. The cost of purchasing and installing these meters (master and individuals) would cost in the thousands. Accordingly, it would appear that the best and most expeditious method is a flat rate. Space heating is by oil fire space heaters. It is believed that the individual tenants should be responsible for procuring oil required for heating. As to rent, it is believed that $40.00 per month for the two-bedroom units in the multiple structures, $45.00 per month for the 2-bedroom individual units, and $45.00 per month for the 3-bedroom multiples would be about right to meet local competition. To this would be added the $6.00 per month flat rate utility charge. In certifying for occupancy, it is believed that the first (or lowest) four grades of Military would be eligible and Civilian employee below GS-7. However, it is also believed that a clause protecting the airmen of the top three graders, who are occupants at the time of the lease execution should be included. As there are approximately 40 of the 66 occupants now living in the project who are among the top three graders, it is believed that some provision should be made in the lease to protect them from eviction. It is also believed that there should be a clause in the lease permitting necessary deviations from the instrument "at the discretion of the Base Commander." In other words, an escape clause should be provided.

FOR THE COMMANDER:

C. A. WHITE
Major, USAF
Asst Adj

1 Incl
Detailed rpt (dup)

cc: DW, Parkedale
AFE, Ja.

"A CERTIFIED TRUE COPY"
E. A. JOHNSON
2nd Lt., USAF

1174

BUILDING SURVEY G

MACDILL A.F.B. Tampa

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CAB.

ADSDEN PARK HOMES

TAMPA, FLA.

CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITATION MINIMUM	ESTIMATED COST OF REHABILITATION MAXIMUM	REMARKS
	4.00	10.00			25.00		7.00	2.00	25.00	150.00	500.00	1000.		Termites indicated
	4.00	10.00			25.00		7.00	2.00	25.00	150.00	500.00	1000.		Termites indicated
	4.00	10.00			23.00		7.00	2.00	25.00	150.00	500.00	1000.		Termites indicated
	4.00	10.00			50.00		7.00	2.00	25.00	175.00	625.00	1250.		Termites indicated
	4.00	8.00			25.00		7.00	2.00	25.00	154.00	500.00	1000.		
										100.00	100.00	500.		Converted
	3.00	8.00			10.00		7.00	2.00	25.00	43.00	200.00	400.		
										25.00	25.00	350.		Converted
	4.00	10.00			25.00		7.00	2.00	25.00	145.00	500.00	1000.		Termites indicated
	4.00	8.00			20.00		7.00	2.00	25.00	141.00	500.00	1000.		Termites indicated
	4.00	10.00			30.00		7.00	2.00	25.00	160.00	600.00	1000		Termites indicated
	4.00	8.00			30.00		7.00	2.00	24.00	140.00	600.00	1000.		Termites indicated
										25.00	33.00	350.		Converted
	4.00	10.00			25.00		7.00	2.00	25.00	139.00	600.00	1000.		Termites indicated
	4.00	8.00			25.00		7.00	2.00	25.00	153.00	600.00	1000.		Termites indicated
	4.00	8.00			25.00		7.00	2.00	25.00	155.00	600.00	1000.		Termites indicated
										25.00	25.00	350.		Converted
										25.00	34.00	350.		Converted
										25.00	25.00	350.		Converted
					10.00		2.00							

[illegible]			[illegible]	5.00	6.00					5.00	6.00	50.00	12.00	35.00		[illegible]
[illegible]			14.00	10.00	60.00		10.00		40.00	4.00	8.00	75.00	40.00	30.00		5.0
[illegible]			14.00	10.00	40.00		10.00		40.00	4.00	8.00	75.00	40.00	30.00		5.0
B	10.00	4.00	36.00	16.00	125.00		20.00		50.00	4.00	12.00	75.00	50.00	30.00		5.0
C		10.00	22.00	6.00	35.00		2.00		38.00	2.00	8.00	75.00	40.00	30.00		[illegible]
D			16.00	10.00	125.00		25.00	10.00	50.00	4.00	12.00	75.00	50.00	30.00		5.0
110A			36.00	10.00	125.00		30.00	10.00	50.00	2.00	12.00	75.00	50.00	30.00		5.0
B		4.00		10.00						2.00	2.00	50.00	5.00	15.00		[illegible]
C			15.00	10.00	40.00		2.00		40.00	4.00	8.00	75.00	40.00	30.00		5.0
D		12.00	15.00	8.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.0
111A	8.00	8.00	39.00	15.00	50.00		20.00		50.00	5.00	40.00	150.00	40.00	30.00		5.0
B			35.00	10.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	30.00		5.0
C	8.00	8.00	32.00	15.00	125.00		25.00		50.00	4.00	15.00	150.00	50.00	30.00		5.0
D	8.00	8.00	23.00	10.00	50.00		25.00		50.00	4.00	15.00	150.00	70.00	30.00		5.0
112A		8.00	36.00	10.00	125.00		25.00		50.00	4.00	12.00	150.00	50.00	30.00		5.0
B		10.00	30.00	10.00	125.00		25.00		50.00	4.00	12.00	150.00	50.00	30.00		5.0
C		10.00	27.00	10.00	125.00		25.00		50.00	4.00	12.00	150.00	50.00	30.00		5.0
D			30.00	10.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	30.00		5.0
113A	8.00		30.00	10.00	150.00		25.00		50.00	6.00	12.00	150.00	50.00	30.00		5.0
B	8.00		27.00	10.00	60.00		25.00		50.00	4.00	12.00	150.00	50.00	30.00		5.0
C			15.00	10.00	40.00		10.00		40.00	4.00	8.00	75.00	40.00	30.00		5.0
D			15.00	10.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.0

				10.00		2.00	2.00	25.00	53.00	200.00	500.	
				30.00		7.00	2.00	25.00	140.00	600.00	1100.	
				30.00		7.00	2.00	25.00	140.00	600.00	1000.	
				30.00		7.00	2.00	24.00	175.00	717.00	1300.	Termites infested
				25.00	3.00	7.00	2.00	25.00	154.00	600.00	1100.	Termites indicated
				25.00	8.00	7.00	2.00	24.00	175.00	686.00	1300.	Termites indicated
				50.00		7.00	2.00	25.00	175.00	715.00	1300.	Termites indicated
				10.00	4.00	5.00	2.00	25.00	60.00	200.00	500.	
				25.00		7.00	2.00	25.00	155.00	600.00	1100.	
				25.00	6.00	7.00	2.00	25.00	138.00	600.00	1100.	Termites indicated
				25.00		7.00	2.00	24.00	175.00	717.00	1300.	Termites indicated
			7.00	25.00	3.00	7.00	2.00	25.00	175.00	683.00	1300.	Termites indicated
				25.00		7.00	2.00	25.00	175.00	765.00	1350.	
				25.00		7.00	2.00	25.00	175.00	686.00	1300.	
				25.00		7.00	2.00	25.00	175.00	799.00	1400.	Termites indicated
				50.00		7.00	2.00	25.00	175.00	814.00	1400.	Termites indicated
				50.00		7.00	2.00	25.00	175.00	811.00	1400.	Termites indicated
				25.00		7.00	2.00	25.00	175.00	704.00	1300.	Termites indicated
				25.00		7.00	2.00	25.00	175.00	814.00	1400.	Termites indicated
				25.00		7.00	2.00	25.00	175.00	709.00	1300.	Termites indicated
				25.00		7.00	2.00	25.00	140.00	500.00	1100.	Termites indicated
				25.00		7.00	2.00	25.00	152.00	650.00	1300.	Termites indicated

DATE: 13 SEPT. 1955

SHEET 8 OF 15 SHEETS

BUILDING SURVEY G

MACDILL A.F.B. T

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CA	
1174	8.00		20.00	10.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
B	8.00		24.00	10.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
C			29.00	12.00	50.00		26.00		50.00	4.00	12.00	150.00	80.00	70.00		5.00
D	8.00		26.00	12.00	50.00		27.00		50.00	4.00	12.00	150.00	80.00	70.00		5.00
114A			24.00	14.00	50.00		25.00		50.00	4.00	12.00	150.00	80.00	70.00		5.00
B			20.00	14.00	50.00		25.00		50.00	4.00	12.00	150.00	80.00	70.00		5.00
C			27.00	13.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
D			27.00	14.00	50.00		25.00		50.00	5.00	12.00	150.00	50.00	70.00		5.00
115A			25.00	15.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
B			30.00	14.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
C			28.00	11.00	50.00		28.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
D			28.00	16.00	50.00		25.00	12.00	50.00	4.00	12.00	150.00	50.00	70.00		5.00
116A	12.00		20.00		5.00					2.00		50.00	5.00	15.00		5.00
B			30.00	10.00	125.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
C		8.00	27.00	10.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
D			30.00	10.00	125.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
117A			28.00	10.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
B			28.00	10.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00
C	10.00		25.00	10.00	125.00		25.00		50.00	4.00	12.00	150.00	50.00	50.00		5.00
D		8.00	29.00	11.00	125.00		25.00		50.00	4.00	20.00	150.00	50.00	50.00		5.00

1179

ADSDEN PARK HOMES

MPA, FLA.

CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITION MINI-MUM	ESTIMATED COST OF REHABILITION OPTI-MUM	REMARKS
	4.00	20.00			50.00		7.00	2.00	25.00	175.00	737.00	1250.		
	4.00	8.00			50.00		7.00	2.00	25.00	175.00	728.00	1250		
	4.00	20.00			30.00		7.00	2.00	25.00	175.00	741.00	1300.		
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	745.00	1300.		
	4.00	20.00			30.00		7.00	2.00	25.00	175.00	747.00	1300.		Termites Indicated
	4.00	10.00			30.00		7.00	2.00	25.00	175.00	733.00	1300.00		Termites Indicated
	4.00	10.00			30.00	6.00	7.00	2.00	25.00	175.00	715.00	1250.		Termites Indicated
	4.00	10.00			30.00	6.00	7.00	2.00	25.00	175.00	717.00	1250.		Termites Indicated
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	707.00	1250.		Termites Indicated
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	711.00	1250.		Termites Indicated
	4.00	8.00			30.00	6.00	7.00	2.00	25.00	175.00	715.00	1250.		Termites Indicated
	4.00	8.00		6.00	30.00		7.00	2.00	25.00	175.00	729.00	1300.		Termites Indicated
	2.00				10.00			2.00	25.00	47.00	200.00	500.		
	4.00	8.00			30.00	5.00	7.00	2.00	25.00	175.00	787.00	1350		Termites Indicated
	4.00	8.00			30.00		7.00	2.00	25.00	100.00	617.00	1200.		Termites Indicated
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	782.00	1300.		Termites Indicated
	4.00	10.00			30.00		7.00	2.00	25.00	175.00	706.00	1250.		Termites Indicated
	4.00	10.00			30.00	6.00	7.00	2.00	25.00	175.00	712.00	1250		Termites Indicated
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	767.00	1300.		Termites Indicated
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	778.00	1300.		Termites Indicated
	4.00	8.00					7.00	2.00	25.00	175.00	794.00	1350.		Termites Indicated

11A			24.00	14.00	125.00		26.00	8.00	60.00	4.00	12.00	150.00	50.00	70.00			5.00
B	10.00		24.00	14.00	125.00		24.00		60.00	4.00	12.00	150.00	50.00	70.00			5.00
C		12.00	20.00	11.00	60.00		25.00		60.00	8.00	12.00	150.00	50.00	70.00			5.00
D	10.00		20.00	8.00	125.00		23.00		60.00	6.00	12.00	150.00	50.00	70.00			4.00
11A	8.00	6.00	28.00	12.00	60.00		24.00		60.00	7.00	12.00	150.00	50.00	70.00			5.00
B		6.00	8.00	12.00	60.00		24.00		60.00	4.00	12.00	150.00	50.00	70.00			5.00
12A		6.00	26.00	7.00						2.00		50.00	5.00	15.00			2.00
B			26.00	6.00	5.00					2.00		150.00	30.00	70.00			2.00
12A	12.00		14.00	5.00	5.00					2.00		50.00	5.00	15.00			2.00
B			11.00	24.00	125.00		25.00		60.00	4.00	12.00	150.00	50.00	70.00			5.00
C	12.00		20.00	10.00	22.00		10.00			4.00		150.00	30.00	30.00			5.00
D			20.00	13.00	30.00		10.00			4.00		150.00	30.00	30.00			5.00
12A					75.00					4.00	2.00	50.00		15.00			2.00
B			20.00	10.00	50.00		24.00	6.00	60.00	4.00	12.00	150.00	70.00	70.00			5.00
C	12.00		4.00	10.00	6.00					4.00	2.00	50.00	5.00	15.00			5.00
D	12.00		4.00	5.00	5.00					2.00	2.00	50.00	5.00	15.00			4.00
12A			30.00	12.00	50.00		25.00		60.00	6.00	12.00	150.00	50.00	70.00			5.00
B			24.00	10.00	125.00		25.00		60.00	4.00		150.00	50.00	70.00			5.00
C			32.00	10.00	125.00		25.00		50.00	4.00		150.00	50.00	70.00			5.00
D		4.00	4.00	5.00	7.00					2.00	2.00	50.00	5.00	15.00			11.00

4.00	9.00			30.00		7.00	2.00	25.00	175.00	700.00	1250.	Termites Indicated
4.00	8.00			30.00		7.00	2.00	25.00	175.00	714.00	1250.	Termites Indicated
4.00	8.00		6.00	30.00		7.00	2.00	25.00	175.00	735.00	1350.	Termites Indicated
4.00	8.00			30.00		7.00	2.00	25.00	150.00	738.00	1350.	Termites Indicated
4.00	9.00			30.00		7.00	2.00	25.00	140.00	708.00	1300.	Termites Indicated
2.00	3.00			10.00		2.00	2.00	25.00	43.00	200.00	500.	
2.00	20.00		10.00	20.00		2.00	2.00	25.00	138.00	600.00	1000.	Termites Indicated
	4.00			10.00		3.00	2.00	25.00	44.00	200.00	500.	
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	807.00	1350.	Termites Indicated
	4.00	8.00			25.00		7.00	2.00	25.00	138.00	500.00	1000.	
	4.00	6.00			25.00		7.00	2.00	25.00	149.00	500.00	1000.	Termites Indicated
	2.00	3			10.00			2.00	25.00	43.00	200.00	500.	
	4.00	6.00			30.00		7.00	2.00	25.00	175.00	730.00	1250	Termites Indicated
	2.00				10.00		3.00	2.00	25.00	45.00	200.00	500.	
	2.00				10.00		3.00	2.00	25.00	50.00	200.00	500.	
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	721.00	1350.	Termites Indicated
	4.00	8.00			30.00		7.00	2.00	25.00	175.00	774.00	1300	Termites Indicated
	4.00	8.00			30.00		7.00	5.00	25.00	175.00	775.00	1300	Termites Indicated
	2.00	20.00		5.00	10.00			5.00	25.00	38.00	200.00	500.00	

BUILDING SURVEY GADSDEN PA

MACDILL A.F.B. TAMPA, FLA.

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH T
126A		15.00	32.00	11.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
B	15.00		28.00	18.00	50.00		24.00		50.00	4.00	12.00	50.00	40.00	70.00		5.00	4.00	8.00	
C			15.00	11.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	10.00	
D			15.00	10.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	30.00		5.00	4.00	6.00	
126A			35.00	15.00	62.00		38.00		50.00	7.00	12.00	150.00	50.00	70.00		5.00	4.00	6.00	
B			32.00	13.00	50.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		30.00	4.00	8.00	
C	9.00		30.00	11.00	125.00		25.00		50.00	4.00	40.00	150.00	50.00	70.00		5.00	4.00	8.00	
D	9.00		30.00	11.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
126A	8.00		30.00	18.00	127.00		25.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
B	8.00	8.00	20.00	5.00			4.00			2.00	2.00	50.00	5.00	15.00		2.00	2.00	1.00	
C	8.00	8.00	22.00	18.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
D		8.00	38.00	20.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
127A		9.00	32.00	22.00	50.00		25.00		50.00	4.00	15.00	150.00	50.00	70.00		11.00	4.00	14.00	
B			32.00	24.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
C		12.00	28.00	23.00	50.00		24.00		50.00	6.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
D			25.00	22.00	125.00		25.00		50.00	7.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
128A	8.00		22.00	20.00	50.00		24.00		50.00	4.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
B			43.00	24.00	50.00		24.00		50.00	8.00	12.00	150.00	50.00	70.00		5.00	4.00	8.00	
C	9.00	8.00	24.00	20.00	75.00		25.00		40.00	4.00	12.00	150.00	30.00	70.00		5.00	4.00	8.00	

G SURVEY GADSDEN PARK HOMES

MACDILL A.F.B. TAMPA, FLA.

	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITION MINIMUM	ESTIMATED COST OF REHABILITION OPTIMUM	REMARKS
0	50.00	70.00		5.00	4.00	8.00			30.00	5.00	7.00	5.00	25.00	175.00	738.00	1300.		Termites Indicated
0	40.00	70.00		5.00	4.00	8.00			50.00	6.00	7.00	5.00	25.00	175.00	646.00	1250.		Termites Indicated
0	50.00	70.00		5.00	4.00	10.00			50.00		7.00	2.00	25.00	175.00	715.00	1400.		
0	50.00	70.00		5.00	4.00	6.00			50.00		7.00	2.00	25.00	175.00	670.00	1250.		
0	50.00	70.00		5.00	4.00	6.00			25.00	6.00	7.00	5.00	25.00	175.00	747.00	1350.		Termites Indicated
0	50.00	70.00		10.00	4.00	8.00			25.00	6.00	7.00	2.00	25.00	175.00	743.00	1350.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00		12.00	30.00	6.00	7.00	2.00	25.00	175.00	838.00	1450.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			30.00	6.00	7.00	2.00	25.00	175.00	703.00	1300.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			30.00	11.00	8.00	4.00	25.00	175.00	813.00	1400.		Termites Indicated
0	5.00	15.00		2.00	2.00	4.00			10.00		5.00	4.00	25.00	30.00	200.00	500.		
0	50.00	70.00		5.00	4.00	8.00			25.00	5.00	7.00	4.00	25.00	175.00	774.00	1350.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			30.00	10.00	8.00	4.00	25.00	175.00	764.00	1350.		Termites Indicated
0	50.00	70.00		10.00	4.00	14.00		7.00	30.00		7.00	2.00	25.00	175.00	750.00	1450.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			50.00	4.00	7.00	2.00	25.00	175.00	746.00	1400.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	731.00	1350.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			50.00		7.00	2.00	25.00	175.00	813.00	1400.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	714.00	1300.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			30.00	4.00	7.00	2.00	25.00	175.00	741.00	1350.		Termites Indicated
0	50.00	70.00		5.00	4.00	8.00			40.00	5.00	7.00	2.00	25.00	175.00	761.00	1350.		Termites Indicated

	70.00		11.00	4.00	8.00		12.00	50.00		7.00	2.00	25.00	175.00	464.00	1400.	Termites Indicated
	70.00		5.00	4.00	8.00			50.00		7.00	2.00	25.00	175.00	714.00	1450.	Termites Indicated
	70.00		5.00	4.00	8.00			50.00	12.00	7.00	2.00	25.00	175.00	776.00	1440.	Termites Indicated
	70.00		5.00	4.00	8.00			50.00	6.00	7.00	2.00	25.00	175.00	750.00	1330.	Termites Indicated
	70.00		5.00	4.00	8.00		7.00	50.00		7.00	2.00	25.00	175.00	743.00	1360.	Termites Indicated
	70.00		25.00	20.00	15.00			40.00		7.00	2.00	25.00	175.00	766.00	1450.	Termites Indicated
	70.00		5.00	4.00	8.00			50.00		7.00	2.00	25.00	175.00	704.00	1350.	Termites Indicated
	70.00		11.00	4.00	8.00			60.00		7.00	2.00	25.00	175.00	760.00	1370.	Termites Indicated
	70.00		5.00	4.00	8.00			50.00	4.00	7.00	2.00	25.00	175.00	737.00	1360.	Termites Indicated
	70.00		5.00	4.00	8.00			50.00		7.00	2.00	25.00	175.00	719.00	1440.	Termites Indicated
	70.00		5.00	4.00	8.00			50.00	4.00	7.00	2.00	25.00	126.00	614.00	1400.	Termites Indicated
	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	175.00	603.00	1000.	Termites Indicated
	30.00		5.00	4.00	8.00			30.00		5.00	2.00	25.00	166.00	500.00	1000.	Termites Indicated
	30.00		5.00	4.00	8.00			40.00		7.00	2.00	25.00	170.00	500.00	1000.	Termites Indicated
	30.00		5.00	4.00	8.00			40.00		7.00	2.00	25.00	168.00	500.00	1000.	Termites Indicated
	30.00		5.00	4.00	8.00			60.00	8.00	7.00	2.00	25.00	175.00	710.00	1370.	Termites Indicated
	30.00		5.00	4.00	8.00			10.00		3.00	2.00	25.00	41.00	200.00	500.	
	15.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	165.00	500.00	1400.	Termites Indicated
	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	175.00	500.00	1000.	
	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	175.00	500.00	1000.	
	30.00		5.00	4.00	8.00		7.00	25.00		7.00	2.00	25.00	160.00	500.00	1000.	Termites Indicated
	30.00		5.00	4.00	8.00								90.00	214.00	400.	Oversized

DATE: 1 SEPT 1953

SHEET 10 OF 15 SHEETS

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BUILDING SURVEY GADSDEN PA

MACDILL A.F.B. TAMPA, FLA.

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH T
			5.00	5.00	6.00					2.00	4.00	50.00	6.00	15.00		2.00		
			12.00	13.00	40.00		10.00		30.00	4.00	8.00	75.00	40.00	30.00		5.00		
			27.00	10.00	50.00		25.00		40.00	4.00	12.00	150.00	50.00	70.00		5.00		
		7.00	22.00	10.00	50.00		25.00		40.00	4.00	12.00	150.00	50.00	70.00		5.00		
		7.00	22.00	10.00	50.00		25.00		40.00	4.00	12.00	75.00	50.00	70.00		5.00		
		12.00	10.00	30.00		15.00	6.00	30.00	4.00	8.00	60.00	30.00	30.00			4.00		
		10.00	7.00	30.00		14.00	6.00	25.00	4.00	8.00	50.00	25.00	65.00			5.00		
		10.00	5.00	30.00		12.00		40.00	4.00	8.00	50.00	30.00	30.00			5.00		
		15.00	20.00	50.00	4.00	25.00		50.00	4.00	12.00	150.00	50.00	30.00			5.00		
		12.00	10.00	40.00		10.00		40.00	4.00	8.00	75.00	40.00	30.00			5.00		
		11.00	8.00	40.00		10.00		40.00	4.00	8.00	60.00	40.00	30.00			5.00		
		10.00	9.00	30.00		10.00		40.00	4.00	8.00	60.00	40.00	30.00			5.00	4.00	8.00
		8.00	10.00	30.00		10.00		30.00	4.00	8.00	60.00	35.00	30.00			5.00	4.00	8.00
		10.00	9.00	36.00		12.00		30.00	4.00	8.00	60.00	30.00	30.00			5.00	4.00	8.00
		17.00	12.00	175.00		25.00		50.00	4.00	12.00	75.00	40.00	30.00			5.00	4.00	8.00
		10.00	8.00	30.00		14.00		30.00	5.00	8.00	60.00	35.00	30.00			5.00	4.00	4.00

NG SURVEY GADSDEN PARK HOMES

MACDILL A.F.B. TAMPA, FLA.

	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITATION: MINIMUM	ESTIMATED COST OF REHABILITATION: MAXIMUM	REMARKS
														10.00	10.00	10%		Occupied
9	6.00	15.00		2.00	3.00	3.00								40.00	40.00	40%		Occupied
	40.00	70.00		5.00	4.00	8.00				10.00				2.00	2.00	25.00	61.00	300.00	500.	Termites Indicated
	50.00	70.00		5.00	4.00	8.00				25.00				5.00	2.00	25.00	150.00	500.00	1000.	Termites Indicated
	50.00	70.00		5.00	4.00	8.00				25.00				7.00	2.00	25.00	175.00	680.00	1300.	Termites Indicated
	50.00	70.00		5.00	4.00	8.00				50.00				7.00	2.00	25.00	175.00	729.00	1700.	Termites Indicated
										50.00	7.00	7.00	2.00			25.00	175.00	661.00	1300.	Termites Indicated
	30.00	30.00		5.00	4.00	8.00										25.00	25.00	350.		Occupied
	25.00	65.00		5.00	4.00	5.00				50.00				7.00	2.00	25.00	156.00	500.00	1000.	
	30.00	30.00		5.00	4.00	7.00				50.00				5.00	2.00	25.00	142.00	600.00	1000.	
	50.00	30.00		5.00	4.00	8.00				50.00				5.00	2.00	25.00	175.00	500.00	1000.	
	40.00	30.00		4.00	4.00	8.00		7.00		40.00	6.00	7.00	2.00	25.00	175.00	667.00	1300.	
	40.00	30.00		5.00	4.00	8.00				25.00		5.00	2.00	25.00	151.00	500.00	1000.	
	40.00	30.00		4.00	4.00	8.00				25.00		5.00	2.00	25.00	149.00	600.00	1000.	
	35.00	30.00		5.00	4.00	8.00				25.00		7.00	2.00	25.00	175.00	500.00	1000.	
	30.00	30.00		5.00	4.00	8.00				50.00		5.00	2.00	25.00	170.00	450.00	1000.	
	40.00	30.00		5.00	4.00	8.00				50.00		7.00	2.00	25.00	170.00	400.00	1000.	
	35.00	30.00		5.00	4.00	8.00				50.00		7.00	2.00	25.00	175.00	677.00	1300.	
										50.00		7.00	2.00	25.00	171.00	600.00	1400.	
										50.00		8.00	2.00							

30.00	30.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	600.00	1300	
										4.00				30.00	18.00	140.	Occupied
50.00	30.00	30.00		5.00	4.00	8.00			50.00		5.00	2.00	25.00	171.00	500.00	1000.	
50.00	30.00	30.00		5.00	4.00	8.00			30.00	5.00	7.00	2.00	25.00	175.00	600.00	1000.	
														100.00	100.00	500	Occupied
61.00	30.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	175.00	600.00	1000.	
50.00	35.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	24.00	161.00	500.00	1000.	
														175.00	190.00	600.	Occupied
50.00	30.00	30.00		5.00	4.00	8.00			30.00	5.00	7.00	2.00	25.00	171.00	600.00	1000.	Termites Infested
50.00	30.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	500.00	1000.	Termites Infested
50.00	30.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	142.00	500.00	1000.	Termites Infested
														30.00	30.00	350.	Occupied
75.00	40.00	35.00		5.00	4.00	8.00			40.00	5.00	7.00	2.00	25.00	175.00	608.00	1300.	
50.00	30.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	171.00	500.00	1000.	
														100.00	208.00	400.	Occupied
40.00	30.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	167.00	400.00	1000.	
														75.00	95.00	500.	Occupied
												2.00		30.00	30.00	350.	Occupied
														32.00	34.00	350.	Occupied
														30.00	30.00	350.	Occupied
														30.00	30.00	350.	Occupied
														25.00	40.00	350.	Occupied

DATE: 1 SEPT. 1953

SHEET 11 OF 15 SHEETS

BUILDING SURVEY GADSDEN PA

MACDILL A.F.B. TAMPA, FLA.

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH
137A																		
138A			2.00															
140A																		
141A																		
142A																		
144A	8.00		14.00	8.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	10.00
145A																		
146A																		
147A																		
148A			12.00	10.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	10.00
149A			5.00	5.00	5.00					2.00	3.00	50.00	10.00	15.00		2.00	2.00	3.00
150A			12.00	10.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	8.00
151A																		
B		8.00	10.00	3.00						2.00	3.00	50.00	10.00	15.00		2.00	2.00	3.00
152A																		
B																		
153A	8.00		15.00	10.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	8.00
B																		
154A																		
155A			15.00	10.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	10.00
B			15.00	10.00	40.00		25.00		125.00	4.00	12.00	75.00	40.00	70.00		5.00	4.00	8.00
C			13.00	10.00	50.00		25.00		125.00	4.00	12.00	75.00	40.00	70.00		25.00	4.00	8.00

SURVEY GADSDEN PARK HOMES

MACDILL A.F.B TAMPA, FLA.

ERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITATION MINI-MUM	ESTIMATED COST OF REHABILITATION OPTI-MUM	REMARKS
														100.00	300.00	500.00	Occupied
														175.00	177.00	600.00	Occupied
														40.00	40.00	350.00	Occupied
2.00	30.00		5.00	4.00	10.00			25.00		7.00	2.00	25.00	147.00	500.00	1000.00		
														25.00	25.00	350.00	Occupied
														65.00	65.00	350.00	Occupied
														30.00	30.00	350.00	Occupied
.00	30.00		5.00	4.00	10.00			25.00		7.00	2.00	25.00	165.00	500.00	1000.00		
.00	15.00		3.00	3.00	1.00			10.00		3.00	2.00	25.00	58.00	200.00	400.00		
.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	147.00	500.00	1000.00	Termites Infested	
														25.00	25.00	350.00	Occupied
.00	15.00		3.00	3.00	1.00			10.00		3.00	2.00	25.00	40.00	100.00	400.00		
														150.00	150.00	400.00	Occupied
														25.00	25.00	350.00	Occupied
.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	147.00	500.00	1000.00		
														25.00	25.00	350.00	Occupied
														30.00	30.00	350.00	Occupied
.00	30.00		5.00	4.00	10.00			25.00		7.00	2.00	25.00	150.00	500.00	1000.00	Termites Infested	
.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	175.00	650.00	1200.00	Termites Infested	
.00	30.00		5.00	4.00	8.00			30.00		9.00	2.00	25.00	175.00	650.00	1300.00	Termites Infested	

			15.00	12.00	50.00		25.00	20.00	125.00	4.00	12.00	75.00	40.00	30.00		5.00	4.00	8.00	
			15.00	8.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	6.00	
			15.00	10.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	8.00	
		8.00	15.00	8.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	8.00	
		8.00	15.00	10.00	125.00		25.00		40.00	4.00	12.00	75.00	40.00	30.00			5.00		
	8.00																		
			15.00	10.00	40.00		25.00		40.00	4.00	8.00	60.00	40.00	40.00		5.00	4.00	8.00	
			15.00	10.00	40.00		8.00		40.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	8.00	
										2.00	2.00	50.00	10.00	15.00		3.00	3.00	3.00	
	6.00		5.00	5.00	5.00					2.00	3.00	50.00	10.00	15.00		3.00	3.00	3.00	
	6.00		8.00	5.00	8.00					2.00	3.00	50.00	10.00	15.00		3.00	3.00	3.00	
	6.00	8.00	8.00	4.00	8.00					2.00	3.00	50.00	10.00	15.00		3.00	3.00	3.00	
	4.00		5.00	5.00	10.00					2.00	3.00	50.00	10.00	15.00		3.00	3.00	3.00	
		10.00	12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	33.00	30.00		5.00	4.00	8.00	
		8.00	12.00	10.00	35.00		15.00		30.00	4.00	8.00	60.00	30.00	70.00		5.00	4.00	6.00	
		8.00	12.00	10.00	40.00		10.00		40.00	4.00	8.00	60.00	30.00	35.00		5.00	4.00	6.00	
			12.00	10.00	45.00		15.00		40.00	4.00	8.00	60.00	30.00	35.00		5.00	4.00	6.00	
		15.00	40.00	10.00	150.00		375.00	120.00	500.00	90.00	12.00	75.00	40.00	35.00		5.00	4.00	8.00	
		15.00	40.00	10.00	150.00		375.00	120.00	500.00	90.00	12.00	75.00	40.00	35.00		5.00	4.00	8.00	
		15.00	40.00	10.00	150.00		375.00	120.00	500.00	90.00	12.00	75.00	40.00	35.00		5.00	4.00	8.00	
			40.00	10.00	35.00		20.00		40.00	4.00	8.00	75.00	70.00	35.00		5.00	4.00	8.00	

40.00	30.00		5.00	4.00	8.00			25.00	8.00	7.00	2.00*	25.00	175.00	662.00	1330.00	Termites Indicated
40.00	30.00		5.00	4.00	6.00		12.00	25.00		7.00	2.00	25.00	126.00	500.00	1000.00	
40.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	154.00	500.00	1000.00	
40.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	151.00	500.00	1000.00	
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	640.00	1280.00	
				2.00							2.00		25.00	27.00	250.00	Occupied
40.00	40.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	120.00	500.00	1000.00	
40.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	154.00	500.00	1000.00	
10.00	15.00		2.00	2.00	3.00			10.00		3.00	2.00	25.00	53.00	200.00	500.00	
10.00	15.00		2.00	2.00	3.00			10.00		3.00	2.00	25.00	46.00	200.00	500.00	
10.00	15.00		2.00	2.00	3.00			10.00		3.00	2.00	25.00	39.00	200.00	500.00	
10.00	15.00		2.00	2.00	3.00			10.00		3.00	2.00	25.00	37.00	200.00	400.00	
									6.00		2.00		25.00	31.00	350.00	Occupied
33.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	25.00	175.00	500.00	1000.00	Termites Indicated
30.00	30.00		5.00	4.00	6.00			25.00		7.00	2.00	25.00	154.00	500.00	1000.00	Termites Indicated
30.00	35.00		5.00	4.00	6.00			25.00		7.00	2.00	25.00	167.00	500.00	1000.00	
30.00	35.00		5.00	4.00	6.00			25.00		7.00	2.00	25.00	172.00	500.00	1000.00	
40.00	35.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	176.00	1718.00	2300.00	
40.00	35.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	1718.00	2300.00	
40.00	35.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	1718.00	2300.00	
70.00	35.00		5.00	4.00	8.00			35.00		7.00	2.00	25.00	104.00	[illegible]	[illegible]	

DATE: 1 SEPT. 1953

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BUILDING SURVEY GADSDEN PA

MACDILL A.F.B. TAMPA FLA.

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TA

G. SURVEY GADSDEN PARK HOMES

MACDILL A.F.B. TAMPA, FLA.

REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITATION MINIMUM	ESTIMATED COST OF REHABILITATION OPTIMUM	REMARKS
40.00	40.00		5.00	4.00	8.00			25.00		7.00	2.00	35.00	149.00	500.00	1000.	Termites Infested
40.00	40.00		5.00	4.00	8.00			25.00		7.00	2.00	35.00	149.00	500.00	1000.	
													60.00	95.00	400.	Demolish
													74.00	85.00	400.	Demolish
													25.00	28.00	350.	Demolish
27.00	40.00		2.00	2.00	3.00			10.00		1.00	2.00	25.00	54.00	200.00	600.	
													35.00	35.00	450.	Demolish
40.00	30.00		5.00	4.00	8.00			25.00	4.00	7.00	2.00	35.00	149.00	500.00	1000.	Termites Infested
10.00	15.00		2.00	2.00	3.00			10.00		1.00	2.00	25.00	54.00	200.00	600.	
	15.00		2.00	2.00	3.00			10.00		1.00	2.00	25.00	54.00	200.00	600.	
40.00	30.00		5.00	4.00	8.00			25.00		7.00	2.00	35.00	149.00	500.00	1000.	Termites Infested

| | | |

40.00	30.00		5.00	4.00	8.00			30.00	4.00	7.00	2.00	25.00	174.00	400.00	1250.	Termites Indicated	
40.00	30.00		5.00	4.00	7.00			30.00	4.00	5.00	2.00	25.00	168.00	500.00	1000.	Termites Indicated	
40.00	30.00		5.00	4.00	7.00			30.00		5.00	2.00	25.00	165.00	500.00	1000.	Termites Indicated	
40.00	30.00		5.00	4.00	7.00			30.00		7.00	2.00	25.00	174.00	500.00	1000.	Termites Indicated	
40.00	30.00		5.00	4.00	8.00			30.00		6.00	2.00	25.00	175.00	400.00	1000.	Termites Indicated	
12.00	15.00		2.00	2.00	3.00			10.00		3.00	2.00	25.00	44.00	200.00	400.		
35.00	30.00		5.00	4.00	6.00			50.00		5.00	2.00	25.00	167.00	500.00	1000.	Termites Indicated	
35.00	30.00		5.00	4.00	6.00			50.00		5.00	2.00	25.00	167.00	500.00	1000.	Termites Indicated	
35.00	30.00		5.00	4.00	6.00			30.00	4.00	7.00	2.00	25.00	174.00	400.00	1000.	Termites Indicated	
12.00	15.00		2.00	2.00	3.00			10.00	5.00	3.00	2.00	25.00	48.00	200.00	400.		
40.00	30.00		11.00	4.00	9.00			30.00		7.00	2.00	25.00	163.00	500.00	1000.		
40.00	30.00		5.00	4.00	8.00			40.00		7.00	2.00	25.00	175.00	400.00	1000.		
											2.00		150.00	150.00	600.	Occupied	
													30.00	30.00	350.	Occupied	
													25.00	25.00	350.	Occupied	
													150.00	150.00	600.	Occupied	
													190.00	190.00	600.	Occupied	
													30.00	30.00	350.	Occupied	
													40.00	40.00	350.	Occupied	
													30.00	30.00	350.	Occupied	
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	500.00	1000.		
													25.00	25.00	350.	Occupied	

DATE: 1 SEPT 1953

SHEET 13 OF 15 SHEETS

BUILDING SURVEY GADSDEN PA

MACDILL A.F.B. TAMPA, FLA.

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TA
[illegible]																		
[illegible]		8.00	12.00	10.00	40.00		10.[illegible]			30.00	4.00			60.00	40.00	30.00		
[illegible]																		
[illegible]							4.[illegible]											
[illegible]		8.00																
[illegible]																		
[illegible]			20.00	10.00	40.00		10.[illegible]			30.00	4.00			60.00	40.00	30.00		
[illegible]			20.00	10.00	40.00		10.[illegible]			30.00	4.00			60.00	40.00	30.00		
[illegible]																		
[illegible]		6.00	24.00	5.00	5.00						2.00	5.00		50.00	10.00	15.00		
[illegible]		8.00	12.00	4.00	10.00						2.00	4.00		50.00	10.00	15.00		
[illegible]			12.00	10.00	40.00		10.[illegible]			30.00	4.00	8.00		60.00	40.00	30.00		
[illegible]			12.00	12.00	40.00		10.[illegible]			30.00	4.00	8.00		60.00	40.00	30.00		
[illegible]																		
[illegible]					35.00													
[illegible]			12.00	10.00	40.00		10.[illegible]			30.00	4.00	8.00		60.00	40.00	30.00		
[illegible]																		
[illegible]			21.00															

DING SURVEY GADSDEN PARK HOMES

MACDILL A.F.B. TAMPA, FLA.

K	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITION MINIMUM	ESTIMATED COST OF REHABILITION OPTIMUM	REMARKS
														40.00	40.00	350.		Occupied
									30.00	6.00	7.00	2.00	25.00	149.00	600.00	1000.		
														30.00	30.00	350.		Occupied
														30.00	30.00	350.		Occupied
														40.00	44.00	350.		Occupied
														30.00	34.00	350.		Occupied
														30.00	30.00	350.		Occupied
60.00	40.00	30.00		5.00	4.00	8.00			30.00	6.00	7.00	2.00	25.00	149.00	600.00	1000.		Termites Infested
60.00	40.00	30.00		5.00	4.00	8.00			30.00	6.00	7.00	2.00	25.00	149.00	600.00	1000.		
														150.00	150.00	500.		Occupied
50.00	10.00	15.00		3.00	2.00	3.00			10.00		3.00	2.00	25.00	97.00	200.00	500.		
50.00	10.00	15.00		1.00	2.00	3.00			12.00		3.00	2.00	25.00	97.00	200.00	500.		
60.00	40.00	30.00		5.00	4.00	8.00			30.00	4.00	5.00	2.00	25.00	173.00	600.00	1000.		
60.00	40.00	30.00		4.00	4.00	8.00			30.00		7.00	2.00	25.00	173.00	600.00	1000.		
														150.00	150.00	500.		Occupied
														61.00	175.00	500.		Occupied
60.00	40.00	30.00		5.00	4.00	8.00			30.00	6.00	7.00	2.00	25.00	149.00	600.00	1000.		
														30.00	30.00	350.		Occupied
														150.00	171.00	500.		Occupied

1200

			12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
B																			
194A		6.00	12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
B			12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
195A			10.00																
B		6.00	12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
196A			4.00																
196A																			
196A			16.00	10.00	40.00		10.00		35.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
B			12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
B			12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
198A			15.00	10.00	40.00		15.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
B		6.00																	
197A			12.00	10.00	40.00		10.00		30.00	4.00	8.00	75.00	40.00	30.00		5.00	4.00	8.00	
B		8.00	10.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
199A		8.00	10.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
B			18.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
C		8.00	12.00	10.00	35.00	4.00	10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
B			15.00	10.00	125.00		25.00		50.00	4.00	12.00	150.00	40.00	30.00		5.00	4.00	8.00	
199A			16.00	10.00	125.00		25.00		50.00	4.00	12.00	75.00	40.00	30.00		5.00	4.00	8.00	
B		6.00	24.00	4.00	6.00					2.00	6.00	50.00	10.00	15.00		2.00	2.00	3.00	
C		6.00	12.00	10.00	40.00		10.00		30.00	4.00	8.00	60.00	40.00	30.00		5.00	4.00	8.00	
D																			

1201

40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	500.00	1000.			
													45.00	45.00	150.	Occupied		
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	169.00	500.00	1000.			
40.00	30.00		5.00	4.00	8.00			30.00	8.00	7.00	2.00	25.00	181.00	500.00	1000.			
													30.00	30.00	350.	Occupied		
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	169.00	500.00	1000.			
													30.00	30.00	350.	Occupied		
													30.00	30.00	350.	Occupied		
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	166.00	500.00	1000.			
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	500.00	1000.			
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	160.00	500.00	1000.			
													45.00	45.00	150.	Occupied		
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	160.00	500.00	1000.			
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	169.00	500.00	1000.			
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	169.00	450.00	1000.			
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	169.00	500.00	1000.			
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	169.00	500.00	1000.	Termites Indicated		
40.00	30.00		5.00	4.00	8.00			30.00	8.00	7.00	2.00	25.00	150.00	700.00	1300.	Termites Indicated		
40.00	30.00		5.00	4.00	8.00			30.00		7.00	2.00	25.00	175.00	649.00	1450.			
10.00	15.00		2.00	2.00	3.00			10.00		2.00	2.00	25.00	31.00	100.00	300.			
40.00	30.00		5.00	4.00	8.00			30.00		5.00	2.00	25.00	171.00	500.00	1000.			
													30.00	30.00	350.	Occupied		

DATE: 1 SEPT 1983

SHEET 14 OF 15 SHEETS

BUILDING SURVEY GADSDEN PA

MACDILL A.F.B. TAMPA, FLA.

BLDG.	EXTERIOR WALLS	INTERIOR WALLS	DOORS	WINDOWS	FLOORS	STAIRS	PARTITIONS	CEILING	ROOF	ELECTRICAL	SINK	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TA
										3.00	8.50	40.00	30.00	30.00		2.00		
				10.00	40.00		30.00		40.00	4.00	8.00	40.00	30.00	40.00		5.00	40.00	5.00
				10.00	40.00		16.00		35.00	4.00	8.00	75.00	30.00	30.00		5.00		6.00
				6.00	6.00				3.00		8.00	50.00	30.00	35.00		2.00		3.00
				5.00	4.00				3.00		4.00	50.00	8.00	35.00		4.00		3.00
				3.00	3.00				3.00		4.00	50.00	8.00	35.00		3.00		3.00
				11.00	40.00		37.00		40.00	4.00	8.00	60.00	40.00	30.00		4.00		8.00
				6.00	6.00				3.00		4.00	50.00	8.00	35.00		3.00		3.00
				12.00	40.00		37.00		40.00	4.00	8.00	60.00	40.00	30.00		4.00		8.00
				12.00	40.00		14.00		35.00	4.00	8.00	60.00	40.00	30.00		4.00		8.00
				10.00	40.00		37.00		35.00	4.00	8.00	60.00	40.00	30.00		4.00		8.00
				14.00														

...G SURVEY GADSDEN PARK HOMES

MACDILL A.F.B. TAMPA, FLA.

	REFRIGERATOR	WATER HEATER	RANGE	KITCHEN CABINET	COMMODE	LAVATORY	FLUSH TANK	BATH TUB	MEDICINE CABINET	SPACE HEATER	FLUE PIPE	FUEL TANK	CLOTHES LINE	WINDOW SHADES	INTERIOR PAINTING	ESTIMATED COST OF REHABILITION: MINIMUM	ESTIMATED COST OF REHABILITION: OPTIMUM	REMARKS
	30.00	35.00		3.00	3.00	3.00			10.00		2.00	2.00	25.00	42.00	200.00	500.		
	30.00	30.00		5.00	4.00	5.00			30.00		5.00	2.00	25.00	143.00	500.00	1000.		
	30.00	35.00		5.00	4.00	5.00			30.00		5.00	2.00	25.00	183.00	600.00	1000.		Termites Indicated
	30.00	15.00		2.00	2.00	3.00			10.00		3.00	2.00	25.00	61.00	300.00	500.		
	8.00	15.00		1.00	2.00	3.00			10.00		3.00	2.00	25.00	47.00	250.00	500.		
	8.00	14.00		1.00	2.00	3.00			10.00		2.00	2.00	25.00	62.00	200.00	500.		
	40.00	40.00		5.00	4.00	5.00			30.00		5.00	2.00	25.00	159.00	650.00	1000.		Termites Indicated
	8.00	15.00		1.00	2.00	3.00			10.00		2.00	2.00	25.00	52.00	200.00	500.		
	40.00	35.00		5.00	4.00	5.00			30.00		5.00	2.00	25.00	143.00	450.00	1000.		
	40.00	30.00		5.00	4.00	5.00			30.00		5.00	2.00	25.00	158.00	500.00	1000.		
	40.00	30.00		5.00	4.00	5.00			30.00		5.00	2.00	25.00	143.00	400.00	1000.		
															30.00	31.00	150.	Damaged

EXHIBIT 32

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

A formal Master Planning Board met on Monday, 27 August, 1956, at 1330 hours, in the 6th Air Division Conference Room, MacDill Air Force Base, pursuant to MacDill Air Force Base letter, file DTCAC-74, dated 10 April, 1956.

The following members were present:

Brigadier General W. K. Mooney	6th Air Division
Colonel T. H. Merchant	Base Commander
Colonel S. Vandeventer, Jr.	306th Bomb Wing
Colonel M. F. Pearson	306th Medical Group
Lt Colonel G. L. Stephen	Asst Dir/Opr 6th Air Division
Lt Colonel D. D. Donadon	Dir/Mat 306th Bomb Wing
Lt Colonel L. T. Mueller	Dir/Opr 900th Air Base Group
Major W. T. Patton	Dir/Mat 6th Air Division
Major W. C. Coker	Base Comptroller
Major E. L. Almon	Dir/Mat 900th Air Base Group
Major E. L. Godfrey, Jr.	1928th AACS Detachment
Major A. D. Allen Jr.	Resident Engineer
Major R. G. Williams	Air Installation Officer
Captain C. J. Westhoff	Base Communications Officer
1st Lt. A. P. Wale, Jr.	306th Bomb Wing
Mr. C. C. Humphreys	Airport Engineer
Mr. Cecil Poole	New Construction Project Officer

The meeting was called to order by Colonel Merchant, stating that General Mooney would be delayed in arriving.

Colonel Merchant then turned the meeting over to Mr. C. C. Humphreys, Airport Engineer. Mr. Humphreys stated that the purpose of the meeting was to discuss the 1956 Public Works Program. For the benefit of the new members of the Board, a review was given of construction for MacDill during 1952, 1953, and 1954.

The proposed 1956 Public Works Program for MacDill Air Force Base was discussed at length, and it was the opinion of the Board that the following items were essential to the mission of the base and should be included in the program:

BASE PRIORITY	DESCRIPTION	QUANTITY	AMOUNT
1	Warehouse, Base	60,000 SF	$
2	Bleachers, Special	10,000 SF	430,000
3	Ventilation of Barracks (138)	Lump Sum	
4	Parachute & Dinghy Building	10,500 SF	147,000
5	Nose Docks, Convair	8	576,000
6	Electric Gen. Plants	3	77,000
7	Shoulder & Overrun Areas	100,000 SY	270,000
8	Roads	58,000 SY	313,000
9	Modernization 1[illegible] Mob. Pks.	Lump Sum	

General Mooney entered and Colonel Marchant gave him a resume of the meeting.

Mr. Humphreys then brought before the Board the following items, in the 1954 program but not approved, for further justification if considered essential to the mission of the base, to be injected into the 1955 Public Works Program.

a. Aircraft Parking Apron Area. Colonel Marchant stated that he does not feel we can justify additional aircraft parking areas. It was the opinion of the Board that no additional areas are desired.

b. (Base Priority 7) It was the opinion of the Board that the item for shoulder and end zone stabilization should be requested as a line item in the 1955 program.

c. Communications - lump sum item of $44,000. It was the opinion of the Board that Air Installations should add the amount necessary for communications on the cost of the project for each building. (Note: Later estimated by ATC and Base Communications Officer at $20,000 instead of $64,000.)

d. Technical Laboratory - 2,136 sq ft $31,000. The Board felt that this item could not be justified at the present time, and that it should be eliminated.

e. A new Base Operations building had been requested in the 1952 new construction program and authorized for construction but never funded. The Board entered into discussion as to the advisability of requesting a new Base Operations building at this time. General Mooney stated that he was not in favor of erecting a new Base Operations building at the approved location, which is considerable distance from the main building area, and asked if consideration had ever been given to enlarging the administrative section of the existing base hangar to provide greater operation space. Mr. Humphreys stated that new buildings in new construction programs were in accord with definitive plans authorized by Headquarters USAF and that such modifications were not in accord with approved definitive plans; therefore no consideration had been given to such modification. After considerable discussion it was brought out that there was to be an item in the 1955 program for construction of a parachute and dinghy shop, which when built, would relinquish a considerable amount of floor space in the base hangar which could then be utilized for Base Operations. It was the opinion of the Board that effort should be concentrated in obtaining the construction of the parachute and dinghy facility in order that necessary additional space would be available in the hangar rather than to request a new Base Operations building at this time. It was decided that the Base Operations building should be eliminated from the 1955 program.

f. In the suggested list of items for the 1955 program, both ventilation and modernization of 1?? mobilization type barracks were included in one line item. General Mooney requested that this item be separated into two projects (1) ventilation of barracks, (2) modernization of barracks, said modernization to be contingent upon approval of ventilation project. Colonel Regner, 306th Medical Group, was informed that this project did include hospital barracks. Colonel Merchant suggested that the exact number of buildings actually needed be stipulated.

g. It was the opinion of the Board that the item for AIC facilities should be eliminated.

Priorities listed above were established by General Mooney.

Mr. Poole, New Construction Project Officer, presented the M.C.C. program for 1955 to the Board. It was requested that reroofing of flat sections of hangars be accomplished as soon as possible.

General Mooney brought up the subject of the congested traffic situation on the base, particularly the traffic situation on Florida Avenue. A discussion was entered into wherein suggestions were made that vehicular parking be eliminated from Florida Avenue and two-way traffic restored, which would necessitate construction of additional parking areas in the rear of headquarters annex, 4th Air Division, headquarters building, library, and Red Cross building. Another suggestion was moving the curb on the South side of Florida Avenue back approximately ten feet. General Mooney requested the Base Commander to have a survey accomplished with a view towards alleviating the congested traffic situation on Florida Avenue, if possible.

Colonel Vandeventer requested information as to whether request had been processed to have the old bomb trainer buildings (T-556, T-557, T-559, and T-560) located southwest of the new A & E building, demolished and removed for the purpose of constructing a vehicle parking area for the 306th Bomb Wing. Mr. Poole is to make a report to him.

Colonel Vandeventer also requested information as to progress made pursuant to relocation of aircraft docks during the projected absence of the 306th Wing. Mr. Poole was instructed to obtain estimates on this matter.

There being no further business to be brought before the Board, the meeting adjourned at 1545 hours, 24 August, 1953.

/s/ Robert G. Williams
/t/ ROBERT G. WILLIAM
Major, USAF
Recorder

"A CERTIFIED TRUE COPY"
B. C. Johnson
B. C. JOHNSON
2nd Lt., USAF

1207

EXHIBIT 33

HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

TCO/AI 600.1

SUBJECT: Command Approved Class "A" Projects, MacDill Air Force Base, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

In Accordance with instructions contained in Headquarters Second Air Force teletype messages 2AFAI 2170, dated 17 July 1953 and 2AFAI 2407, dated 19 August 1953, the enclosed list of proposed command approved Class "A" (450 and 470) projects is forwarded for your consideration.

FOR THE COMMANDER:

/s/ C. A. Whittle
/s/ C. A. WHITTLE
MAJ, USAF
ASST. ADJUTANT

1 incl
Proj List (450 & 470 quad)

"A CERTIFIED TRUE COPY"
(Including Inclosure)

T. A. JOHNSON
2nd Lt., USAF

PROPOSED CLASS "A" PROJECTS OVER
$50,000 TO BE ACCOMPLISHED FY-54

22 August 1953

456 and 478 (Class "A") MacDill AFB, Fla.

ITEM NUMBER	PROJECT DESCRIPTION AND JUSTIFICATION	ESTIMATED COST
1.	Repair and reseal 75ft dust strip on each side of runway 17-35, consisting of approximately 127,000 S.Y. of flexible pavement. Work includes patching and application of a bituminous sand seal. Resealing of runway 17-35 and dust strip is included in the FY-55 major repair and minor new construction program. Dust strip sections of runway is deteriorating so fast that normal maintenance by the installation forces is ineffective. Lack of traffic and extreme heat has caused oxidation of the existing sand seal bituminous surface and it is considered essential that this work be accomplished at the earliest practical date to preserve the existing limerock base course.	$51,000.00
2.	Exterior painting of all exterior wood trim, eaves, gable rakes on ten(10) administration buildings; exterior painting of wood eaves, gable rakes, on roofs and aqua media section on 39 barracks, buildings and painting exterior of 5 trainer buildings. Administration buildings were covered with asbestos cement single siding by installation forces in the past two years. Exterior wood trim on administration buildings and eaves section of barracks buildings have not been painted within the past 5 years. Trainer buildings were repainted recently by PX fund and have only been given a prime coat of paint. Extremely high humidity and corrosive action from salt air has caused considerable deterioration to exposed previously painted wood surfaces and protective repainting is critically required to eliminate excessive repair cost in the immediate future.	$25,000.00
3.	Repair and resealing approx 60,000 square yards of parking areas on the base proper, consisting of patching and application of bituminous single surface treatment. Existing flexible pavement has deteriorated to the point that normal maintenance is very ineffectual. Existing surface has eroded and base course has pot holes to the extent that it is hazardous.	$30,000.00

1210

EXHIBIT 34

AIRWAYS AND AIR COMMUNICATIONS SERVICE
HEADQUARTERS 1ST AACS ION SQUADRON
Tinker Air Force Base, Oklahoma City, Okla.

CTS.3 22 September, 1953

SUBJECT: Construction Drawings for ILAS Localizer Site

TO: Commander
MacDill AF Base
Florida

Request this organization be furnished copies of construction drawings for the ILAS localizer site. It is understood that this construction has been completed and is ready for occupancy. Drawings of the construction are necessary for our use in preparation of installation job specifications.

FOR THE COMMANDER:

/s/ Dennis A. Backman
DENNIS A. BACKMAN
WO3C, USAF
Adjutant

cc: Comdr 1021-7 AACS Det

"A DEMOCRACY MUST BE STRONG"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

Airways & Air Comm Svc, Hqs 1st AACS IAM Sq, Tinker AF Base, Oklahoma City, Okla, Subj: Construction Drawings for ILAS Localizer Site.

NCDWAI 673.3 (22 Sep 53) 1st Ind 8 Oct., 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Airways and Air Communications Service, Headquarters, 1st AACS IAM Squadron, Tinker Air Force Base, Oklahoma City, Okla.

With reference to information requested in basic communication, construction drawings for ILAS localizer constructed at this headquarters are furnished herewith:

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

1 Incl
Dwg 53-35 in 4 sheets (trip)

"A CERTIFIED TRUE COPY"

L. A. Johnson

L. A. JOHNSON
2nd Lt., USAF

BLVD
4.7 MILES
TO
OUTER MARKER
SEE
INSERT "A"
RESERVATION
INTERBAY
DALE MABRY
HWY
AVE.
EXIST
MARK
& CON
EM. POWER
SHELTER
BOUNDARY MAR
GLIDE PATH
BLDG.
INSTRUMENT RUNWAY (300' X 10,000')
POSSIBLE FUTURE
PORT TAMPA CITY
RESERVATION
BOUNDARY

BLVD.
4.7 MILES
TO
OUTER MARKER
SEE
INSERT "A"
RESERVATION
GALE MABRY HWY
AVE.
MIDDLE
MARKER
SEE
INSERT "B"
EM. POWER
HINES
BOUNDARY
MacDILL AVE.
BAYSHORE BLVD.
EXISTING SITE
MARKER SHED
& COUNTERPOISE
BOUNDARY MARKER
100'
250'
300'
400'
GLIDE PATH
BLDG.
POSSIBLE FUTURE RUNWAY
HILLSBOROUGH
BAY
N

FORT TAMPA CITY

RESERVATION BOUNDARY

EM. POWER SHELTER T-111B

GLIDE PATH BLDG. T-112

INSTRUMENT RUNWAY (5000' X 10,000')

TAMPA

AUTO. COURSE CENTERING UNIT

LOCALIZER UNIT

BAY

EM. POWER SHELTER T-111B

MIDDLE MARKER

CENTER LINE INST. RUNWAY (EXT.)

SPITLER PARK SUBDIVISION

BLOCK 2

SOUTH MIDWAY BLVD.

SHORE DRIVE

ENGLEWOOD AVE

HIMES AVE.

EMERG. POWER SHELTER T-596

3625' TO END OF PAVE.

S.E. CORNER OF N.E. 1/4 OF S.E. 1/4 SEC. 16 TWP. 30 S., RGE. 18 E.

NARGUM ST.

INSERT "B"

1 IN. = 200 FT.

OUTER MARKER

CENTER LINE INST. RUNWAY (EXT.)

RIVIERA DR.

CANAL

BLOCK 54

MAYNARD AVE

LUCERNE AVE

WEST DAVIS BLVD.

4.7 MI. TO END OF PAVEMENT

TRANS BLDG

EMERG. POWER SHELTER

INSERT "A" (DAVIS ISLANDS)

NO SCALE

1215

EM. POWER
SHELTER

BOUNDARY MARKER

GLIDE PATH
BLDG. T1112

1800' X 10,000'

POSSIBLE FUTURE RUNWAY

CONTROL TOWER

ORDNANCE AREA

POOL

BAY

APPROVED FOR 6 4 D

BY _____ DATE _____

APPROVED FOR _____

BY _____ DATE _____

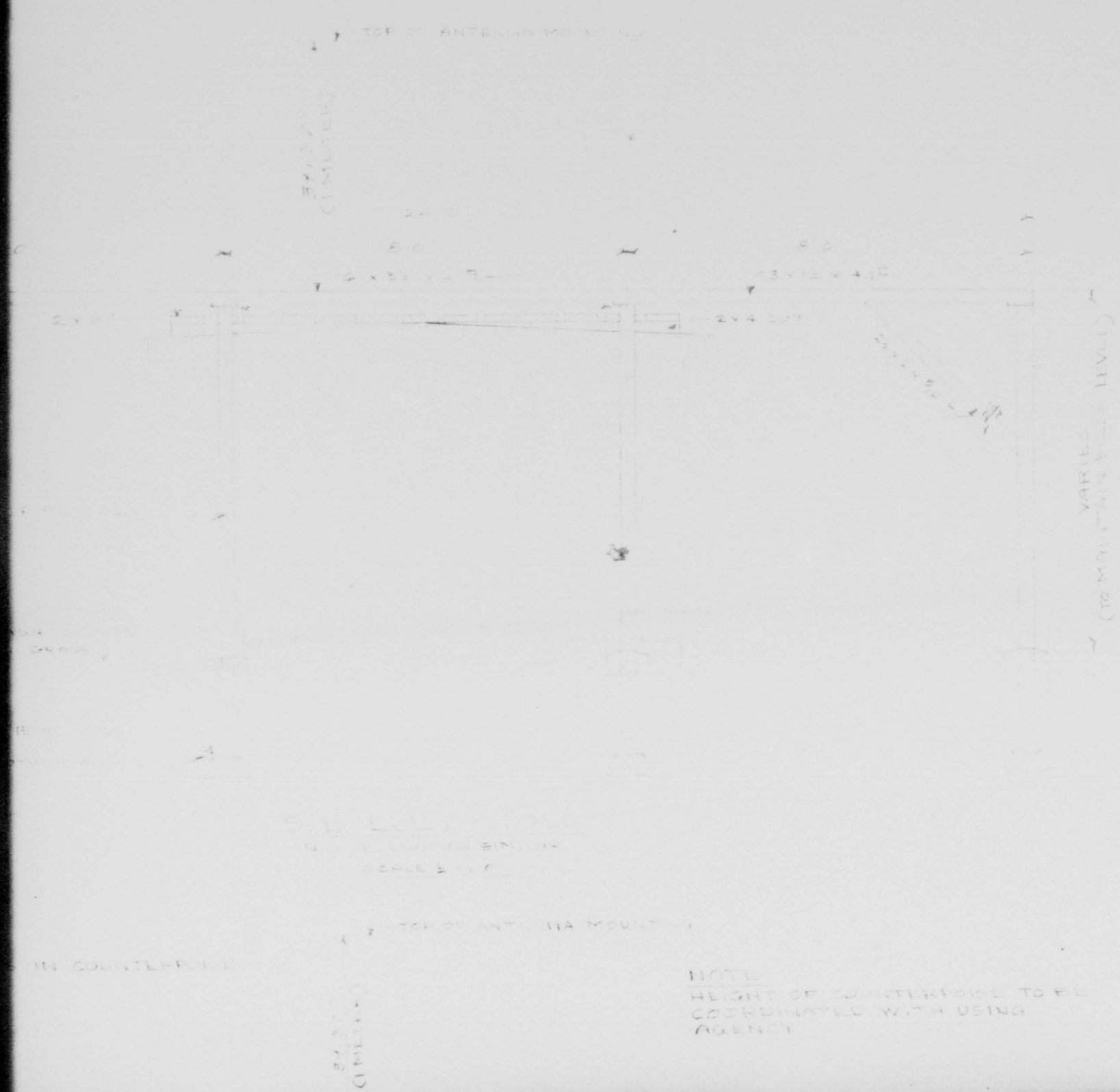
SCALE 1" = 1200FT.	MAC DILL AIR FORCE B	
	MODIFICATIONS TO I.	
	SITE LOCATION PLAN	
DRAWN J.R. CLARK	SUBMITTED C. E. [illegible] BASE ENGINEER	RECOMMENDE AIR INSTALLATIO
CHECKED U.C.J.	APPROVED [illegible] COMMANDING OFFICER	DRAWING N MCD 5 IS
DATE REV 26 MAR 53		

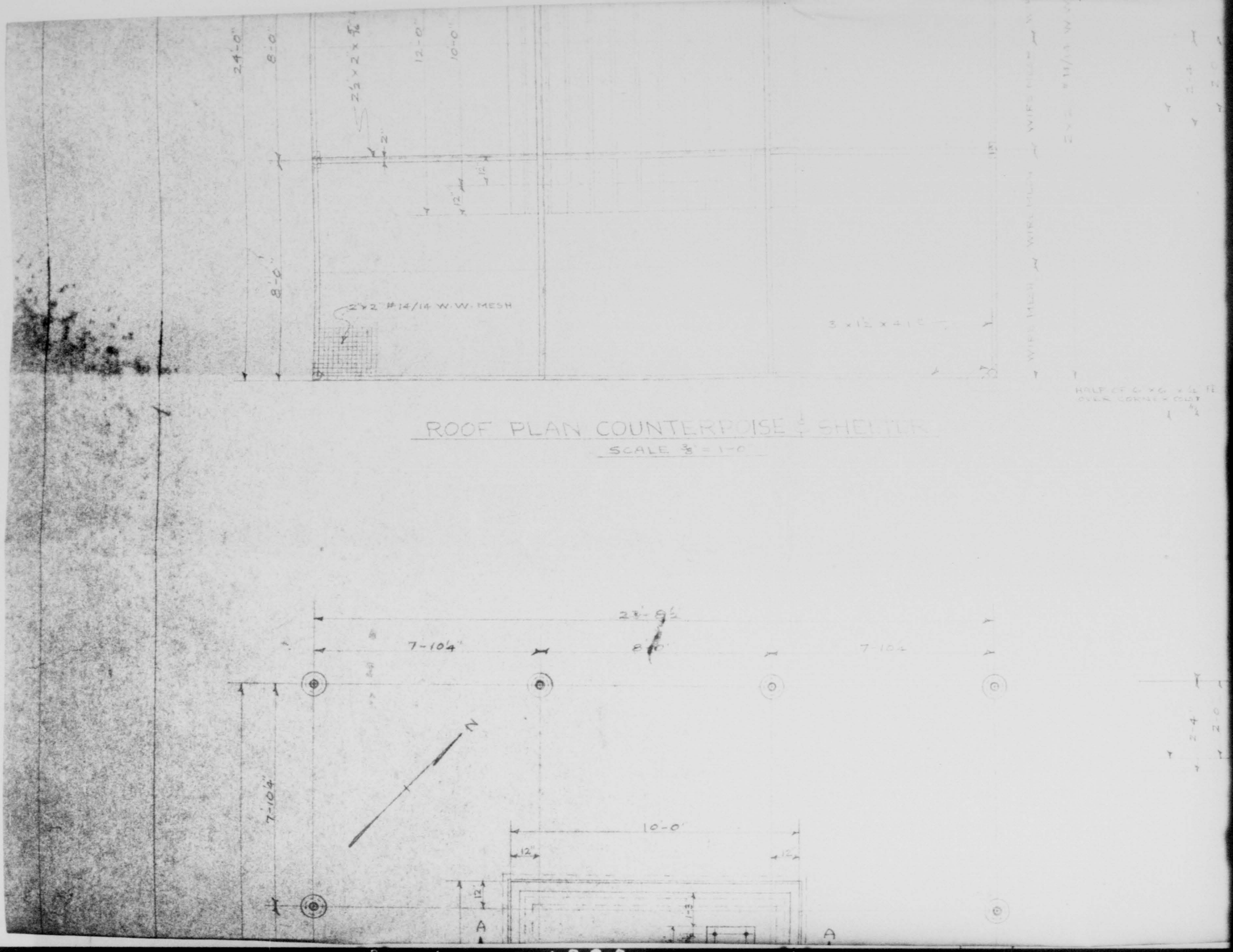
SHEET 1 OF 4 SHEETS 53-

SPEED 12

24'-0"
8'-0"
8'-0"
24'-0"
8'-0"
12'-0"
10'-0"
2 x 2 x 5/16" ∠
2 x 2 x 5/16" ∠
2 x 2 #14/14 W.W. MESH

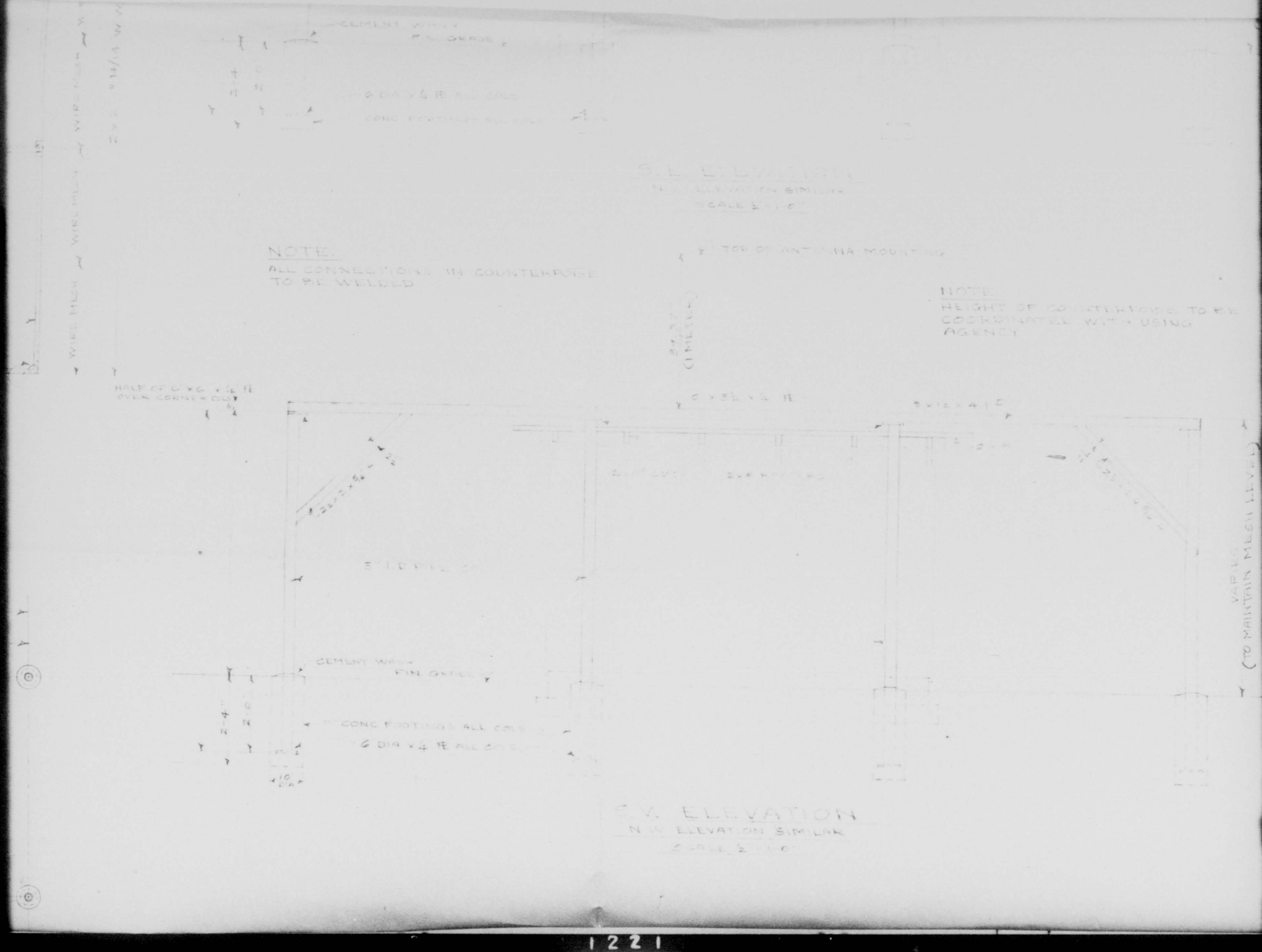
NOTE:
ALL CONNECTIONS IN COUNTERPOISE
TO BE WELDED


2x4 CUT
VARIES
NOTE:
HEIGHT OF COUNTERWEIGHT TO BE
COORDINATED WITH USING
AGENCY



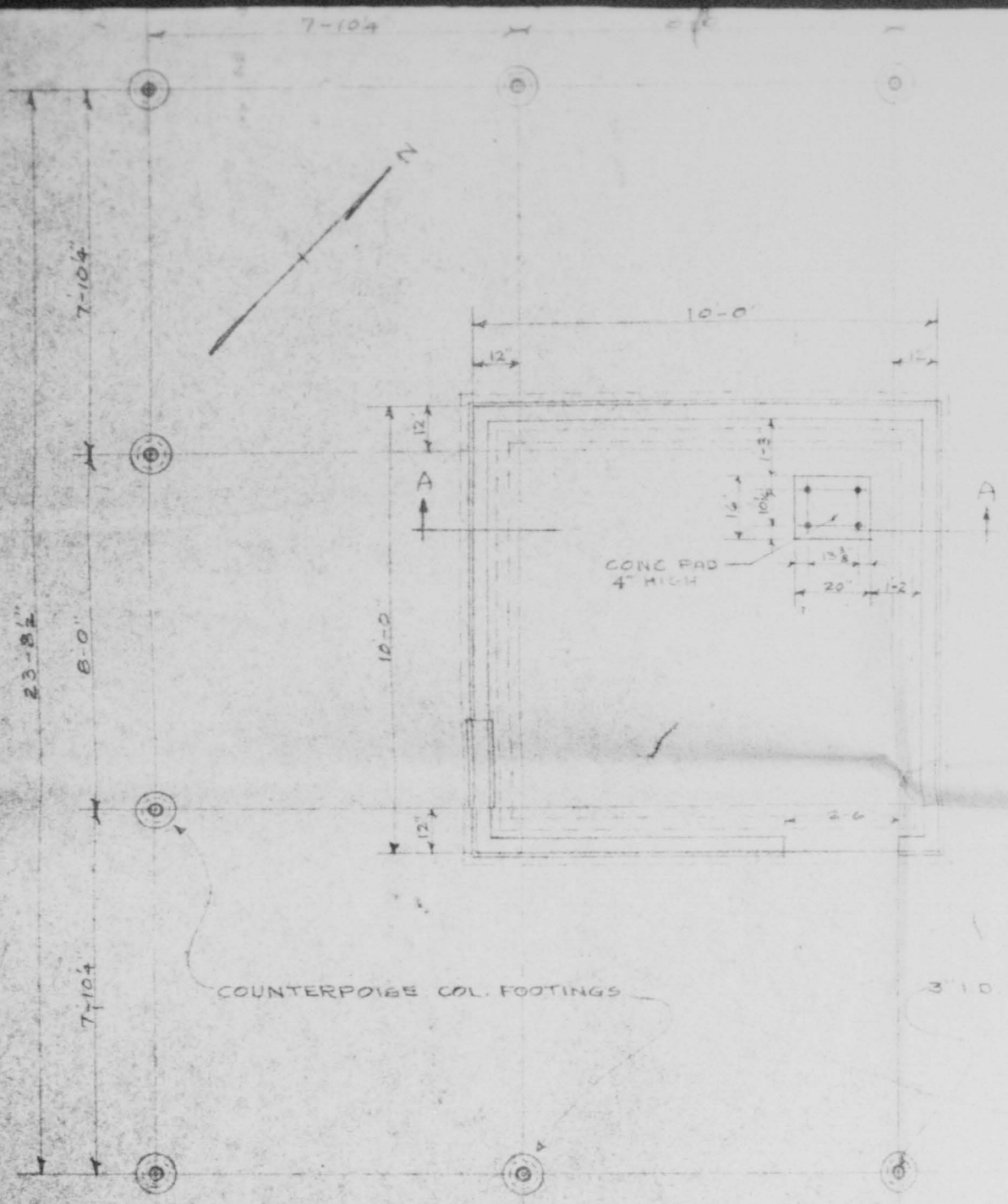
ROOF PLAN COUNTERPOISE & SHELTER

SCALE 3/8" = 1'-0"


NOTE:
ALL CONNECTIONS IN COUNTERPOISE TO BE WELDED
NOTE:
HEIGHT OF COUNTERPOISE TO BE COORDINATED WITH USING AGENCY
CEMENT WASH
FIN GRADE
CONC FOOTINGS ALL COLS
6 DIA x 4 FT ALL
TOP OF ANTENNA MOUNTING
HALF OF 6 x 6 x 1/4 FT OVER CONNECTOR COLS
6 x 8 1/2 x 4 FT
8 x 12 x 4 FT
WIRE MESH OR WIRE MESH OR WIRE ROPE
(TO MAINTAIN MESH LAYER)
S.W. ELEVATION
N.W. ELEVATION SIMILAR
SCALE 1/2" = 1'-0"
S.E. ELEVATION
N.E. ELEVATION SIMILAR
SCALE 1/2" = 1'-0"

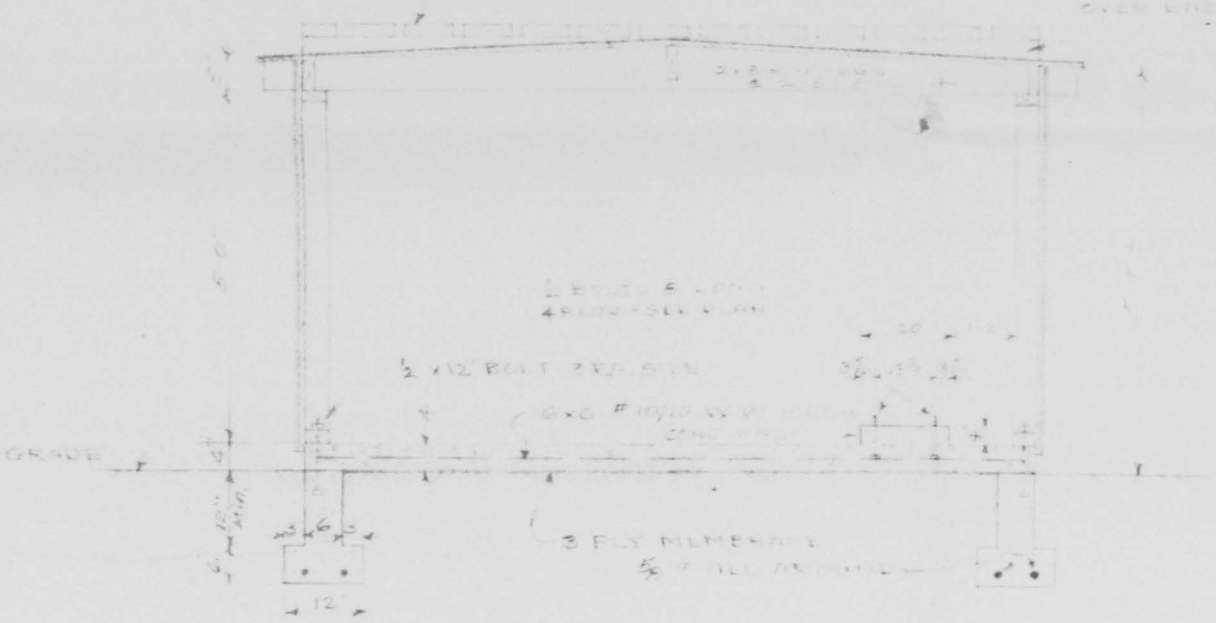
1221

NOTE:
HEIGHT OF COUNTERBRACE TO BE
COORDINATED WITH USING
AGENCY



FOUNDATION & FLOOR PLAN

SCALE ¼" = 1'-0"



SECTION A

SCALE ½" = 1'-0"

GENERAL NOTES

1. CONCRETE FOUNDATION AND FLOOR
   INSTALLED FOR BOUNDRY MARKE
   AT NEW LOCATION SHOWN ON
2. BOUNDRY MARKER SHELTER AN
   EXISTING TO BE MOVED FROM
   LOCATION SHOWN ON SHEET
   ON NEW FOUNDATION AS SHO
   SHEET.
3. CONSTRUCT AND INSTALL COUN
   AS DETAILED ON THIS SHEET
   ING MIDDLE AND OUTER MAR
4. HEIGHT OF COUNTERFOISE TO B
   WITH USITT AGENCY

1224

GENERAL NOTES

1.- CONCRETE FOUNDATION AND FLOOR SLAB TO BE INSTALLED FOR BOUNDRY MARKER SHELTER AT NEW LOCATION SHOWN ON SHEET 1.
2.- BOUNDRY MARKER SHELTER AND COUNTERPOISE EXISTING TO BE MOVED FROM PRESENT LOCATION SHOWN ON SHEET 1 AND INSTALLED ON NEW FOUNDATIONS AS SHOWN ON THIS SHEET.
3.- CONSTRUCT AND INSTALL COUNTERPOISE AS DETAILED ON THIS SHEET OVER EXISTING MIDDLE AND OUTER MARKER SHELTERS.
4.- HEIGHT OF COUNTERPOISE TO BE COORDINATED WITH USING AGENCY

APPROVED: [illegible signature]

APPROVED:

REV	DATE	DESCRIPTION	SUB'D	RECO	APP'D

STRATEGIC AIR COMMAND
TAMPA, FLORIDA

MACDILL AIR FORCE BASE

MODIFICATIONS TO I.L.A.S.

PLANS AND DETAILS OF COUNTERPOISE INSTALLATION

SCALE: AS SHOWN DRAWN: C.A.L. TRACED:	SUBMITTED: C.C. Humphreys BASE ENGINEER	RECOMMENDED: J.A. Weeks Maj. AIR INSTALLATIONS OFFR
CHECKED: A.C.J. DATE: 26 MAR. 53	APPROVED: Robert D. Ungstrom Major COMMANDING OFFICER	DRAWING NUMBER MCD B-12

SHEET 2 OF 4 SHEETS

53-35

SPEED 151

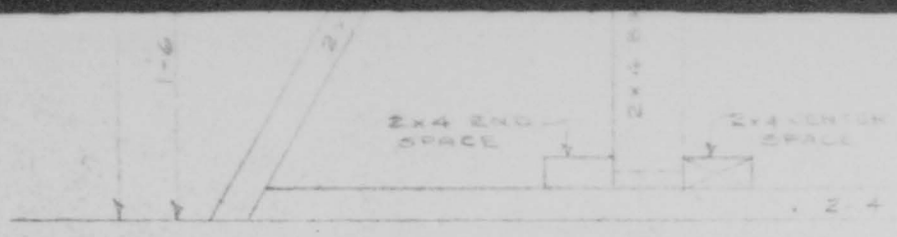
1225

SECTION C-C

SCALE ½" = 1'-0"

2x6 CONTINUOUS

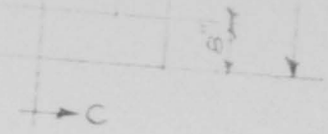
1228



SECTION D-D

SCALE 3"=1-0

ELEVATION OF AUTO. [illegible]RING UNIT MOUNT



REV	DATE	DESCRIPTION	SUB'D	RECO	APP'D

STRATEGIC AIR COMMAND
TAMPA, FLORIDA

MACDILL AIR FORCE BASE

MODIFICATIONS TO I.L.A.S.

PLANS AND DETAILS OF PIT FOR LOCALIZER UNIT & AUTO. CENTERING UNIT MOUNT

SCALE: AS SHOWN	SUBMITTED: C C Humphreys	RECOMMENDED: Robert Wyatt Maj
DRAWN: C A L	BASE ENG.	AIR INSTALLATIONS OFF.
TRACED:	APPROVED: Robert Wyatt Maj	DRAWING NUMBER MCD ST-4
CHECKED: A C S	COMMANDING OFFICER	
DATE: 26 MAR. 53		

SHEET 3 OF 4 SHEETS

53-35

Sept. 15

GROUND ROD
1" CONDUIT

SECTION BB

LEGEND

CEILING LIGHT

CONVENIENCE OUTLET

DOUBLE CONVENIENCE OUTLET

LIGHT SWITCH

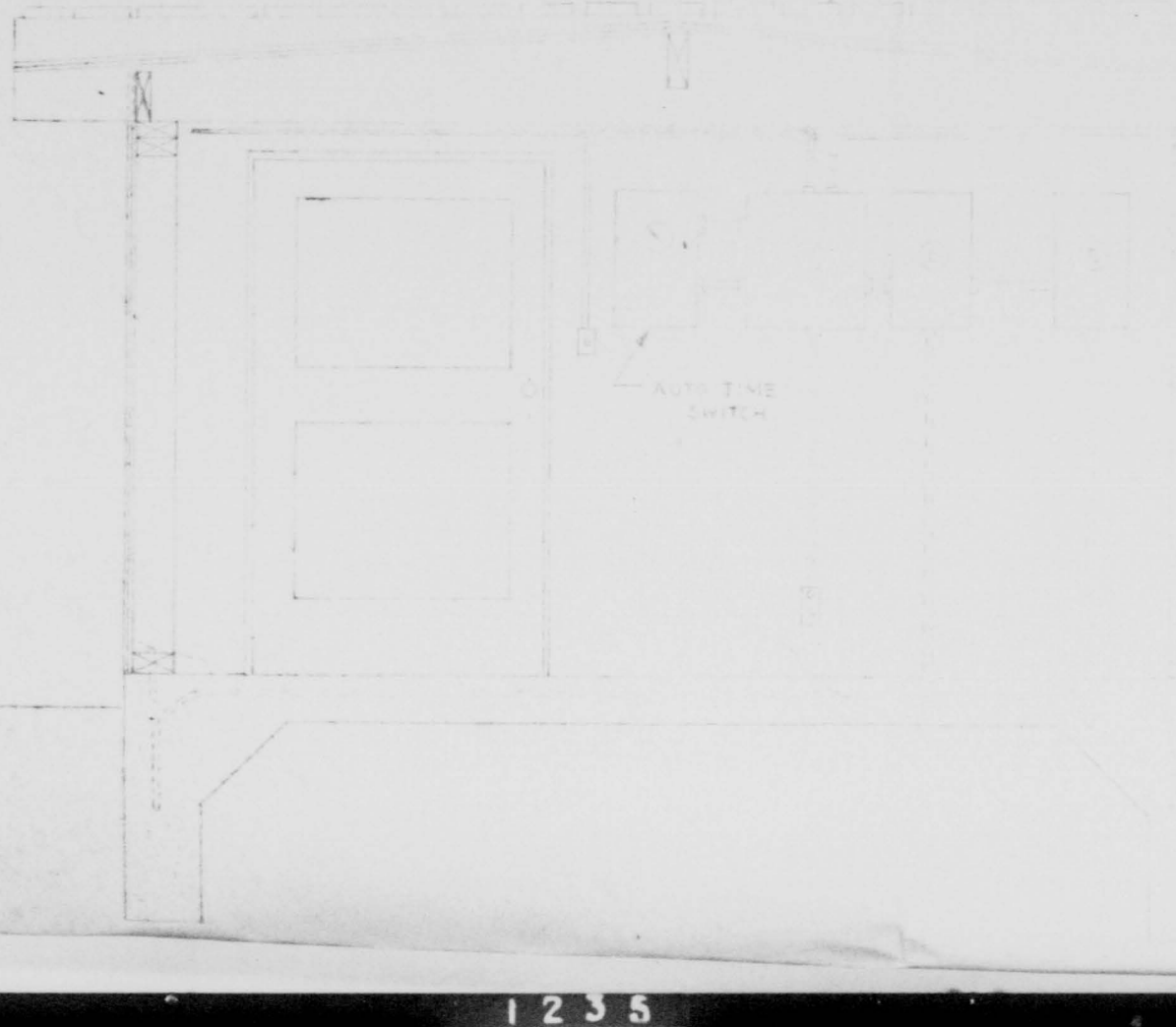
WIRING

A

COMMERCIAL MAIN SOURCE

FLOOR PLAN OF KITCHEN
EQUIPMENT & WIRING LAYOUT

SCALE 3/4" = 1'-0"



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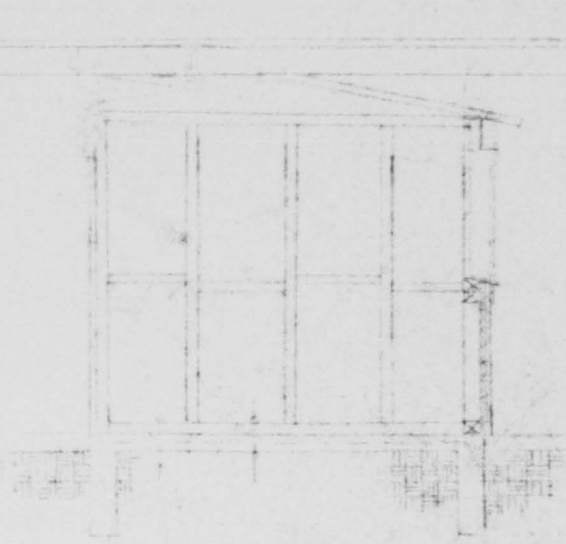
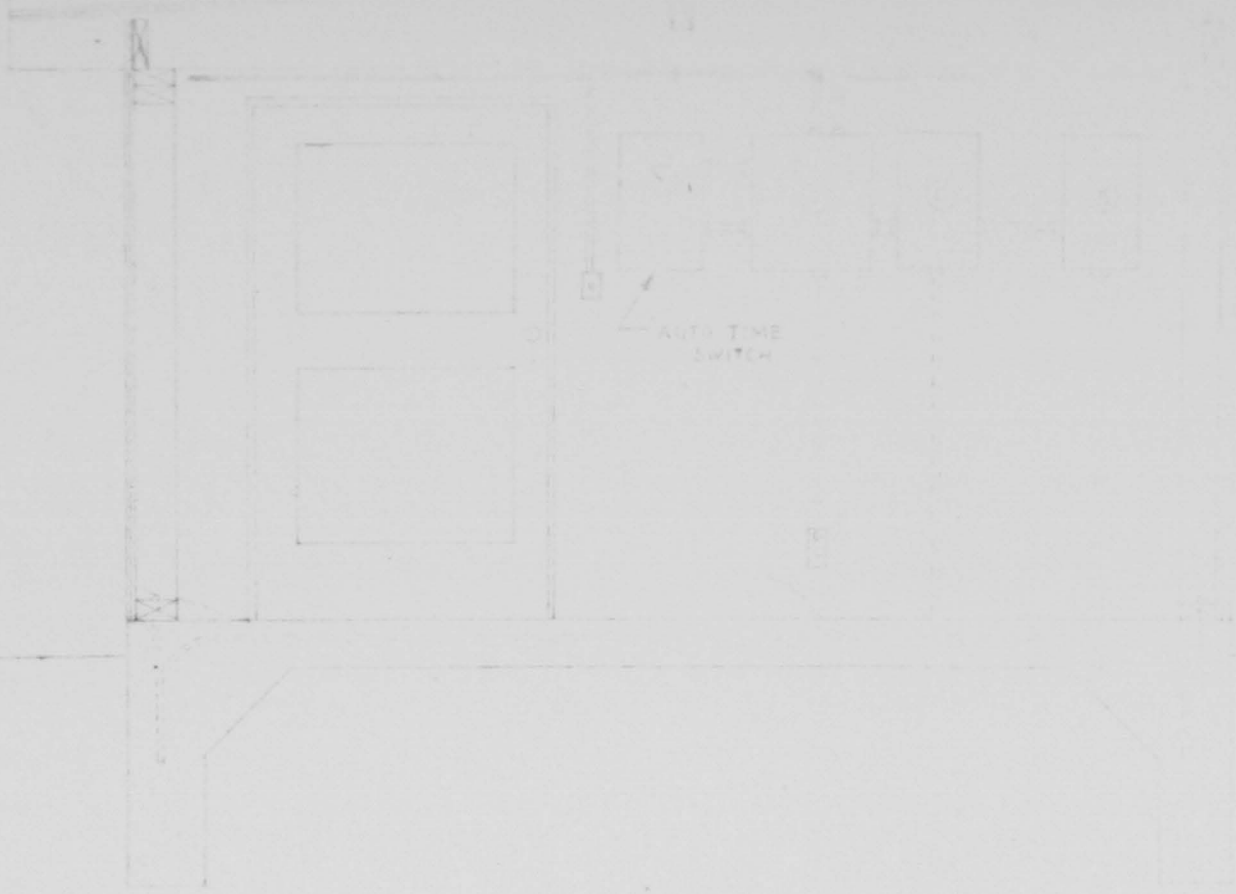
1 2 3 6



SECTION "CC"
SCALE: 3/8"=1'-0"

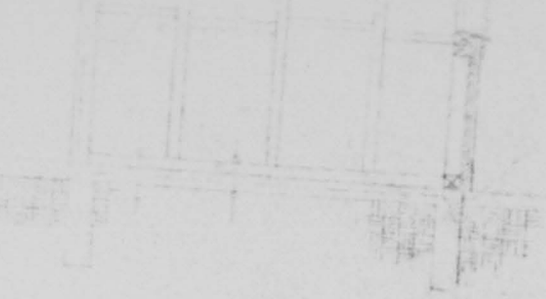


SECTION A-A

SCALE: 3/4" = 1'-0"

EQUIPMENT DATA

NO	TYPE	FREQ	APPLICATION	REMARKS
1	DU-41/6		STANDBY POWER	
2	RC-115-B		TRANSMITTER	
3	RC-115-B		TRANSMITTER	
4	RE-39/CTW-1		RELAY UNIT	
5	30 AMD FUSED		DISCONNECT SW	FURNISHED AND INSTALLED BY SHIP
6	30 AMD DPDT		POWER TRANSFER	
7	15 AM		CIRCUIT BREAKERS	



SECTION "CC"
SCALE 3/8"=1'-0"

APPROVED: Chas L. Cole Colonel

STRATEGIC AIR COMMAND
TAMPA, FLORIDA
MACDILL AIR FORCE BASE

MODIFICATIONS OF I.L.A.S.
ELECTRICAL

SCALE: AS SHOWN		PROJECT NO.
DRAWN: R.E.M. DESIGNED	SUBMITTED: C.C. Kemphues BASE ENGINEER	RECOMMENDED: [illegible] AIR INSTALLATIONS OFF.
CHECKED: [illegible] DATE: 26 MAR 53	APPROVED: [illegible] Brig Gen COMMANDING OFFICER	DRAWING NUMBER: MCD - E-10

SHEET 4 OF 4 53-35 RECORD DRAWING

SHEET 4 OF 4 53-35

1240

This envelope contains four sheets
of drawings of the ILAS localizer site,
MacDill AFB, Fla., and is an Inclosure
to EXHIBIT 34, 6th AD History, Sept., 1953.

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CONFIDENTIAL

EXHIBIT 35

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDMAI 600.96 25 September, 1953

SUBJECT: Security Facilities

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska

1. In accordance with instructions in teletype message IGISB 26422, dated 17 September 1953, from your headquarters, there is submitted herewith a site location plan of security facilities at this headquarters.

2. When Incl 1 is withdrawn or not attached, the classification of CONFIDENTIAL on this letter will be cancelled.

FOR THE COMMANDER:

B. A. JOHNSON
2nd Lt., USAF
Assistant Adjutant

1 Incl
Dwg - Sec. Facs (dup)

cc: Cmdr 2AF w/ 1 Incl

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

(6AD-C-7257)
Copy 5 of 6 copies

SECURITY INFORMATION

CONFIDENTIAL

CONFIDENTIAL

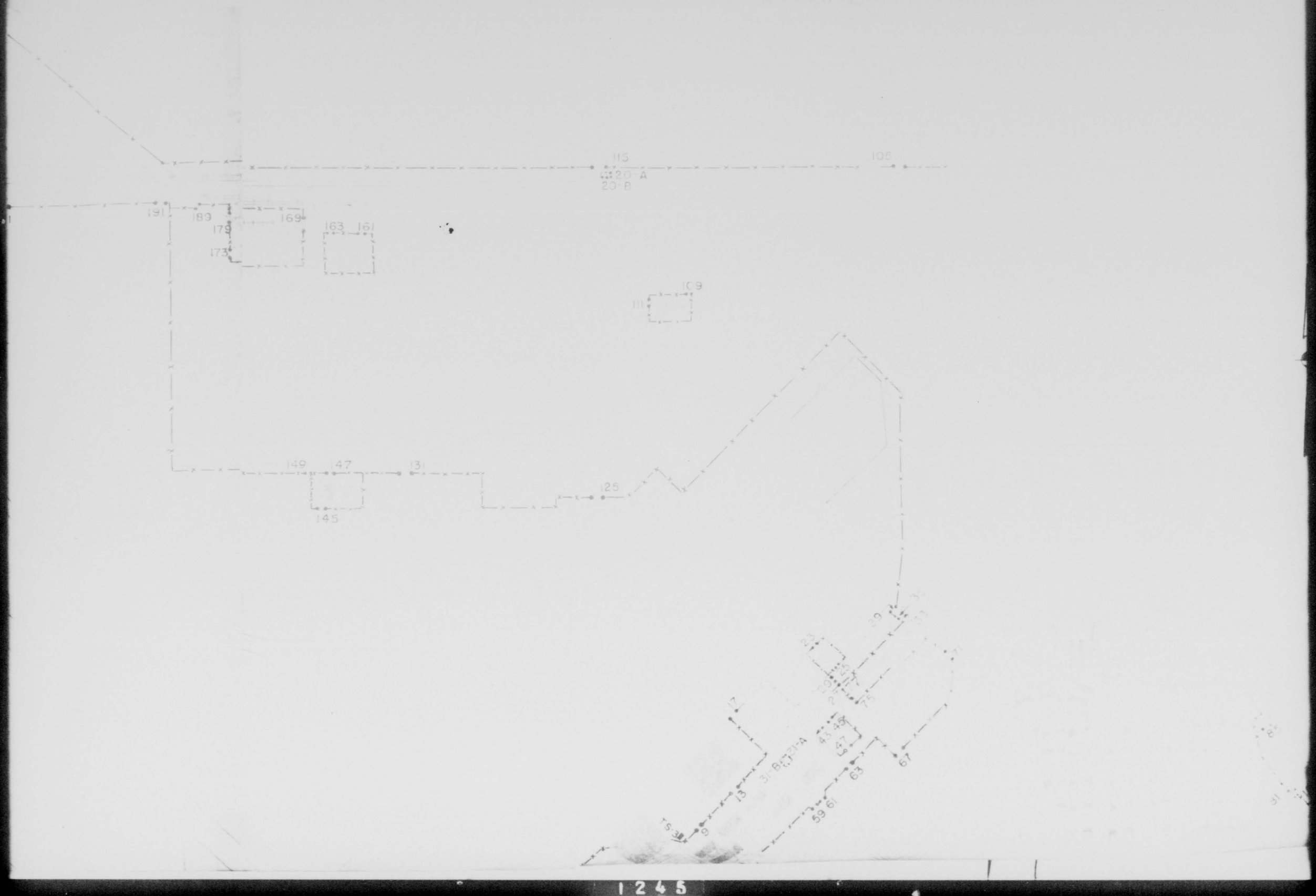
This envelope contains a map showing the security fence area of MacDill AFB, Fla., and is an Inclosure to EXHIBIT 35, 6th AD History, Sept., 1953

SECURITY INFORMATION

CONFIDENTIAL

CONFIDENTIAL

CONFIDENTIAL



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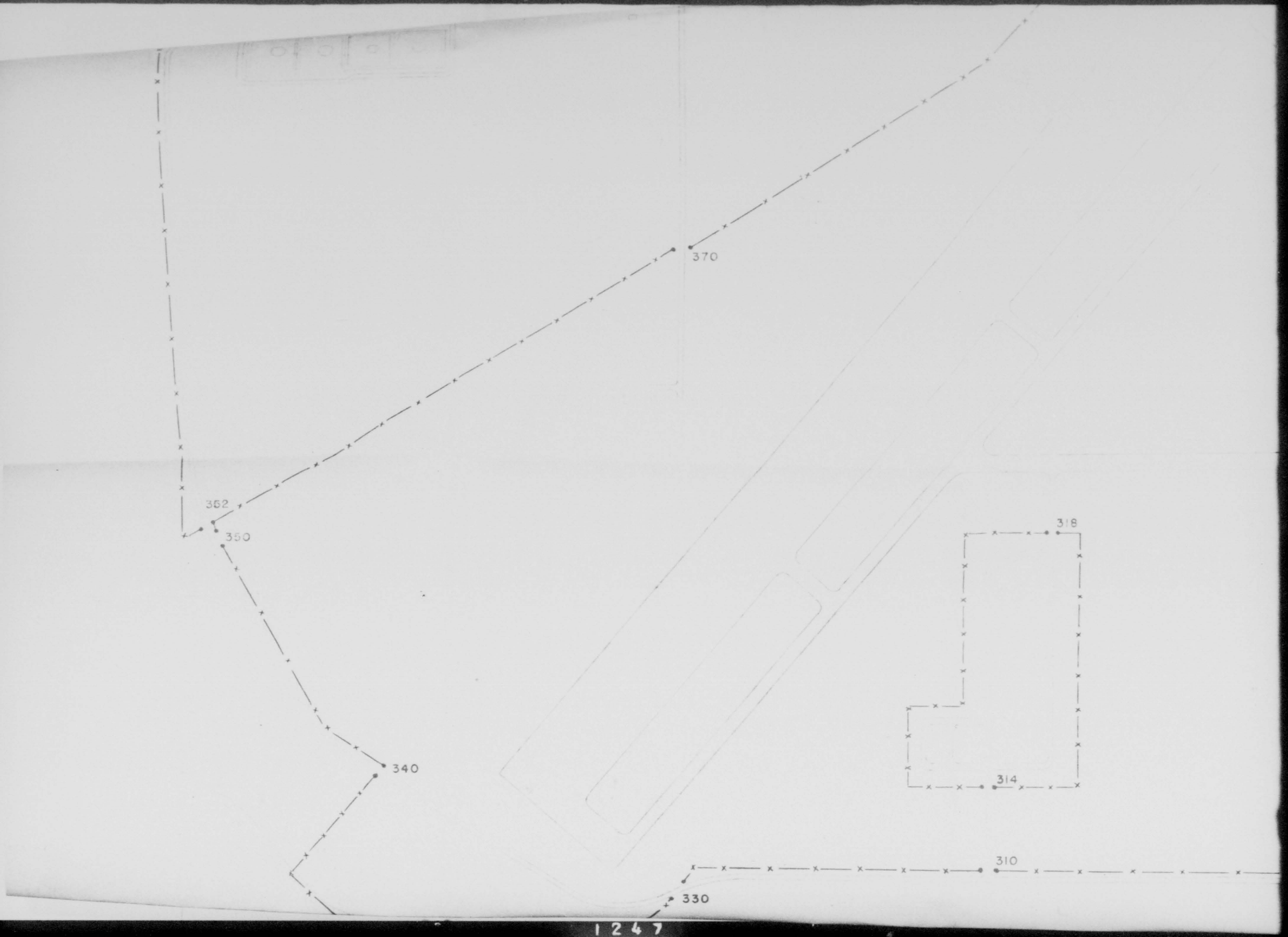
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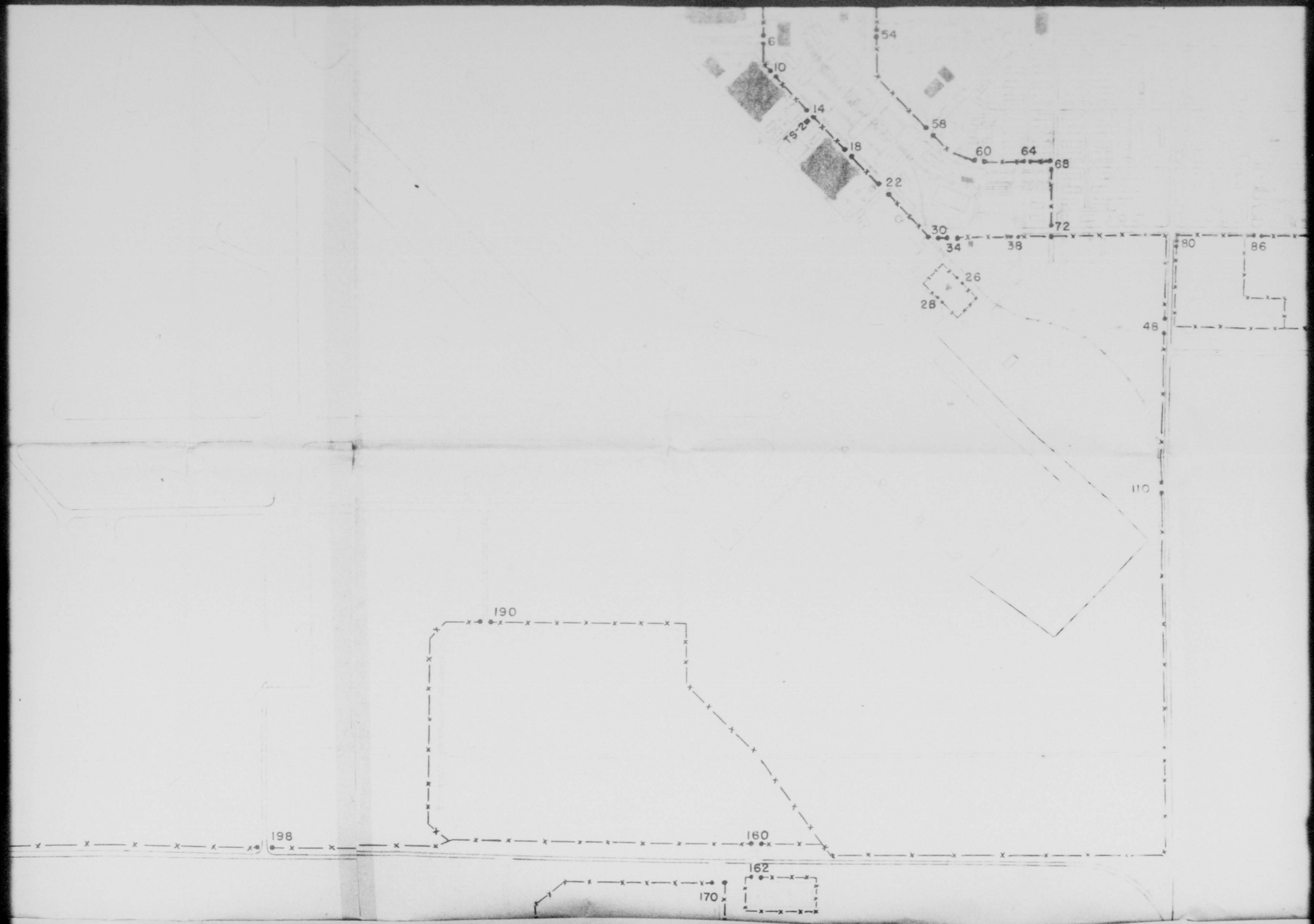
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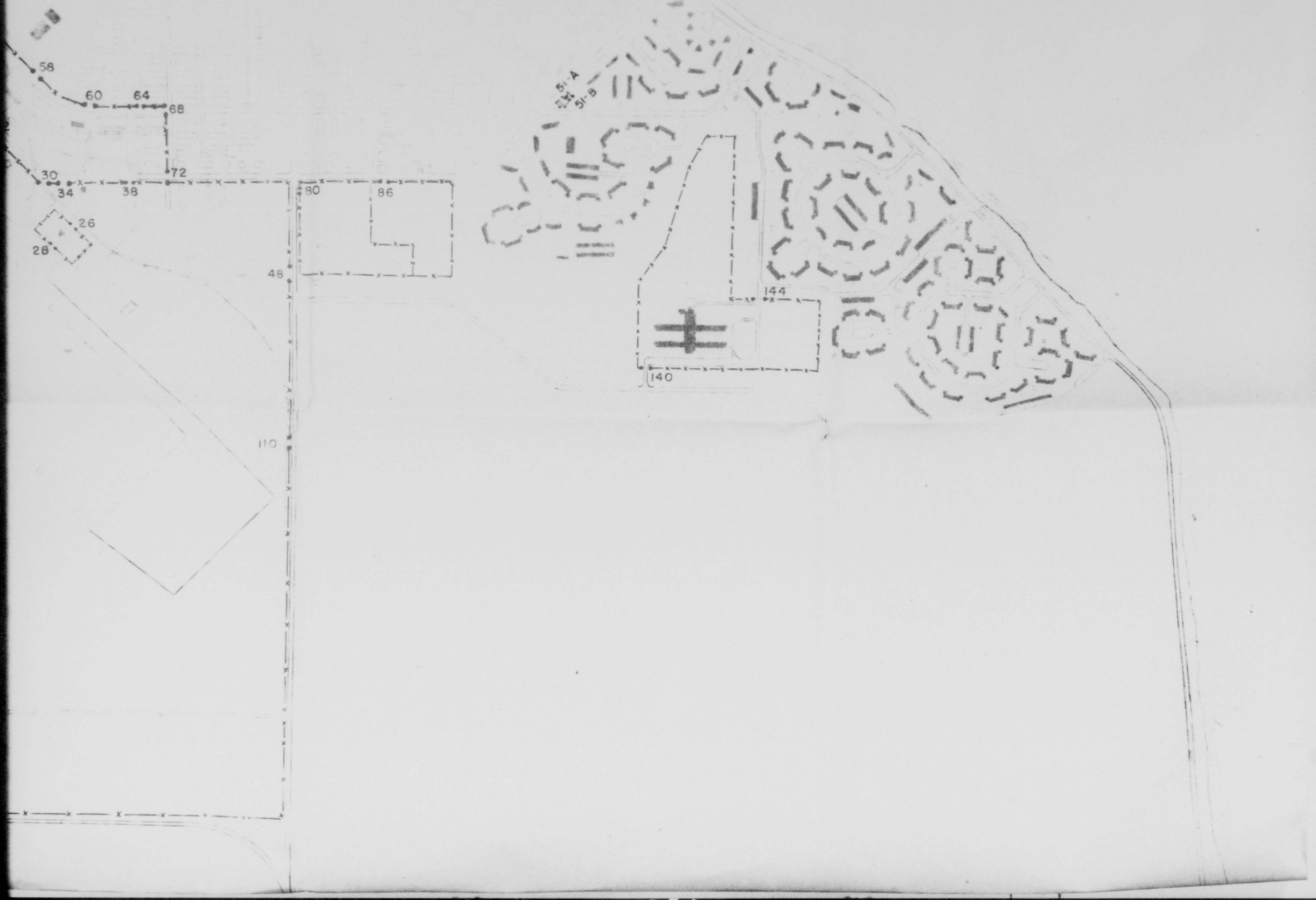

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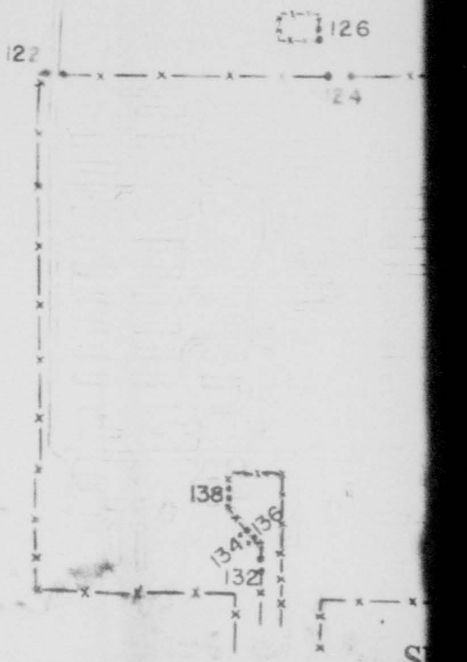
ECURITY
ORMATION

CONFIDENTIAL



CONFIDENTIAL

1252

LEGEND:

—•— GATE

—x— CHAIN LINK FENCE

TS TURNSTILE GATE

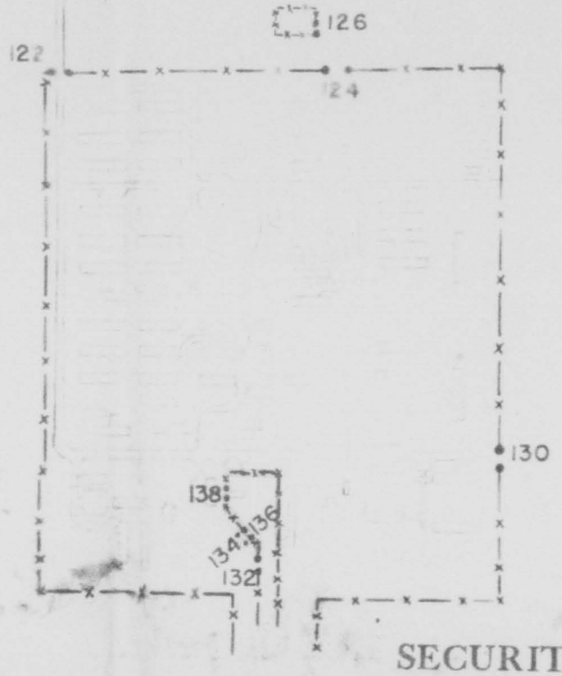
NOTE:-

ODD NUMBERED GATES ARE NORTH OF AN EXTENDED LINE THRU FLORIDA AVE.
EVEN NUMBERED GATES ARE SOUTH OF THAT LINE.

SECURITY FENCE SHOWING GATE Nos.

MARCH 16, 1953 L.B.HALL.

CONFIDENTIAL



SECURITY INFORMATION

GAO-C-7257

CONFIDENTIAL

EXHIBIT 36

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDCLC 250.4 1 September 1953

SUBJECT: Courts-Martial Trials (August 1953)

TO: Commander
All Organizations
MacDill Air Force Base, Florida

There follows a list of the courts-martial trials held at MacDill Air Force Base, Florida, during the month of August 1953. This list is published for the information and guidance of all concerned and therefore should be DISPLAYED in a prominent place on all bulletin boards.

GENERAL COURTS-MARTIAL

GRADE	AGE	BRIEF OF OFFENSE	PREV CONV	SENTENCE
None				

SPECIAL COURTS-MARTIAL

809 AP Sq, 809th AB Gp					
1.	A/2C	24	Art 86 AWOL 165 days	1	BCD, CHL - 6 mos Forf $30/mo for 6 mos
809 Ops Sq, 809th AB Gp					
2.	A/3C	27	Art 86 Fail to repair (4 counts)	4	BCD, CHL - 3 mos Forf $45/mo for 3 mos
809 Fd Sv Sq, 809th AB Gp					
3.	A/B	19	Art 121 Wrongful Appropriation	1	CHL-3 mos, Forf $55. per mo for 3 mos
809 Sup Sq, 809 AB Gp					
4.	A/3C	20	Art 121 Larceny	1	CHL-2mos, Forf $25. per mo for 2 mos
5.	A/B	19	Art 121 Larceny Art 128 Assault	1	BCD, CHL - 6mos Forf $55/mo for 6 mos
Det 5, 1928 AACS					
6.	T/Sgt	28	Art 86 Fail to Repair Art 92 Derelict in Duty Art 113 Sleeping on Post Art 134 Out of Uniform Art 134 Disgraceful Actions	0	Reduced to S/Sgt, Forf $30/mo for 3 mos
Det 7, 1928 AACS					
7.	A/2C	20	Art 121 Larceny (2 counts)	0	CHL - 6 mos, Forf $60/mo for 6 mos
8.	A/1C	23	Art 121 Larceny	0	BCD, CHL - 6 mos Forf $39/mo for 6 mos
365 Bm Sq, 305 Bm Wg (M)					
9.	S/Sgt	28	Art 86 AWOL 38 days	0	Reduced to A/2C, Forf $20/mo for 3 mos
305th PM Sq, 305 Bm Wg (M)					
10.	T/Sgt	27	Art 134 Indecent Exposure	0	Reduced to A/1C, Forf $61/mo for 6 mos

SUMMARY COURTS-MARTIAL

Hq Sq 809 AB Gp					
1.	A/3C	30	Art 86 AWOL 17 days	0	CHL 30 days, Forf $55.
809 Sup Sq, 809 AB Gp					
2.	A/2C	28	Art 86 AWOL 19 days	0	Reduced to A/3C, Rest to Sq - 30 days, Forf $35.00

Hq 809 AB Gp, MacDill AFB, Fla, CM Trials for Aug 53, dtd 1 Sep 53
Cont'd

809 Sup Sq, 809 AB Gp (cont'd)					
3.	A/2C	19	Art 86 AWOL 26 days	0	Red to A/3C, Rest to Sq-30 days, Forf $55.
4.	T/Sgt	38	Art 86 AWOL 7 days	0	Rest to Base-15 days Forf $60.00
5.	A/B	35	Art 86 Fail to Repair	1	CHL 20 days, Forf $35.
809 Fd Sv Sq, 809 AB Gp					
6.	A/B	18	Art 86 Fail to Repair	2	CHL 30 days, Forf $40.
7.	A/3C	18	Art 86 Fail to Repair	2	CHL 15 days, Forf $30.
8.	A/B	22	Art 86 Fail to Repair	1	CHL 15 days, Forf $30.
9.	A/3C	18	Art 86 AWOL 27 days	0	CHL 30 days, Forf $50.
10.	A/B	18	Art 134 Drunk in Command	2	CHL 30 days, Forf $50.
11.	A/3C	19	Art 86 Fail to Repair	1	CHL 10 days.
12.	A/3C	18	Art 134 Imperson. A/1C	1	CHL 15 days, Forf $50.
13.	A/3C	18	Art 86 Fail to Repair	0	CHL 30 days.
809 Mtr Veh Sq, 809 AB Gp					
14.	A/B	20	Art 86 AWOL 8 days	1	CHL 21 days, Forf $25.
15.	A/3C	19	Art 86 AWOL 10 days	0	CHL 30 days, Forf $55.
16.	A/B	18	Art 108 Damage Govt Property	2	HL w/o C - 45 days Forf $30.00
809 Instl Sq, 809 AB Gp					
17.	A/2C	28	Art 86 AWOL 29 days	0	CHL 30 days
18.	A/3C	21	Art 111 Reckless Driving	0	Rest to Sq-30 days Forf $55.00
19.	A/B	23	Art 134 Wrongful Appearance	3	CHL 30 days, Forf $60.
20.	A/3C	21	Art 86 Fail to Repair	0	CHL 30 days, Forf $30.
21.	A/3C	20	Art 111 Reckless Driving	0	Rest to Sq 30 days Forf $55.00
809 AP Sq, 809 AB Gp					
22.	A/3C	20	Art 121 Larceny	1	CHL 30 days, Forf $28.
98th ARS, 6AD					
23.	A/1C	26	Art 86 AWOL 13 days	0	CHL 30 days, Forf $39.
24.	A/3C	23	Art 86 AWOL 6 days	0	CHL 18 days, Forf $39.
25.	A/2C	26	Art 86 Fail to Repair	2	CHL 7 days
305 Fld Maint Sq, 305 Bm Wg (M)					
26.	A/3C	28	Art 86 AWOL 2 Days	0	CHL 6 days, Forf $10.
365 Bm Sq, 305 Bm Wg (M)					
27.	A/3C	19	Art 121 Larceny Art 134 Breach of Rest.	0	CHL 20 days, Forf $40.
366 Bm Sq, 305th Bm Wg (M)					
28.	A/B	18	Art 86 Fail to Repair	0	CHL 30 days.
Detachment 1, 306th Bm Wg (M)					
29.	A/B	21	Art 134 Incapacitated for duty	1	CHL 30 days, Forf $25.
30.	A/B	24	Art 113 Sleeping on Post	1	CHL 20 days.
31.	A/1C	20	Art 86 Fail to repair	0	Red to A/B, Rest to Sq-30 days, Forf $50.

Detachment 1, 306th Bm Wg (M) (Cont'd)

32.	A/3C	19	Art 113 Sleeping on Post	0	CHL 30 days, Forf $40.
33.	A/3C	23	Art 107 False Official Oath	0	Red to A/B, Rest to Sc - 30 days, Forf $28.00.

306th Med Gp, 306th Bm Wg (M)

34.	A/1C	23	Art 134 Drunk in Command	0	Red to A/2C, Rest To Sc- 30 days, Forf $40.00.

BY ORDER OF THE COMMANDER:

c a whittle

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

DISTRIBUTION D

Ex 37

WREATH - ALTERNATIVE COLORS EMBROIDERED

YELLOW

BLUE

WHITE EMBROIDERED AIRCRAFT.

BLUE APPLIQUED SHIELD WITH SILVER GRAY EMBROIDERY.

SPANISH YELLOW EMBROIDERED LANDING STRIP.

WITH

BLACK EMBROIDERED SHADOWS.

(LIGHT GRAY (SILVER) EMBROIDERED FINGERS AND THUMB, WITH BLACK OUTLINE AND DETAIL.

MEDIUM GRAY (STEEL) EMBROIDERED HAND WITH BLACK OUTLINES.

BLAZON:

AZURE, A GAUNTLETED HAND PROPER HOLDING A TRIANGULAR LANDING STRIP OR, IN CHIEF AN AIRCRAFT ARGENT.

SEE BASE DRAWING NO. S-100-1

SHIELD - - - APPLIQUED WITH SILVER GRAY EMBROIDERY - - - - - - CABLE NO. 65008

SCROLL - - WHITE APPLIQUED - - - - - - CABLE NO. 65005
OUTLINE EMBROIDERED - - CABLE NO. 70068 (SPANISH YELLOW)

LETTERS - - EMBROIDERED - - - - - - - - CABLE NO. 70068 (SPANISH YELLOW)
OUTLINE EMBROIDERED - CABLE NO. 70118 (GOLD BROWN)

CABLE NOS. SHIELD AND WREATH

YELLOW	70068 (SPANISH YELLOW)
BLUE	65010 (ULTRAMARINE)
LT. GRAY	67008 (SILVER GRAY)
MED. GRAY	70153 (STEEL GRAY)
WHITE	65005
BLACK	67018

REVISIONS					
NO.	DATE	CHECKED APPROVED	NO.	DATE	CHECKED APPROVED

DEPARTMENT OF DEFENSE
DEPT. OF THE ARMY, O.Q.M.G.

UNIT DEVICE FOR
ORGANIZATIONAL FLAG
809TH AIR BASE GROUP

SCALE: Full Size | DATE: 10 July 1953

DRAWN | CHECKED | REGISTERED

SUBMITTED

APPROVED

DATE OF APPLICATION

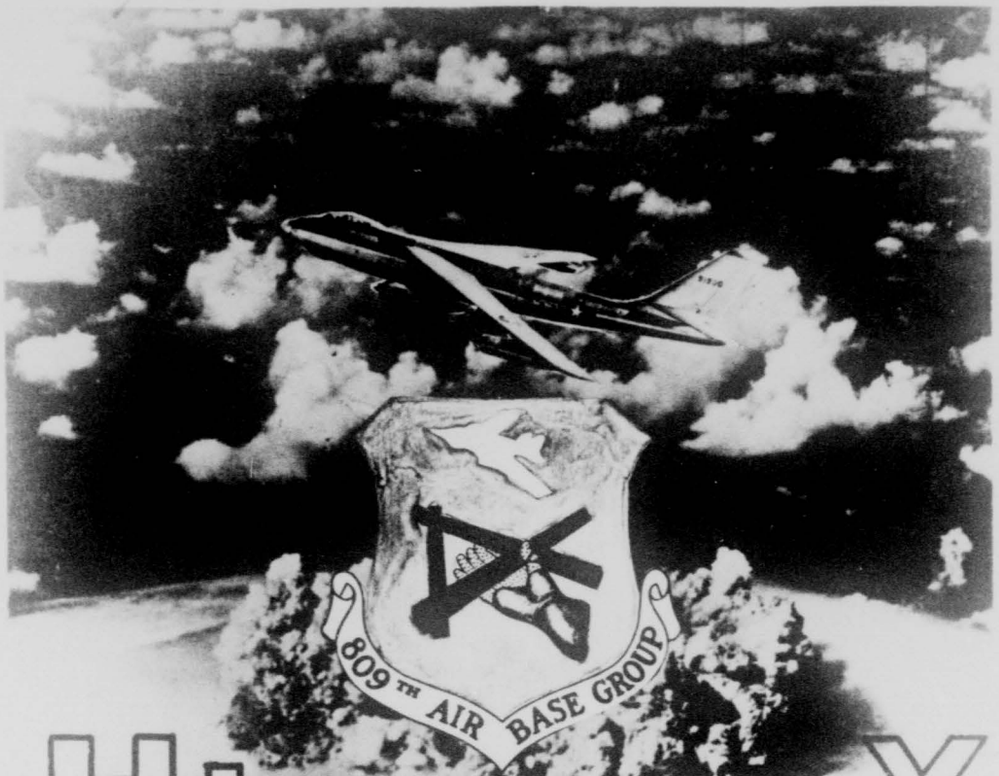
5-10

1257

APPENDIX "B"

LT. COL. CHARLES L. LACK

Base Chaplain



HISTORY

6th AIR DIVISION

OCTOBER 1953

CONFIDENTIAL

CONFIDENTIAL

Dec 6 1953

RSI
00703 CONFIDENTIAL

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CONFIDENTIAL

HISTORY

6TH AIR DIVISION

Including

809th Air Base Group
MacDill Air Force Base

Florida

1 - October - 31

1953

B. A. Johnson
Division Historical Officer
2d Lt. B. A. Johnson

S. E. Wickam
Division Historian
M/Sgt. S. E. Wickam

H. K. Mooney
H. K. MOONEY
Brigadier General, USAF
Commander

CONFIDENTIAL

TABLE OF CONTENTS

NARRATIVE

Chapter		Pages
I	Administration and Personnel	1 - 12
II	Operations and Training	13 - 36
III	B-47 Operational Engineering	37 - 39
IV	Materiel and Facilities	40 - 42
V	Miscellaneous	43 - 44

APPENDIX

"A" Documents Arranged as Exhibits

"B" Statistical Summaries

CHRONOLOGY OF MAJOR EVENTS

1 Oct - Colonel Ernest C. Hardin, Jr., named Director of Operations, Headquarters, 6th Air Division.

B-47 Operational Engineering Section (OES), Headquarters, 6th Air Division began publication of B-47 Maintenance Tips on a semi-monthly basis.

3 Oct - Headquarters, 6th Air Division recommended to Headquarters, Second Air Force the construction of a radar reflector and resolution target for Avon Park Bombing and Gunnery Range.

6 Oct - Military facilities at the Brooksville, Florida, Municipal Airport closed at 1700 hours, Eastern Standard Time, in accordance with permission of Headquarters, Strategic Air Command.

8 Oct - MacDill Air Force Base declared "vulnerable" to biological warfare.

9 Oct - Plans formulated to increase the prestige of MacDill Air Force Base non-commissioned officers.

13 Oct - In response to USAF query, Headquarters, 6th Air Division recommended aggregate strength of 13 officers and 553 airmen for the 809th Air Police Squadron.

15 Oct - 6th Air Division Headquarters recommended to Headquarters, Second Air Force certain changes in Second Air Force Regulation 50-13 in order to make the Cedar Keys Bombing Range of more value to B-47 units.

19 Oct - Brigadier General H. K. Mooney, 6th Air Division Commander, recommended to Headquarters, Second Air Force that the 809th Air Base Group be redesignated as an "air base wing."

23 Oct - Congressman Harry R. Sheppard visited MacDill Air Force Base; he "had no criticism," and "expressed complete satisfaction."

28 Oct - Major General Robert B. Landry, Deputy Commander, Second Air Force, promised aid in putting the Avon Park Bombing and Gunnery Range on a "first-class operating basis."

Advanced party of 98th Air Refueling Squadron began processing for movement to Lake Charles Air Force Base, La.

CHAPTER ONE

ADMINISTRATION and PERSONNEL

Congressman Harry R. Sheppard from the 27th District of California had "no adverse comments or criticisms" and "expressed complete satisfaction with his visit upon his departure," reported Colonel B. H. Merchant in a letter to the Commander of Strategic Air Command, Offutt Air Force Base, Omaha, Nebraska, following the brief inspection of MacDill facilities by the Congressman on 23 October, 1953.[1] The visit by Representative Sheppard was originally expected to occur during the second or third week of November.[2]

1. Ltr., Hq 6AD to Comdr SAC, "Report on Congressional Visit," 24 Oct., 1953, MCDOCO 333. Exhibit 1.
2. History, 6th Air Division, August, 1953, pp 2-3.

The Congressman arrived at MacDill at 0920 hours on 23 October via a Navy JRB type aircraft (jet reconnaissance bombardment) from the Naval Air Station, Jacksonville, Fla., and returned to the NAS by the same aircraft at 1415 hours. He was met upon arrival at MacDill by Colonel Merchant, Base Commander and acting 6th Air Division Commander; Colonel Michael N. W. McCoy, 306th Bomb Wing Commander; Colonel R. E. Kimmel, 6th Air Division Director of Materiel; and Colonel E. C. Hardin, 6th Air Division Director of Operations.

The Congressman attended a briefing at Division Headquarters (in consonance with directive from Strategic Air Command (SAC)),[3] then made a tour of the base. The legislator expressed the desire to be furnished with a transcript of the briefing and of all questions and answers conducted following the briefing; furthermore, he requested additional data on: list of motor vehicles utilized, summary of improvements made and man hours saved through management improvement ideas, state of amounts returned to the government through salvage sales and any other collections made, total military and civilian payrolls, and a list of items requested in the 1955 Public Works Program. This data was to arrive at the Congressman's office by 10 November, 1953, via the Commander, Second Air Force, Barksdale Air Force Base, Shreveport, Louisiana.

Congressman Sheppard was particularly interested in the requirements for the storage of supplies, the supply and inventory system,

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3. TWX, Hq SAC to Comdr 6AD, DPLEP 17561, 6 Aug., 1953. Exhibit 1A.

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expeditor system for the issuance of aircraft spares, jet engine operations and maintenance, and the preservation of fringe benefits for military personnel.

He held a brief pre-luncheon discussion with Major General Archie J. Old, Jr., SAC Director of Operations.

The visit of Representative Sheppard was the second time within three months that MacDill had received similar attention. On 11 August, Congressman Albert H. Bosch, Fifth District of New York, made an informal visit and tour of base facilities.[4]

Brigadier General H. K. Mooney, 6th Air Division Commander, requested of Second Air Force that "consideration be given to the redesignation of air base groups on multiple wing stations as air base wings."[5] The request was initiated in an attempt to secure "highly qualified staff officers in multiple wing air base group functions and by the complexity and importance of an air base group in support of two or more combat wings. A wing organization would provide higher grades than those established for a group organization."

General Mooney conjectured that since, according to Strategic Air Command concept, the primary purpose of an air base group is to support the tactical wings, "I wonder if we haven't overly minimized the secondary mission, (of air base groups) that of running and developing a $100,000,000 installation which annually spends many millions of dollars on construction alone." He pointed out that both

4. History, 6th Air Division, August, 1953, pp 1-2.
5. Ltr., Hq 6AD to Comdr 2AF, "Redesignation of Multiple Wing - Air Base Groups to Air Base Wings," 19 Oct., 1953, MCDCCO 322. Exhibit 2.

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civilian industry and other branches of the Armed Services (notably Navy) had, because of necessity, increased the pay or grades in order to attract - and hold - qualified and responsible managers for comparable jobs. Referring to the simile of the "weakest link in the chain," the Commander said that "any weakness in air base group functions is immediately detrimental to the combat capability of the wings." Apparently criticism had been forthcoming from the 305th and 306th Wings of the 809th Air Base Group's past support, for General Mooney observed: "The efficiency of the support rendered has continuously been hurt by the caliber and experience level of personnel assigned to an air base group. It is believed necessary, therefore, to elevate air base groups on multiple wing stations to wing status."

Precedents for such a reorganization have been established within other major air commands. Within SAC, the air base wing at Offutt AFB, Neb., site of SAC Headquarters, is a notable example. Therefore, appropriate tables of organization have been established.

This redesignation request was predicated on a discussion held at the Second Air Force Commanders' meeting on 1 October, 1953, at which time considerable interest in the proposal was expressed by Major General R. B. Landry, Deputy Commander of the Second Air Force. He further suggested, according to General Mooney's letter, that the problem be presented to Second for "further study."

MacDill achieved 75 percent of the maximum obtainable score for September, 1953, under the provisions of the SAC Management Control

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System, Air Base Groups.[6] This figure was three points lower than the prediction made by the Base Comptroller,[7] who predicted, again, 78 percent for October.[8]

Members of the Executive Ground Safety Council were informed at the 15 October meeting that MacDill's cumulative military disabling injury rate of 3.68 was the lowest in Second Air Force for the month of August; the cumulative civilian injury rate was 2.69, which placed the base in fifth place among Second Air Force installations; and the cumulative government vehicle accident rate of 1.14 put MacDill in seventh spot within the parent command.[9]

The 809th Air Police and the 809th Food Service Squadrons were scheduled for reorganization effective 18 December, 1953, according to a SAC directive.[10] The Air Police would be authorized a strength of 12 officers and 346 airmen (present authorization 14 officers and 449 airmen), and the Food Service Squadron would be authorized two officers, three warrant officers, and 234 airmen (present authorization is seven officers and 372 airmen).

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6. Ltr., Hq SAC to Comdr 6AD, "SAC Management Control Statement, Air Base Groups - September 1953," 2 November, 1953, COA 300.
7. History, 6th Air Division, Sept., 1953, page 4.
8. Rpt, "Predicted Scores," October 1953, MacDill AFB, Fla - SAC Management Control System, Air Base Group," October 1953, prep by Base Comptroller. Exhibit 3.
9. Rpt, "Proceedings of Ground Safety Council," October 1953, prep by Executive Committee of the Ground Safety Council, Flying Safety Division, Hq 6AD, October 1953. Exhibit 4.
10. GO 70, Hq SAC, 9 Oct., 1953.

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The 28-man (assigned as of 31 October, 1953) 740th Air Force Band was scheduled for inactivation effective 25 November, 1953, in compliance with the Department of Defense's austere program of reducing manpower.[11]

The advanced party of the 98th Air Refueling Squadron, consisting of 11 officers and 95 airmen, began processing on 28 October[12] for the movement to Lake Charles Air Force Base, La.[13]

PERSONNEL

All too frequently stringent manpower "ceilings" are slapped onto certain functions of the various branches of the Armed Forces without due regard to the serious handicaps that will result therefrom. The sharp reduction in air police activities is a case in point. Through some top level snarl, the decree was made that "the percentage of Air Force personnel performing duty as air police would be more nearly proportional to the percentage of Army personnel engaged in military police duties."

There is considerable difference between the overall functions of the air police and the military police as pointed out by the Department of the Air Force.[14] The Air Force's policing activities

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11. GO 71, Hq SAC, 13 Oct., 1953.
12. Daily Journal, Hq 809th ABGp, 28 Oct., 1953.
13. History, 6th Air Division, September, 1953, pp 5-6.
14. Ltr., DAF to Comdrs, Major Air Commands, "Justification for Required Air Police Strength," 30 Sept., 1953, AFCFM 370.093. Exhibit 5.

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involve, in addition to the law enforcement and correction procedures inherent to all branches of the Armed Forces, security and local ground defense. "This function breakdown," observed the DAF, ". . . apparently has not been understodd completely by Congress, with resultant mandatory reduction in air police authorized strength."

Therefore, "in order that Headquarters, USAF may determine the minimum number of air police required to protect the capability of the Air Force to perform its mission," each major air command was ordered to prepare a justification for the number of air police that would be required to properly execute the functions of security, local ground defense, law enforcement and correction. This justification, according to the directive, was to be based on the commander's estimate of the security situation. Further, in making a differentiation between the two function fields, i.e., security-defense and law enforcement-correction, it was requested that justification be made in determining the minimum number of air police required in the latter combined category. Headquarters advised that requirements of guarding supply warehouses, finance offices, post exchanges, et cetera, should be furnished by extra duty or roster methods "and not by utilizing air police."

USAF emphasized that "the information contained in this report will be used as a basis for future planning. Failure of commanders to provide fully for their essential air police requirements or to justify clearly such requirements, may result in a further adjustment

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in air police strength within their respective commands."

MacDill could ill afford to under estimate the requirements, as the lack of manpower within the Air Police Squadron was cited as one of the principal reasons for a glaring lack of general security in and about the flight line as was shown in a recent unit simulated combat mission (USCM) vulnerability team exercise.[15] During September, 55 air policemen were discharged under the "early out" program,[16] with an additional 28 slated for October.

In order to justify the contemplated request for increase in strength, Headquarters Second Air Force asked that MacDill include: the number of restricted areas and total acreage thereof, "comments should include . . . the peculiarity of terrain features or physical layout which necessitates the operation of a more than normal number of restricted area gates;" number of personnel requiring access to restricted areas; number of registered vehicles; and the monthly average number of prisoners in confinement since 1 January, plus special off-base patrolling problems that require the full-time operation of an adequately manned patrol. Second advised that "computations of requirements for supervisory and training personnel should be based on the assumption that all personnel assigned to the Air Police Squadron are physically and mentally qualified. . ."[17]

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15. History, 6th Air Division, September 1953, page 45.
16. Ibid, page 8.
17. Ltr., Hq 2AF to Comdr 6AD, "Justification for Required Air Police Strength, RCS: AF-P181 (OT)," 13 Oct., 1953, 2AFHGP 370.093. Exhibit 5A.

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Accordingly, 6th Air Division recommended an aggregate Air Police strength of 566 (13 officers, 553 airmen.)[18] It was noted that ten restricted area gates were required to be in operation during normal duty hours, and there were a total of 7,897 active holders of restricted area passes. With 20 entry points onto the flight line, 32 circulation control guards are required per flight. "To adequately patrol the flight line area of 2,275 acres and to supervise the circulation control guards, entry points and restricted area gates, six vehicular patrols are required each containing an NCO for a total of 12 men." Division's indorsement disclosed that the Security Section operates a four flight system of 98 airmen with four flight officers and one security control officer, and that there are five restricted areas with a total of 2,525 acres, all of which with the exception of 250 acres, are contained within the flight line fence.

As concerns confinement of prisoners, the monthly average from 1 January to 17 October, 1953, was placed at 67; furthermore, the base has been designated as a prisoner receiving station in accordance with Air Force directives. Sixteen prisoner guards are used in this work, and one non-commissioned officer conducts the rehabilitation program.

Three perimeter gates granting access to the station are manned by the Law Enforcement Section, in addition to exercising traffic

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18. 1st Ind, Hq 6AD to Comdr 2AF, 26 Oct., 1953 to ltr, Hq 2AF to Comdr 6AD, "Justification for Required Air Police Strength, SCS: AF-P181 (CT)," 13 Oct., 1953, Exhibit 5P.

control of approximately 300,000 vehicles per month. As of 15 October, there were 9,435 active registered vehicles, plus a daily influx of about 700 commercial, and visitor-occupied vehicles. It was noted also that the total population of MacDill, including dependents, was about 12,700 people. The military service and housekeeping installation includes 800 Wherry Housing units.

MacDill has the primary responsibility of providing patrols for the central-west coast area of Florida, which includes Tampa, St. Petersburg, and Clearwater. Past experience has shown that, particularly during winter months, a large number of AWOL service personnel are attracted to this area, plus the fact that the area provides a large number of military personnel "who often return to the area on leave, and the presence of the town patrol is a deterrent to misconduct as well as reassurance in the case of need."

Colonel Robert E. Kimmel, 6th Air Division Director of Materiel, was transferred to Headquarters, 5th Air Division, APO 118, New York City, effective 5 November, 1953.[19] His successor had not been named at month's end.[20]

Colonel Ernest C. Hardin, Jr., was named as 6th Air Division Director of Operations, effective 1 October, 1953.[21] He had been

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19. SO 273, Hq 6AD, 27 Oct., 1953, par 1.
20. History, 6th Air Division, January, 1953, page 18.
21. GO 25, Hq 6AD, 1 October, 1953. Exhibit 6.

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filling that position since 1 September.[22]

Lieutenant Colonel Frank R. Bertero, 6th Air Division Director of Personnel,[23] was confirmed as 6th Air Division Executive Officer, in addition to other duties, as of 30 January, 1953.[24]

Allocation of promotion quotas for October, 1953, were: three master sergeants, nine technical sergeants, 19 staff sergeants, 32 airmen first class, and 59 airmen second class to be divided among the 6th Air Division Headquarters, 809th Air Base and 307th Air Base Groups. For the 306th Bomb Wing, the promotion quotas were two master sergeants, five technical sergeants, 15 staff sergeants, 22 airmen first class, and 27 airmen second class.[25] The 305th Bomb Wing received their quota while on temporary duty at Brize-Norton, England. Closed for promotion purposes were 63 career fields for master promotions, 61 for technical sergeant, and 37 for staff sergeant.

During the period of 1 September - 31 October, 1953, 26 officers and 257 airmen were separated from the service for various reasons; 20 airmen reenlisted during the same period, according to the Base Statistical Officer.

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22. History, 6th Air Division, September, 1953, page 10.
23. History, 6th Air Division, January, 1953, page 19.
24. GO 27, Hq 6AD, 29 October, 1953.
25. Ltr., Hq 6AD to General Distribution, "Promotion of Airmen (October 1953)," 1 Oct., 1953. MCDPO 220.2. Exhibit 7.

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As of 31 October, 1953, there were a total of 8,098 personnel authorized at MacDill AFB, 9,097 assigned, and 578 attached.[26] These figures include officers, airmen, and civilian employes.

26. Reference MacDill Statistical Summary - Part I, Appendix "B."

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CHAPTER TWO

OPERATIONS and TRAINING

Brigadier General H. K. Mooney, 6th Air Division Commander, had two general criticisms of the manner in which the 7th Air Division in England would exercise operational control of the 305th "Can Do" Bomb Wing during its 90-day period of temporary duty in the United Kingdom and North Africa.[27]

General Mooney and Colonel R. S. Kimmel, 6th Air Division

27. History, 6th Air Division, September, 1953, pp 1, and 16-19.

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Director of Materiel, spent 17 days, effective 3 September, 1953, in observing the deployment of the 305th and their first maximum effort mission, plus observing the return of the 306th Bomb Wing from the United Kingdom to MacDill.[28]

On 8 September, according to General Mooney's report to the Commander, Second Air Force, Barksdale Air Force Base, La.,[29] the 6th Air Division Commander attended a 7th Air Division briefing for Colonel Elliott (Pete) Vandevanter, Jr., 305th Bomb Wing Commander, his squadron commanders, and key staff officers. "At this briefing," General Mooney wrote, "I tried to emphasize General Selser's responsibility to see that the 305th's lead crews stayed off probation, and to assist the 305th in accomplishing their maximum 50-8 (Strategic Air Command Regulation, "Training" - Training Program for SAC Units, 5 January, 1952) training requirements during the months of September and November." General Mooney stressed the desirability of concentrating the requirements within that particular theater, i.e., practice blunting and retardation missions, shows, and other operations during the "free" training period of October.

Another order which did not meet with General Mooney's approval was the 7th Air Division's requirement for the 305th to "run on Target Bravo, the hardest one in the London area, on their first

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28. Ibid.
29. Ltr., Hq 6AD to Comdr 2AF, "Report on Temporary Duty Accompanying 305th Bombardment Wing to Deployment," 25 Sept., 1953, no file. Exhibit 8.

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mission over London." The 7th Air Division "was anxious to test a new method of target study, and insisted on Target Bravo on the first run, knowing full well that many crews would wind up with large CEs (circular (bombing) errors) as record runs."

General Mooney noted that "at present" there were no adequate bombing ranges within the United Kingdom. The Thulletorpe Range did not possess a sufficient reflector, and the proposed range at Luce Bay would not have a UHF (ultra-high frequency) set until the latter part of September.

The first maximum effort mission of the 305th was accomplished on 9 - 11 September, inclusive. Of the 47 B-47's scheduled, 46 were flown, with the remaining one being a ground abort. This mission was of an orientation type, including penetrations and GCA's (Ground Controlled Approach-type landings) at the "usable" B-47 bases in England (obviously Fairford, which housed the 306th during its 90-day session in the United Kingdom, and Brize-Norton, site of the 305th's B-47 operations), plus two RBS (radar bombing scoring) runs on the Heston Bomb Plot, one of which was the afore-mentioned Target Bravo.

Trouble was experienced, according to General Mooney's report, by the 305th on initial GCA landings. "Through error," he wrote, "the point of touch-down on one runway was 1,000 feet beyond the area which had been sterilized or marked off to prevent short

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landings, which made the point of touch-down 1,000 feet beyond the end of the runway." However, a new GCA hard-stand was under construction. The glide path at Brize Norton was noted as being too steep, but a correction of that deficiency was being made. The CPN-4 was transferred from Fairford to Brize-Norton immediately after Colonel Swencutt witnessed a "hairy" bad weather approach and go-around at Brize-Norton.

The runway at the 305th's B-47 base was reported as being "considerably rougher" than that at Fairford. Colonel Vandeventer experimented with strut ratios from 8:1 to 15:1, and was to advise 6th Air Division of the results. Gravel on the edges of the narrow-curved taxiways presented a serious hazard from the standpoint of jet engines and tires. "I recommended immediate temporary stabilization of any kind, to include investigating the use of pierced steel planking," General Mooney reported.

The 6th Air Division Commander was not satisfied with the system in the United Kingdom of supplying B-47 parts. On the day of his departure to MacDill, he recommended that the 7th Air Division Headquarters and the Third Air Force at Burtonwood coordinate with the Brize-Norton Depot to "insure the expeditious handling of AOCP (aircraft out of commission due to parts) parts." He suggested that the responsible United Kingdom depot establish direct contact with the prime depot within the Zone of Interior (ZI), with the use of a code

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name for the 305th Wing. Furthermore, he recommended that the decision to leave the 45-day level of parts at Fairford be reversed and a 45-day level be established at Brize-Norton immediately. He did not recommend any change in the use of flyaway kits, "since I believe it is desirable to check their completeness and adequacy." On the other hand, no trouble was expected at Mildenhall, site of the 305th's KC-97 Stratotankers, except the supply of -59B engines.

For the most part, General Mooney reported, "all bases (Fairford, Brize-Norton, and Mildenhall) seemed pretty well prepared to receive the 305th Wing; and the 7th Air Division, by virtue of their experience with the 306th Wing, seemed well prepared to accept their responsibility toward the 305th Wing."

Forty-two of the 305th's Stratojets arrived at Brize-Norton on schedule, with the remaining three coming in a day later. On the date of the arrival of the last aircraft, 43 were capable of being evacuated (had circumstances required), while 25 B-47's were capable of performing their EWP (emergency war plans) mission. This difference between incommissionrate and the number of aircraft available for EWP purposes was due to inoperative K-Systems. Four of the 20 KC-97G Stratotankers developed trouble enroute, and arrived in the United Kingdom on 8 September, two days after the scheduled date for the arrival of all tankers. During this time, four engines were changed enroute, and another four were changed upon landing because of tappet guide failures. Sixteen of

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the 20 tankers were capable of performing their SWP mission on 8 September.

General Mooney noted that the UHF radio contacts in the Zone of Interior and those in operation as the flights neared the United Kingdom were considered satisfactory; however, the UHF position reporting with ocean station vessels was considered most unsatisfactory. HF (high frequency) position reporting was marginal due to poor contacts and the fact that only one B-47 in each flight of five was equipped with an HF set. Harmon and Croughton Airways were worked by the aircraft with marginal success. Lajes Airways was worked successfully between 51 degrees and 8 degrees West.

General Mooney returned to MacDill on 19 September via Keflavik, Iceland, and Harmon, Newfoundland. He noted that Keflavik "should have a 10,000-foot usable runway by the end of the month," and that the base had made "remarkable" strides during the past year.

Aid in providing the necessary facilities for placing the Avon Park Bombing and Gunnery Range on a "first-class operating basis" was promised 6th Air Division by Major General Robert B. Landry, Deputy Commander of the Second Air Force.[30] Prior to the letter, a telephonic discussion was held between General Landry and Brigadier General H. K. Mooney, 6th Air Division Commander, concerning the difficulties

30. Ltr., Maj. Gen. Landry to Brig. Gen. Mooney, 28 Oct., 1953, no file number. Exhibit 9.

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encountered since the decision to accelerate the use of Avon Park ranges for B-47 training.[31] Six salient points were discussed in General Landry's letter:

The first was that of providing a radar reflector for bombing targets.[32] Second Air Force officials had hand-carried MacDill's request to Headquarters, Strategic Air Command with further request that expeditious action be forthcoming in order to initiate the actual construction.

MacDill's request for additional personnel for Avon Park in order to more adequately support the facilities thereat was forwarded, with Second Air Force's approval to SAC. The additional airman spaces would be supported from within Second Air Force sources, General Landry wrote, and he added that "we have informal information that approval will be granted immediately." On the other hand, MacDill's request for the assignment of additional maintenance personnel for the A-5 gunlaying systems was not favorably considered. The Deputy Commander pointed out that "although your tactical aircraft do not have the A-5 system installed, you are assigned approximately 50 percent of the personnel with the 32330-50-71C AFSC in Second Air Force." Thus, the manning of the spaces would have to come from MacDill's resources.

SAC informed the intermediate command that MacDill would receive

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31. History, 6th Air Division, August 1953, pp 27-29.
32. History, 6th Air Division, September 1953, page 52.

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one additional A-5 system which would bring the base's authorization to three systems. Thus, the base would then have a total of one YA-5 system, and two A-5's. General Landry "understood" that the systems are in being within supply channels, but lack a few "bits" and "pieces" which prevented the complete build-up of the systems; however, "AMC (Air Materiel Command) is taking action to obtain the items that are short." The writer suggested to General Mooney that 6th Air Division should requisition the turret and all available components immediately upon the receipt of supply authorization. "Your own people can build the mount and modify the sighting station to aircraft configuration while the remaining parts are being obtained," advised General Landry.

Also receiving favorable indorsement by Second Air Force was MacDill's request for a separate UAL (unit allowance list) for the Avon Park detachment. While the request was forwarded to SAC, the Deputy Commander of Second Air Force observed that he was not satisfied with the lapse of time between the receipt of MacDill's recommendation at Second and its return for additional justification. Furthermore, he stated that "I believe I have taken sufficient action to preclude future delays of this nature." He noted that a large portion of the required items at Avon Park did not appear on any portion of the 6th Air Division's unit's UAL's at the time of writing. Regardless of whether SAC approved of the separate UAL, General Landry

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advised that all of the additional items should be added to the UAL of one of the subordinate units within 6th Air Division, provided "we are able to obtain and retain them."

Difficulty was foreseen in the consolidation of a list of spare parts that would be required for the uninterrupted operation of both the A-5 and B-36 systems on the Avon Park OQ range as no other Second Air Force units, other than MacDill, had experience with the operation of A-5 systems on the OQ range. The best available substitution was that gained on B-36 tail turrets within the Eighth and Fifteenth Air Forces on their B-36 OQ ranges. General Landry was of the opinion that "a standard authorization for spare parts for B-36 OQ ranges is contained in a published ECL (equipment component list)." Although regret was expressed that the ECL was not immediately available within Second Air Force, a request had been made of the Eighth and Fifteenth Air Forces for a list of the items that they have used over a length of time on their OQ ranges. General Landry added that such lists would be furnished MacDill when they became available. In the final analysis, though, "we will have to rely on the experience that your people gain as a basis for the A-5 system OQ ECL."

The Deputy Commander of Second Air Force noted that while supply authorization currently is nonexistent for UHF equipment on bombing ranges, the latter is authorized for gunnery ranges. However, MacDill had requisitioned the equipment for both ranges, pending the proper

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authorization. General Landry advised Division to keep Second Air Force supply officials informed of any difficulties in obtaining this equipment, and suggested that pending receipt of the UHF materiel that a substitute could be manufactured locally from resources of standard aircraft components, "similar to those built as mobile control sets by the 40th Air Division."

The writer advised that he had appointed Lieutenant Colonel Emmett F. Singleton, of the Second Air Force Operations Directorate, as "our Avon Park Project Officer." Colonel Singleton would be responsible for the "proper and expeditious" action on all matters involving Avon Park, and had received specific instructions to insure that delays did not occur. At the same time, General Landry suggested that General Mooney appoint a similar Avon Park project officer for 6th Air Division. (Major Donald R. Chinnock was subsequently selected for 6th Air Division.)

A strong letter of justification for the construction of a radar reflector and resolution targets for Avon Park[33] was forwarded to Second Air Force. The request[34] noted that while "two serviceable visual targets equipped for triangulation exist on Avon Park, to bomb these targets, B-47 aircraft require suitable offset aiming points because of the length of bombing run, speed, and high altitude,

33. History, 6th Air Division, September 1953, pp 54-55.
34. Ltr., Hq 6AD to Comdr 2AF, "Construction of Radar Reflector and Resolution Targets, Avon Park AFB, Florida," 3 Oct., 1953, MCDWAI 600.1.

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as well as to insure that proper consideration is given to safety requirements."

The labor to be performed on this project would consist of the clearing and grubbing of an equilateral triangular area 1,000 feet on each side; the construction of a radar reflector, and the construction of a resolution target inside the cleared and grubbed areas between Bombing Targets "A" and "C."

The request noted that "this facility is urgently needed to meet the base mission operational requirements outlined in SAC Regulation 50-8 ("Training" - Training Program for SAC Units, 5 Jan., 1952) and 2AF Regulation 50-10 ("Training" - Avon Park Bombing Range, 6 Aug., 1953), which pertain to visual bombing for B-47 crews and night photography runs for reconnaissance crews." This project was directed in September by Second Air Force Headquarters,[35] and would meet the requirements for both type aircraft; furthermore, it was especially critical, as Avon Park "is the only area suitable for B-47 bombing practice under the jurisdiction of Second Air Force," and when completed would satisfy the requirements of Stratojet training. The proposed project, of Class "D" category, would cost $6,820.94.

In order to expand the facilities for B-47 training, 6th Air

35. History, 6th Air Division, September 1953, page 54.

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Division tactical units had been using to a limited extent the facilities of the Cedar Keys Bombing Range, located north of Tampa on the Florida west coast. To make the facility of more value, Division proposed certain changes to Second Air Force Regulation 50-13 ("Training" - Cedar Keys Bombing Range, 15 Aug., 1953). The current regulation imposed restrictions "which impair the value of the range for B-47 use and thus effect the possibility of accomplishment of training minimums."[36] Seven specific recommended changes were offered, complete with necessary justification for each:

The recommendation was made that paragraph 10a of the subject regulation which authorizes only 100, 250, and 500-pound practice bombs be changed to include 250-pound general purpose bombs as the danger area designation in the Federal Register did not permit the dropping of general purpose bombs which were believed to be necessary as Division had encountered trouble in the past with obtaining scorable photographs of actual releases of practice bombs, whereas the photographing of general purpose bomb bursts from high altitude produced pictures which were much easier to score by definite identification of the bomb burst. Therefore, use of the 250-lb general purpose bomb would increase the ability of Division tactical units to accomplish training minimums.

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36. Ltr., Hq 6AD to Comdr 2AF, "Cedar Keys Bombing Range," 15 Oct., 1953, DOP 360.1. Exhibit 10.

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Paragraph 10b emphasizes that "no visual synchronous (underscoring in regulation) will be attempted. Only radar attacks permitted with one exception, i.e., minimum altitude bombing requirements of APQ-5 as set forth in Anti-Submarine Warfare (ASW) Training Minimums." Division recommended that this paragraph be altered to permit visual optical bombing as "this change coupled with the one (change of paragraph 10a) will aid the B-47 organizations . . . greatly in the accomplishment of what has proven to be a difficult training requirement: Scored Visual Releases."

Recommendation was made to change the pattern on Target 4 (as displayed in cited regulation) to a single axis of attack, from the race track East to West. This was believed justifiable as the clover-leaf pattern "should be eliminated for reasons of flying safety and because of the lack of on-the-spot communications and control of aircraft on the range."

The IP's (initial points) for both targets 4 and 5 were recommended to be extended to a minimum of 45 nautical miles for B-47 use as "the average length of IP-Target run in the present regulation is 30 nautical miles . . . and is not sufficient distance for proper synchronization in the B-47."

Division suggested that the maximum bombing altitude for the Cedar Keys bombing range be changed to 35,000 feet (MSL) mean sea level, as it was deemed necessary in order to avoid hazard to safe

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flying that exists in conflict with bomb runs on the MacDill AFB RBS (radar bomb scoring) site.

Further recommendation was made that a statement be included in the proposed regulation that at the time an aircraft would check in to MacDill Airways Control for clearance onto the Cedar Keys range, the former would inform Tampa Bomb Plot (Detachment 21 of the 3944th Radar Bomb Scoring Group) by telephonic means that there would be "x" number of aircraft on Targets 4 and 5 of Cedar Keys at "x" altitude and using "x" as an IP. This procedure was thought necessary as a conflict exists in the RBS and bomb range axes of attack. The RBS site should have this suggested information in order to inform the aircraft using its facilities that there would be aircraft on the bomb range, and giving their altitude and IP's.

Division believed also that there be eliminated from the present regulation any intimation or requirement that the target and/or Restricted Area be cleared visually by the bombing aircraft, as it is not possible for a B-47 aircraft at altitudes above 30,000 feet to visually clear the bombing area.

Finally, Division recommended that if these suggestions could not be adopted in order to make the Cedar Keys Bombing Range suitable for use by B-47 aircraft, that the range be released and the Air Space Restricted Areas be cancelled.

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Headquarters, Second Air Force was somewhat guarded in its general concurrence of Division's recommendations:[37]

The higher headquarters interposed no objection to the use of the 250-pound general purpose bombs, "provided this is not contrary to Airspace Subcommittee regulations promulgated under provisions of AFR 55-103" ("Operations" - Airspace Subcommittee and Its Relation to Air Force Activities and Operations, 11 Dec., 1952). Second observed that the danger and warning areas surrounding Targets 4 and 5 met the requirements of paragraph 5b, Air Force Regulation 87-16 ("Real Estate" - Guides for Areas Required for Bombing, Gunnery, and Rocket Ranges, 5 Sept., 1950) for demolition bombardment. Although Second did not have on file the regulations of the Airspace Subcommittee governing Cedar Keys Bombing Range, they noted that Division was attempting to procure same; in the event that cited regulations did not indicate that demolition bombardment was prohibited, "action may be initiated by your headquarters to revise Second Air Force Regulation 50-22 ("Training" - Cedar Key Air to Water Gunnery Range, 3 July, 1952) accordingly."

Second had no objection to using visual optical bombing procedures, but they did not that according to the September, 1953, Narrative Summary of Monthly Summary of Gross Bombing Errors (RCS: SAC T-4) published by the 306th Bomb Wing that the existing targets at Cedar Keys "are not suitable for visual bombing." The intermediate

37. 1st Ind., Hq 2AF to Comdr 6AD, 29 Oct., 1953, to ltr, Hq 6AD to Comdr 2AF, "Cedar Keys Bombing Range," 16 Oct., 1953, 2AFOTA 360.0. Exhibit 10A.

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parent command suggested that "determination of size, configuration and color of targets suitable for B-47 bombing in this area be made and the targets constructed prior to revising the regulation to permit visual bombing." To avoid destruction of the radar reflector by the use of 250-pound general purpose bombs, recommendation was made that the visual target be located at a safe distance from the radar reflector.

That headquarters stated that it was attempting to obtain permission to lower the altitude for visual scored releases to 25,000 feet (Division had recommended 35,000). Should Second's efforts prove successful, then the altitudes, IP's, traffic patterns, etc., would probably have to be resurveyed and the regulation amended accordingly.

That Headquarters was not in accord with Division's suggestion of relieving the B-47 crews of the responsibility of visually clearing the target area prior to bombing operations. "When bombing under visual conditions," said the indorsement, "visual clearance from the bombing altitude must be accomplished. In some cases, visual clearance may be aided by radar. In any event, our obligation for protection of watercraft which may stray into the area cannot be avoided."

Finally, Second stated no action would be taken to release the danger and warning areas until their future potential was established definitely.

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In the meanwhile, Second requested of Division certain data relative to a contemplated revision of Second Air Force Regulation 50-13.[38] The information requested was that of:

A detailed description of any restrictions imposed by the Regional Airspace Subcommittee as listed in Air Force Regulation 55-103, and Strategic Air Command Regulation 55-33 ("Operations" - Clearing Nav-Aids and Air Traffic Control Procedures with Airspace Subcommittee, 27 Jan., 1953); detailed description of any restrictions imposed by the Secretary of Army as prescribed in Air Force Regulation 50-13 ("Safety" - Regulations for Firing Ammunition for Training, Target Practice and Combat, 4 March, 1949); specific information of the types of munitions that could be used on the range; specific data relative to the scheduling and/or cancelling periods on the range, this information to include the agency of 6th Air Division that would be designated to do the same (in this connection the minimum advance notice that would be required was to be determined and specified in order to allow more efficient usage of the range by other organizations); detailed communications frequencies and procedures; and a request for new radar scope photographs, and the photographs and negatives to be submitted together with the photographs and negatives of any chart for inclusions within the new regulation.

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38. Ltr., Hq 2AF to Comdr 6AD, "Cedar Keys Radar Bombing Range," 14 Oct., 1953, 2AFCTA 353. Exhibit 11.

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6th Air Division's indorsement[39] referred Second's attention to the information contained in the 16 October, 1953, letter.[40] Furthermore, Division stated that "the small amount of bombing that has been conducted on Cedar Keys Bombing Range by units of this command was conducted per current Second Air Force Regulation 50-13. As a result of this experimental type bombing, the above referenced letter was written, and it contained all the recommendations that this headquarters felt were needed to convert this range to limited use for B-47 aircraft."

In an allied vein, 6th Air Division Headquarters recommended changes to Strategic Air Command Regulation 50-4 ("Training" - (Unold) Radar Bomb Scoring Operations (RCS: SAC - T29), 14 Oct., 1953 (formerly February, 1953).[41] These suggestions were predicated upon a review of the bombing training activity within a 75 nautical mile radius of MacDill Air Force Base. It was then determined that "further control must be established in the interest of safe flying." Currently, the bombing activity of MacDill tactical units within the local area includes the Cedar Keys Bombing Range, Avon Park Bombing Range, and Detachment 21 of the 3944th Radar Bomb Scoring Group, "Tampa Bomb Plot."

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39. 1st Ind., Hq 6AD to Comdr 2AF, 28 Oct., 1953, to ltr., Hq 2AF to Comdr 6AD, "Cedar Keys Radar Bombing Range," 14 Oct., 1953, DOP 353. Exhibit 11A.
40. Pp 25-28 of this volume.
41. Ltr., Hq 6AD to Comdr 2AF, "Recommended additions to SAC Reg 50-4," 16 Oct., 1953, DOP 360.1. Exhibit 12.

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Conflict arises in the use of these bombing facilities in the 35,000 feet altitude required for record bombing and bombing for which credit may be obtained under the provisions of Strategic Air Command Regulation 50-8. An examination of the IP-Target runs of Cedar Keys and Avon Park Bombing Ranges disclosed that the greater majority of bomb runs ran across possible axes of attack for the Tampa RBS Site;neither were these runs of adequate length on either the Cedar Keys or Avon Park Ranges. Previously, Division had requested the bomb runs be extended to a minimum of 45 nautical miles, although it was realized at the time that such action would complicate the various RBS axes of attack.

As a consequence of this examination, Division had recommended that Second Air Force Regulation 50-13 be changed to state that aircraft using Cedar Keys and Avon Park Bombing Ranges would contact MacDill Airways Control for permission to enter the ranges, whereupon Control would contact the local RBS site with the information as to the number of aircraft on the ranges; furthermore, that the bombing be conducted at a minimum of 35,000 feet MSL.

With these proposed changes to 2AF Reg 50-13 in view, Division further recommended that SAC Regulation 50-4 be amended thusly:

"That 'Tamps Bomb Plot,' after notification by MacDill Airways Control will transmit to aircraft on their range that there are "x" number of aircraft on Cedar Keys Bombing Range and "x" number

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of aircraft on Avon Park Bombing Range;" and "that high altitude RBS bombing on 'Tampa Bomb Plot' will be at a minimum of 36,000 feet MSL."

Division's clincher to these suggested changes was, "With only the two organizations of this command (305th and 306th Bomb Wings) there has been conflict in altitude and courses. With the increase of 2AF jet units, more aircraft will be utilizing these facilities, therefore the requirement for establishment of the requested procedures becomes paramount in view of the command emphasis on Safe Flying."

Included within this volume is a report of a survey made of a B-47 Flight Simulator by 6th Air Division aircrewmen.[42] Unfortunately, the basic letter from Headquarters, Strategic Air Command is not available for purposes of this report; however, the material of the answering second indorsement is included. No attempt will be made by this technician to narrate on the subject as it is much too technical for his purely administrative and public information background; especially so in view of the fact that the basic letter is not available to provide the proper reference on which he could base coherent remarks. Furthermore, time is too short to conduct extensive research from the files of the

42. 2nd Ind., Hq 6AD to Comdr SAC, 3 Dec., 1953, to ltr, Hq SAC to Comdr 2AF, "Modification of a B-47 Flight Simulator (Unclassified)," 9 Oct., 1953, DOTRG 452. Exhibit 13.

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section concerned.

Major Julious C. Griffin, Base Operations Officer, and Lieutenant Colonel Robert D. Easters, Commander of the 1928th AACS Squadron, MacDill AFB, attended a conference at Jacksonville, Florida, on 14 October, of aviation agencies to consider preferred VHF routings for the Miami and Jacksonville Control Areas. The meeting was called by Mr. Telford W. Cowart, Chief, Air Route Traffic Control Center, Second Region, Civil Aeronautics Administration (CAA), Jacksonville, Fla.[43] Because agreements thereat affect not only military-civilian air traffic in the vicinity of MacDill AFB-Tampa-St. Petersburg, but traffic concerning Pinecastle AFB, Orlando, Fla., and Turner AFB, Albany, Ga., as well, a copy of the proceedings is included within this volume.[44]

Permission was received from Headquarters, Strategic Air Command[45] via Headquarters, Second Air Force[46] to close the military facilities at Brooksville Airport, Brooksville, Florida, in response to 6th Air Division's request.[47-48] A Notam was dispatched on 5 October, 1953,

43. Ltr., 2nd Region, CAA, Jacksonville, Fla., to Comdr 6AD, 2 Oct.,1953.
44. Rpt., "CAA Second Region Aviation Industry Conference, Jacksonville, Fla. Exhibit 14.
45. 2nd Ind., Hq SAC to Comdr 2AF, 24 Sept., 1953, to ltr, Hq 6AD to Comdr 2AF, "Closing of Military Facilities at Brooksville Airport, Florida," 21 July, 1953, DPLCP 686. Exhibit 15.
46. 3d Ind., Hq 2AF to Comdr 6AD, 1 Oct., 1953, to ltr as above. Exhibit 15A.
47. Ltr., Hq 6AD to Comdr 2AF, subject as above. Exhibit 15B.
48. History, 6th Air Division, July 1953, page 12.

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by Lieutenant Colonel Louis J. B. Mestier, Jr., Director of Operations and Training, 809th Air Base Group, to Flight Service, and to Aeronautical Chart and Information Service that the facilities at Brooksville were to be closed as of 1700 hours Eastern Standard Time on 6 October, 1953. Equipment and personnel began the return trek to MacDill on 7 October.[49]

A letter of appreciation for use of the municipal facility was sent to Mayor W. G. Underwood of Brooksville over the signature of Colonel B. H. Merchant, Base Commander.[50]

A brief history of the original SAC Plan 1000 (Communications Projects) was prepared by the Base Communications Officer, Captain Clarence J. Westhoff. According to the initial operation, SAC Plan 1000 was developed in the Fall of 1949; at that time the program was projected for fixed radio equipment to support the operation of SAC CW point-to-point and air/ground circuits. However, revisions were necessitated due to the requirements for long-range voice communications with jet bombardment and reconnaissance aircraft, the development of new types of fixed radio equipment, and the adoption of the USAF voice air/ground plans; therefore, necessary changes to the original plan were completed in July, 1951.

In accordance with SAC Plan 1000, the various Command bases

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49. Daily Journal, Hq 809th ABGp, 5 Oct., 1953.
50. Ltr., Hq 809th ABGp to Major W. G. Underwood, Brooksville, Fla., 2 Oct., 1953. Exhibit 150.

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prepare and submit the communications projects within 15 days after the receipt of the engineering data, plus affecting coordination with local AACS detachments to assure that their requirements are included in the overall cable and power requirements for the stations. Initiation of the various projects occurs at Strategic Air Command Headquarters, which controls all Plan 1000 installations in regard to funding and assigns priorities, plus coordinating with AMC (Air Materiel Command) for the required material.

At MacDill, construction was begun on the Plan 1000 buildings (receiver and transmitter) in November, 1952, and were completed in October, 1953. Although funds were insufficient for the construction of buildings to house emergency power sources, necessary monies were requested in the Fiscal Year 1955 Public Works Program.[51]

Status of the various Communications projects as of 31 October:[52]

SAC-2AF-MCD-361 - Comm - Instrument Landing Service. Construction was being completed by Air Installations Office (AIO), and supply action was expected to be completed by November, 1953.

SAC-2AF-MCD-541/5 - Comm - UHF/DF. This project was re-sited near the Control Tower; necessary construction was being accomplished by AIO.

SAC-2AF-MCD-661/1 - Comm - RAPCON. This project was complete

51. Ltr., Base Comm Off to Comdr 809th ABGp, "History of SAC Plan 1000 at MacDill Air Force Base," 31 Oct., 1953, MCDOEL 311. Exhibit 16.
52. History, 809th Operations Squadron, October, 1953.

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except for CAA requirements.

SAC-2AF-MCP-1192/1 - Comm - Fire Reporting Switchboard and Expansion of Fire Reporting System. Supply action not complete.

SAC-2AF-AVP-1030/1 - Comm - Avon Park Outside Plant Facilities. Awaiting supply action by AMC.

SAC-2AF-AVP-1030/2 - Comm - Avon Park Outside Plant Facilities. Awaiting supply action by AMC.

SAC Plan 1000 - Communications Buildings and Facilities. All buildings completed; antennae plans being engineered by Warner-Robins Air Materiel Area (WRAMA).

A University of Tampa professor, Mr. H. A. Heiser, kindled anew the simmering pot of complaint against jet noise.[53] Professor Heiser expounded at great length about "these boys. . . sitting on my roof top . . . and swooshing (almost) through my house," which is located near MacDill Air Force Base. He acknowledged that he had purchased his home in 1948 when MacDill housed the quieter B-29 Superforts. The educator complained that "the thunderous noise of these jets is progressively becoming more and more deafening in this residential area," and made the dire prophesy that "if something is not done to modify the roar, we will have a group of first-class neurotics in this neighborhood." He also expressed the fear that "these low-flying

53. History, 6th Air Division, March 1953, page 39.

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planes given reason to surmise that some babies will wind up in a psychopathic ward later on in life." At the end of his complaint, Professor Heiser hastened to add that he was not "one of these 'chronic gripers' about the military" and proudly pointed out that one of his nephews had died in World War II, and another was serving as a test engineer at Eglin AFB, Fla. Professor Heiser made no reference of his military service.[54]

Patiently, in his reply, Brigadier General H. K. Mooney, 6th Air Division Commander, explained the facts of B-47 operations at MacDill, and assured the harrassed professor that the Air Force, in cooperation with other federal agencies and the aviation industry was endeavoring to reduce the noise that so inconveniences the populace. General Mooney observed that "We cannot give you the security you must have if we are a five day a week, fair weather, daylight only, strategic striking force."[55]

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54. Ltr., Professor H. A. Heiser, Tampa, Fla., to Comdr 6AD, 16 Oct., 1953. Exhibit 17.
55. Ltr., Comdr 6AD to Professor H. A. Heiser, Tampa, Fla., 16 Oct., 1953. Exhibit 17A.

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CHAPTER THREE

B-47 OPERATIONAL ENGINEERING

Included within this volume are three B-47 Operational Engineering Section (OES) Specific Item Reports (SIR) pertaining to projects which have been mentioned in previous reports. Therefore, they will be listed briefly herein, with proper references.

SIR Number 111 concluded the Improved Air System for the B-4 Fire Control System (EE-42).[56] The purpose of the project was "to

56. History, 6th Air Division, September 1953, pp 64-65.

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report the results obtained on the test installation which provides an increased capacity air syste m for the B-4 fire control system and a means of dehumidifying the air after it is compressed."

Four conclusions had been reached after completion of the tests. The first was that the present 50-cubic inch storage bottle does not have sufficient capacity to operate properly two B-1 gun chargers through the entire firing mission at the normal operating altitudes of B-47 aircraft. A mechanical separator for the elimination of moisture and/or aerosol emulsion is needed to avoid malfunctions in the charger. The high pressure air that is used to operate the gun charger should be regulated to a constant pressure in order to permit proper timing of the guns and chargers to assure achievement of the correct rate of fire. Finally, the modification of the present air system of the B-4 fire control system in B-47 aircraft is not considered feasible as the B-4 is being replaced with the A-5 turret and controls.[57]

SIR Number 113 ended the project of Coaxial Connector in ARN-14 and ARC-27 Antenna Cables, B-47E Aircraft (EE-57). The purpose of this project was "to point out a deficiency in the UG-21/U coaxial connector as used in the B-47 installation of the ARN-14 and the ARC-27, and to recommend a solution to the operational and maintenance problems caused by this deficiency."[58]

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57. Ltr., B-47 OES Hq 6AD to Comdr WADC, "Specific Item Report No. 111, Improved Air System for the B-4 Fire Control System (EE-42)," 18 Sept., 1953, DOES 452.0311. Exhibit 18.

58. History, 6th Air Division, September 1953, page 66.

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Conclusions were reached that the UG-21/U connector is unsatisfactory in these applications because it frequently causes loss or reception or else intermittent reception. The inaccessibility of these connectors in the B-47 necessistates an expenditure of 10 manhours in replacing the connector after a failure. Furthermore, the PL-259 coaxial connector can substitute for the UG-21/U in the installations covered in this report.[59]

Specific Item Report Number 114 ended the Evaluation of the K-System Dual Offset Unit in B-47 Aircraft (EB-53), whose purpose was "to report on the evaluation of two prototype dual offset units for the K-System installed in two B-47B aircraft at MacDill."[60] The conclusions are contained within the subject report.[61]

The OES began, on 1 October, the semi-monthly publication of B-47 Maintenance Tips with the purpose of "keeping everyone informed on maintenance problems that are under study, and the fixes for these problems as they are developed, as well as to provide a medium for the exchange of maintenance ideas and methods between all B-47 Wings."[62-63]

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59. Ltr., B-47 OES Hq 6AD to Comdr WADC, "Specific Item Report No. 113 Coaxial Connector in ARN-14 and ARC-27 Antenna Cables, B-47B Aircraft (EB-57)," 3 Oct., 1953, DOES 452.0311. Exhibit 19.
60. History, 6th Air Division, September 1953, pp 65-66.
61. Ltr., B-47 OES Hq 6AD to Comdr WADC, "Specific Item Report No. 114 Evaluation of the K-System Dual Offset Unit in B-47 Aircraft (EB-52)," 8 Oct., 1953, DOES 452.0311. Exhibit 20.
62. Rpt., "B-47 Maintenance Tips," prep by B-47 OES Hq 6AD, 1 Oct., 1953, Exhibit 21.
63. Rpt., "B-47 Maintenance Tips," prep by B-47 OES Hq 6AD, 15 Oct., 1953, Exhibit 21A.

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CHAPTER FOUR

MATERIEL and FACILITIES

Pending the arrival of the Strategic Air Command regulation covering the "Local Purchase Store," Headquarters, Second Air Force advised 6th Air Division to make certain preparations for the change in the simplified monetary accounting system for the local purchase of expendable-type supplies.[64] One of the major benefits to be derived from this new system would be, according to Second Air Force, "the elimination of all stock record cards for this type of supplies

64. Ltr., Hq 2AF to Comdr 6AD, "Supply Policy for Local Purchase of Expendable Supplies," 21 Sept., 1953, 2AFMSH 400. Exhibit 22.

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and multitude of paper work and postings currently required."

Division was advised to establish stock levels on all locally purchased expendable items in order to affect a turnover rate of at least six items per year. Levels on this category would average as close to 30 days as possible, although careful consideration would be given to the economical quantity for individual purchases. With the objective in view of maintaining low stock levels, it was deemed imperative that "store managers compute requirements and place them with purchasing and contracting officers sufficiently in advance to allow 45 to 60 days pipeline time."

The base supply officer was directed to survey available physical facilities and prepare tentative plans for the locations of the various departments of the "local purchase store." All departments were scheduled to be in operation by 1 January, 1954.

As of 13 October, 6th Air Division replied, among other things, that "since the Strategic Air Command Regulation has not been received this base is already behind in establishment of the country store."[65]

Headquarters, 6th Air Division requested authority to submit a project for the installation of partitions (modification of the provisions of Air Force Regulation 86-8 ("Installation Planning and Development" - Modernization of Mobilization Barracks, 20 March, 1953)

65. 1st Ind., Hq 6AD to Comdr 2AF, 13 Oct., 1953, to ltr., Hq 2AF to Comdr 6AD, "Supply Policy for Local Purchase Expendable Supplies," 21 Sept., 1953, MCDMAC 400. Exhibit 22A.

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to meet local conditions) in 15 mobilization-type barracks at MacDill. Government furnished materials and organizational labor would be employed under the supervision of AIC.

The proposed project provided for the erection of temporary partitions with openings at the top and bottom to permit the present heating system to circulate properly. These 15 barracks are equipped with mechanical ventilation in the form of multiple window fans which were purchased from profits earned by the 1953 Florida National Sports Car Races held at MacDill in February.[66] The installation of the partitions would complete another portion of the modernization program.

Erection of the improvements would provide separate two-man rooms for the occupants of the barracks. This proposed work is a modification of the criteria established by AFR 86-8. Division opined that "the submission of a project for complete modernization in strict accordance with the terms of AFR 86-8 at this time would not be in accord with the present austerity program."

Estimated cost of the proposed work was $3,266 per building, or a total of $48,990 for the 15 barracks.[67]

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66. History, 6th Air Division, March 1953, pp 70-73.
67. Ltr., Hq 6AD to Comdr 2AF, "Modernization of Mobilization Type Barracks, MacDill AFB," 29 Oct., 1953, MCDMAI 600.1.

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CHAPTER FIVE

MISCELLANEOUS

MacDill Air Force Base, according to a survey made by the USAF Hospital, is extremely vulnerable to biological warfare.[68] Furthermore, "It is extremely difficult to conceive that any comprehensive program offering reasonable protection can be wholly practical with present resources, personnel, and facilities."

In reply to a Second Air Force directive,[69] pertaining to the restoration of the noncommissioned officer to his proper place in

68. Ltr., Hq 6AD to Comdr 2AF, "Survey of Vulnerability to Biological Warfare Agents," 8 Oct., 1953, MCDCSU 729. Exhibit 23.
69. Ltr., Hq 2AF to Comdr 6AD, "Status of Noncommissioned Officers," 9 Oct., 1953, 2AFPB 220. Exhibit 24.

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the command echelon, and development of methods to increase his managerial ability and prestige," MacDill offered a seven-point program.[70]

This program consisted of: payment by rank, club privileges, improved messing facilities, membership on certain boards, management and leadership training, manager identification, and improved housing.

During October, 1953, there were five General Courts-Martials, four Specials, and 47 Summary Courts-Martials.[71]

70. 1st Ind., Hq 6AD to Comdr 2AF, 27 Oct., 1953, to ltr, Hq 2AF to Comdr 6AD, "Status of Noncommissioned Officers," 9 Oct., 1953, MCDCCO 220. Exhibit 24A.

71. Ltr., Hq 809th ABGp to all unit comdrs, MacDill AFB, "Courts-Martials Trials (October, 1953)," 2 Nov., 1953, MCDCIC 250.4. Exhibit 25.

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APPENDIX "A"

EXHIBIT 1

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDCCO 333 24 October, 1953

SUBJECT: Report on Congressional Visit

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska

1. This report is submitted in accordance with your message DPLBP 17561, dated 6 August, 1953.

2. Congressman Harry R. Sheppard from the 27th District of Californai and Member of the House Appropriations Committee, visited MacDill Air Force Base on 23 October, 1953. He arrived from Jacksonville Naval Air Station by Navy JRB type aircraft at 0920 and departed at 1415 to return to Jacksonville by the same aircraft. He was indefinite as to his future itinerary stating only that he would travel to the east coast next week.

3. In response to an inquiry from the local press, Congressman Sheppard stated that he was making an inspection trip for the House Appropriations Committee and had no further comments. He desires a minimum of publicity.

4. Congressman Sheppard was met upon arrival by the following officers: Colonel B. H. Merchant, Base Commander and acting Division Commander, Colonel M. N. W. McCoy, Commander, 306th Bombardment Wing, Colonel R. E. Kimmel, Division Director of Materiel, and Colonel E. C. Hardin, Division Director of Operations.

5. He was escorted to Division Headquarters where he was given a briefing which included the subjects outlined in the message referred to in paragraph 1. This was followed by a question and answer period at which additional members of the Division and Air Base Group staff were present.

6. Congressman Sheppard was then conducted on a tour of the base which included the following facilities:

Wherry Housing
Outside storage of supplies
Base shipping and reciving section
Base Supply located in Hanger #3
B-47 Flight Simulator
Rescue boat dock
Engine build up section
Aircraft maintenance docks
Armament and electronics shop
Interior of KC-97G aircraft

The tour was conducted at Congressman Sheppard's request to include only those facilities which he desired to see. He stated he had previously seen other facilities which were suggested for his inspection.

7. In accordance with Congressman Sheppard's request, this headquarters will forward to the Commander, Second Air Force, to arrive at the Congressman's office by 10 November, a transcript of the briefing and all statements made at the question and answer period together with additional data on the following subjects:

List of motor vehicles utilized
Summary of improvements made and man hours saved through management improvement ideas
Statement of amounts returned to the government through salvage sales and any other collections made
Total military and civilian payrolls
List of items requested in the 1955 Public Works Program

8. Congressman Sheppard was particularly interested in requirements for the storage of supplies, in the supply and inventory system, the expediter system for issuance of aircraft spares, jet engine operation and maintenance, and the preservation of fringe benefits for military personnel. He had a brief discussion before lunch with Major General Archie J. Old, Jr., Director of Operations, your headquarters.

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Hq 6th AD, MacDill AFB, Fla., MCDCCO 333, Report on Congressional Visit

9. No adverse comments or criticisms were offered by Congressman Sheppard and he expressed complete satisfaction with his visit upon his departure. It appeared that his impressions were distinctly favorable in all respects.

B. H. MERCHANT
Colonel, USAF
Commander

Info to:
Comdr, Hq 2AF

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 10

DE JEDMH 197
FM CGSAC OFFUTT AFB NEBR
TO * * * *
JESDL/COMDRAIR DIV SIX MACDILL AFB FLA
* * * *

/R E S T R I C T E D/ DPLBP 17561. FOL MSG FR VICE CS USAF TO ALL MAJR COMDS IS QUOATED FOR YOUR INFO AND NSC ACTION CIN "RESTRICTED CITE 701/53. I HAVE BECOME INCREASINGLY CONCERNED WITH CRITICISMS OF THE AIR FORCE FROM MEMBERS OF CONGRESS RESULTING FROM VISITS THEY HAVE MADE TO AIR FORCE BASES. IN ORDER THAT WE CAN MINIMIZE THE ADVERSE EFFECT OF SUCH CRITICISM CMA I BELIEVE THAT ALL COMMANDERS SHOULD BE MADE AWARE OF THE IMPORTANCE OF CREATING FAVORABLE IMPRESSIONS DURING THESE VISITS. SOME OF THE CRITICISMS WHICH I HAVE RECEIVED INDICATE THAT MANY OF OUR PERSONNEL ARE NOT FAMILIAR WITH THEIR ASSIGNED MISSIONS AND ARE RESPONSIBLE FOR A GREAT DEAL OF DUPLICATION IN NOT UTILIZING FACILITIES AVAILABLE FROM OTHER SERVICES CMA AND ESTABLISHING CMA IN SOME INSTANCES CMA DUPLICATE AND UNNECESSARY FUNCTIONS WITHIN THEIR OWN UNIT. I KNOW THAT YOU WILL WANT TO KNOW THAT SOME COMMANDERS IN CORRECTING COMPLAINTS OF THIS NATURE IN THE PAST HAVE FOUND THAT THE PRESENTATION OF A COMPREHENSIVE BRIEFING TO VISITING LEGISLATORS FOLLOWED BY A QUESTION AND ANSWER PERIOD HAS PROVEN VERY EFFECTIVE. I BRING THIS TO UR ATTENTION NOW BECAUSE WITH THE ADJOURNMENT OF THE PRESENT SESSION OF CONGRESS CMA MEMBERS OF THE HOUSE AND SENATE WILL UNDBOUTEDLY VISIT MANY OF OUR INSTALLATIONS AND I KNOW YOU WILL WANT TO TAKE ACTION PRIOR TO THEIR VISITS TO PRECLUDE ADVERSE CRITICISM."

IN COMPLIANCE WITH THE ABOVE CMA IT IS DESIRED THAT EACH BASE PREPARE AN APPROP BRIEFING OF ACTIVITIES TO INCL A PLAN FOR A TOUR OF BASE FACILITIES. TOUR OF BASE SHOULD BE DESIGNED TO IMPRESS CONGRESSMEN WITH HIGH LEVEL OF PRODUCTIVE ACTIVITY AT SAC BASES CMA E.G. CMA PERIODIC MAINTENANCE DOCKS CMA ENGINE BUILD-UP LINE CMA MAINT CONTROL CMA BASE SUPPLY CMA ETC. IT IS CONSIDERED THAT THE BRIEFING SHOULD INCL DISCUSSION OF AT LEAST THE FOL MAJ SUBJECTS CNL

A. MISSION OF SAC - SEE AFR 23-13 CMD DTD 6 SEP 51. PURPOSE OF THIS SUBJ IS TO PROVIDE VISITOR WITH GENERAL ORIENTATION ON SAC MSN AS AN INTRODUCTION TO DISCUSSION OF THE BASE MISSION. THIS HURFR (sic) WILL FURNISH MATERIAL FOR THIS SUBJ WHICH WILL COVER BASIC OBJECTIVE OF THE COMD AND ALSO RQMT TO HAVE A FULLY TRAINED D-DAY READINESS FORCE CMA PROPERLY MANNED CMA EQUIPPED AND SUPPLIED.

B. MISSION OF BASE. THIS PART OF BRIEFING SHOULD REFLECT COMPLETE UNDERSTANDING BY ALL PERS OF THE MSN AND THEIR DUTIES AND RESPONSIBILITIES. TO EMPHASIZE THE BASE CAPABILITY TO CARRY OUT ITS SPECIFIC MS AND THE PART IT CONTRIBUTES TO THE COMD MSN CMA SUCH ITEMS AS THE BASE MOBILITY PLN CMA MEASURES TAKEN TO TO INSURE READINESS OF THE FORCE CMA AND TRAINING RQMTS AS SET FORTH IN SAC REG 50-8 SHOULD BE DISCUSSED. ADDNL ITEMS SUGGESTED FOR DISCUSSION ARE CIN TYPICAL TNG MSN CMA CREW BRIEFING CMA COMBAT CREW PRE-FIT INSPECTION CMA COMPOSITION CMA EXPERIENCE LEVEL CMA AGES CMA MARITAL STATUS CMA OCC. OF TYPICAL SAC CREW.

C. BASE CONSTRUCTION. VISITORS SHOULD BE SHOWN BY MAP PATRN FOLLOWED BY TOUR OF BASE IF THEY DESIRE PAREN THE MAJ CONSTRUCTION PROJECTS RECENTLY COMPL ON THE BASE AS WELL AS CONSTRUCTION STILL REQUIRED. BASE LEVEL BUDGET CONSIDERATIONS AND AN INDICATION OF ANY MAJ DEFICIENCIES EXISTING BECAUSE OF BUDGET LIMITATIONS MAY BE MENTIONED. EXPLANATION OF CONSTRUCTION UNDER PROGRESS OR REQUIRED SHOULD BE BASED UPON OPNL RQMTS CAVA CONDITION OF EXISTING ASGD MISSION. ANY REQUEST BY CONGRESSIONAL MEMBERS TO VISIT SAC BASES SHOULD BE WELCOMED BY COMMANDERS CONCERNED. A BRIEF REPORT OF ANY VISIT BY MEMBERS OF CONGRESS TO A SAC BASE WILL BE FWD DIRECT TO THIS HQ WITH INFO TO INTERMEDIATE HQS WITHIN 24 HOURS OF THE TERMINATION OF THE VISIT. ADDITIONAL INFO AS INDICATED IN ITEMS A AND B WILL BE FORWARDED IN THE NEAR FUTURE DIRECT TO APPROPRIATE AIR DIVISION AND WING COMMANDERS WITH INFO TO NUMBERED AIR FORCES.
06/2043Z JAUG DJEDMH

"A CERTIFIED TRUE EXTRACT COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 2

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDCCO 322 19 October, 1953

SUBJECT: Redesignation of Multiple Wing - Air Base Groups to Air Base Wings

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. Request consideration be given to the redesignation of air base groups on multiple wing stations as air base wings. This request is motivated by the necessity for highly qualified staff officers in multiple wing air base group functions and by the complexity and importance of an air base group in support of two or more combat wings. A wing organization would provide higher grades than those established for a group organization.

2. The primary mission of an air base group in Strategic Air Command must always be the support of the tactical wings. However, I wonder if we haven't overly minimized the secondary mission, that of running and developing a $100,000,000 installation which annually spends many millions of dollars on construction alone. Civilian industry and the other services have found it necessary to increase the pay or grades in order to attract qualified and responsible managers for comparable jobs.

3. The simile "A chain is no stronger than its weakest link" is identical to the relationship of a multiple wing air base group with its two combat wings. Any weakness in air base group functions is immediately detrimental to the combat capability of the wings. The efficiency of the support rendered has continuously been hurt by the caliber and experience level of personnel assigned to an air base group. It is believed necessary, therefore, to elevate air base groups on multiple wing stations to wing status.

4. An air base wing has been provided at Offutt Air Force Base and other major air commands have been authorized air base wings at larger stations. Appropriate tables of organization are therefore available.

Hq 6th AD, MacDill AFB, Fla, MCDCCO 322, Redesignation of Multiple Wing - Air Base Groups to Air Base Wings

5. The redesignation requested herein was discussed at the Second Air Force Commanders' meeting on 1 October 1953. Major General R. B. Landry expressed considerable interest and suggested the problem be presented to your Headquarters so that further study could be made.

H. K. MOONEY
Brigadier General, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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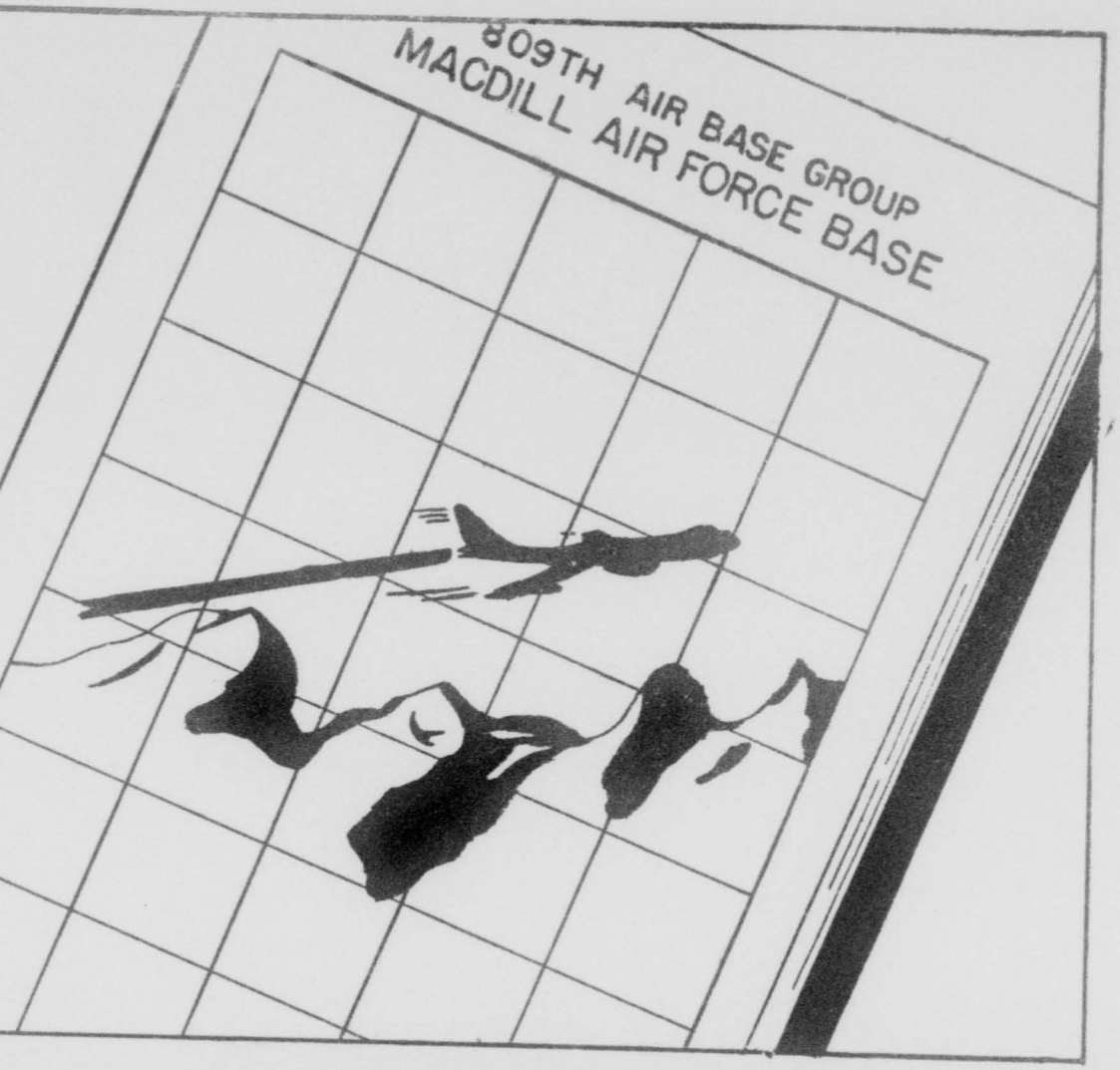
—SAC—
MANAGEMENT CONTROL SYSTEM

AIR BASE GROUP

OCTOBER 1953

PREPARED BY:
BASE COMPTROLLER



FOREWORD

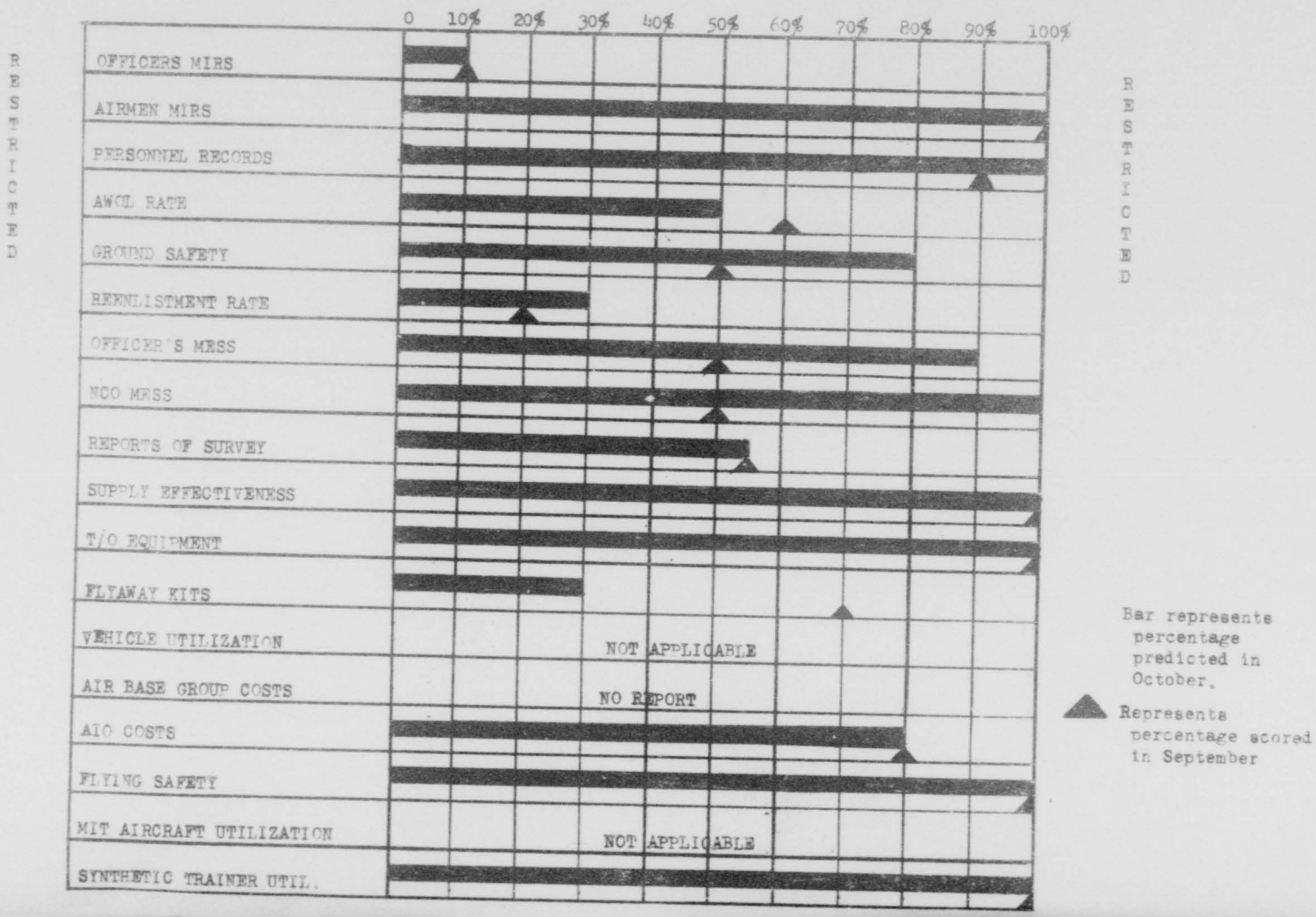
This detailed analysis of areas rated under the SAC Management Control System - Air Base Group was prepared by the Base Comptroller and provides predicted scores, graphic representation and appropriate analytical comments for the Commander and Staff. The Official SAC Scores for the previous month are compared with predicted scores for the current month, indicating point deviations and analysis of regression in the various areas.

In areas where 100% of the maximum score was achieved no analytical comment was made.

Graphic representation of performance for the current month is provided, as well as comparison columns indicating previous month's official SAC percentage of maximum score and current month's predicted MacDill percentage of maximum score.

H. C. OAKES
Major, USAF
Base Comptroller

OCTOBER 1953 - 809TH AIR BASE GROUP SAC MANAGEMENT CONTROL PERCENTAGES



SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
OCTOBER 1953

13 November 1953

	MAXIMUM SCORE	SAC SEPTEMBER % MAX SCORE	SAC SEPTEMBER SCORE	PREDICTED OCTOBER % MAX SCORE	PREDICTED OCTOBER SCORE
Manning:					
Officers MIRS	20	10	2	10	2
Airmen MIRS	80	100	80	100	80
Personnel Records	50	90	45	100	50
AWOL Rate	50	60	30	50	25
Ground Safety	70	50	35	80	56
Reenlistment Rate	50	20	10	30	15
Messes:					
Officers' Mess	25	50	12.5	90	22.5
NCO Mess	25	50	12.5	100	25
Reports of Survey	60	55	33	55	33
Supply Effectiveness	100	100	100	100	100
T/O Equipment, Air Base Group	20	100	20	100	20
Flyaway Kits	60	70	42	30	18
Vehicle Utilization		- - - - NOT APPLICABLE - - - -			
Air Base Group Costs	80	80	64	NR	NR
AIO Costs - Incident to Maint.	60	80	48	80	48
Flying Safety	70	100	70	100	70
MIT Aircraft Utilization		- - - - NOT APPLICABLE - - - -			
Synthetic Trainer Utilization	50	100	50	100	50
TOTAL SCORE	870		654		*614.5
PERCENTAGE OF TOTAL SCORE			75		78

NR - No Report
*Total Item Weight 790

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SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
OCTOBER 1953

13 November 1953

	MAXIMUM SCORE	SAC SEPTEMBER SCORE	PREDICTED OCT. SCORE	POINT CHANGE	COMMENTS
Manning: Officers MIRS	20	2	2	NC	There were 111 spaces manned in requir specialties out of 157 authorized for 70.7% manning as compared to 112 manne out of 157 authorized in September (71 manning). With an assigned strength o 134, 85.4% of assigned officers were M in October.
Airmen MIRS	80	80	80	NC	100% of maximum score attained. There 2213 airmen MIRS out of 2,450 authoriz
Personnel Records	50	45	50	+5	100% of maximum score attained.

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
OCTOBER 1953

13 November 1953

	MAXIMUM SCORE	SAC SEPTEMBER SCORE	PREDICTED OCT. SCORE	POINT CHANGE	COMMENTS
AWOL Rate	50	30	25	-5	The 15 AWOLs in October resulted in a three-month total of 36. The rate of 3.8 per thousand for October compared with 3.5 per thousand for September resulted in a point decrease from 30 in September to 25 in October. There have been 5 AWOLs through 6 November. If there are no more AWOLs through November, based on the same mean strengt the result will be 60% of maximum score or 30 points. A total of 15 AWOLs in November (same as Oct.) based on the sam mean strength, will result in 30% of the maximum score or 15 points.
Ground Safety	70	35	56	+21	A ground Safety Index of 5.84 combined with an Accident Cost Index of $.46 resulted in a score of 56 points (80% of the maximum). Had there been one less military accident and one less motor vehicle accident, the October score would have been 90% of the maximum score or 63 points. The Ground Safety Index of 5.84 was the limiting factor which prevented attainment of a higher score.

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R E S T R I C T E D

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
OCTOBER 1953

13 November 1953

	MAXIMUM SCORE	SAC SEPTEMBER SCORE	PREDICTED OCT. SCORE	POINT CHANGE	COMMENTS
Reenlistment Rate	50	10	15	⁄5	The combined three-months immediate reenlistments (4) and regular terminations (13) result in a rate of 30.8% for 30% of the maximum score, or 15 points.
Messes:					
Officers' Mess	25	12.5	22.5	⁄10	Fourteen points were attained under the SAC "Financial Efficiency Index" for 90% of the maximum score. Points were lost in Factors 7 and 8 (Net Profit from Operations before Dues for Month and Year to Date).
NCO Mess	25	12.5	25	⁄12.5	Fifteen points were attained under the SAC "Financial Efficiency Index" for 100% of the maximum score.
Reports of Survey	60	33	33	NC	An average survey dollar value of $515.11 combined with a .28 rate per thousand resulted in 55% of the maximum score or 33 points. The incidence rate was well within the 100% scoring bracket but the average survey dollar value limited the score attained to 55% of the maximum possible score.

R E S T R I C T E D

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SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
OCTOBER 1953

13 November 1953

	MAXIMUM SCORE	SAC SEPTEMBER SCORE	PREDICTED OCT. SCORE	POINT CHANGE	COMMENTS
Supply Effectiveness	100	100	100	NC	100% of maximum score attained.
T/O Equipment	20	20	20	NC	100% of maximum score attained.
Flyaway Kits	60	42	18	-24	Based on report as submitted (3-SAC-E21) the percentage of completeness of 75.2% attained 30% of the maximum score, or 18 points. These figures are based on the Basic SAC 65 series and do not take into consideration any additions or deletions made by 306th Bm Wg while TDY to U.K. Therefore percentage will increase when official change is received.
Air Base Group Costs	80	64	NR	NR	A&E Expense Summary not received because of extension in submission date.

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
OCTOBER 1953

13 November 1953

	MAXIMUM SCORE	SAC SEPTEMBER SCORE	PREDICTED OCT. SCORE	POINT CHANGE	COMMENTS
AIO Costs - % Incid. to Maint.	60	48	48	NC	The percent of AIO Manageable Resources expended on maintenance and repair incident to maintenance was 97.4% for 80% of the maximum score or 48 points. Had expenditures in Account 09108.3A (Cost of Minor Construction, Minor Additions, Alterations and Deletions) been $3,312 less in October, 100% of the maximum score would have been attained.
Flying Safety	70	70	70	NC	100% of maximum score attained.
Synthetic Trainer Util.	50	50	50	NC	100% of maximum score attained.

EXHIBIT 4

REPORT OF PROCEEDINGS OF THE EXECUTIVE GROUND SAFETY COUNCIL:

Headquarters
MacDill Air Force Base, Florida

Proceedings of a meeting of the Executive Ground Safety council which convened at MacDill Air Force Base, Florida, under provisions of Second Air Force Regulation 32-2, 28 June 1952, and pursuant to Letter Order MCDCnG- 28 February 1953, Headquarters 805th Air Base Group, MacDill Air Force Base, Florida.

The Council met pursuant to the foregoing order at Headquarters MacDill Air Force Base, Florida at 1400 hours, 15 October 1953.

Members Present:

Lt Col D.J. Nolan - Base Executive Officer (Acting President)
Lt Col William B. Maples - Base Pers Staff Officer
Major A.H. Haaf - Base Motor Trnsp Officer
Major George R. Adams - For Commander 306th Bomb Wing (M)
Major J.H. Windsor - Provost Marshal
2nd Lt. R.B. Billman - For Base Surgeon
WOJG J.V. Henderson - For Commander 305th Bomb Wing (M)
M/Sgt Robert W. Dancy - For Base Materiel Staff Officer
Civ Frank Joseph - Base Fire Chief
Civ Geo R. White - Ground Safety Director (Recorder)

1. Discussion

a. Action taken on recommendations of 22 September minutes is as follows:

(1) A letter was sent to the Dew Bloom Dairy thanking the owner for loan of the goat during the Safe Wheels program.

(2) A regulation was drafted regarding the wearing of hand jewelry. The council agreed that the regulation would be too difficult to enforce at this time. (see recommendations for other action)

(3) The plan for requiring drivers of government vehicles to attend a monthly safety meeting was shelved until the council could give it further study.

(4) An article was published in the "Airman", issue of 25 of September, regarding punitive and disciplinary action taken in three recent government vehicle accidents.

g. The members were informed that a special study of Safety on the Flight Line had been conducted by the ground safety office. Bad practices noted were, promiscuous riding on all types of mobile equipment, excessive number of private conveyances operating on the line, the absence of a flight-line flag on vehicle and the widespread habit of smoking in and on vehicles and in other than authorized areas on the parking apron. Some of the pictures taken were shown to the members.

2. Recommendations:

a. That the photographs of a finger ring, torn from an airman's hand, be reproduced and widely distributed on bulletin boards to discourage the wearing of finger rings by personnel engaged in activities involving, Moving Equipment, Aircraft Maintenance, Shop Work, Material Handling and activities, which require climbing with the use of ladders or scaffolds.

b. That further study be given to methods in which the government vehicle drivers could be called together for regular safety instruction periods.

c. Meeting adjourned 1500 hours.

/s/ W. E. BOWLES
W. E. BOWLES, LT. COLONEL, USAF

/s/ [illegible]
[illegible]
Ground Safety Director
Recorder

HEADQUARTERS MACDILL AIR FORCE BASE, FLORIDA

Approved:

/s/ E. E. MARCH
E. E. MARCH, COLONEL, USAF
Base Commander

Month of September — MCDILL Air Force Base Command

RATES AND COSTS	806th AB Sq	305th Wing	306th Wing	98th AB Sq	SAC DET	NON-SAC DET	6TH AIR DIV TOTAL	
Mil Non-Disab Inj (on)	9	6	10	1	0	0	26	
Mil Non-Disab Inj (off)	11	6	11	0	0	0	28	
Civ Non-Disab Inj	0	0	0	0	0	0	0	54
Mil Disab Inj (on-duty)	1	0	1	1	0	0	3	
Mil Disab Inj (off-duty)	5	2	0	3	0	0	10	
Civ Disab Inj	.00	0	0	0	0	0	0	
Mil fatalities	.00	0	0	0	0	0	0	13
USAF Veh accident	2	0	0	0	0	0	2	
Aircraft accident cost	.00	0	20,362	.00	.00	.00	20,362.00	
Property damage cost	75.00	0	1,000	.00	.00	.00	1,075.00	
USAF Veh accident rate *	.93	.00	.000	.00	.00	21/54	0.64	
USAF Veh repair cost	128.00	.00	.00	.00	.00	10.00	128.00	
Mil Disab inj rate - on	2.69	.00	4.25	22.94	.00	.00	3.36	
Mil disab inj rate - off	6.72	4.28	0.00	34.44	.00	.00	5.65	
Total disab inj rate-Mil	5.35	2.86	1.42	30.60	.00	.00	4.89	
Civ disab inj rate	.00	.00	.00	0.00	.00	.00	.00	
Mil inj cost/capita	.60	.65	8.84	3.04	.00	.03	2.85	
Civ inj cost/capita	.00	.00	0.00	.00	.00	.00	.00	
Total cost/capita *	.64	.68	9.15	3.04	.00	.03	2.97	
Cost of mil injuries	$ 1970.00	$1584.00	177.00	1,327.00	.00	.00	5,058.00	
Cost of civ injuries	.00	.00	.00	.00	.00	.00	.00	
Total accident costs	$ 2173.00	$1584.00	21,539.00	1,327.00	.00	$10.00	26,623.00	
Effectiveness %	80	100	75	5	100	30	70	
Points Scored	56	70	52½	3½	70	21	49	

*Effectiveness % and score based on figures in this column (except 806th AB Sq)
-6th Air Div. figures do not include experience of SAC and NON-SAC Detachments.

EXHIBIT 5

DEPARTMENT OF THE AIR FORCE
WASHINGTON 25, D. C.

AFOPM 370.093 30 September 1953

SUBJECT: Justification for Required Air Police Strength

TO: Commanders, Major Air Commands, ZI and Overseas

1. Recent manpower limitations placed upon the Air Force as part of the Department of Defense austerity program have reduced air police authorizations among the major air commands worldwide. This overall reduction was directed in order that the percentage of Air Force personnel performing duty as air police would be more nearly proportional to the percentage of Army personnel engaged in military police duties.

2. The collective term "air police" includes functionally those duties involving security and local ground defense for the Air Force, as well as those duties involving law enforcement and correction activities. This functional breakdown, peculiar among the services to the air police of the Air Force, apparently had not been understood completely by Congress, with the resultant mandatory reduction in air police authorized strength.

3. In order that Headquarters USAF may determine the minimum number of air police required to protect the capability of the Air Force to perform its mission, the headquarters of each major air command will prepare a justification for the number of air police required in implementing AFRs 205-5 and 355-4 throughout its command. This justification should be based on the commander's estimate of the security situation, prepared in accordance with subject regulations.

4. In differentiating between the two functional fields in the air police acitivty, it is alsc requested that justification be prepared to determine the minimum numberof air police required in the law enforcement and correction function. In connection with this function, it is increasingly obvious to Headquarters USAF that requirements by commanders such as guarding supply warehouses, finance offices, post exchanges, and so forth, must be met by extra duty or roster methods and <u>not</u> by utilizing air police.

5. It is requested specifically that AF Form 1006 (Temp), "Command Air Police Requirement According to Functional Areas," attached as an inclosure to this letter, be completed to reflect command requirements as of 15 October 1953, and forwarded to the Air Provost Marshal, Headquarters USAF, Washington 25, D. C., not later than 15 November 1953. Reports Control Symbol AF-P181(OT) is assigned to this report. If additional copies of AF Form 1006 (Temp) are required, they will be produced locally by typewriter only on 8 by 10 1/2-inch paper in accordance with the inclosure.

AFCPM 370.093, DAF, subject: Justification for Required Air Police Strength

6. It is emphasized that the information contained in this report will be used as a basis for future planning. Failure of commanders to provide fully for their essential air police requirements or to justify clearly such requirements, may result in a further adjustment in air police strength within their respective commands.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

K. E. THIEBAUD
Colonel, USAF
Air Adjutant General

1 Incl
AF Form 1006 (temp)

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 5A

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, La.

2AFIGP 370.093 13 October 1953

SUBJECT: Justification for Required Air Police Strength, RCS: AF-P181 (OT)

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

1. The attached correspondence, Inclosure #1, is forwarded for necessary action.

2. Completed AF Forms 1006 will be returned to this headquarters not later than 27 October 1953. RCS assigned this report is AF-P181 (OT).

3. Your reply will include justification as requested in paragraphs 3 and 4 of attached letter. In addition, the following information will be included as clarifying information in a supplement to AF Form 1006.

a. Number of restricted areas and total acreage thereof. Comments should be included under this item as to peculiarity of terrain features or physical layout, which necessitates the operation of a more than normal number of restricted area gates.

b. Total number of personnel requiring access to restricted areas.

c. Total number of vehicles registered on your installation.

d. Monthly average number of prisoners held in confinement facility since 1 January 1953.

e. Special off-base patrolling problems that require the fulltime operation of an adequately manned town patrol. This would include responsibilities as defined in AFR 125-19 where the off-base patrol activity is the primary responsibility of the Air Force or the responsibility of another service with your base committed to furnish part of the town patrol complement.

4. Computations of requirements for supervisory and training personnel should be based on the asumption that all personnel assigned to the Air Police Squadron are physically and mentally qualified for

2AFIGP, 370.093, Subj: Justification for Required Air Police Strength, RCS: AF-P181 (OT)

Air Police duty as established in AFR 35-85 and the USAF Training Prospectus; however, it is desired that the larger number of supervisory and training personnel that will be required if sub-standard airmen are assigned be included as clarifying information in a supplement to the AF Form 1006.

BY ORDER OF THE COMMANDER:

R. E. STAUFFER
CWO USAF
Asst Adjutant

1 Incl
Ltr AFCPM 370.093,
DAF, 30 Sep 53
w/1 Incl
(2 cys)

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 5B

Basic: Ltr, Hqs Second Air Force, Barksdale Air Force Base, Louisiana, dtd 13 October 1953. File: 2AFTGP 370.093, Subject: Justification for Required Air Police Strength, RCS: AF-P181 (OT)

MCDCPM 370.093 (13 Oct 53) 1st Ind 26 October 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

1. Justification for required Air Police strength as pertains to this command is as indicated on the inclosed AF Form 1006 (Temp) 15 September 1953 and added supplements.

2. When AF Form 1006 (Temp) is withdrawn, this correspondence may be downgraded to unclassified:

FOR THE COMMANDER:

B. A. JOHNSON
2d Lt., USAF
Assistant Adjutant

1 Incl
n/c

(Classification of Confidential Cancelled by Auth of B/Gen H. K. MOONEY, Comdr 6AD per msg 2AFTGP 0034, 2 Nov 53. /s/ B. A. JOHNSON, 13 Nov 53)

"A CERTIFIED TRUE COPY"
(Including Inclosure)

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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RCS: AF-P181(OT)

Reporting Command: 6th Air Division Date of Report: 24 October 1953
MacDill Air Force Base
Florida

COMMAND AIR POLICE REQUIREMENT ACCORDING TO FUNCTIONAL AREAS*
(NOTE: Required air police must not be shown in more than one line. All lines must not necessarily be filled. Air police requested in sections I and II, collectively represent the command requirement shown in section III.)

SECTION I

Requirement for Implementation of AFRs 205-5 and 355-4

Personnel required:	Officers	Airmen
1. To man fixed (point) security posts (other than observation towers).....	____	16
2. To man roving foot patrols.....	____	128
3. To man roving vehicular patrols.....	____	48
4. To conduct personnel circulation control systems (includes air police at gates to restricted areas and not personnel reported elsewhere).....	____	124
5. To man security observation towers.....	____	____
6. To operate security communications systems..	____	4
7. In operational and/or supervisory capacity (includes duty flight officers and assistants, operations clerks, and so forth, on a 24-hour-day basis).....	4	12
8. For standby, alert force (if applicable) and not reported elsewhere.....	____	52
9. To process security clearances.....	____	4
10. For security indoctrination program (when applicable and when performed as fulltime duty).....	1	2

* It is requested that clarifying information, when appropriate, be included as a supplement to this format.

AF Form 1006 (Temp)
15 Sep 53
Incl to ltr AFCPM 370.093, DAF, 30 September 1953

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Personnel required	Officers	Airmen
11. To process security credentials and restricted area passes.....		5
12. To provide administrative and logistical support to this function (these figures may have to be reported as a portion of total thus engaged for entire air police squadrons or sections).....	2	12
13. To conduct training peculiar to this function.....	1	1
14. For implementation of AFR 355-4, if applicable, (Must be full-time duty and not reported in any other category.....		1
15. Flight Line Visitor's Pass and Escort Section (explain in accompanying narrative as required)....		8
Total Air Police required by AFRs 205-5 and 355-4.	8	417

SECTION II

Air Police Required for Minimum Correction and Law Enforcement Function

Personnel required:	Officers	Airmen
A. Correction:		
16. To guard and supervise prisoners..		16
17. To retrain and rehabilitate prisoners		1
18. To provide administrative and logistical support to the correction activity (these figures may have to be reported as a portion of total thus engaged for entire air police squadrons or sections).....		4
19. In operational supervisory capacity in operating confinement and rehabilitation facilities.....	1	5

Incl to ltr APCPM 370.093, DAF, 30 September 1953

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Personnel required	Officers	Airmen
20. To conduct training relative to paragraph 5b, AFL 125-8, 11 March 1952.....		
21. To man fixed posts (not including any personnel previously shown nor those reported in line 25).....		8
22. To man roving on-base patrols (foot and vehicular) for the enforcement of base directives other than traffic control.....		16
23. For traffic control.....		24
24. To man town patrols, if applicable		20
25. To man gates other than those to restricted areas.....		16
26. To provide administrative and logistical support to this function (should include all administrative and logistical support personnel not shown in lines 12 and 18).....	2	8
27. To conduct training in this function		
28. For pass and identification activities associated with this function	1	14
29. For this function not included in any of above lines: Provost Marshal activities.....	1	4
Total Air Police required for law enforcement and correction	5	136

SECTION III

Air Police Required Command-wide

30. Officers 13 Airmen 553 Aggregate 566

Incl to ltr AFCPM 370.093, DAF, 30 September 1953

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SUPPLEMENT
SECTION I

JUSTIFICATION FOR REQUIREMENT FOR IMPLEMENTATION OF AFR 205-5 AND 355-4

I. RESTRICTED AREA GATE GUARDS: During normal duty hours a minimum of ten (10) restricted area gates must be in operation. This requirement is due to the fact that all hangars, briefing rooms, tactical operations and related supply facilities are located on the edge of the flight line in the shape of an inverted "V" and are encompassed by the restricted area fence. A total of 7,897 active holders of restricted area passes are present on the station with a need to enter the restricted area. To limit this access to three (3) to five (5) gates, especially at the start of the duty day, noon, and quitting time, would create a backlog that would require some individuals two (2) or three (3) hours to process into their duty area. The existence of a flight line PX and flight line motor pool requires another gate. Two (2) gates must be operated on the south side of the flight line to allow access to the control tower and radar stations, and to construction work taking place on the flight line, a distance of 6,000 feet from nearest flight line gate. These gates allow access to the above mentioned areas without granting access to the active runways. If these gates were not under operation, it would be necessary for a large number of vehicles and personnel to cross the active runways. One (1) of the flight line hangars is open from both sides, thus requiring the presence of an air policeman at the front of the hangar to deny unauthorized persons access to the restricted area which contains Category I items. MacDill is a two (2) wing air base. Each wing requires a gate to allow its personnel access to its headquarters, briefing rooms inside the flight line fence, and to its aircraft. The number of restricted area gates under operation may be reduced fifty (50) percent during non-duty hours. However, more personnel are needed on the flight line after daylight hours, and as the restricted area gates are closed the personnel operating these gates are utilized on the flight line.

II. CIRCULATION CONTROL POINTS AND PATROLS: To establish a further defense in depth, additional circulation control entry points are operated directly on the flight line adjacent to the Category I elements on a twenty-four (24) hour basis. There are twenty (20) such entry points which control access to the two bomb wings and totwo (2) air refueling squadrons. In order to man roving foot patrols between the rows of aircraft and to insure circulation control procedures are adequately carried out, thirty-two (32) circulation control guards are required per flight. To adequately patrol the flight line area of 2,275 acres and to supervise the circulation control guards, entry points and restricted area gates, six (6) vehicular patrols are required, each containing an NCO for a total of twelve (12) men.

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III. FIXED POSTS: There are only four (4) fixed posts within the restricted area which must be operated. They consists of two (2) special weapons posts, the chemical area, and the tank farm. Thus, personnel required to man fixed posts can be held to a minimum of four (4) men per eight (8) hour period.

IV. CENTRAL SECURITY CONTROL: The consolidation of the security radio and telephone communications has eliminated the need of more than one (1) man to operate the security communications system. The operational overhead of the security flight consists of a flight sergeant, his assistant, and a stand-by driver who is also utilized as a clerk. In compliance with Air Force Regulation 205-5, a stand-by alert force of twelve (12) airmen and one (1) NCO must be maintained at all times to provide personnel for immediate emergencies. A total of two (2) airmen are required to issue and control approximately 1,500 restricted area visitor passes per month and provide escort service in the restricted area.

GENERAL: The two (2) bomb wings are composed of approximately forty-five (45) B-47 aircraft each, while the refueling squadrons are composed of approximately twenty (20) KC-97 aircraft, a total of one hundred thirty (130) tactical aircraft. All are designated Category I elements in accordance with Air Force Regulation 205-5. These aircraft are dispersed over an area of 2,275 acres. MacDill Air Force Base security section operates on a four (4) flight system of ninety-eight (98) airmen, requiring four (4) flight officers and one (1) security control officer for a total of five (5) officers in this section. There are five (5) restricted areas at this station with a total of 2,525 acres, all of which with exception of two hundred fifty (250) acres, is contained within the flight line fence. In addition to organizational aircraft based at this station, a large number of transient aircraft are processed into and out of the restricted area by security guards.

SUPPLEMENT
SECTION II

JUSTIFICATION FOR AIR POLICE REQUIREMENT FOR MINIMUM CORRECTION AND LAW ENFORCEMENT SECTION

I. CORRECTION:

A. General: The monthly average number of prisoners held in confinement since 1 January 1953 to 17 October 1953 is sixty-seven (67). In addition, MacDill Air Force Base has been designated as a prisoner receiving station in accordance with Air Force Regulation 125-25A, dated 12 July, 1951. This necessarily increases the work load of this activity due to the continuous processing in and out of casual prisoners.

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B. Justification and Utilization of Personnel as Recommended in Section IIA above is as follows:

Sixteen (16) prisoner guards to supervise and guard prisoners at work, going to and from places of duty, also used as maximum custody compound and fence guards, and in isolated cases as hospital ward guards. One (1) noncommissioned officer is required to conduct the rehabilitation program required under the provisions of Air Force Regulation 125-33 and Air Force Regulation 125-35. Three (3) individuals are needed to provide the administrative and logistical support to the section as indicated below. One (1) supply man to prepare supply requisitions, and requests for health and comfort items, clothing records and to issue necessary clothing and equipment. Two (2) clerk typists to maintain guardhouse records, prisoners 201 files, reports, correspondence and the prisoners' personal deposit fund. One (1) officer and one (1) senior noncommissioned officer are required as the confinement officer and confinement NCO respectively. In addition, four (4) senior air policemen working one (1) per shift, are needed to directly supervise all guard personnel and have custody of the cell block keys. Training as required by paragraph 5b, Air Force Letter 125-8 will be conducted by the aforementioned supervisory personnel.

SUPPLEMENT
SECTION II

JUSTIFICATION FOR AIR POLICE REQUIREMENT FOR MINIMUM CORRECTION AND LAW ENFORCEMENT SECTION

II. LAW ENFORCEMENT:

A. Traffic Requirement: The Law Enforcement Section at MacDill Air Force Base has the requirement of manning three (3) perimeter gates granting access to the station, plus traffic control of approximately 300,000 vehicle units per month. As of 15 October, 1953, there were 9,435 active registered vehicles on the base plus a daily influx of approximately 700 commercial and visitor-occupied vehicles.

B. Law Enforcement Requirement: The physical layout of the cantonment area of MacDill encompasses a large and sprawling area and contains in addition to the military service and housekeeping installations, a large Wherry Housing installation of 800 units. The estimated total population at this station to include dependents is 12,700 people.

C. Special Off-Base Patrolling Problems That Require Full Time Operation of an Adequately Manned Town Patrol: MacDill has the primary responsibility of patrolling the central-west coast area of Florida which includes Tampa, St. Petersburg, Clearwater and outlying towns. Past experience has shown that predominately during the winter months, this area has an attraction for AWOL personnel from all branches

of the service. In addition, Tampa and the outlying communities furnishes numerous personnel for the Air Force and other services, who often return to the area on leave, and the presence of the town patrol is a deterrent to misconduct as well as reassurance in the case of need.

D. General: Under the overall supervision of an Air Police officer, noncommissioned officer, and clerk, the personnel as recommended in section IIB above will be utilized in four (4) flights of eighteen (18) men each as follows:

One (1) noncommissioned officer (NCO) in charge. One (1) desk sergeant. Two (2) vehicular patrols of two (2) air policemen each to enforce base directives, such as uniform violations, check on security of all buildings, fire patrol, etc. Three (3) vehicular patrols of two (2) air policemen each to enforce traffic regulations. Four (4) air policemen on gate sentry on three (3) main entrance gates to the station. Two (2) air policemen assigned to man and operate the Visitor's Pass Section. Twelve (12) air policemen for the Tampa area, nine (9) white and three (3) Negro. Four (4) air policemen (white) for the St. Petersburg area. Four (4) air policemen (white) for the Clearwater area.

E. Air Police Operations and Provost Marshal Activities (Line 29) Personnel listed under this item are required to carry out the Provost Marshal responsibility for the overall supervision, monitoring, and reporting of matters pertaining to military discipline as outlined in Air Force Regulations 125-3, 125-6, 125-21, SAC Regulations 125-3, 125-4, 125-7, and other directives from higher headquarters.

1347

EXHIBIT 6

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 25)

1 October 1953

STAFF ASSIGNMENT----COL ERNEST C HARDIN JR 8211A, Hq 6th Air Division, this sta, SAC, is hereby announced as Director of Operations 6th Air Division, effective this date.

BY ORDER OF THE COMMANDER:

OFFICIAL:
B. A. Johnson

B. J. HUMMERLYN
Major, USAF
Adjutant

B. A. JOHNSON
2D LT, USAF
Asst Adjutant

DISTRIBUTION:
"D"
Plus
2 cys Comdr 2AF
1 cy SO Section

EXHIBIT 7

HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDPO 220.2 1 October 1953

SUBJECT: Promotion of Airmen (October 1953)

TO: See Distribution

1. The following information has been received from Hq 2AF is forwarded for your information and guidance:

a. Promotion of airmen in October 1953 will be IAW provisions of AFR 39-29, and as supplemented by SAC Reg 39-6, 21 Apr 53. Following additional instructions apply:

(1) Reference par 10, AFR 39-29:

(a) Provisions of par 10b, AFR 39-29, are waived for promotion to A/2C (E-3), and to A/1C (E-4) in all career fields in which a temporary overages exists. Classification requirement (par 10a) and time-in grade requirement (par 10c) will not be waived.

(b) Waiver under par 10a, b, and c, AFR 39-29, will not be granted to effect promotion to upper three grades. Request for waivers will not be submitted.

2. For the month of October 1953 only, promotions will not , repeat not, be accomplished in those grades and career field sub-divisions shown below as closed:

CAREER FID SUIDIV	MSGT	TSGT	SSGT
201	Closed	Closed	Closed
202	Closed	Closed	Closed
203	Closed	Closed	Closed
205	Closed	Closed	Closed
222	Closed	Closed	Closed
232	Closed	Closed	Closed
233	Closed	Closed	Closed
262			Closed
272	Closed	Closed	Closed
273	Closed		
291			Closed
292		Closed	Closed
304	Closed	Closed	
311	Closed	Closed	
312	Closed	Closed	
313	Closed	Closed	Closed

CAREER FID SUBDIV	MSGT	TSGT	SSGT
332	Closed		
341	Closed	Closed	
361			Closed
362		Closed	Closed
363		Closed	
401	Closed	Closed	
405	Closed	Closed	Closed
421	Closed	Closed	Closed
422	Closed	Closed	
424	Closed	Closed	
432			Closed
441	Closed	Closed	Closed
462	Closed		
471	Closed	Closed	
532	Closed		
533	Closed	Closed	Closed
551	Closed		
552	Closed		
561		Closed	Closed
565	Closed	Closed	Closed
581	Closed		
582	Closed	Closed	
601	Closed	Closed	
602		Closed	
603	Closed	Closed	
621	Closed	Closed	Closed
622	Closed	Closed	
623	Closed	Closed	
642		Closed	Closed
644	Closed	Closed	Closed
651	Closed		
701	Closed	Closed	Closed
702		Closed	
711	Closed		
712	Closed	Closed	Closed
721	Closed		
731		Closed	Closed
732	Closed	Closed	
733	Closed	Closed	
751	Closed	Closed	Closed
752	Closed	Closed	
762	Closed		
764	Closed	Closed	Closed
765	Closed	Closed	Closed
772	Closed	Closed	Closed
791		Closed	
811	Closed		
813	Closed	Closed	Closed
901		Closed	
902	Closed	Closed	Closed
903	Closed	Closed	

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CAREER FLD SUBDIV	MSGT	TSGT	SSGT
904	Closed	Closed	
905	Closed	Closed	
906	Closed		
907	Closed	Closed	Closed
908	Closed	Closed	Closed
909	Closed	Closed	
922	Closed		
931	Closed	Closed	Closed
941		Closed	
951		Closed	Closed
991	Closed	Closed	
992	Closed	Closed	Closed

3. Allocation of promotion quotas to the 6th Air Division is as follows:

	MSGT	TSGT	SSGT	A/1C	A/2C
6th ADiv, 809th AF Gp & 307th AF Gp	3	9	19	32	59
306TH FM WG	2	5	15	22	27

BY ORDER OF THE COMMANDER:

B. A. Johnson

B. A. JOHNSON
2nd Lt USAF
Asst Adj

DISTRIBUTION: "D"

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EXHIBIT 8

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

25 September, 1953

SUBJECT: Report on Temporary Duty Accompanying
305th Bombardment Wing Deployment

TO: Commander
Second Air Force
Barksdale Air Force Base,
Louisiana

1. On 3 September, 1953, togeth er with Colonel Kimmel, my Director of Materiel, I departed on a seventeen day temporary duty trip to observe the deployment of the 305th Bomb Wing to the United Kingdom, to observe their first max effort mission, and to observe the return of the 306th Bomb Wing. I returned to MacDill on 19 September via Keflavik, Iceland, and Harmon, Newfoundland.

2. While in the United Kingdom, I visited Fairford, Brize-Norton, Mildenhall, and the 7th Air Division Headquarters. In general, all bases seemed pretty well prepared to receive the 305th Wing, and the 7th Air Division, by virtue of their experience with the 306th Wing, seemed well prepared to accept their responsibility toward the 305th Wing.

3. Forty-two B-47 aircraft were in position at Brize-Norton on schedule, with the remaining three arriving one day late. On the date of the last arrivals, there were forty-three B-47s capable of being evacuated, with twenty-five capable of carrying out their EWP mission. The difference between the in-commission and the EWP figures was occasioned by K-systems inoperative. Four of the twenty KC-97G aircraft developed trouble enroute, and arrived in the United Kingdom on 8 September, two days after the scheduled date for the arrival of all KC-97 aircraft. Four engines were changed enroute and four engines changed upon landing due to tappet guide failures. Sixteen of the tankers were capable of performing their EWP mission on 8 September.

4. UHF radio contacts in the Zone of the Interior and approaching the United Kingdom were considered satisfactory, while UHF position reporting with the ocean station vessels was considered most unsatisfactory. HF position reporting was considered marginal due to poor contacts and the availability of only one B-47 in each flight of five

possessing an HF set. Harmon and Croughton Airways were worked with marginal success. Lajes Airways was worked successfully between fifty-one degrees and eight degrees West.

5. On 8 September, I attended a 7th Air Division briefing for Colonel Vandevanter, his commanders and key staff officers. At this briefing, I tried to emphasize General Selser's responsibility to see that the 305th's lead crews stayed off of probation, and to assist the 305th in accomplishing their maximum 50-8 training requirements during the months of September and November. I again pointed out the desirability of concentrating the UK theater requirements, such as practice blunting and retardation missions, shows, etc., in the free training month of October. An effort was made, with no avail, to change the 7th Air Division's requirement for the 305th to run on Target Bravo, the hardest one in the London area, on their first mission over London. The 7th Air Division was anxious to test a new method of target study, and insisted on Target Bravo on the first run, knowing full well that many crews would wind up with large CEs as record runs.

6. A max effort was run on 9, 10 and 11 September. Forty-seven aircraft were scheduled, forty-six flown, with one ground abort. This max effort was an orientation mission, including penetrations and OCAS, at the usable B-47 bases in England, plus two RBS runs on Heston Bomb Plot, one of which was Target Bravo.

7. At present there are no adequate bombing ranges. The range at Thallethorpe does not have a good enough reflector, and the proposed range at Luce Bay will not have a UHF set until the end of this month. Trouble was experienced with GCA during our initial landings. Through error, the point of touch-down on one runway was 1,000 feet beyond the area which had been sterilized or marked off to prevent short landings, which made the point of touch-down 1,900 feet beyond the end of the runway. A new GCA hard-stand is being built. The glide path was too steep, and that is being corrected. The CPN-4 was left at Fairford until Colonel Swancutt witnessed a hairy bad weather approach and go-around at Brize-Norton. It was to have been moved to Brize-Norton from Fairford last week-end.

8. The runway at Brize-Norton appears to be considerably rougher than the one at Fairford. Colonel Vandevanter is again experimenting

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with strut ratios from 8:1 to 15:1, and will advise us of his results. Gravel on the edges of narrow curved taxiways will present a serious problem on engines and tires if not corrected. I recommended immediate temporary stabilization of any kind, to include investigating the use of pierced steel planking.

9. The system of supply B-47 parts as set up did not look good to me. The day I departed, I recommended that 7th Air Division and Third Air Force, Burtonwood and Brize-Norton Depot get together to insure the expeditious handling of AOCP parts. I suggested that the responsible depot contact the prime depot back in the States direct, using a code name for the 305th project; and further recommended that the decision to leave the 45-day level of parts at Fairford be reversed, and that a 45-day level be built up at Fairford (sic) immediately, replacing the 45-day level at Fairford through normal 150-day supply action. I recommended no change in the use of fly-away kits, since I believe it is desirable to check their completeness and adequacy.

10. No trouble was anticipated at Mildenhall with the KC-97 except the supply of -59B engines.

11. Keflavik Air Force Base should have a 10,000 foot usable runway by the end of the month. This base has made remarkable strides in the last year or so, and should be able to take care of our survey flight on schedule. It will be necessary to take in most of our own equipment peculiar to B-47 operations.

12. The attitude of the 305th personnel during their deployment and subsequent missions appeared to be fine, and I am sure that they should turn in some good results while on temporary duty.

H. K. MOONEY
Brigadier General, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 9

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, La.

28 October, 1953

Brigadier General H. K. Mooney
Commander, 6th Air Division
MacDill Air Force Base
Florida

Dear Jim:

After our telephone conversation on 16 October, 1953, I instructed the staff here to assist you in every way possible to put Avon Park on a first-class operating basis. Our understanding of the problems involved and the action being taken by our staff are as follows:

a. Radar reflector for bombing targets: The card for essentiality of this item was hand carried to Headquarters SAC with a request that it be given special handling to expedite construction of the reflector. Funds have already been set aside for this project. The project has been forwarded to Headquarters SAC for technical review to obtain agreement on preliminary details. We will inform you by telephone of the action taken on the application for essentiality in order that you may initiate actual construction at the earliest possible moment.

b. Additional personnel authorization to support the training facilities at Avon Park: Your recommendation was approved as written and submitted to Headquarters SAC for final approval together with a plan to support the additional troop spaces from Second Air Force resources. We have informal information that approval will be granted immediately. The manning of these spaces with personnel of the proper AFSC will be handled as nearly as possible on an equitable basis. In this connection, your request for assignment of additional maintenance personnel for A-5 gunsaying systems is not favorably considered. Although your tactical aircraft do not have the A-5 system installed, you are assigned approximately 50 percent of the personnel with the 32330-50-71C AFSC in Second Air Force. Manning of those spaces must come from your resources.

c. Authorization for additional A-5 equipment for the OQ range: We have received telephone assurance from Headquarters SAC that authorization for one additional A-5 system will be granted. This will bring your authorization up to three A-5 systems which when received will provide you with one YA-5 system and two A-5s. I understand

that these systems exist in supply channels but are short a few "bits" and "pieces," the lack of which limits complete build-up of the systems. AMC is taking action to obtain the items that are short. You should requisition the turret and all available components as soon as supply authorization is received. Your people can build the mount and modify the sighting station to aircraft configuration while the remaining parts are being obtained.

d. Separate UAL for Avon Park detachment: Your recommendation for a separate UAL was forwarded to Headquarters SAC with a favorable indorsement. I am not satisfied with the lapse of time between receipt here of your recommendation and its return for additional justification. I believe I have taken sufficient action to preclude future delays of this nature. I am informed, however, that a large portion of the items required at Avon Park do not appear on any of your organization's UALs at this time. Whether or not a separate UAL is approved at Headquarters SAC, all additional items that are required should be added to the UAL of one of your organizations if we are to obtain and retain them.

e. Consolidated list of spare parts required for uninterrupted operation of A-5 and B-36 systems on the OQ range: Unfortunately, no experience in operation of A-5 systems on the OQ range exists except for that gained by your people on your OQ range. The best substitute experience is that gained on B-36 tail turrets on Eighth and Fifteenth Air Force B-36 OQ ranges. We understand that a standard authorization for spare parts for B-36 OQ ranges is contained in a published ECL. Our publications people have furnished your publications section the nomenclature of the ECL and the procedure for obtaining it. Iam sorry that it is not among our files. We have asked the Eighth and Fifteenth Air Forces for a list of the items they used over a period of time on their OQ ranges. We will furnish these lists to you as soon as they are received. We will have to rely on the experience that your people gain as a basis for the A-5 system OQ ECL.

f. UHF equipment to control B-47 traffic on the Avon Park Bombing Range: Supply authorization does not exist at this time for UHF equipment for bombing ranges. Authorization does exist for gunnery ranges. I understand that your supply people have requisitioned this equipment with the idea of using it for both the Avon Park fighter gunnery range and the bombing range, pending additional authorization. Keep our supply people informed of any difficulties on which you need assistance. Pending receipt of UHF equipment, I believe a substitute set may be constructed from your resources using standard aircraft components, similar to those built as mobile control sets by the 40th Air Division.

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Brigadier General Mooney 28 October 1953

I have appointed Lieutenant Colonel Singleton, Operations Directorate, as our Avon Park Project Officer. He is responsible for proper and expeditious action on all matters pertaining to Avon Park. He has been specifically instructed to insure that delays, similar to the incident of your proposed UAL, do not occur. I suggest that you appoint a project officer at your station. Keep me informed also of other problems concerning Avon Park besides those enumerated above.

Sincerely,

ROBERT B. LANDRY
Major General, USAF
Deputy Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1357

EXHIBIT 10

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

DOP 360.1 16 October, 1953

SUBJECT: Cedar Keys Bombing Range

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In order to make Cedar Keys Bombing Range be of value to this headquarters and Second Air Force for use with B-47 aircraft, it is proposed that certain changes to 2AF Reg 50-13 be made. As the regulation stands it imposes restrictions which impair the value of the range for B-47 use and thus effect the possibility of accomplishment of training minimums.

2. Recommended changes and justifications are as follows:

a. Paragraph 10a be changed to include 250 lb GP. bombs.
JUSTIFICATION: Danger Area Designation in the Federal Register (Incl 1) does not permit the dropping of general purpose bombs. In the past this command has experienced difficulty in obtaining scorable photos of actual releases. Photographing of general purpose bomb bursts from high altitude produces photographs which are much easier to score by definite identification of the bomb burst. Thus, use of this type bomb would increase our ability to accomplish training minimums.

b. Paragraph 10b changed to allow visual optical bombing for B-47's.
JUSTIFICATION: This change coupled with the one outlined above (para 2a) will aid the B-47 organizations of 2AF greatly in the accomplishment of what has proven to be a difficult training requirement: Scored Visual Releases.

c. Change the pattern on Target 4 to a single axis of attack, race track East to West.
JUSTIFICATION: The cloverleaf pattern should be eliminated for reasons of flying safety and because of the lack of on-the-spot communications and control of aircraft on the range.

d. The IP's for both Targets 5 and 4 should be extended to a minimum of 45 nautical miles for B-47 use.

JUSTIFICATION: The average length of IP-Target runs in present regulation is 30 nautical miles. This is not sufficient distance for proper synchronization in the B-47.

e. Maximum bombing altitude for this range to be 35000 feet MSL.

JUSTIFICATION: Establishment of a maximum bombing altitude of 35000 MSL is necessary in order to avoid hazard to safe flying which exists with confliction from bomb runs on RBS site located at MacDill AFB (Incl 2). This subject is also covered in letter, this headquarters, file DOP 360.1, Subj: Recommended additions to SAC Reg 50-4, dated 15 Oct 53.

f. Add to the regulation a statement to the effect that when an aircraft checks in with MacDill Airways Control for clearance onto the range, the Control will then inform Tampa Bomb Plot (Det 21) by telephone that there are "X" number of aircraft on Target 4 and/or 5 of Cedar Keys Bombing Range at "X" altitude and using "X" as an IP.

JUSTIFICATION: The purpose of this procedure is that there is a conflict in RBS and bomb range axes of attack (Incl 2 and 3). The RBS site should have this information in order to be able to inform the aircraft using its facilities that there are aircraft on the bomb range, their altitude and IP's. This subject is also covered in the letter referred to in paragraph 2e, above.

g. Eliminate from the regulation any intimation or requirement that the target and/or Restricted Area must be cleared visually by the bombing aircraft.

JUSTIFICATION: The visual clearing requirement will preclude the use of this range by B-47 aircraft. It is not possible for aircraft flying at altitudes above 30000 feet to visually clear their bombing area. Further, there is no requirement in the Danger Area Designation (Incl 1) that this area be cleared visually by the bombing aircraft.

3. It is recommended by this headquarters that if all the foregoing amendments cannot be adopted in order to make this range suitable for use by B-47 aircraft, the range be released and the Air Space Restricted Areas be cancelled.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

3 Incls:
1. Danger Area Designation
2. Map of MacDill Area
3. Ltr fr McD to 2AF
Subj: SAC Reg 50-4

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DCF 360.3, Subj: Cedar Keys Bombing Range

"A CERTIFIED TRUE COPY"

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 10P

Hq 6th Air Division, MacDill AFB, Florida, DOF 360.1, Subject: Cedar Keys Bombing Range

2AFOTA 360.0 (16 Oct 53) 1st Ind 29 October 1953

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. The position of this headquarters as regards recommendations contained in similarly numbered paragraphs in basic communication is as follows:

a. Reference paragraph 2a. The danger and warning areas surrounding targets 4 and 5 meet the requirements of paragraph 5b, AFR 87-16 for demolition bombardment. We have no objection to use 250 pound GP bombs on the range provided this is not contrary to airspace subcommittee regulations promulgated under provisions of AFR 55-103. Regulations of the airspace subcommittee governing these ranges are not on file at this headquarters. It is understood that you are taking action to procure them. If upon receipt they indicate demolition bombardment is not prohibited, action may be initiated by your headquarters to revise 2AFR 50-22 accordingly.

b. Reference paragraph 2b. No objection exists to the use of these target areas for visual bombardment. However, it is noted from paragraph 2, 306th Bombing Narrative Summary of September Monthly Summary of Gross Bombing Errors (RCS SAC T-4), that existing targets are not suitable for visual bombing. Determination of size, configuration and color of targets suitable for B-47 bombing in this area should be made and the targets constructed prior to revising the regulation to permit visual bombing. In order to preclude destruction of the radar reflector by 250 pound GP bombs, it is recommended that the visual target be located a safe distance from the radar reflector.

c. Reference paragraphs 2c, d, e, and f. This headquarters is attempting to obtain permission to lower the altitude for visual [illegible] ful, [illegible] ter of altitude, IPs, traffic patterns, etc. may be resurveyed and the regulation amended accordingly.

d. Reference paragraph 2g, we do not concur in the recommendation that the requirement for clearing the area be eliminated.

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Hq 6th ADiv, MacDill AFB, Fla., DOP 360.1, Subject: Cedar Keys Bombing Range

When bombing under visual conditions visual clearance from the bombing altituie must be accomplished. In some cases, visual clearance may be aided by radar. In any event, our obligation for protection of watercraft which may stray into the area cannot be avoided.

2. Reference paragraph 3. This headquarters will take no action to release the danger and warning areas until such time as their future potential is definitely established.

BY ORDER OF THE COMMANDER:

3 Incls
n/c

R. E. STAUFFER
CWO USAF
Asst Adjutant

A CERTIFIED TRUE COPY

H. A. Johnson

H. A. JOHNSON
2d Lt, USAF

1362

EXHIBIT 11

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, La.

2AFOTA 353

14 October, 1953

SUBJECT: Cedar Keys Radar Bombing Range

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

1. Information available at this headquarters indicates that practice bombing of Cedar Keys Radar Bombing Target has been accomplished by B-47 aircraft of your command. We are not aware of the procedures that you have developed, such as Initial Points, traffic patters, etc., to fit this facility to B-47 operation.

2. It is requested, therefore, that your headquarters prepare and submit, in draft form, a revision of Second Air Force Regulation 50-13. In preparing this revision care should be taken to include the following:

a. Detailed description of any restrictions imposed by the Regional Airspace Subcommittee as prescribed in Air Force Regulation 55-103 and Strategic Air Command Regulation 55-33.

b. Detailed description of any restrictions imposed by the Secretary of Army as prescribed in Air Force Regulation 50-13.

c. Specific information of the types of munitions which can be employed on the range.

d. Specific information regarding scheduling and/or canceling periods on the range, to include the agency designated to accomplish same at 6th Air Division. In this connection the minimum advance notice that is required should be determined and specified in order to permit more efficient usage of the range by other organizations.

e. Detailed communications frequencies and procedures.

f. New radar scope photographs should be made and the photographs and negatives submitted along with photographs and negatives of any chart to be included in the regulation.

2AFOTA 353, Subj: Cedar Keys Radar Bombing Range

3. In view of the urgent requirement for bombing ranges to support B-47 operation it is requested that the draft specified above be submitted to reach this headquarters as soon as possible and not later than 2 November 1953.

BY ORDER OF THE COMMANDER:

R. E. STAUFFER
CWO, USAF
Asst Adjutant

1 Incl
2AFR 50-13
as amended

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1364

B/L fr Hq 2AF, file 2AFOTA 353, subject: Cedar Keys Radar Bombing Range, dtd 14 Oct 53

DOP 353 (14 Oct 53) 1st Ind 28 October, 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

1. Reference letter, Headquarters 6th Air Division, file DOP 360.1, subject: Cedar Keys Bombing Range, dated 16 October, 1953, (Inclosure #2, hereto).

2. The small amount of bombing that has been conducted on Cedar Keys Bombing Range by units of this command was conducted per current Second Air Force Regulation 50-13. As a result of this experimental type bombing, the above referenced letter was written. Referenced letter contained all recommendations that this headquarters felt were needed to convert this range to limited use for B-47 aircraft.

3. Included with subject letter was the entry in the Federal Register which established the surface restriction to navigable waters per AFR 55-13. This headquarters requested information regarding the Airspace Subcommittee directives regarding the Air Space Restricted Areas. We have been advised that it has become necessary to search the Central Files of that Agency, with no target date for forwarding the requested information. It is felt, however, that our proposals would not be in conflict with their directive. We base this upon checking the Air Facility Charts and Air Space Restricted Areas lists and descriptions therein.

4. Due to the photo scoring requirement resulting in poor percentage of accomplishments with the use of this range, conduct of bombing there is only an interim measure to the completion of reflector construction at Avon Park.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

2 Incls
1. n/c
One Incl added
2. Cy Ltr Hq 6AD
dtd 16 Oct 53

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1365

EXHIBIT 12

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

DOF 360.1 16 October, 1953

SUBJECT: Recommended Additions to SAC Reg 50-4

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. A review of the bombing training activity within a 75 nautical mile radius of this base has been made. Further control must be established in the interest of safe flying. Under present regulations the bombing activity in the MacDill area includes the following bombing patterns (Map, Incl 1):

a. Cedar Keys Bombing Range

b. Avon Park Bombing Range

c. Detachment 21, RBS, "Tampa Bomb Plot"

2. The point of conflict in the use of the above bombing facilities lies in the altitudes required to be flown under SAC Reg 50-8. Requirements for record bombing and bombing for which credit may be obtained is, in all cases, 35000 feet. Examination of the IP-Target runs of Cedar Keys and Avon Park Bombing Ranges shows that these bomb runs in all but one case, run across possible axes of attack for the Tampa RBS site. The bomb runs referred to above are not of adequate length on either range. In other correspondence this headquarters has repeated that they be extended to a minimum of 45 NM's. It is realized that this will further complicate the various RBS axes of attack.

3. As a result of the above examination of the problem this headquarters made the following recommendations to Headquarters Second Air Force, for change to 2AF Reg 50-13:

a. In accordance with 2AF Reg 50-13, aircraft utilizing Cedar Keys and Avon Park Bombing Range must contact MacDill Airways Control for permission to enter the ranges. We recommend that in addition to the above:

DOP 360.1, Subj: Recommended Additions to SAC Reg 50-4

(1) MacDill Airways Control will contact the local RBS Site with the information as to the number of aircraft on these ranges.

(2) That bombing on these ranges be at a maximum of 35000 feet.

4. In view of the recommendations contained in paragraph 3, above, it is proposed that SAC Reg 50-4 be amended to include:

a. That "Tampa Bomb Plot," after notification by MacDill Airways Control, will transmit to aircraft on their range that there are "X number of aircraft on Cedar Keys Bombing Range and X number of aircraft on Avon Park Bombing Range."

b. That high altitude RBS Bombing on "Tampa Bomb Plot" will be at a minimum of 36000 feet.

5. With only the two organizations of this command utilizing these facilities, there has been conflict in altitude and courses. With the increase of 2AF jet units, more aircraft will be utilizing these facilities, therefore the requirement for establishment of the requested procedures becomes paramount in view of the command emphasis on Safe Flying.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

1 Incl
Map of MacDill
Area

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

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CONFIDENTIAL EXHIBIT 13

Hq SAC, Offutt AFB, Nebr, DOTRG 452, Subject: Modification of B-47 Flight Simulator (Unclassified)

DOP 452 (9 Oct 53) 2nd Ind 3 DEC 1953

HEADQUARTERS SIXTH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Strategic Air Command, Offutt Air Force Base, Nebraska

1. As requested in the Basic Letter, Inclosure 1 and 2 have been reviewed by B-47 Flight Simulator and pilot personnel at this headquarters. Without question the proposal of modifying the 8th article to the 731st aircraft will be a most welcomed step for pilot personnel who undergo training in the simulator. Pilot personnel repeatedly indicate that better training could be accomplished if the simulator was up to date with the aircraft.

2. A recent survey by this headquarters of thirty experienced pilots revealed that there were at least forty-five (45) readily recognizable differences between the simulator and B-47B aircraft. An analysis of comments by pilots who are currently undergoing emergency procedures training in the B-47 Simulator, is adding to this list of differences that have been noted between the simulator and the newer aircraft. The results from these surveys indicate that the quality of training, scope of training and the attitude of the aircrews toward simulator training can be enhanced considerably by the suggested program of modification. The execution of the proposed as outlined in Inclosure 2 is therefore enthusiastically indorsed.

3. One of the major requirements of a simulator is that the fidelity of aircraft reproduction be very high in certain critical areas. Those areas may be critical, either from the standpoint of danger to the pilot, should the simulator not respond like the aircraft or in terms of the pilot's learning a fairly complex relationship or procedure which is important to successful operation of the aircraft.

4. In these critical areas a fidelity of simulation high enough to guarantee positive training results should never be sacrificed to cost. On the other hand, money can be saved on the simulation of items which:

a. Occur so infrequently in the air, even under combat or emergency conditions that emphasis can better be placed on other items.

b. Can be easily understood from a verbal description or more readily taught in another medium.

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c. Provide little or no assistance in improving performance even with considerable practice.

d. If improperly operated or interpreted would have few, if any, serious consequences.

e. Simulator features which can be classified under any of the situations above need not be engineered to close tolerances and may in fact be dummied in or left out entirely.

5. The aerodynamic changes as listed in Inclosure 2, para 5-A-1 have been made in the B-47E aircraft. The only thing that would materially effect the performance of the flight simulator, however, would arise from the change in flight characteristics resulting from the addition of the Vortez generators and new engines to the aircraft. The present simulator's performance is equal to an aircraft with -11 engines so therefore is slightly underpowered. Modification of these items would prove helpful. It is not believed that there has been an approach chute added to the B-47 as standard equipment, but, to date, only tested.

6. The power plant changes as indicated in Inclosure 1, para 5-A-2, have been made in the aircraft. The present simulator is equipped with an operative ATO system and a dummy water injection system without operating lights. The cost of installing operative ATO and water injection systems is not known, but it is felt that a substantial saving could be effected if these systems were only functional insofar as the lights working, and not the effects on airspeed and lift. The ATO control panel has been moved from the right side of the pilot's panel slightly forward of the drag chute deployment handle, (Incl 3, Photo 1) to a position below the radio panel.

7. Cockpit configuration between the 20 and 731st aircraft is marked by a number of changes and a substantial number of these changes will be necessary to produce a simulator like the 731st aircraft. The ejection seat is one of the changes; however from the cost standpoint, it is the opinion of this headquarters that ejection seats in the simulator would represent superflous training and are therefore unnecessary. Maintenance personnel at this headquarters were surprised at the statement "in addition to the assembly changes, it is estimated that 20 to 30 additional assemblies will be redesigned to take care of the aerodynamic changes and accessory changes in the airplane". In view of the expense involved, it would seem advisable, if possible, to modify existing assemblies rather than to add a large number of assemblies in an indeavor to change the simulator flight characteristics.

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8. Inclosure 1 has been reviewed by simulator and maintenance personnel of this command and the following kits would appear to be useable in modification of the simulators:

a. MCP-318-6K --- Screen installation, water injection system.

b. K-8691-5 --- Relocate J-219A/APS23 Junction Box.

c. K-1058 --- Pilot fuel selector knob revision.

d. K-8589-2 --- Installation of J-2 Compass unslaving switch.

e. KC2-311 BK --- Surface power control unit revision.

9. It is possible that Link Aviation could evaluate and purchase some of these kits from the aircraft manufacturer as previously done. It is noted, however, that the majority of these kits, although used in the aircraft, are for parts of the aircraft not simulated in the simulator.

10. In addition to the modifications listed above the following modifications should be made to present simulators, and those additional trainers built to simulate the 731st aircraft. For explanation, pictures of the B-47B Flight Simulator are included and for further data on the 731st aircraft, reference is made to the T.O. 01-20ENG-1, dated 28 Feb 53 and revised to 30 April 1953.

a. Pilot's switch panel (Incl 3 Photo 1). This switch panel has been changed a number of times from the type used in early aircraft as duplicated in the simulator, to the current panel found in B-47E aircraft. This new panel has four rather than three rows of switches which include wafer type, engine startor selector switch, replacing the 6 starter switches as in the simulator; other additions are the engine screen, emergency override switches and cabin temperature selector rheostat. Reference Page 23 of -1 T.O. The change of this panel is considered manditory.

b. Pilot's instrument panel. The right side of the simulator panel is shown in Incl 3, Photo 1, and the left in Incl 3, Photo 2. The latest aircraft instrument panel is pictured on Page 13 of the -1 T.O.. The simulator panel is not an R, S, nor T type panel but rather a combination of several, having items contained in panels of the latest type aircraft. Although the new panels of the 731st aircraft have individually lighted flight instruments there are not many instrument position changes. Pilots who have been flying the E model have

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no difficulty with the conversion to the present simulator instrument panel. Rather than the major revisions as mentioned in para 4 of Incl 1 the addition of a few indicator lights and switches to present simulator panels would be considered satisfactory. The modifications of panels for simulators No. 8 and on, is considered desirable, but not mandatory, if the following minor changes are made:

(1) Addition of the IFM control box in wheel detent.

(2) Addition of a bomb door indicator light, which operates.

(3) Aerial refueling disconnect light (may be a dummy).

(4) Engine stall switch.

(5) Gyrosyn compass unslaving switch (may be a dummy).

c. The ATO panel and surface power control. The ATO panel has been repositioned, to a position once occupied by the surface power control panel (Incl 3, Photo 3), which in turn has been moved to the place originally occupied by the ATO panel. See Incl 3, Photo 1, and -1 T.O. Page 58 and 59. It is noted that the surface power control panel has been redesigned, and the electrical functions changed on the new B-47E aircraft.

d. Pilot's Station - Left Side. A number of changes have been made on this side of the aircraft and should be included in the simulators for good fidelity. This equipment could be included at a very nominal cost as it could be almost completely "dummied". Reference Page 11, -1 T.O. and Incl 3, Photo 4. It will be noted that there is no emergency hayer nor anti-icing air temperature panel or an intercommunications systems filter switch. Since these items are included on the checklist it is felt that the cost of these items would be warranted. A map case and flight report holder would be a worthwhile addition for storage of flight maps and other material. As almost all missions are simulated night flights, the exterior light toggle swithes should be made to work rather than flop loose as in present simulators. This item could be easily accomplished at practically no cost.

e. Pilot's Station - aft-right side.

(1) Fuel Panel. The fuel panel has been changed in a number of ways and should be changed as pictured on page 25 of the -1 T.O. (the present simulator fuel panel is pictured in Incl 3, Photo 5). It can be seen that the wing tank jettison switches have been

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repositioned from the top to the bottom side of the panel. A fuel gage control has been added which permits fuel readings to be read at either the pilot's or co-pilot's station. Other changes are the TKS position of the fuel selector handle and the method by which fuel is transferred. The change of this panel is considered to merit a very high priority.

(2) Radio Panels. Reference Incl 3 Photo 5, the VHF control panel should be replaced by a UHF radio panel. No picture of the B-47E Radio Panel is available in the T.O., however, data on this panel is available at Boeing Aircraft. Radio repositioning has been effected to make the tuning of various radios less difficult.

(3) Trim Tab Coordination Switch Panel. These 4 guarded momentary switches provide operation of trim tab coordination actuatorn and are shown in Incl 3, Photo 3. These switches are functional in the simulator, but could be dummied as they are used only by flight test personnel.

f. Instrument invertor switch panel. The physical appearance of the panel is like the new aircraft, however, since lights are dummied, no failure to this circuit is possible. At present, operation of the instrument inverter and corresponding instrument indication is erroneous and should be made functional.

g. Cabin pressure gage. Pilots find this instrument hard to read as it is unlike the instrument found in the aircraft.

h. Copilots cockpit section. The instrumentation of the co-pilot's panel has remained relatively the same between the early B-47B and the B-47E with the exception that the instruments are now the new individual lighted type. It would appear that the modifications could be made at at relatively small cost and not require a complete replacement of the panel. Pictures of the present simulator panel are inclosure 3 photo 6 and 7. The panel as shown on page 47 of the -1 T.O. is materially the same as that of the 715 aircraft. The aircraft regulated inverter, panel of the 715th aircraft is shown on page 36 of the T.O. and contains the following switches and controls

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a. A/C Voltmeter

b. Voltmeter control switch

c. Inverter power switches

d. Inverter indicator lights

e. Inverter transfer control switch

This panel should be changed the switches and lights made to function as the new aircraft.

a. Oxygen warning light. Is not included on the panel of the simulator and should be added for simulation. With these exceptions the remainder of the simulator panel to very much like the newest aircraft and it is not believed any major revisions will be necessitated or warrented.

(1) Hydraulic System. The present simulator system does not function on the ground as the aircraft system as the system cannot be bled down to 1500 psi on the normal system and 1000 psi on the emergency brake system. This system should ultimately be changed and does not warrant the priority of many other systems.

(2) Co-pilot radio panel. This panel has undergone normal changes and should be brought up to date with the B-47E system.

(3) ECM panel. This panel has been repositioned from the right to the left side of the copilots station.

(4) Unregulated aircraft power panel. The present simulator panel is shown in Inc 3 Photo 8 and a newer type panel is shown on page 49 of the T.O. The panel of the 715 aircraft is very similar to that pictured on page 49 and simulator panels should be changed to conform to the 715th panel as a number of very worthwhile emergencies can be centered around this system.

(5) Bus Selector Switch. This selector switch is not included in the simulator and therefore a co-pilot can not become skilled in practicing d/c bus emergencies. This change would improve training and the cost should be very small.

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(6) Elge System. This system has been slightly changed in the new aircraft and modifications to the present system could be affected easily. The present adaptor system does not have the free fall effect or the resistance felt when the gear is down and locked thereby producing unreal clues as evidence that the gear is properly down and locked. The new system as installed on the 731st aircraft should be installed as a desirable item.

11. Operators panel. Items that should be added or changed on this panel are as follows:

a. More than the 10% increase of the EGT and engine RPM should be provided to more accurately build up to engine malfunctions. A -10 -40% would be very desirable.

b. Gear indicators should be provided on the operators panel for better operator and IP analysis of related troubles. A staple light system would be satisfactory.

c. A clock would be a very worthwhile addition to add in giving approach times and weather information, etc..

d. The local tracking chart now encompasses an area of only 13 miles from selected facility. This presentation should be centered (sic) to an area approximately twice as large as a number of fan markers and homing aids are located more than 13 miles from a facility.

e. If cost would not be excessive an automatic bayer which would provide proper station identification should be provided. The present system provides only pre-selected station identifications. Negative training can result from this present system where a pilot hears the wrong call sign for a station.

f. A simple system of lights on the operators panel indicating the position of the fuel. Selectors would add materially to the realism of fuel troubles that may be induced. At the present time the IP must watch the fuel panel and relay the changes to the operator who must make necessary instrument adjustments. This delay in instrument reactions has a tendency to destroy some of the realism and at times gives the pilot faulty instrument readings.

12. General changes to Simulator.

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a. The interphone system located immedistely aft of the instructor pilot's seat is very difficult to work as it is directly behind the I.P. The light which comes on when the operator is on private interphone to the IP, cannot be seen.

b. The operator and instructor pilot should be equipped with a foot keyer and headset microphone, at their stations, which would eliminate the hand held microphone thereby making it possible to use both hands, and eliminate holding a microphone.

c. The throttle manipulations, as related to EGT and fuel pressure, should be improved as there are false indications between the two. The NCT is too sensitive and has no lag on starting, as in the aircraft. The fuel pressure indications on engine starts are not true and can cause interference of reactions in the aircraft. The fuel pressure indications during starting are so small that the pilot starts the simulator by EGT alone and does not utilize a very important cross check of fuel pressure as he should do.

d. Mach meter and airspeed. When pilot ice is experienced only the airspeed is affected and not the mach meter, thereby giving a false relationship.

e. Elevator trim tab controls. The simulator does not provide realistic trim tab indications for nose or tail heavy conditions. The simulator only gives a 2° instead of 6° nose up or nose down action, for a CG change of 10-34% MAC. This deficiency has a bad effect on training in that trim is not changed materially with an out of proper CG condition. It is recommended that this system be modified, bringing CG and required trim into closer tolerances.

f. Boost pump failures. When any of the aim boost pump switches are actuated by the operator the corresponding engine fails. This is not a true condition and in the aircraft the failures do not usually occur as both pumps very rarely fail. It would be desirable to have a 3 position switch allowing for failure of pumps on one side without loss of engines as in present system.

g. The circuit breakers on the co-pilot's panel are all well syncronized and to all necessities appear to be quite functional and true indications occur upon their failure. The limiting factor of the system is that the operator has only some 14 that can be failed.

13. Flight characteristics. The most frequently heard complaint of the simulator is that it does not fly like the aircraft. Not all

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of the pilots will agree as to how it differs from the aircraft and may will have very different opinions. It is believed that the lack of "G" forces has a lot to do with these critical remarks. It is of interest to note that in the advanced mission with more difficult emergencies, that the critical pilot has little or nothing to say relative to how the simulator handles.

a. These statements can be mde in regard to the flying characteristics of the simulator.

(1) Control Pressure (Boost on). Both the elevator and aileron have too much play in the system.

(2) Control Pressure (Boost off). The elevator needs about an 8 inch dead space before the system becomes effective. The aileron is much too stiff and requires about twice the pressure the aircraft does to effect a turn.

(3) Pitch and Roll. The simulator has excessive pitch and roll characteristics at slow speeds. The pitch up due to lowering of flaps is more than twice that of the aircraft.

FOR THE COMMANDER:

2 Incl
n/c, added 1 Incl
3. 8 Photos of Simul
(in dup)

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cc, w/photos: Comdr, 2AF

A CERTIFIED TRUE COPY

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EXHIBIT 14

CIVIL AERONAUTICS ADMINISTRATION
SECOND REGION
AVIATION INDUSTRY CONFERENCE
October 15, 1953
Seminole Hotel
Jacksonville, Florida

Conferees:

MajorThomas C. Clodfelter, 308th Bomb Wing, Hunter AFB, Savannah, Georgia
Captain Leonard F. Smisson, 456th Troop Carrier Wing, Charleston AFB, S. C.
Lieutenant E. M. Cadenas, NAS Cecil Field, Jacksonville, Florida
W. R. Oesting, Pan American World Airways, Miami, Florida
Captain A. A. Perkins, Hunter AFB, Savannah, Georgia
Commander L. E. Felderman, NAAS Clynco, Brunswick, Georgia
Captain C. F. DuPont, 363 Tac. Recon. Wg., Shaw AFB, South Carolina
W. A. Jensen, ALPA - ATA, Washington, D. C.
A. Grimes-Graeme, B. O. A. C., New York, New York
C. H. Ruby, ALPA, Jacksonville, Florida
E. S. Smith, National Airlines, Jacksonville, Florida
George C. Diggs, Eastern Air Lines, Miami, Florida
Commander N. P. MacNair, NAAS, Sanford, Florida
Lieutenant R. P. Smythe, NAS, Jacksonville, Florida
Major George R. Daugherty, 1922-1 AACS Det., Tyndall AFB, Panama City, Fla.
Captain Richart H. Shea, 1922-1 AACS Det., Tyndall AFB, Panama City, Fla.
Lt. Colonel Robert D. Easters, 1928th AACS Sq., MacDill AFB, Tampa, Fla.
Major Julious C. Griffin, Base Operations, MacDill AFB, Tampa, Florida
Lt. Colonel Richard Speilan, Hq. CTAF, Randolph AFB, San Antonio, Texas
Captain George Townsend, Jr., Randolph AFB, San Antonio, Texas
Colonel Samuel E. Lawrence, 3540th Wing, Pinecastle AFB, Orlando, Florida
Major E. C. Price, 3540th Wing, Pinecastle AFB, Orlando,Florida
H. W. Reid, Capital Airlines, Washington, D. C.
Lieutenant J. L. McCanlies, 1741st ATS, Palm Beach AFB, West Palm Beach, Fla.
Captain T. R. Dewey, 1707 ABW, Palm Beach AFB, West Palm Beach, Fla.
Major R. D. Williams, 3550th Training Grp. Moody AFB, Georgia
H. L. Roberts, Regional Manager, ATA, Fort Worth, Texas
A. P. Swanson, CAA, Fort Worth, Texas
W. T. Deason, CAA, Forth Worth, Texas
P. R. Eidson, CAA, Orlando, Florida
A. S. Hall, Jr., CAA, Jacksonville, Florida
J. S. Mays, CAA, Washington, D. C.
J. N. Smith, CAA, Atlanta, Georgia
Curt Harrison, CAA, Miami, Florida
R. A. Taylor, CAA, Washington, D. C.
M. R. Rsushing, CAA, Tallahassee, Florida
L. I. Pearce, CAA, Miami, Florida
R. C.Dunlap, CAA, Miami, Florida
C. R. Leavitt, Jr., CAA, Jacksonville, Florida
P. H. Boatman, CAA, Forth Worth, Texas
Martin E. Hansen, CAA, Miami, Florida
Paul M. Ragan, CAA, Tampa, Florida
V. T. Erickson, CAA, Jacksonville, Florida
C. W. Thomas, CAA, Jacksonville, Florida
H. H. Bates, CAA, Jacksonville, Florida
N. E. Clayborne, CAA, West Palm Beach, Florida
E. R. Chattin, Jr., CAA, Jacksonville, Florida

Telford W. Cowart, Chief, Air Route Traffic Control Center, Jacksonville, Florida - Presiding

The conference convened at 10:00 A. M., with Mr. Cowart extending a welcome to all conferees. He then explained that the purpose of this conference was to discuss with industry and military representatives certain proposals for more fully utilizing existing L/MF navigational facilities and "preferred VHF routings" for the Jacksonville and Miami Air Route Traffic Control Areas. In preparing for these proposals, consideration has been given to defining reporting and holding fixes, in so far as possible, in such a manner as to enable aircraft having one VOR receiver and one ADF to utilize them.

Mr. Cowart then requested the conferees to refer to Chart Number 6 which depicts proposed Victor Airways designed to by-pass the busier terminals such as Jacksonville, Florida, and Savannah, Georgia. After a thorough explanation of this chart in its entirety, the specific items were individually discussed.

Subject: Items 1 (a) Daytona Beach - Savannah Victory Airway and 1 (b) Jacksonville - Charleston Victor Airway.

Discussion: The Conferees were informed that Item 1 (b) had recently been approved at the last meeting of the Atlanta Airspace Subcommittee. The Navy has informally agreed to a redefinition of the Western boundaries of Warning Areas Number 157 and 158 to accommodate the proposed Daytona Beach - Savannah Victor Airway. Subject to flight check, the minimum reception altitude for the Daytona Beach - Savannah route was expected to be approximately five thousand feet. It was explained that the northbound traffic proceeding north of Charleston could be routed via the Daytona Beach - Savannah Victor Airway to the Sea Island Intersection thence via the Tybee Intersection to Charleston thence via flight planned route to destination. This will enable Air Traffic Control to route aircraft as to avoiding the busy terminals of Jacksonville and Savannah.

Commander Felderman of the Naval Air Station, Glynco, Georgia, advised that the Navy would request a corridor from the Air Station east to cross Amber Civil Airway Number 7 and the proposed Jacksonville - Charleston Victor Airway. Mr. Roberts of the Air Transport Association interposed an objection to this corridor. Mr. Deason stated that traffic was too heavy on these routes to permit the establishment of a permanent corridor.

Captain Perkins of Hunter Air Force Base interposed an objection to these airways because of the location of the Hunter Air Force Base ILS and associated homing beacon. After some discussion, Mr. Deason suggested that there should be no great difficulty in establishing a new jet penetration at Savannah, Georgia, especially after the proposed radar installation at Hunter is completed.

Conclusion: The CAA will request designation of these airways as proposed and the redefinition of the western boundaries of Warning Areas Number 157 and 158. The Navy was requested to reconsider the idea of a corridor across Amber Civil Airway Number 7 and the Jacksonville - Charleston Victor Airway.

Subject: Item 1 (c) Savannah - Augusta Victor Airway.

Discusdon: None

Conclusion: The CAA will request designation of the proposed airway.

Subject: Iten 1 (d) Savannah - Columbia Victor Airway.

Discussion: Captain Smisson advised that the Charleston military planning has not been completed but he believes that the military would interpose no objection to this airway. It was stated that careful checking of the proposed airway and the proposed jet penetration for Charleston Air Force Base revealed that there would be no confliction between the two.

Conclusion: The CAA will request designation of the proposed airway.

Subject: Item 1 (e) Charleston - Amber Civil Airway Number 9.

Discussion: It was explained that this was a project for the future and that designation would be contingent upon conversion of the present VARs to VORS. Mr. Swanson advised that this proposal would have to be referred to the Airspace Subcommittee.

Conclusion: The CAA will request the designation of a Victor airway generally coinciding with the present Amber Civil Airway Number 9 when the conversion of VARs to VORs is completed.

Subject: Item 1 (f) Brunswick - Callahan - Jacksonville Victor Airway.

Discussion: Mr. Cowart explained that this airway was a vital component of the planning for arrival and departures in the Jacksonville Terminal Area. Southbound traffic would be routed this airway

to the Callahan Intersection leaving the en route radial available for northbound traffic landing at Brunswick or Savannah. Routing of southbound traffic on this airway would enable routing of traffic bound for Charleston or points north via the 024 degree radial of the Jacksonville VOR to the Sea Island Intersection and thence to Charleston. It was explained that the Callahan Intersection was located within the distance required by the criteria for a direct transition from the holding fix to the compass locator.

Conclusion: The CAA will recommend the designation of this airway.

Subject: Item 1 (g) Jacksonville - Tallahassee Victor Airway.

Discussion: Upon being questioned, Mr. Swanson was of the opinion that the MRA on this route would be about four thousand feet. Inquiry was then made as to whether or not a lower MRA could apply between Jacksonville and the Genoa Intersection and between Tallahassee and the Greenville Intersection. Mr. Swanson stated that he thought such an arrangement could be made. Mr. Roberts asked why this airway could not be designated from Jacksonville direct to Valdosta thence direct to Tallahassee. Mr. Cowart stated that he doubted the advisability of such a designation in view of the heavy concentration of military traffic in the vicinity of Moody Air Force Base and also pointed out that a greater distance would be involved than would be the case of the Jacksonville direct Tallahassee Victor Airway. Mr. Roberts then suggested that the routes in the Valdosta area be depicted on published charts. After some further discussion on this point, Mr. Deason advised Mr. Roberts that this would be considered at a later date.

Conclusion: The CAA will request designation of the Victor Airway as proposed and consideration will be given to depicting routes in the Valdosta area on published charts.

Subject: Item 1 (h) Alma - Cross City Victor Airway.

Discussion: Colonel Spielan stated that the Air Force expected to request the establishment of a Danger Area comprising the control area presently referred to as the Valdosta Control Area. This request will be in connection with the activity of the GCI School at Moody Air Force Base which, it is contemplated, will be considerably expanded in the near future. Mr. Deason pointed out that no such request had been received and that this area was presently under the control of the Jacksonville Center. Colonel Spielan requested that this airway be held in abeyance for the time being. Mr. Deason suggested that the conference consider the proposed airway as depicted on the agenda since

the request for the Danger Area was not definite at present and additionally would require Airspace Subcommittee action. Colonel Spielan briefly outlined the activities of the various training schools operating at Moody Air ForceBase.

Conclusion: The CAA will request the designation of this airway as proposed.

Subject: Item 1 (i) Albany - Cross City Victor Airway.

Discussion: It was explained that there is considerable traffic overflying Albany, Georgia, proceeding to Cross City and thence down the west coast of Florida to Tampa and Miami. It is believed that the designation of this airway would permit more expeditious and safer control of this traffic. Colonel Spielan requested to know if this route would affect the Air Force Training School at Spence Field, Moultrie, Georgia. Mr. Cowart explained that activities conducted at Spence Field were strictly a VFR operation and that designation of the proposed airway would have no adverse affect upon these activities.

Conclusion: The CAA will request the designation of this airway as proposed.

Subject: Item 1 (j) Proposed V-56 West, Tallahassee - Albany Victor Airway.

Discussion: It was explained that this route would expedite traffic since it would provide north and south routes between these two points. Lieutenant Smythe inquired as to whether this proposed airway would not lie within a Danger Area. It was explained that Danger Area Number 183 included the airspace above nineteen thousand feet from sunset to sunrise and that the proposed airway would be no more adversely affected by the Danger area than the existing L/MF and Victor Airways.

Conclusion: The CAA will request the designation of this airway as proposed.

Subject: Item 1 (k) Montgomery - Marianna Victor Airway.

Discussion: Explanation was made that the proposed Victor Airway does not coincide exactly with the existing Blue Civil Airway Number 3, since it was necessary to utilize en route radials which would enable aircraft utilizing the proposed airway to avoid Danger Area Number 156.

Conclusion: The CAA will recommend designation of this airway as proposed.

Subject: Item 1 (l) Vero Beach - Orlando Victor Airway.

Discussion: This route was depicted on the chart indicating the use of the 124 degree radial of the Orlando VOR but, after preparation of the charts, a change has been made to utilize the 130 degree radial as the en route radial, since this will coincide with the approach course of the Orlando localizer. An intersection formed by the 130 degree radial of the Orlando VOR and the 338 degree radial of the Vero Beach VOR will be identified as the Malabar Intersection.

Conclusion: The CAA will request the designation of the airway as proposed.

Subject: Item 1 (m) Daytona Beach - Orlando - Tampa Victor Airway.

Discussion: The conferees were advised that the MRA on this proposed airway would probably be the same as the MEA on the present Civil Airway between these terminals. It was further proposed that an alternate route north be designated between Orlando and Tampa.

Conclusion: The CAA will request designation of this airway as proposed.

The conference recessed at 11:40 A. M. for lunch and reconvened at 12:50 P.M.

Subject: Jacksonville, Florida Terminal Area, 2 (a) Inbound Routes and Holding Patterns.

Discussion: Mr. Hall explained that the proposed procedures with the aid of Chart Number 1. He explained that there would be three feeder fixes; i. e., Callahan Intersection, Bryceville Intersection and Sunbeam Intersection, from which aircraft will be vectored to the approach gate serving Imeson Airport. Reporting points in the terminal area will be Anastasia, St. Johns, Sea Island, Folkston and Taylor. All of the holding fixes are within the criteria for direct transition to the Jacksonville ILS Outer Marker. It is planned to hold aircraft concurrently at the same altitude all holding fixes in the terminal area.

Mr. Cowart stated that holding at the VOR station would only be done under extreme circumstances. Mr. Roberts then suggested that there should be an altitude separation between aircraft holding at the VOR station and aircraft holding at the Outer Marker.

Mr. Ruby stated that he felt that altitude separation, in this case, was advisable. Considerable discussion ensued on this subject with Mr. Roberts, Mr. Swanson, and Mr. Jensen actively participating. Lieutenant Cadenas advised that the Cecil Field Homing Beacon is being relocated and Mr. Cowart stated that CAA personnel had agreed to meet with the Navy to determine the best possible siting of other proposed Navy facilities. Mr. Hall then described how traffic would be brought into the holding patterns at the feeder fixes.

Conclusion: Operating instructions, to be prepared later, will prohibit simultaneous holding at the same altitude at the Jacksonville VOR station and the ILS Outer Marker. The holding patterns and reporting points, as proposed, were agreed to be satisfactory.

Subject: Jacksonville, Florida Terminal Area, 2 (b), Departure Routes.

Discussion: Mr. Chattin explained the proposed departure procedures as depicted on Chart Number 2. Mr. Cowart informed the conferees that departing aircraft would initially be given a short range departure clearance by Jacksonville Approach Control and that, after departure, the pilot will change over to the Jacksonville Center departure controller to obtain the remainder of the clearance. It is proposed to allocate certain altitudes at fixes on the departure routes which will enable Approach Control to issue the initial clearance without reference to the Center.

Mr. Roberts suggested that a departure route be designated out of Jacksonville north to Callahan, thence to the Taylor Intersection to allow westbound flights to by-pass Bryceville when several altitudes are occupied at that intersection. Mr. Deason said that use of this routing would be good traffic control technique when circumstances dictated its use. Mr. Cowart stated that normally altitudes would be occupied at Callahan whenever aircraft are holding at Bryceville. Mr. Roberts recommended a definite route from Imeson Airport to the intersection of the 303 degree radial of the Jacksonville VOR and the 223 degree radial of the Brunswick VOR and thence to Taylor. He then suggested other routes out of Jacksonville

utilizing the 15 degree radial and the 105 degree radial of the Jacksonville VOR.

Mr. Cowart stated that implementation of the above proposed departure procedures would require the commissioning of an additional VHF radio frequency to be utilized by the departure controller in the Jacksonville Center.

Conclusion: Conferees were in agreement on the departure procedures as outlined and the suggested departure routes will be incorporated in the final plan.

Subject: Item 3 (a) Columbia, South Carolina Terminal Area Holding Patterns.

Discussion: The explanation of this item was prefaced by a statement that, at present, the radials of the Columbia VOR are unsatisfactory from the 220 degree radial clockwise to the 060 degree radial and the intersection formed by these radials will not be utilized until the VOR is operating satisfactorily.

Mr. Hall then explained the holding patters at Columbia advising that they were within the 15 mile criteria for transition direct to the ILS Outer Marker. He explained further that the Gaston Intersection would not be used while jet penetrations are being made to Shaw Air Force Base. Mr. Roberts recommended that an investigation be made of the feasibility of utilizing the back course of the ILS for approaches. Mr. Cowart stated that he doubted that this would be possible due to the proximity of the back course of the ILS localizer to the Ft. Jackson Danger Area. Mr. Swanson stated that the back course of this ILS is considered technically unusable. A brief explanation was then given of the approach control procedure in effect between the Columbia and Augusta Towers.

Mr. Deason asked Mr. Roberts if there is sufficient air carrier traffic between Columbia and Charlotte to warrant the establishment of an airway between those terminals. Mr. Roberts stated that such an airway had been previously requested and disapproved but that it is still desired by the Air Transport Association.

Conclusion: Holding patterns were concurred in as presented. The designation of an airway between Columbia and Charlotte will be explored at a later date.

Subject: Item 4 (a) Orlando, Florida Terminal Area Holding Patterns.

Discussion: Mr. Hall explained the holding patterns at Orlando as depicted on Chart Number 4. He explained that a change had been made after the chart was prepared which corrected the 124 degree radial to read the 130 degree radial. This change was made so that the en route radial will coincide with the center line of the Orlando ILS approach course. Mr. Eidson, Chief of the Orlando Airport Control Tower, was then introduced and answered questions on the proposed plans for this area.

Colonel Lawrence inquired if simultaneous approaches could be made to Pinecastle Air Force Base and the Orlando Municipal Airport. Mr. Cowart stated that this would not be practicable due to the missed approach procedure established for Pinecastle Air Force Base when landings are made to the north. Mr. Eidson stated that simultaneous approaches could only be made at Sanford and Pinecastle.

Commander MacNair inquired if there were any changes proposed that would affect the Sanford Naval Air Station and Mr. Cowart replied that no such changes were contemplated at this conference.

Mr. Roberts requested that a study be made of the possibility of using the back course of the ILS localizer for approaches to the Orlando Municipal Airport.

It was mentioned that the Eustis Intersection (the intersection of the 310 degree radial of the Orlando VOR and the 240 degree radial of the Daytona Beach VOR) could be advantageously utilized as a reporting point for use by aircraft, inbound and outbound, between Orlando and Ocala.

A statement was then made defining the area over which the Orlando Approach Control has jurisdiction.

Conclusion: Proposed holding patterns were concurred in and investigation will be made of the back course of the ILS to determine its suitability for approaches to Orlando Municipal Airport.

Subject: Item 5 (a) Tallahassee, Florida Terminal Area Holding Patterns.

Discussion: Mr. Hall explained the holding procedures at Tallahassee as depicted on Chart Number 5. Mr. Roberts inquired why the Calvary Holding Pattern was non-standard and Mr. Hall explained that this was necessary to provide lateral separation in accordance with TSO-N20A between aircraft holding at the Calvary Intersection and at the Tallahassee VOR station.

Mr. Roberts requested that the back course of the Tallahassee ILS localizer be checked to determine its suitability for approaches.

Conclusion: Holding patterns were concurred in as proposed. The back course of the ILS localizer will be flight checked to determine suitability for approaches.

The conference was recessed at 2:10 P.M. and reconvened at 2:40 P.M.

Subject: Item 6 (a) Tampa, Florida Terminal Area, Preferred VHF Routings and Terminal Area Procedures to be Utilized in the Tampa Radar Approach Control Center Area.

Discussion: Mr. Ragan described the present and proposed procedures advising that the proposals are based upon the utilization of facilities as presently sited. He stated that the Maria Intersection, the intersection of the southwest course of the Tampa L/MF Range and the 180 degree radial of the Tampa VOR, would be used for high altitude flights landing northwest at MacDill Air Force Base. The Jay Intersection, the intersection of the 130 degree radial of the Tampa VOR and the southwest course of the Tampa L/MF Range will be utilized for conventional approaches at MacDill Air Force Base. Mr. Ragan also stated that a homing beacon to provide for jet approaches to MacDill Air Force Base was now being installed by the Air Force at Zephrhills, Florida.

Radar departure procedures have not yet been developed. Radar is proposed to be used at Tampa International Airport by advising aircraft of their positions and when to turn into final approach. The radar equipment is located at MacDill Air Force Base.

It is proposed to relocate the Tampa VOR to Drane Field at Lakeland, Florida, which will permit the designation of a Victor airway which will by-pass the Tampa Terminal Area. When the relocation of the Tampa VOR to Drane Field is effected, it is planned to install a TVOR on or near the Pinellas Airport.

The Tampa Radar Room will be a Center type operation and this facility will control all traffic within a fifty mile radius of Tampa, Florida, segements of civil airways and control area extensions. All inbound traffic will be controlled by radar once the aircraft are within the area of radar coverage. It is planned that, when completely activated, the Tampa Control Area will extend from twenty-five miles southwest of Ft. Myers, Florida, on Red Civil Airway Number 25 and Victor Airway Number 7, to a point twenty-five miles south of Cross City, Florida, and will be contiguous to the Orlando Control Area Extension on the east.

Mr. Roberts requested that the southwest course of the Tampa L/MF Range be reoriented to provide a check point for Braniff Airlines but Mr. Deason said it would be impossible to make this change due to utilization of the southwest course for jet penetrations by B-47s at MacDill Air Force Base.

Mr. Ragan explained that the North Tampa Fan Marker will be utilized as a feeder fix. Mr. Roberts requested further information on markers in the area and Mr. Ragan went into more detail which developed into a discussion on plans for altitude separation in the Tampa Area.

Conclusion: When finalized, the holding patterns and radar procedures for this area will be incorporated into operations letters and disseminated to all interested agencies.

Subject: Item 7 (a) Miami, Florida Control Area, Preferred VHF Routings and Terminal Procedures.

Discussion: Mr. Dunlap described the plan for VHF routings in the Miami Area as depicted on the Chart labeled "Preferred VHF Routings, Miami, Florida." V-3 Airway will be used for outbound flights and the by-pass route west of V-3 will be used for inbound flights. This route will use the 180 degree radial of the Vero Beach VOR to the intersection of the 218 degree radial of the Palm Beach VOR thence via the 343 degree radial of the Miami VOR. Mr. Dunlap advised that, after discussion with interested pilots, it is deemed advisable to change the 180 degree radial to that of the 185 degree radial of the Vero Beach VOR to the intersection of the 270 degree radial of the Palm Beach VOR and thence via the 343 degree radial of the Miami VOR. Route would thus be via the Vero Beach VOR to

the Belle Glade Intersection and thence to the New River holding fix.

The feeder fixes at Tamiami, New River and Cypress are outside the fifteen mile criteria for direct transition but are as close to the Outer Marker holding pattern as operationally possible. A VOR at Belle Glade is needed, as is a homing facility near Tamiami, for the purpose of routing traffic from Key West around the Miami Terminal Area. Mr. Deason stated that the homing facility would not be provided at this time.

It is planned that the Golden Beach holding fix, as depicted on the Miami Chart, will be used only when thunderstorm activity in the Miami Area makes it impractical to use New River, Cypress and Belle Glade.

It was brought out that Pan American World Airways, National Airways and Braniff Airlines will have aircraft equipped for VOR. Mr. Oesting said that this has not been considered for all Pan American World Airways aircraft.

A question arose regarding the navigational aids to be installed when the Air Force reactivates the Homestead Airport. Colonel Easters has in his office the projected plans for the navigation aids to be located at Homestead and stated that a list of these facilities can be provided at a later date. He also stated that, if the CAA wrote him and requested it, he would come to Miami and explain these plans.

Mr. Diggs stated that there was some doubt as to the need for a VOR at Belle Glade on the part of some persons but he was of the opinion that it would be very helpful. Mr. Deason stated he felt that this facility was very desirable.

The question of UHF arose and Mr. Swanson stated that the installation of UHF equipment was expected to commence in the Miami Center and Tower approximately November 2, 1953. Mr. Deason stated that aircraft equipped with UHF only should not proceed to Miami since other instrument traffic in the area would be delayed until theaircraft equipped with UHF only were on the ground.

Mr. Roberts asked if "Pogo Stick" operation was contemplated between West Palm Beach and Miami and Mr. Deason replied that this plan was being implemented.

Mr. Hansen suggested using the back course of the ILS localizer at Miami. Mr. Roberts stated that the noise problem associated with the use of the back course should not be overlooked, but Mr. Pearce stated that only industrial property was located just east of the airport. Mr. Swanson wished to know if an approach from the east was needed and Mr. Deason stated that it was needed for traffic control purposes. Mr. Roberts suggested that the noise phase of this problem be referred to Mr. Furman Stone of Miami, who is on the "Noise Committee." If this proposal is not disapproved by the "Noise Committee," a back course ILS approach at Miami may be possible. Mr. Roberts felt that, since the "Noise Committee," had been working on this problem the matter should be checked with them. He added that the Air Transport Association would favor a back course localizer approach if such is feasible.

Mr. Jensen suggested that, when these proposed airways are submitted to the Airspace Subcommittee, that the victor airways carry the same number through an entire route rather than be numbered differently for small sections of the same route, i.e., a route from Miami to New York should carry the same identifying number throughout rather than consist of small segments, each bearing a different number.

Conclusion: It is recommended that the routes and holding fixes be established as depicted on the chart. A holding fix will be established just west of Homestead which will be identified as the Roberts Intersection and will be formed by the intersection of the 210 degree radial of the Miami VOR and the west course of the Homestead L/MF Range.

Mr. Dunlap will refer the question of back course ILS approaches to Mr. Stone of the "Noise Committee" for determination of the advisability of this procedure from the noise standpoint.

Mr. Cowart thanked the conferees for their attendance and cooperation.

The conference was adjourned at 3:35 P.M.

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 15

Hq 6th AD MCDOO 686 Subject: Closing of Military Facilities at Brooksville Airport, Florida

DPLCP 686 (21 Jul 53) 2d Ind 24 September, 1953

HEADQUARTERS STRATEGIC AIR COMMAND, Offutt Air Force Base, Omaha, Nebraska

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

This headquarters interposes no objection to the closing of Brooksville Airport, providing cessation of activities at that station will in no way detract from your assigned mission.

BY ORDER OF THE COMMANDER:

W. J. GONINAN
Major, USAF
Asst Adj

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 15A

Hq 6th ADiv, MacDill AFB, Fla., MCDOC 686, Subj: Closing of Military Facilities at Brooksville Airport, Florida

2AFPIC 320 (21 Jul 53) 3d Ind 1 October, 1953

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

Attention is invited to 2nd Indorsement.

BY ORDER OF THE COMMANDER:

R. B. STAUFFER
CWO USAF
Asst Adjutant

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 15 B

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDOC 686 21 July, 1953

SUBJECT: Closing of Military Facilities at Brooksville Airport, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. Request authority to close the military facilities at Brooksville Airport, Brooksville, Florida.

2. B-47 and KC-97 crews at MacDill AFB have accomplished sufficient transition training to render Brooksville Airport surplus to the needs of this organization. The total number of take-offs and landings at Brooksville Airport has fallen to one hundred (100) per month. At MacDill AFB the total take-offs and landings has fallen to 4,700 per month. No congestion is anticipated at MacDill AFB. No future requirement can be foreseen for re-opening the military facilities at Brooksville Airport.

3. Brooksville control tower was placed on indefinite status by Headquarters, USAF in third indorsement to letter, this headquarters, file MCDOC 686, subject: "Justification of Temporary Control Tower at Brooksville, Florida," dated 11 February, 1953.

4. Closing the Brooksville military facilities will make available fourteen (14) airmen, control tower equipment, two (2) fire trucks, and one (1) ambulance for duty or use at MacDill AFB.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

Hq 6th ADiv, MacDill AFB, Fla., MCDOO 686, Subj: Closing of Military Facilities at Brooksville Airport, Florida

2AFMIA 686 (21 Jul 53) 1st Ind 13 August 1953

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana

TO: Commander, Strategic Air Command, Offutt Air Force Base, Nebraska

This headquarters sees no future use for Brooksville Airport and concurs in base request for closing this facility.

FOR THE COMMANDER:

FORREST A. BRANDT
Lt. Colonel, USAF
Adjutant

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 15C

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

20 October, 1953

Honorable W. G. Underwood
Mayor of the City of Brooksville
Brooksville, Florida

Dear Mayor Underwood:

This is to advise you that the Air Force will no longer require the use of Brooksville Municipal Airport after 10 October 1953.

The District Engineer, Corps of Engineers, Jacksonville, Florida, is being requested, through Air Force channels, to cancel Lease No. DA-08-123-eng-1054. This lease granted this headquarters utilization of the runways and taxiways.

As the transition to heavy type aircraft has been completed and because of the austerity program now in effect generally, it will be necessary to withdraw all personnel temporarily stationed there.

The cooperation of your City in granting the use of the runways and taxiways at Brooksville Airport during the transition period is deeply appreciated. Their use has aided this station materially in accomplishing its mission.

Sincerely,

B. H. MERCHANT
Colonel, USAF
Commanding

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 16

OFFICE OF THE BASE COMMUNICATIONS OFFICER
MacDill Air Force Base, Florida

MCDOEL 311

31 October 1953

SUBJECT: History of SAC Plan 1000 at MacDill Air Force Base

TO: Commander
809th Air Base Group
MacDill Air Force Base, Florida

1. Reference is made to the following correspondence.

a. Letter, Hq 2AF, to CG 6AD File 2AF AC 311, Subject: SAC Plan 1000 dtd 26 Dec 51.

b. Teletype message, WNMEG 10-33-E, dtd 23 Oct 53, from [illegible] to Commander, MacDill Air Force Base (Incl #1).

c. Minutes of meeting on SAC Plan 1000 held at Rome Air Force Depot, Rome, New York on 17 Mar 53 (On file at the 1928th AACS Squadron, this base).

2. Letter referenced in paragraph 1a states:

a. The original SAC Plan 1000 was developed in the Fall of 1949. That edition of the plan was projected for fixed radio equipment to support the operation of the SAC CW point-to-point and Air/Ground circuits. Revisions of this plan, brought about by the requirement for long range voice communications with Jet Bombers and Recon aircraft, the development of new types of fixed radio equipment, and adoption of the USAF Voice Air/Ground Plans, were completed in Jul 51.

b. Responsibilities of SAC Bases:
(1) Prepare and submit AFR 100-17 Communications projects within 15 days after receipt of engineering data.
(2) Effect coordination with local AACS to insure their requirements are included in the overall cable and power requirements for the stations.

3. The Communications projects referenced in paragraph 2b (1) above were initiated at SAC Headquarters (See Incl #1). Major Nicholson, Communications Office, 2AF, has informed this office that SAC is controlling all SAC Plan 1000 installations, in regard to funding, assigning pri-

Off of the Base Comm Officer MCDOEL 311 Subject: History of SAC Plan orities and coordinatin with AMC.

4. Construction was started on the SAC 1000 buildings (Receiver and Transmitter Buildings) in November of 1952 and buildings were completed in October of 1953. Funds were insufficient for construction of buildings to house emergency power sources. However, funds have been requested in the FY 55 Public Works Program for this purpose.

5. Communications equipment and emergency power generators for these buildings are programmed in the USAF Planning and Budgeting Program (BPG 55-1) for procurement from FY 53 funds. Delivery of this equipment is expected in calendar year 1954.

6. Engineering and installation of Communications facilities in the new receiver and transmitter buildings are a responsibility of Warner Robbins Air Material Area (See Incl #1).

7. WRAMA has engineered a plan for an interim antennae installation at the new receiver site on Hospital road. Implementation of this plan will allow the relocation of the AACS remote receiver station to the new receiver building and also enable the SAC Air/Ground station, now in building T-701, to move to the same place. The 1st AACS Installation and Maintenance Squadron is to make this interim installation when the necessary materials are procured. Target date for the completion of the above job is November of 1953. Permanent antennae installation plans for both receiver and transmitter buildings are in the engineering stage at WRAMA.

8. Reference paragraph 1c, minutes state that only one SAC Plan 1000 project (At Biggs AFB) had been completely engineered by Hq Rome AFD as of 17 Mar 53. This delay was attributed to the change-over from AFR 100-17 to AFR 100-46 and the changes in operational requirements necessitated by Hq USAF directives. It was believed that rapid strides would be made toward completion of engineering plans since responsibility for same has been delegated to the Air Material Areas.

9. The ideal situation would have been for these buildings to be occupied immediately upon their acceptance. Personnel of this base have fulfilled their assigned responsibilities and delay in this project can be attributed to various factors beyond the control of this base.

/s/ Clarence J. Westhoff
CLARENCE J. WESTHOFF
Captain, USAF
Base Communications Officer

1 Incl
TWX WRMEG 10-33-E
28 Oct 53 (5 cys)

A CERTIFIED TRUE COPY
B. A. Johnson
B. A. JOHNSON, 2d Lt, USAF

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DL128
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DE JESBN 05D
M 281300Z
FM COMDR WRAMA ROBINS AFB GA
TO COMDR MACDILL AFB FLA

FROM WRMEG 10-33-E FOR HQSC COMM OFFICAL ENGINEERING AND INSTL OF MAD COMM PAC IN NON SAC PLAN 1000 BLDG AT MACDILL ARE THE RESPONSIBILITY OF THIS HQ. PROJECT NO SAC-2AF-MCD-11310MM AND SAC-2AF-MCD-704-COMM ARE APPL. PREPARATION OF ENGINEERING PLANS ARE CURRENTLY IN PROGRESS AT THIS HQ. MAINTENANCE ENGINEERING DIRECTORATE
28/1424Z OCT JESBN

A CERTIFIED TRUE COPY

B. A. JOHNSON
2d Lt, USAF

EXHIBIT 17

UNIVERSITY OF TAMPA
Tampa 6, Florida

Department of
Business Administration

September 26, 1953

Joseph E. Goodbar
Russel E.Apple
Harold A. Heiser
Roy E. Geeting
C. Lawrence Roberts

Home address: 6331 MacDill Avenue

Subject: Low-Flying Planes over Residential Area

Brigadier General W. K. Mooney
Commander, MacDill Air Force Base
Tampa, Florida

Dear General Mooney:

When we located in Tampa in 1948, I made a first-class mistake by building our home within one mile of the MacDill Field. At that time the Field was a B-29 base. Within the last two years the Field has become a B-47 Jet Base. The thunderous noise of those jets is progressively becoming more and more deafening in this residential area, and if something is not done to modify the roar, we will have a group of first-class neorotics (sic) in this neighborhood.

I realize, of course, that training flights are necessary to the security of our country, and the endurance of such noise and inconvenience is a small price to pay for this national security. On the other hand, I wonder whether these boys could not accomplish the same purpose without "sitting on my roof top" as they leave or approach the landing field. Sometimes I think I should just open my front and back doors and let them "swoosh" straight through. Sometimes at night I'd swear to heavens they are coming smack through our bed room.

I have observed that the number of flights around this area seem to vary with different days of the week. Apparently flights are more numerous over the latter part of the week, and somewhat concentrated on Saturdays. Hours seem to vary, too, but after you have listened to this din throughout the entire day and far into the night, and it starts up again around four o'clock in the morning, as it did last week, the noise begins to become intolerable.

My home is in direct line with the landing and take-off strip, distance approximately one mile orso; hence, every plane that either leaves the field or approaches it, eastward, comes smack over my home, or else slightly to the right or to the left of it. If I could sell this place without taking a financial beating and locate elsewhere in the city, I would do so; but it is not so simple as all that. Nobody will buy this house, for the same identical reasons that I want to get rid of it.

I don't know whether you can do anything about this situation or not, General Mooney. The only possible solution to the problem as it affects me and all other people in the neighborhood lies in the answer to the question as to whether these planes are capable of rising to higher altitude as they leave or approach the Field, or else in varying the traffic pattern of these training flights.

It appears to me that most of the planes pass over my home in a deafening roar that downs out all conversation, a radio at full tone, or a telephone conversation, then they sweep in a wide curve to the right, southeastward, back to the Field, touch wheels, and immediately take off again and keep on repeating that pattern.

I know nothing about the factors involved, such as wind, position of landing and take-off strip, etc. Last year there was mention of changing the flight pattern so as to eliminate just such a complaint as I am making. Perhaps the changes were made, I don't know; but if they were made, there is no discernible difference in this area, perhaps and probably for the very reason that we live too close to the Field.

It all seems to wind up to this point: if it is possible for these pilots to give us a "breather" from such low-flying, or if they can vary their flight pattern, so that the same people in this neighborhood are not deafened by such constant noise and nerve-frazzling roar, I know that all of us would be happy. While I have not gone to the trouble of circulating this letter as a signed petion (sic) in the neighborhood, I know the mind of the people in the neighborhood. Some of them have small children; their obvious reaction to the frightening roar of these low-flying planes gives reason to surmise that some of these babies will wind up in a psychopathic (sic) ward later on in life.

I realize that the Base was "here first," and that it will probably remain here, as I am sure all of us would prefer that it should. One of my nephews was trained at the Field in the last war. The Germans got him on the Normandy Beach Head. He was the bombadier (sic) on the plane called "Idiots' Delight" - T/Sgt. Eugene Heiser of Willard, Ohio. I have another nephew at Eglin Field, a test engineer. Hence, I am not one of these "chronic gripers" about the military. As a professor at the local University of Tampa, I conceive one of my functions to be to help to preserve our American institutions, notto team them down or to indulge in adverse criticism thereof.

Yours very sincerely,

/s/Professor H. A. Heiser
/t/Professor H. A. Heiser

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 17A

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

16 October, 1953

Professor H. A. Heiser
6331 MacDill Avenue
Tampa, Florida

Dear Professor Heiser:

I have delayed answering your letter of September 26, 1953, with regard to the disturbing effects of jet aircraft noises to people on the ground in this area, until I had assured myself that my pilots were complying with all flight regulations and proper operating procedures.

I have again personally reviewed our very thick file of similar complaints from residents of our neighboring communities, and the action taken by my predecessor and by me to eliminate and alleviate the cause for the justifiable complaints.

The obvious solution to your concern would be to construct another runway which would have approaches clear of residential areas. The minimum length of such a runway would have to be 11,300 feet, and 200 feet wide. The cost of the runway plus connecting taxiways, relocation of lights, modern electronic landing aids, etc., would be just under two (2) million dollars. This solution has been seriously considered, but turned down by our austere defense budget.

For the same reasons, it is impossible for the government to buy all of the land and improvements in the approach zones to the main runway. Strict zoning to distances of a mile beyond the base was not considered necessary when the main runway area was initially laid out into the prevailing wind. Airplanes of those days could make a tighter traffic pattern around the base and did not have to be so low for so long on take-offs and landings.

The flying characteristics of the B-47 are entirely different from the other airplanes that we have had at MacDill. Due to its heavy weight it cannot gain altitude rapidly until it has picked up considerable speed and hence, must remain relatively low for quite a distance. Many of our missions require heavy take-offs and those are the boys who seem to skim your roof top. Rest assured that those of

us who are in that B-47 want to get as much altitude under us as soon as we can. Since the rate or steepness of turn depends upon the weight of the aircraft and the airspeed, it is not safe to attempt a quick turn immediately after take-off.

The landing characteristics are also different from other aircraft. Since the B-47 is so perfectly streamlined, the retarding of the throttle or power does not result in an immediate rapid descent or steep glide. Hence, it is necessary to make a flat or low approach from some distance out. The distance out or the point in space where the airplane turns on his final straight in approach has been brought in as close to the base as is consistent with safe operations.

During the past year and a half, the flight or traffic patterns have been changed to minimize the hazard and noise factor. A landing and navigation facility was re-located. Every pilot, including some who have families living in effected communities, has been thoroughly indoctrinated in methods of minimizing the jet noise nuisance. Consideration for our neighbors is a slogan used at each briefing prior to take-off.

Now that most of our crews are considered qualified to land and take off, we have drastically reduced the number of B-47's which make "touch and go" landings one after another. However, according to the newspapers, we have over 90 B-47's stationed at MacDill, so there will still be many flights day and night.

I shall continue to govern our flight schedules with sincere consideration for the day in the week and the hour in the night. However, we cannot give you the security you must have if we are five day a week, fair weather, daylight only, strategic striking force.

You will be interested to know that the Air Force, other agencies of the Federal Government interested in aviation, and the aviation industry are all working together in an effort to reduce or eliminate the hazards and noises resulting from flying. A National Aviation Noise Reduction Committee is studying methods which we hope will reduce the nuisance of aviation noise, and the United States Air Force is placing added emphasis on rigid control over its flying activities in order to provide maximum safety to personnel in the air and on the ground.

To better understand our problem, I have inclosed an aerial photograph of the area, which shows the relation of the runway to your home, and a schematic diagram of the flight path of the aircraft in relation to the area. The aerodynamic characteristics of the aircraft preclude a flight path other than as shown. In this connection, the approaches to MacDill are under constant review by the Civil Aeronautics Authority, who likewise are endeavoring to route all air traffic with due consideration for the hazard to the people of Tampa.

1401

It has been my policy to meet with representatives of communities effected by MacDill operations in the belief that a full understanding of our problems contributes significantly to the achievements of our mutual security objective. In the event you feel that such a meeting with the people of your community would be helpful, please advise me.

Your interest in this problem, and the manner in which you have called it to my attention, is deeply appreciated.

Sincerely,

H. K. MOONEY
Brigadier General, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1402

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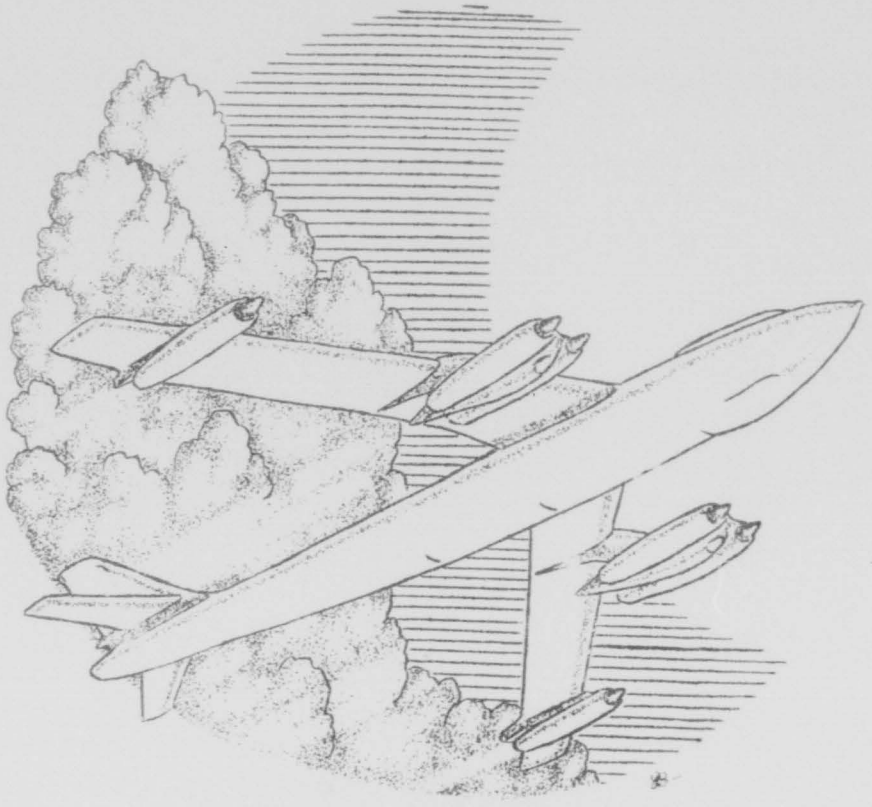
EXHIBIT 18

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. III



6TH AIR DIVISION

MAC DILL AFB., FLORIDA

SECURITY INFORMATION

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INFORMATION COPY

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 18 September 1953

SPECIFIC ITEM REPORT NO. 111

SUBJECT: Improved Air System for the B-4 Fire Control System. (EE-42)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base
ATTN: WCOWB (B-47)

I. PURPOSE:

To report the results obtained on the test installation which provides an increased capacity air system for the B-4 fire control system and a means of dehumidifying the air after it is compressed.

II. FOREWORD:

During two evaluation programs conducted at MacDill Air Force Base, numerous malfunctions of the B-4 armament system occurred which could only be attributed to deficiencies in the air system which supplies high pressure air to charge and fire the guns. When notified of this problem, the Armament Laboratory requested Mr. Dean of the Walter Kiddie Company to visit MacDill to investigate the deficiency. Mr. Dean provided the components required to improve the air system by: (a) increasing the capacity from fifty (50) to one hundred (100) cubic inches, (b) dehydrating the air by means of a mechanical separator and chemical cartridge, and (c) providing air at a constant pressure by means of a regulator on the storage bottle.

III. CONCLUSIONS:

A. The present 50 cubic inch air storage bottle is not of sufficient capacity to properly operate two B-1 gun chargers throughout the entire firing mission at the normal operating altitudes of the B-47 aircraft.

SECURITY INFORMATION

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B. A mechanical separator for eliminating moisture and/or aerosol emulsion is required to preclude malfunctions in the B-1 gun charger.

C. The high pressure air used to operate the B-1 gun chargers should be regulated to a constant pressure to permit proper timing of the guns and chargers to assure that the correct rate of fire is achieved.

D. In B-47 aircraft the modification of the present air system of the B-4 fire control system is not considered feasible because the B-4 is being replaced with the A-5 turret and controls.

IV. RECOMMENDATIONS:

A. Subject air system be considered for use in future armament installations which utilize the B-1 gun charger.

B. No changes be accomplished on the present B-4 fire control system in B-47 aircraft unless it becomes mandatory to use it in combat, in which case the air system should be modified.

V. DISCUSSION:

A. The present configuration of the B-4 system in the B-47B aircraft employs a 50 cubic inch storage bottle. The gun chargers require a pressure of approximately 400 psi to 975 psi. The present system has no regulator to regulate the air pressure to the gun chargers. Consequently, the air pressure varies as guns are being fired. While the firing is in progress, the air pressure drops due to the inability of the compressor to replenish the air supply at high altitude. The lower air pressure causes the firing rate to decrease, and in many cases, the pressure drops enough so the guns cannot be cleared when a misfire occurs.

B. Mr. Dean of the Walter Kiddie Company which manufactures the B-1 charger, provided the OES with an air storage bottle of 100 cubic inch size and 2,000 psi capacity, a mechanical separator and a chemical drier cartridge. Immediate steps were undertaken by the OES to have the items listed above installed in B-47B aircraft, Number 51-2296. The following listed gunnery flights were flown on the dates shown and the data concerning temperatures, rounds expended and malfunctions collected:

Date	Rounds Expended R. H. Gun	L. H. Gun	Altitude	Temperature
19 Mar 53	600	600	30,000	-36°C
20 Mar - 23 Jun 53	AOCM - Fuel Leaks			
23 Jun 53	600	600	35,000	-50°C
16 Jul 53	600	208	37,000	-48°C
	(Ammunition jammed in ammunition can)			
10 Aug 53	600	300	34,000	-55°C
	(Jammed link in R. H. run)			

C. With the standard B-4 storage system, the compressor must be set to cut off at approximately 950 psi due to the possibility of rupturing the seals in the B-1 gun charger. The small volume of air in conjunction with the lower pressure available after the guns have been actuated several times results in a system that is incapable of providing the proper air pressure to the gun chargers while in flight at the operating altitudes utilized by the B-47 during profile missions. The test 100 cubic inch size air storage bottle, when charged to 1500 psi, contains 129 sea level atmosphere volumes of air. The pressure regulator on the bottle provides a constant air pressure of 950 psi to the gun chargers. Therefore, the gun chargers can be timed for the optimum firing rate.

D. Freezing of moisture and the aerosol lubricant for the pump were believed to be major contributing factors in several cases where the guns could not be fired after several hours of cold soaking. The present system does not have facilities for removing the moisture or lubricant, or for preventing them from entering the pressure lines and gun chargers. Subject test system provides a mechanical separator and chemical cartridge for removing foreign liquids as well as a heating element to prevent liquids from freezing in the mechanical separator. No malfunctions of this type were encountered during subject tests.

E. It is understood that an air storage system comparable to the one described herein is presently being utilized in present-day jet type fighter aircraft.

F. No research has been made at this level in the determination of the availability of the described items in Air Force Supply channels. The test items utilized in this test were:

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1. Bottle, Pneumatic, Walter Kiddie, Part No. 840348

2. Separator, Mechanical Moisture, Walter Kiddie, P/N Unknown.

3. Regulator, Air Pressure, Walter Kiddie, P/N Unknown.

4. Dehydrator, Chemical Cartridge, Walter Kiddie, P/N Unknown.

G. Approximately four (4) man-hours would be required to make this modification per aircraft, providing component parts such as tubing, check valve and major items were made available in kit form. An actual expenditure of eight (8) man-hours were required in the hand-fitting and shaping of the tubing to make the original test installation, and four (4) man-hours were required for installation.

H. The B-4 fire control system is presently being replaced with the A-5 system, which has an electrical charger, on a production and retrofit basis. For this reason, it is not considered feasible to modify the present air system in the B-4 system unless it becomes mandatory to utilize these systems under combat conditions. In this event, the improved air system should be installed on all combat aircraft as soon as possible. If other fire control systems incorporating air chargers are developed, the incorporation of a sufficient air supply, moisture eliminating unit and a pressure regulator should be considered.

Phillip W. O'Dwyer

PHILLIP W. O'DWYER
Captain, USAF
Project Officer

APPROVED:

Thomas P. Savage

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Chief, O.E.S.

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EXHIBIT 19

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B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 113

6TH AIR DIVISION

MAC DILL AFB, FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 3 October 1953

SPECIFIC ITEM REPORT NO. 113

SUBJECT: Coaxial Connector in ARN-14 and ARC-27 Antenna Cables, B-47B Aircraft (ED-57)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To point out a deficiency in the UG-21/U coaxial connector as used in the B-47 installation of the ARN-14 and the ARC-27, and to recommend a solution to the operational and maintenance problems caused by this deficiency.

II. FOREWORD:

Coaxial plug UG-21/U is used as a connector in the coaxial cable running from the ARN-14 omni range receiver to its antenna mounted in the tip of the vertical stabilizer and also in the antenna cable of the ARC-27 UHF command set. Approximately thirty (30) in-flight radio failures have been caused by these connectors in 306th Bomb Wing B-47B aircraft since October 1951. Approximately 90% of the failures have occurred in the vertical cable run to the ARN-14 antenna where cable weight is a big factor. Unsatisfactory Reports, 306BW53-83, 86, 174, 472, 482, 483, and 571 have been submitted on this condition. The 305th Bomb Wing has had similar failures.

III. CONCLUSIONS:

A. The UG-21/U connector is unsatisfactory in the applications named above in that it frequently causes loss of reception or intermittent reception. The inaccessibility of these connectors in the B-47 airplane necessitates an expenditure of ten (10) man-hours to replace the connector after a failure.

B. The PL-259 coaxial connector (figure 3) can be used as a substitute for the UG-21/U in the installations covered in this report.

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IV. RECOMMENDATIONS:

That a Technical Order be issued directing replacement of the UG-21/U in these applications with a PL-259 or some other suitable plug in which the center-pin is molded within the dielectric so that it cannot be withdrawn. Because of the large number of man-hours involved this substitution should be made on a replacement basis by the organizational flight line radio maintenance personnel only when failures occur. The aircraft manufacturer should make this change in aircraft not yet delivered.

V. DISCUSSION:

A. The center-pin of coaxial connector UG-21/U (figure 1) is not physically retained within the plug and is easily withdrawn (figure 2). If two men pull on opposite ends of a cable several feet in length made of RG-8/U coaxial cable and two UG-21/U plugs, the center-pins can be made to withdraw from sight into the cable, as only the outer portions of the coaxial cable stretch.

B. In B-47 aircraft returning from flights on which ARN-14 reception had failed, the radio mechanics found that the UG-21/U center-pin had withdrawn from contact with the mating connector. This always occurred in the long vertical cable run leading up to the ARN-14 antenna mounted in the top of the vertical stabilizer. The failing connector is shown joining RM-154 and RM-211 on diagram 19.05a, Section VIII, T.O. 01-20ENB-2. The B-47 OES feels that vibration, cable stretching, and the weight of the center conductor of the RG-8/U coaxial cable probably caused the whole center conductor of the cable with the UG-21/U center-pin attached to slide down within the cable. Expansion and contraction due to temperature changes could have been a contributing factor.

C. In three or four cases of ARC-27 in-flight failure the UG-21/U coaxial connector splice in the cable, leading aft from the ARC-27 antenna to the ARC-27 receiver-transmitter, was found to have a withdrawn center-pin. The failing connector is shown joining cable assemblies, RM-243 and RM-244, on diagram 4.03, Section VIII, T.O. 01-20ENB-2.

D. M/Sgt Mings of the 306th A&E Squadron discovered this and suggested that a PL-259 coaxial plug be substituted for the UG-21/U connectors at the spots where this type of failure occurs. The center-pin of the PL-259 connector (see figure 3) is molded within the rigid dielectric material of the plug during manufacture and cannot be withdrawn unless the connector is broken.

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E. If, as a T.O. and stock list search indicates, there is no female coaxial connector for use on RG-8/U cable with the PL-259, both of the mating cable ends will have to be terminated in PL-259's and a PL-258 double-ended coaxial socket used to join them.

F. The scanty information available at this level on coaxial connectors indicates that the UG-21/U plug was adopted because it is a "constant impedance" connector. If a suitable "constant impedance" connector in which the center-pin is physically retained within the plug is available we feel that it should be used here. However, it is the opinion of this Section that any increase in the standing-wave ratio which might be caused by some electrically inferior plug is less detrimental to system reliability than a physically unsound connector. The PL-259 has been used in many applications in the frequency ranges of the ARN-14 (108 to 135.9 MC) and the ARC-27 (225 to 400 MC). If the PL-259 is the only suitable plug with a restrained center connector, although it is not a "constant impedance" connector, we feel that its adoption in place of the UG-21/U in the applications covered by this report would reduce in-flight radio malfunctions in B-47 aircraft and would materially decrease the work load of the A&E Squadron's flight line radio mechanics.

John T. A. Ely

1 Incl
Figures 1, 2 & 3.

JOHN T. A. ELY
Captain, USAF
Project Officer

APPROVED:

Thomas P. Savage

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Major, USAF
Chief, O.E.S.

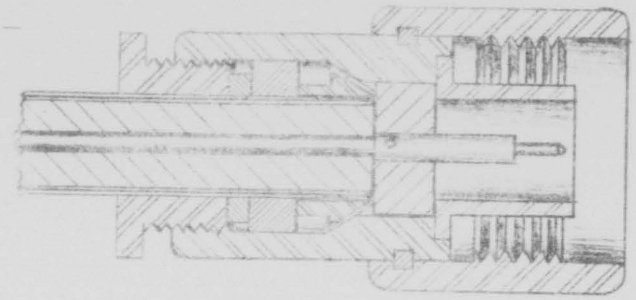

Figure 1 — UG-21/U Plug connected to RG-8/U coaxial cable. None of the drawings on this page are to scale.

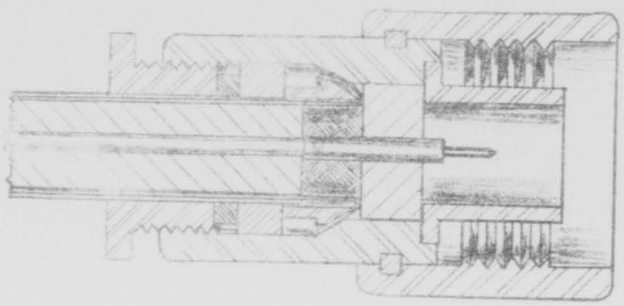

Figure 2 — UG-21/U Plug after failure, showing withdrawal of center conductor and pin.

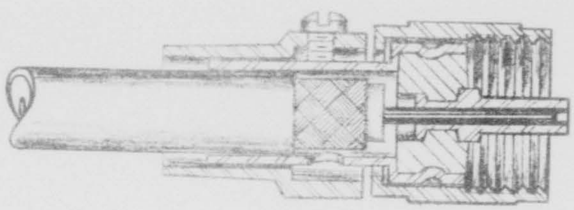

Figure 3 — PL-259 coaxial connector. Note indented center pin molded into the solid dielectric material.

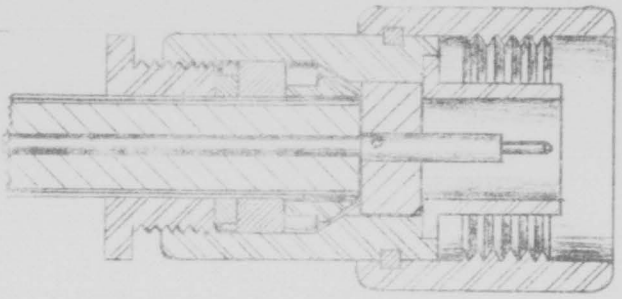

Figure 1 UG-21/U Plug connected to RG-5/U coaxial cable. Note of the drawings on this page are to scale.

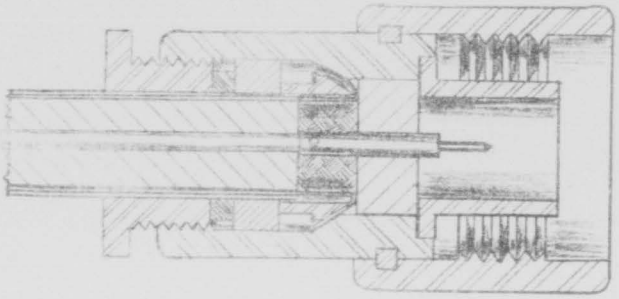

Figure 2 UG-21/U Plug after [illegible] showing withdrawal of center [illegible] pin.

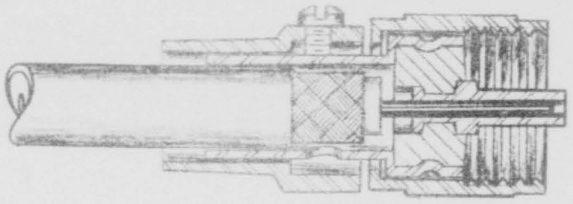

Figure 3 PL-259 coaxial connector. Note indented center pin molded into the solid dielectric material.

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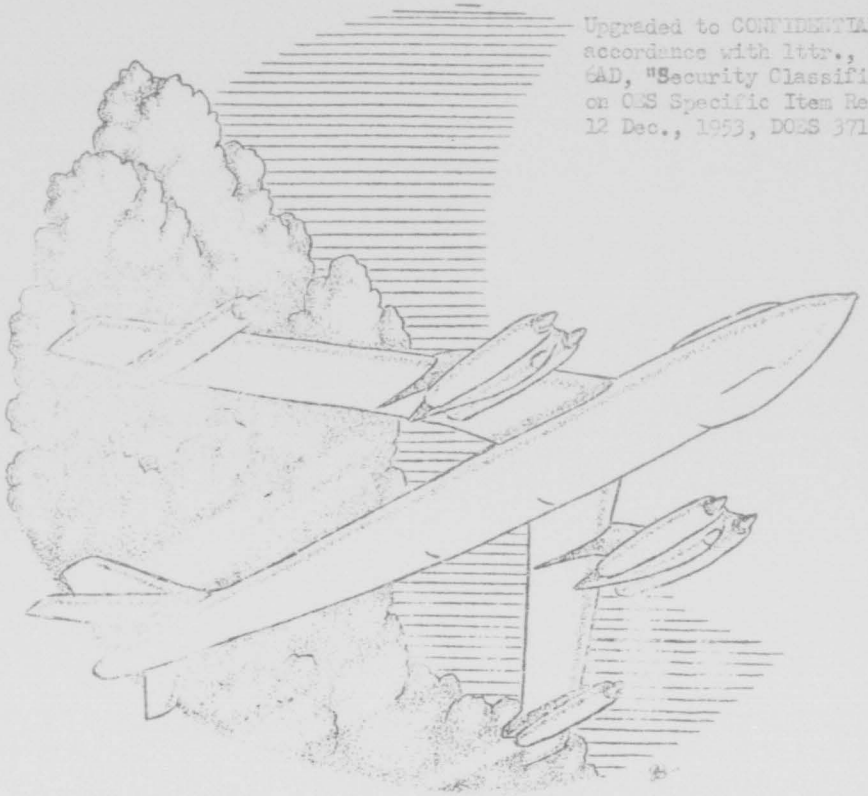
EXHIBIT 20

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 114

Upgraded to CONFIDENTIAL in accordance with ltr., Hq CAD, "Security Classification on OOS Specific Item Reports," 12 Dec., 1953, DOOS 371.2



6TH AIR DIVISION

MAC DILL AFB., FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 8 October 1953

SPECIFIC ITEM REPORT NO. 114

SUBJECT: Evaluation of the K-System Dual Offset Unit in B-47 Aircraft (EB-53).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base
Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To report on the evaluation of two prototype dual offset units for the K-System, installed in two B-47B aircraft at this station.

II. FOREWORD:

A. The dual offset unit provides another set of offset indicators and controls in the K-Bombing and Navigation System which enables the radar operator to use three aiming points, the target and two offset aiming points. These aiming points can be used singly or in combination to isolate and bomb targets which (1) give poor radar returns or (2) are lost in the clutter of surrounding returns.

B. K-Systems in tactical B-47 aircraft have, at present, a single offset capability. Two prototype dual offset units which were provided by Headquarters Strategic Air Command were installed in two 6th Air Division B-47B aircraft to evaluate the operational benefit of a second offset system.

III. CONCLUSIONS:

A. The dual offset unit makes it easier to isolate and bomb complex targets.

B. A heading error of 1-1/2° that may exist in the K-System due to an accumulation of allowable tolerances will cause bombing errors when using offset aiming.

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C. Heading errors can be detected by using the dual offset unit to check the cross-hair's position on one offset unit against the position on the other offset point.

D. The prototype dual offset distance dial indicators as well as the offset indicators on the present ballistic control are not satisfactory because:

1. They are difficult to read properly.

2. The readings of the offset dials can be changed by accidentally brushing against the controls.

3. The offset dials are not suitably lighted for night operation.

E. The prototype dual offset selector switch (selecting offset No. 1 or offset No. 2) is located too far away from the observer.

F. Bomb runs can be made inadvertently on offset aiming points with the offset mode switch improperly positioned in the out position because the offset warning light is not visible to the operator when he is using the ID-218.

IV. RECOMMENDATIONS:

A. All tactical B-47 aircraft be provided with the dual offset capability.

B. WADC investigate means to reduce the present allowable heading errors in the B-47 compass system, in order to eliminate bombing errors when using offset aiming, without increasing the complexity of the system.

C. Digital counter type offset distance indicators which incorporate directional information be provided on production dual offset units.

D. Detent positions be provided for the counter controls on production units to preclude accidental changes of the offset data.

E. The indicator dials and controls of offset No. 1 should be grouped apart from the corresponding dials and controls of offset No. 2 to help prevent mixing of offset information.

F. The offset selector switch (for selecting offset No. 1 or No. 2) be mounted on the ballistic unit or on the primary control unit.

G. Incorporate an offset No. 1 and No. 2 warning light within the ID-218 indicator near the face of the scope to indicate that offset aiming is being used.

H. Incorporate internal lighting in the new Ballistic Control Unit.

V. DISCUSSION:

A. The purpose of the dual offset unit is to increase the bombing accuracy of the K-System - radar operator combination. This is accomplished by providing three aiming points, the target and two offset aiming points, for the operator to use singly or in combination to identify the target more positively and thus bomb more accurately.

B. Offset aiming on returns other than the target is often required because the target itself may give a weak and indistinct radar return or may be lost in the clutter of other returns. The strength of a radar return varies with individual radar indicators as well as with the axis of attack. On some headings, the targets and the offset aiming points will give good strong returns while on other headings no return will be displayed on the radar indicator.

C. During bomb runs on complex targets only one offset point is presently available. Direct radar aiming must be used, with lesser accuracy, if the offset aiming point can not be identified or recognized as a radar return on the scope. When the dual offset capability is available the probability of having at least one identifiable offset return on the scope is increased with the attendant enhancement of bombing accuracy.

D. Offset distance is measured in north-south and east-west components from the target to the aiming point. The maximum offset distance for each component is 50,000 feet. Dial indicators and controls for offset No. 1 are contained on the C-3 Ballistic Control Unit. In the prototype units, the dials and controls for the second, offset No. 2, are identical with the ones on the ballistic unit but are contained in a separate "black box". In the prototype units tested, as well as in the standard C-3 Ballistic Control Unit, the offset dials are difficult to set and to read accurately, and observers have inserted erroneous distances and, in some cases, the reciprocal of the distance into the offset dials. In addition, accidental brushings of maps, pencils, and elbows against the offset controls may change the dial value without the observer being aware of it. These factors contribute needlessly to bombing errors and can be corrected by providing a detent position for the controls, and digital type counters which incorporate an offset direction indicator.

E. Seven evaluation missions have been flown using the prototype dual offset units. All radar operators commented favorably on the dual offset capability. A consensus of advantages and disadvantages of the dual offset system follows:

1. Advantages:

   a. Positive identification of the exact target is possible during the early part of the bomb run by using offset checks on two offset aiming points to refine the cross-hair position.

   b. Offset checking on two aiming points instills confidence in scope interpretation that the correct target is under the cross-hair. A lingering doubt always exists when only one offset point is available.

   c. An approximate method of checking compass error is provided by the dual offset system.

   d. Use of a small pinpoint offset aiming point is possible. This type of return is normally not used due to difficulty in identification and the possibility of it not showing as a return on all headings, ranges, and radar indicators.

   e. Selection of a memory point wind run offset aiming point and a pinpoint cross-hair positioning offset aiming point is possible.

   f. Bomb runs are more successful on strange targets because of the above advantages.

2. Disadvantages:

   a. Small changes are required in operator's bomb run procedures. During activation of the offset selector switch, the observer must leave the scope to reach the switch. Dark adaptability and target orientation are partially lost and 10-15 seconds are required for readjustment. This difficulty will not be experienced with the production dual offset unit.

   b. Possibility of errors due to the operator setting incorrect offset data into the system is increased due to having two sets of offset controls. This possibility becomes negligible if digital counters and direction indicators are incorporated in production models.

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c. Synchronization time is lost on the bomb run when the radar operator switches from one aiming point to another. Five (5) to ten (10) seconds are required for the cross-hairs to drive from one point to another and for the presentation to become stabilized again. The time is a function of the distance between aiming points.

d. The present dial system is difficult to read and set and the offset value can be changed by accidentally brushing against the controls. This is also true of the present single offset system.

F. Dual offset can enable the operator to check errors in the heading system if two readily identifiable offset points of known distances from a target are used. This is accomplished in the following manner:

1. Position cross-hairs on one offset point.

2. Synchronize on the aiming point by a memory point wind run operation.

3. Switch to the second offset point.

4. If the cross-hairs fall through the second aiming point, no heading error exists.

5. If the cross-hairs do not fall through the second offset point, an error exists. Direct aiming is necessary in such cases and a new wind run should be made.

The target can be used in conjunction with either or both offset points to make this check but generally a complex target is not sufficiently identifiable for this purpose.

G. The accuracy of offset bombing is a function of the input heading and the offset distance. If the offset distance is in error, the bomb will fall away from the target in the direction of the error. A heading error causes the bomb to fall away from the target in the direction of the heading error. This latter error is the most serious one. The Mechanics Maintenance Manual, Sperry Gyroscope publication No. 148048, indicates that a heading tolerance of + or - 1 1/2° maximum magnitude is allowed in the K-System heading information. A heading error does not affect direct runs but does affect an offset aiming release. The magnitude of the error is given by the mathematical expression 2 (Sin $\frac{\emptyset}{2}$) X offset distance, where $\emptyset$ is the heading error.

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Range error is obtained by multiplying the impact error by the Sine function of the angle between the offset vector and the release heading while deflection error is found by a similar operation on the cosine function of this angle. On one test mission the variation cam on the D-2 navigational control oscillated 4° from the correct magnetic variation during the bomb run. If a 2° heading error is assumed as a result of the oscillation, the impact error will be as follows:

$$\text{Impact error} = 2\left(\sin \frac{2^\circ}{2}\right)\left(12666^2 \not / 18343^2\right)^{\frac{1}{2}}$$

$$= 2 \times .0175 \times 21600$$

$$= 756 \text{ feet}$$

The bomb will strike the ground at some point on the periphery of the circle having the offset point as the center and the offset distance as the radius. In the case cited above, the correct heading was 13° and the incorrect, 15°. The bomb impact was clockwise 2° from the target on the offset circle. Reference Figure No. 1. The range error is S-710 and the deflection error is L-280 due to the 2° heading error. When reduced by this range and deflection error, the bomb score which was made on this run compares favorably with the average results obtained on this target.

H. Prototype dual offset units were tested in two 6th Air Division B-47B aircraft. In B-47B #51-2295, 306th Bomb Wing, the added unit was installed directly above the Polar Navigation Unit. In B-47B #51-2332 the unit was installed in the position normally used for the Loran radio. It was found that a small change in bomb run procedures was required to use the dual offset unit. The right hand which is used for tracking must be removed from the tracking handle to position the offset selector switch to change from one offset aiming point to the other. To do this, the operator in B-47B #51-2332 had to leave the radar indicator to reach the selector knob. Dark adaptability and target orientation were lost during this time and it takes 10-15 seconds to partially regain these. This difficulty should not be experienced with the production dual offset unit. In addition, the ballistic control box will be moved closer to the operator when its position is interchanged with the polar navigation unit in the reliablized observer's compartment (731st article and on plus retrofit of earlier units). This relocation will make all controls on the ballistic unit more accessible.

I. Many radar operators have made bomb runs inadvertently on an offset aiming point with the mode switch in the offset out position.

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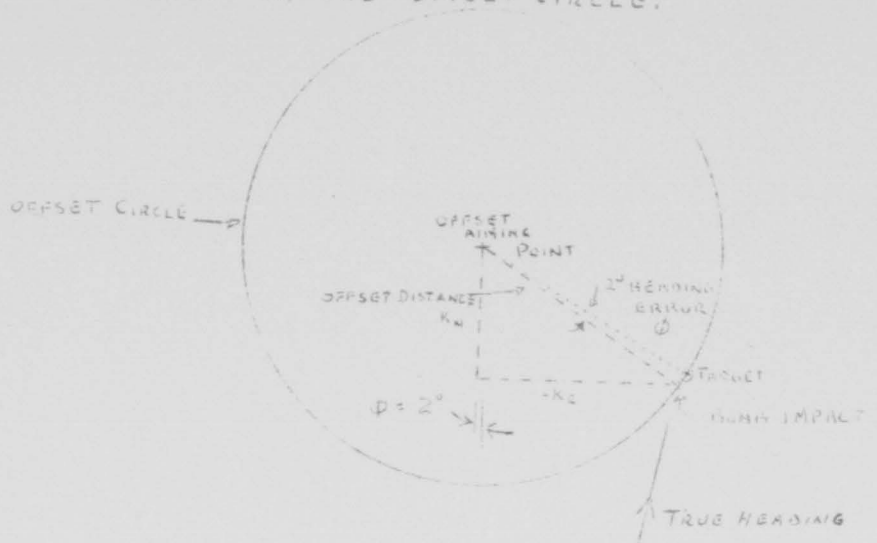
EFFECT OF HEADING ERROR ON OFFSET BOMBING

BOMB IMPACT WILL BE DISPLACED $\Phi°$ FROM THE TARGET ON THE OFFSET CIRCLE.



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EXPANDED VIEW

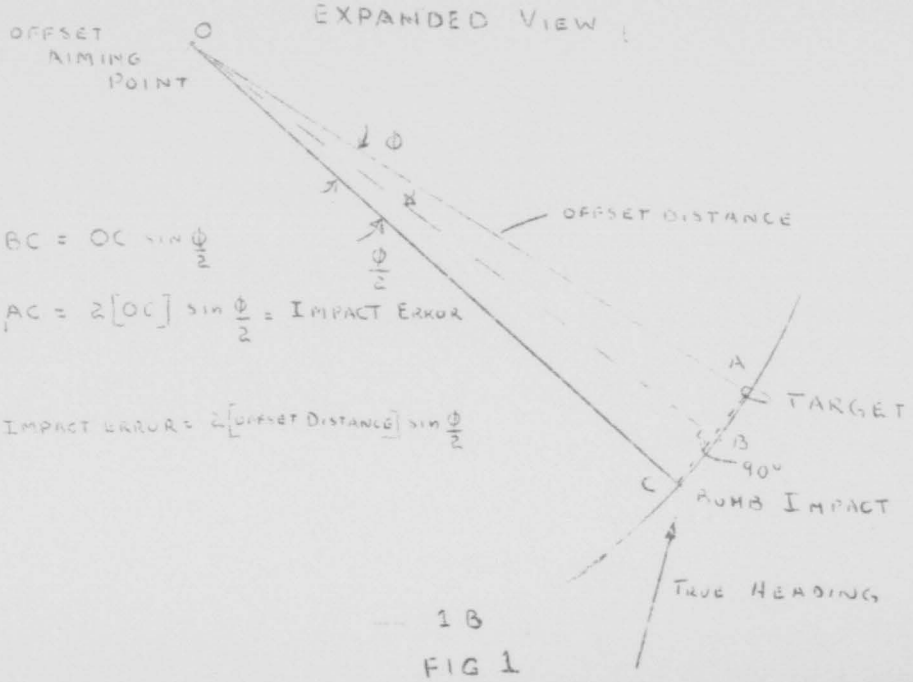

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FIG 1

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The results have been an error equal to offset distance. To help eliminate this type of bombing error, it seems advisable to incorporate an offset warning light or lights near the scope face. The range lights on the face of the scope could be used for this purpose. The 10 mile light can be associated with offset No. 1 and the 20 mile range light can be associated with offset No. 2 for this purpose. It would not be difficult to incorporate this feature in the existing circuitry to provide for this function.

J. It is understood that the new production models of the Ballistic Control Unit will contain the controls and counters for both offset No. 1 and No. 2 and that digital counter type dials have been provided. These counters are easier to read and set than the type of indicators on the present ballistic unit and on the prototype dual offset units.

1. The direction of the offset distance should be displayed in close proximity to the counter in order to help minimize incorrect settings.

2. The offset dials and counters for one offset point should be grouped apart from the other offset point for the same reason.

3. The counter controls must have a detent position to preclude accidental changes of offset distance. This is especially important when the new ballistic unit is incorporated as it protrudes over the observer's table 2-1/2" farther than the present ballistic unit.

K. The lighting of the Ballistic Control Unit is not satisfactory. The Navigator's table lamp must be twisted about to light the offset and ballistic indicators and this light is uneven and glaring. Internal lighting should be incorporated into the ballistic unit to provide satisfactory lighting.

L. Dual offset offers a promise of more accurate bombing on many types of targets. This promise will be largely latent till the

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deficiencies outlined in this report are corrected. It is recommended that WADC take expeditious action to eliminate these deficiencies.

E. T. Navertsen

E. T. NAVERTSEN
Captain, USAF
Project Engineer

APPROVED:

Thomas P. Savage

THOMAS P. SAVAGE
Major, USAF
Chief, O. E. S.

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EXHIBIT 21

B-47 MAINTENANCE TIPS

ISSUE NO. 1

1 October 1953

This is the first issue of B-47 Maintenance Tips, a semi-monthly publication of maintenance information about B-47's. Our purpose in these "Tips" is to keep everyone informed on maintenance problems that are under study, and the fixes for these problems as they are developed, as well as to provide a medium for the exchange of maintenance ideas and methods between all B-47 Wings. We particularly want you to tell us of any ideas or methods you have developed that you have found helpful in maintenance of your aircraft, and that you think might help make someone else's job easier and at the same time increase the efficiency and effectiveness of B-47 maintenance SAC-wide.

FUEL TANK LEAKS

Here is one of the maintenance problems we mentioned earlier. Unfortunately we cannot report any sure cure for fuel leaks. However, this is what is happening. Since a large proportion of the leaks are occurring at the interconnects at the -8 and -9 and at the -3 and -4 fuel cells, Boeing is conducting load studies of these fuel cell installations to try and find out what is happening to cause the interconnects to leak - whether the cells are shifting or are not supported well enough or whether the interconnects are at fault. It is hoped that these studies will prove that the final interconnector fix will solve our leakage problem.

This final interconnector fix consists of a new spool and spider which look good. An "O" ring has been placed in the face of the spool which meets with the tank. This should take care of small imperfections in the surface of the spool or tank interconnector face. The spool also has the spider bolt attached to it. This is a clevis type bolt which has enough universal action in its method of attachment that the bolt can't bind on the spider. The new spiders are six and eight legged, instead of three and four legged. The method of making the spiders has been changed, so we should have fewer cracked or warped spiders.

On or about 5 October 1953, teams from OCAMA and Boeing will bring the new T.O. and interconnectors to each of the Bomb Wings and will assist in installing the new spiders and spools on an attrition basis. When leaks occur, you'll replace the old interconnectors in the leaking cell with the new type. Unfortunately, you'll have to do the work, but the teams will show you how to install the new interconnects. Eventually all interconnects will be replaced, in the aircraft recycling program if not in the field.

S/Sgt Carlyle Van Patten, of the Aero Repair Branch of the 306th Field Maintenance Squadron at MacDill AFB, has been in the fuel leak game for some time. Some of the things he has learned may be of help to those of you who are just starting this business. Here's what he says:

Finding Leaks:

Self-Sealing Cells: Multiple bolt fittings, such as fuel boost pumps, hardly ever leak. Leaks usually (not always) occur at spiders. If a spider or a spool is not stuck to the tank all the way around, it is a good indication that there is a leak at that point. In self-sealing cells, if there is any activation, it will usually be found near spiders or seams.

Forward Main Tank: If the forward main tank leaks, retorque all the fittings in the -3 and -4 cells, but don't touch the bladder cells. Fill the forward main tank to 7500# (up to the top of the -4 cell) and let it stand overnight. If the tank still leaks, then recheck the -3 and -4 cells. If there is no leak, then fill the forward main tank full and check for leaks. If there is still evidence of leaks, then it is probably the bladder cells leaking. Feel under the bladder cells, and also in the "burned toast" around fittings, for stickiness or dampness which is an indication of a fuel leak. When checking the fuel

tank drains on the fuselage under the wings to see if fuel is leaking from the forward main tank. Fuel discovered leaking from the upper drain is not necessarily an indication that the bladder cells are leaking, because the -4 cell may also drain here.

Replacing Cells and Retorquing Fittings:

"Gas-Tite" will not work on tanks filled with JP-4. It forms a sticky gum, and does not allow a good seal. Spools and spiders should be absolutely clean and dry for best sealing.

When replacing cells, check around spool holes to see that the fiberglass cloth used to prevent chaffing is out of the way so that it doesn't get caught between the cell and the spool. This will cause a leak. If necessary, trim the glass cloth back so that it will be out of the way.

On the bomb bay tank, when tying the nylon cord near a fitting, such as the vent, tie the end of the cord back so that when the fitting is replaced the end of the cord cannot fall between the fitting and the tank and cause a leak. A tip to make threading the nylon cord through holes in stringers easier is to pull in the outer covering back from the inner strands about two inches, then cut off the inner strands. Stick a piece of safety wire through the outer covering, about 1/4" from the end, and wrap the safety wire tightly around the outer covering. Three or four wraps are enough. Leave a 3" or 4" piece of safety wire sticking straight out from the end of the cord, to act as a needle to help thread the cord. When through, be sure to cut the safety wire off the cord.

On certain fittings where it is impossible to use a torque wrench, tighten the bolts until "cold flow" or a slight bulging of the rubber of the cell right around the fitting is noted. This gives just about the proper torque. This same procedure can also be used as a check on the torque applied to bolts on the large interconnects between the bladder cells of the forward main tank. Here the self locking nuts used may give erroneous torque indications, and this procedure may be used as a double check on the torque wrench.

When installing purging fittings, it is possible to catch a piece of rubber from the cell in the threads of the nut. This will give an erroneous torque reading, so watch out for this. Retorque purge fittings when retorquing a cell, as they sometimes work loose.

ALTERNATORS

The problem of alternator failure in flight caused by moisture from clouds or rain has gotten a lot of attention. As a result, two fixes for this problem have been offered, one by Boeing and the other by Westinghouse. They both have been flight tested. The Boeing fix, known as ECP 1407, consists of putting a baffle, which fits tightly around the alternator, in the nose dome, and uses a cap with a slot in the bottom of it as an air inlet for the alternator, instead of the present air inlet duct. This makes a pressure chamber out of the front end of the nose dome, which slows down the speed of the air entering the alternator, and forces the air to make a right angle bend before entering the alternator. The idea is that the slower speed air, which now cannot enter straight into the alternator, will drop its moisture before it gets in the alternator. The flight tests showed that this water separator was effective only at lower altitudes. Clouds and moisture encountered at high altitudes still cause failures of Boeing ECP 1407 water separator equipped alternators.

The Westinghouse proposal is known as the "window" or "window bracket" alternator. This is a modified alternator which requires the same baffles in the nose dome as the Boeing fix. However the air does not enter the front of the alternator as before, but enters behind the brushes through windows cut in the frame of the alternator. This is to keep moisture off the brushes, slip rings and commutator where it does its damage. The old air entry in the front of the alternator is covered by a solid cap. So far during the flight tests this type of alternator has not failed under any conditions.

The final fix, therefore, is the Westinghouse window alternator. The part number of this alternator is A35A9110. If present production plans are not changed, everyone should be equipped with these alternators by early next year. Meanwhile, the Boeing ECP 1407 water separator kits are being delivered to the field. When you receive these kits, you should go ahead and install them, because they have to be installed before you can use the window alternators. Also, they will help prevent alternator failures until you get the window alternators. Once the Boeing kit is installed, the only big job in changing over to the window alternators is the actual alternator change.

For more detailed information about the two water separator installations, look for Specific Item Report Number 112, to be published by this Section in the near future.

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EXHIBIT 21D

B-47 MAINTENANCE TIPS

ISSUE NO. 2 [illegible] 15 October 1953

ANTI-ICING LINE FLAPPER VALVES

306th Bomb Wing message MDCTD-C-104 reports finding a condition caused by failure of an inboard engine anti-icing line flapper valve that may have troubled other people also. It states that on a number of occasions pilots have noticed that when all throttles were advanced together on B-47B aircraft, one of the inboard -23 or -25 engines would indicate a compressor stall or a power hang-up at 70% RPM. This was not accompanied by an EGT rise, normal during a compressor stall. On ground inspection and run-up, nothing was ever found wrong with the offending engine. A recent inspection and run-up of engines revealed the following: No. 5 engine would accelerate to full power when advanced alone or with any combination of engines except the No. 4 engine. When the No. 4 and No. 5 throttles were advanced together, the No. 5 engine would stall or hang-up at 70% RPM while No. 4 reached 100%. Inspection of the anti-icing line flapper valves revealed that the No. 5 flapper valve was broken. Pressure from the No. 4 engine was bleeding into No. 5, affecting the power output or causing the stall on the No. 5 engine. Replacing the broken flapper valve corrected this condition.

It is felt that this could be a safety of flight condition during touch and go landings, and the 306th Wing recommends inspection of anti-icing line flapper valves on the special 50 hour postflight inspections.

The 22nd Bomb Wing "Maintenance Information Bulletin" of 17 July 1953 says, "Broken flapper valves can be detected by tapping the combustion chambers lightly and listening for movement inside the chambers. It is recommended that postflight crews adopt this method."

M/Sgt Bauman, NCOIC of the 306th Field Maintenance Squadron Jet Engine Minor Repair, says that from his experience he would expect that flapper valves, or parts of them, might lodge in the combustion chambers occasionally. More often, however, they will lodge in the mid-frame section of the engine and will not get into the combustion chambers. If they stay in the mid-frame section long enough, they may crystallize, break up, and then be carried through the combustion chamber to the nozzle diaphragm and out through the turbine. This, of course, causes much damage in this section of the engine. Sgt Bauman concludes that the only positive way to check for broken flapper valves is to remove the upper end of the flexible portion of the anti-icing line leading from the engine bleed port, and look and see if the flapper valve is still intact. If it is gone and you don't find it by tapping the combustion chambers as the 22nd Bomb Wing suggests, remove combustion cans No. 3 and No. 4, or No. 5 and No. 6 depending upon which side of the engine the bleed port is on, and feel forward in the mid-frame section of the engine. The flapper valve will usually be found here. If it is not found, then check the nozzle diaphragm and the turbine wheel for damage, because the flapper valve probably went on out of the engine through here.

It probably would be advisable for postflight crews to adopt the 22nd Bomb Wing procedure, and then during special 50 hour postflights, to physically inspect the flapper valve itself.

An improved flapper valve, Boeing Part No. 6-50177, is available. This new flapper valve requires new pivot bearings, Boeing Part No. 6-50176. Two pivot bearings are required with each flapper valve. You should use this flapper valve when replacing broken valves, and you should change all your flapper valves to this new type as soon as convenient, in order to cut down on flapper valve failures and resulting engine damage.

INVERTERS

Inverters seem to require excessive maintenance time, as indicated by the number of times they must be adjusted, the numerous malfunctions which occur, and their relatively short service life. The B-47 OES at MacDill conducted service tests of inverters which showed that a few things can be done to improve

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[illegible] operation.

Records kept during these tests show that at least half of the total operating time of either the main or secondary inverters in B-47B aircraft is ground operating time. In other words, for every [illegible] hours of flying time the main and secondary inverters operate at least 20 hours due to preflights, checks of other equipment, and, in unusual cases, K-System maintenance. This is probably also true of the main and A-5 inverters on B-47E's. If this ground time can be cut down, the inverters will last for a greater number of flying hours. Therefore, if you use a source of power other than the aircraft inverters whenever possible, such as a [illegible] when working on the K-System, you can reduce your inverter maintenance [illegible] and prolong the life of your aircraft inverters. Also, don't run the inverters longer than necessary during preflights or when you are working on the aircraft.

Operation of an inverter generates a large amount of heat, and passing cool air through and around the inverter is the only way of dissipating this heat. Insufficient cooling may shorten the inverter's life by causing bearing failure, rapid brush wear, or the destruction of [illegible] sensitive parts such as insulation and rubber shock mounts. At present there is no outside air inlet for the main inverter or the K-System inverter. The only air available for cooling these inverters is the air trapped in the lower radar compartment. This air is recirculated through the inverters and in a relatively short time, under ground operating conditions, becomes too hot to provide adequate cooling. The secondary and spare inverters on B-47B's (secondary and A-5 on B-47E's) have a blast cooling duct which provides adequate air during flight if the canvas cooling sleeves are properly installed on the ends of the inverters. But during ground operation little air gets into these inverters. Therefore, we strongly recommend that in order to increase the life of your inverters you open the lower radar compartment door and take the panel off the secondary and spare (or A-5) inverter compartment whenever possible during ground operation of the inverters, and especially if they are to be run over 20 minutes. Also check the canvas cooling sleeves once in a while for proper installation on both ends of the secondary and spare (or A-5) inverters. Give your inverters a chance to keep cool!

__Eclipse Pioneer (Bendix) Inverters:__

These inverters (Stock No. 4213-[illegible]-1A) have proved during service test to be very satisfactory, but only if they are equipped with Eclipse Pioneer high altitude brushes, Part No. 51 (Stock No. 4213-865256). These brushes may be identified by the number "51" imprinted on [illegible]. Inverters [illegible] and the new brushes installed during production. Inverters with serial numbers below [illegible] should be checked before installation to see if the brushes are imprinted with the number "51". If they are not, the new high altitude brushes should be installed. If these brushes are not already in stock, they should be placed on order in compliance with [illegible] message [illegible] which quotes [illegible] message [illegible], dated [illegible] August 1953. Don't install these inverters without the new brushes unless you absolutely have to since they won't last more than a few hours.

Eclipse Pioneer inverters will not fit in the spare position on B-47B's or the secondary position on B-47E's. In the secondary position of B-47B's or A-5 position of B-47E's the present cooling sleeves probably will not fit the inverters. Sleeves should be locally manufactured to fit these inverters if they are to be used in these positions. Or, as an interim measure until sleeves can be made, the old sleeves should at least be rolled up out of the way--like rolling up your pants' leg--leaving the opening to the cooling duct open. Don't just push the sleeves out of the way thereby closing off the air opening, since the inverters will overheat, go into overvoltage, and be turned off by the changeover relay.

WINDSHIELD WIPERS

Don't let that windshield wiper be an orphan child. When it is needed, it is needed badly. Although the windshield wiper installation on the B-47 is not yet satisfactory, its effectiveness can be greatly increased by careful and proper adjustment. During flight as the airspeed increases, even a properly adjusted windshield wiper will rise completely off the windshield at about 200 knots IAS. Improperly adjusted wipers will rise off at even lower airspeeds. Therefore, the total force of the blade upon the windshield is very important. The proper static force setting on the ground is 5 to 7½ pounds. This can be measured by means of an ordinary fish weighing scale hooked under the wiper arm where it attaches to the wiper blade, noting the pull required to just raise the blade from the windshield. (Scales are usually carried in dock supply.) The trick is to be sure to operate the wiper after initial adjustment, then check it again after operation, since frequently the adjustment will change several pounds due to equalization resulting from operation. Be sure to pour water on the windshield while operating. This test should always be accomplished after repositioning the blade.

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EXHIBIT 22

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, La.

21 September, 1953

2AFMSH 400

SUBJECT: Supply Policy for Local Purchase Expendable Supplies

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

1. A Strategic Air Command Regulation covering the "Local Purchase Store" will be distributed approximately 1 October 1953 for command wide implementation which must be completed by 1 January 1954. This regulation is based on a basic policy change received from Headquarters USAF and established a simplified monetary accounting system for local purchase (of) expendable type supplies. One of the major benefits to be drived from this simplified system is the elimination of all stock record cards for this type of supplies and the multitude of paper work and postings currently required.

2. Pending receipt of subject regulation, the following action will immediately be taken by your headquarters:

a. Stock levels on all locally purchased expendable items will be established to effect a turnover rate of at least six (6) items per year. Levels on this category will average as close to thirty (30) days as possible; however, careful consideration will be given to the economical quantity for individual purchases. In view of the low stock objective, it is imperative that store managers compute requirements and place them with purchasing and contracting officers sufficiently in advance to allow 45 to 60 days pipeline time.

b. Strategic Air Command Regulation 67-7 and Strategic Air Command Technical Pamphlet 67-2 will be held in abeyance pending further information from this headquarters. Subject publications may be used as a guide if desired.

c. Base Supply Officers will survey physical facilities available to them and prepare tentative plans for the locations of the various department of the "Local Purchase Store."

3. Upon receipt of the SAC Regulation, a progressive plan will be prepared by each Base Supply Officer to insure that all departments of the local purchase store are in operation by 1 January 1954. Reference is made to Inclosure I which outlines the proposed arrangement of classes for each department in the local purchase store.

Hq 2AF, Barksdale AFB, La., 2AFMSH 400, Subj: Sup Policy for Local Purchase Expendable Supplies

4. The following AFSC's are suggested as sources for the specific jobs in the local purchase store:

Store Manager - 6424, 64100, 64175
Department Manager - 64175, 64152, 64174

Careful consideration will be given to selection of qualified personnel for store manager and department managers. The simplified system prescribed for local purchase expendable supplies necessitates the use of managers who are capable of exercising sound judgement in determination of requirements, operation of stores, etc.

5. Difficulties encountered in establishing this program and action taken by your headquarters to comply with paragraphs 2a, b, c, and 3 of this correspondence will be outlined and returned to this headquarters by indorsement not later than 15 October 1953.

BY ORDER OF THE COMMANDER:

R. E. STAUFFER
CWO, USAF
Asst Adjutant

1 Incl
Functional Diagram

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 224

Bsc Ltr fr Hq 2d AF, Barksdale AFB, La., file 2AFMSH 400, dtd 21 Sep 53, subj: Supply Policy for Local Purchase Expendable Supplies.

MCDMAC 400 (21 Sep 53) 1st Ind 13 October 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Attn: 2AFMSH, Barksdale Air Force Base, Louisiana

1. Reference paragraph 2 a, all local purchase items stock levels have been reduced to a 60-day level as required by previous correspondence. Further reductions are presently being accomplished in order to reduce the levels to a 30-day stock objective.

2. Reference paragraph 2 b., Strategic Air Command Regulation 67-7 and Strategic Air Command Technical Pamphlet 67-2 is being held in abeyance.

3. Reference paragraph 2 c, physical facilities available at MacDill Air Force Base are limited; however, present plans are to use the buildings in which the larger portion of local purchase items are located. The R & U type supplies are in one building near the Air Installations facilities and the Automotive supplies are in another building seperated from the rest of Base Supply. Upon completion of the move to the new warehouse, Base Supply will be in a better position to segregate the property in those two locations.

4. Reference paragraph 3, Strategic Air Command Regulation on the local purchase store has not been received; however, present plans are to place all of the items in Department A and Department B as shown on inclosure 1 into effect first and as experience is gained, the other departments will be added. Personnel are presently being selected and are being presented with all information and plans available in order that they will be as familiar, as anyone on the base, with the local purchase store as possible.

5. Reference paragraph 5, the first difficulty which will be encountered by this base is the large workload required in trying to move into a new warehouse and at the same time establish thelocal purchase store in order to meet deadlines required for both operations at the same time. Since the Strategic Air Command Regulation has not been received, this base is already behind in establishment of the country store.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

1 Incl
w/d

"A CERTIFIED TRUE COPY"
E. A. JOHNSON
2nd Lt, USAF

CONFIDENTIAL EXHIBIT 73

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDCSU 729 8 October, 1953

SUBJECT: Survey of Vulnerability to Biological Warfare Agents.

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. General.

a. In compliance with letter, Headquarters Second Air Force, Barksdale Air Force Base, Louisiana, dated 11 September, 1953, subject as above, a survey was completed on 6 October 1953 to determine the vulnerability of MacDill Air Force Base, Florida, to overt and/or covert attack by bilological warfare agents.

b. The scope of the survey includes cognizance of known methods of bidogical contamination by means of air dispersal, water dispersal, and food dispersal, and local public health practices and preventive medicine measures currently employed in the detection of and protection against such an attack.

c. In many cases, the first positive evidence of biological warfare attack is likely to be the occurrence and diagnosis of actual cases of disease caused by the agent. Prompt diagnosis of such diseases would be imperative. For this purpose, existing epidemiological service should be closely coordinated with official local and State health agencies.

d. This survey was fully coordinated with the Security Control Agency of this base.

2. Report of Survey.

a. Air Dispersal.

(1) Air Contamination: Contamination of the air with biological warfare agents appears possible. Purposeful contamination of the air of buildings on the base and mass contamination of the area by creation of clouds of pathogenic organisms by means of enemy munitions appears possible.

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MCDCSU 729 Subj: Survey of Vulnerability to Biological Warfare Agents.

(2) Air Conditioning Systems: A large number of strategic buildings on the base are equipped with standard mechanical air conditioning units of approved design. The intakes and exhausts are properly located and consist of screened open ducts with adequate filters. Dust is reduced to a minimum due to the high humidity of the atmosphere in this area.

(3) Air Samplings: Air sampling devices, sample examinations, and plate counts are not employed to determine the purity of the air in buildings. Equipment and high specialized technicians necessary to conduct such a program are not available at this base.

(4) Air Disinfection: Adequate filtration of the air in a large number of strategic buildings on the base is provided. Other air disinfection methods, such as ultra-violet radiation, are not provided for use.

(5) Pertinent Weather Conditions. (Weather Chart - U.S. Weather Bureau - 10 year averages).

Month	Wind Direction	Wind Velocity	Fog	Rain
Jan	N-E	10.3	≠	0
Feb	N-E	11.4	≠	0
Mar	E-S	11.0	≠	0
Apr	N-E	11.0	0	0
May	NE-SE	9.8	0	0
Jun	NE-SE	8.9	0	≠
Jul	E-S	7.8	0	≠
Aug	NE-SE	7.9	0	≠
Sept	NE-SE	9.4	0	≠
Oct	N-E	10.1	0	≠
Nov	N-E	9.8	0	≠
Dec	N-E	9.8	≠	0

b. Water Dispersal. The water supply system of the base affords a means to personnel who could employ biological warfare agents. Purposeful contamination of the base water supply appears possible by persons operating from homes located in the base civilian housing area by employing mechanical means to neutralize chlorine residuals in the water through introduction of concentrated solutions of sodium thiosulfate and biological agents into the system under pressure or by employing the principle of back siphonage.

MCDCSU 729 Subj: Survey of Vulnerability to Biological Warfare Agents.

(1) Source: The water supply for MacDill Air Force Base is procured from the municipal supply of the City of Tampa, Florida, and is under the sanitary supervision, from source to consumer, by the Florida State Board of Health, Tampa, Florida. Chlorine determinations of the water at the City Plant are made hourly and bacteriological analyses made daily at the Plant laboratory. Loyalty statements have been signed by all employes of the City Waterworks.

(2) Base Water Supply.

(a) Water from the City of Tampa enters the reservation through two (2) twelve (12) inch lines into the base water distribution system. One (1) additional sixteen (16) inch line direct to the base is planned for the near future and will provide an additional alternate water supply from a 2,000,000-gallon elevated storage reservoir to be constructed in close proximity to the base. Three (3) covered ground storage reservoirs - two (2) 350,000-gallon capacity each and one (1) 500,000-gallon capacity - are provided for water storage on the base. A 500,000-gallon elevated storage reservoir, located on the base, floats on the system. In addition, water from the two (2) swimming pools on the base - one (1) 320,000 gallon capacity and one (1) 200,000-gallon capacity- can be used in case of emergency. An alternate water supply, other than storage located on the base, consists of the municipal supply of the City of Tampa, including two (2) 1 1/2 million-gallon capacity each elevated storagge reservoirs located in close proximity to the base.

(b) The ground storage reservoirs located on the base are enclosed by fencing as a security measure. Small screened ventilator ducts located on the upper side surfaces of the storage reservoirs will minimize possible air contamination. Storage reservoirs are inspected periodically to determine the condition of the water and each reservoir may be pumped individually as required. Reservoirs are located at strategic points in the system.

(c) Chemical treatment of the water of the base is applied by four (4) gas type chlorinating units. Chlorine residual determinations of the water are made daily at the pump house, which is located on the base, from the main line and at taps located in several diversified points in the system. An average of 0.4 ppm chlorine residual is maintained in the system continuously. One (1) standby gas type chlorinating unit, one (1) pre-table hypo-chlorinating unit, and cylinder chlorine gas or calcium hypo-chlorite are available for use in event of an emergency or heavy contamination.

(d) Samples of water from various points in the system and from the main line servicing the base are submitted three times each week to the Hospital Laboratory for bacteriological analyses. Results of laboratory analyses are submitted to the Preventive Medicine Section for evaluation and file. Daily records of all chlorine residual determinations are filed also in this Section. Chemical analyses of the base water supply is conducted semi-annually by the U. S. Geodetic Survey located in Atlanta, Georgia, and reports evaluated and filed in the preventive Medicine Section.

(e) Two (2) gasoline operated standby units of 600 gallons per minute each are located in the main pump house of the base to insure continuous water pumping operation.

(f) Cross-connections in the water system revealed by previous investigations have been corrected.

(g) Employes of the base waterworks have signed loyalty statements and are well trained in the fundamental principles of water plant operation.

c. Food Dispersal. Purposeful biological contamination of foods consumed on the base appears possible by persons employing biological warfare agents. Defense against such contamination must be based primarily on the loyalty of persons concerned in the handling of such foods from the source of origin to the ultimate consumer, and preventing access to foods by persons who could employ biological warfare agents.

(1) Supply.

(a) Procurement: Perishable subsistence of animal origin and non-animal origin, except milk, ice cream, cream and cottage cheese, is procured for the vase by the Sales Commissary Officer through the Quartermaster Market Center, Columbia, South Carolina, from Army and Air Force approved sources of supply. Local subsistence supplies, including foods of animal origin, milk and dairy products, water foods, fresh fruits and vegetables, and other foods of non-animal origin, are procured from sources approved by the MacDill Base Veterinary Service.

(b) Initial Examination: All foods of animal origin are initially procured from establishments operating under Federal supervision. Point of origin inspection is made of these products in the area of their procurement by the Air Force and/or Army Veterinary Services. Foods procured locally originate in establishments that have passed a sanitary inspection by the Base Veterinary Service.

(c) Frequency and Extent of Examinations: Inspection of foods on receipt at the base are made by the Base Veterinary Service and such foods are under continuous sanitary supervision until consumed. Daily sanitary inspection is conducted on the food when received, in storage, at issue, and in food service facilities. Milk plants supplying the base with dairy products are inspected weekly by the Veterinary Service and weekly by the Florida State Board of Health Laboratory for chemical and bateriological analyses. Deviations from Federal Specification Milk Standards are reported to persons concerned and corrections obtained.

(d) Procedure for Testing Suspected Foods: Foods that are suspected are withheld from issue and samples for laboratory analyses are submitted to the Third Army Area Medical Laboratory, Fort McPherson, Georgia; MacDill Air Force Base Hospital Laboratory, and Florida State Board of Health Laboratory, Tampa, Florida. Disposition of suspected food is based on laboratory findings.

(2) Storage.

(a) Perishable food for the base is received and stored in the base cold storage warehouse. Small amounts of perishables are stored in mechanical refrigeration units located in various base food service facilities. Non-perishable food is received and store at the Base Dry Storage Warehouses and the Sales Commissary and in smaller amounts in other base food service facilities.

(b) Frequency and Extent of Re-examination During Storage: All perishable foods are visually examined daily. This check inspection is made on food in storage, at issue and at various other food service facilities. Perishable subsistence from the Base Cold Storage Warehouse to food service facilities is made by covered truck and loaded under the supervision of the Veterinary Service. Non-perishable foods are checked on arrival from outside sources and weekly while in storage, and at time of issue. Milk and milk products, except cheese and butter, are checked daily upon receipt for temperature, volume and weight by the Veterinary Service. Bacteriological sampling of these products is accomplished once per week prior to storage. None of these products are stored over twenty-four (24) hours.

(c) Average Time of Storage: Perishable subsistence is stored in the Base Cold Storage Warehouse for various prescribed lengths of time. Chilled meats, such as beef carcass chilled, are stored for an average of ten (10) to fifteen (15) days. Frozen meats and meat products are stored from thirty (30) days to six (6) months at 5°F. Fresh fruits and vegetables are stored from twenty-four (24) to seventy-two (72) hours. Milk and milk products (except cheese and butter) are consumed on day of delivery. Non-perishable subsistence is kept under surveillance so that it does not remain in storage over the established safety storage period.

(d) Rotation Procedure for Food on Hand: All foods are kept under constant surveillance to insure that they are rotated according to age in storage and established safety storage periods. Forced issues are recommended when necessary.

(3) Distribution.

(a) Frequency of Examination: All foods are given a close inspection daily at issue, in ration breakdown, in central meat cutting plant, and in dining halls and other food service facilities. Check meals are consumed daily by the Base Veterinarian at various dining halls.

(b) Time Between Storage and Utilization: The time element involved between storage and utilization of food is not in excess of recommended practices.

(c) Qualified Personnel Requirements: All personnel assigned and engaged in inspection of food are well qualified in their specialties. Civilian operators of the Cold Storage Plant have signed loyalty statements.

d. Personnel.

(1) Immunization and Epidemiological Procedures in Effect.

(a) An immunization program, in accordance with Air Force directives, is carried out by the Medical Service for all Air Forde personnel on this base. Immunization Registers are screened monthly by each base organization to determine that all immunizations (cholera, typhus, yellow fever, typhoid, smallpox and tetanus) are maintained up to date. All cases of acute communicable disease are investigated, epidemiological data obtained, and control measures initiated.

(2) Diagnosis, Quarantine and Treatment Facilities.

(a) A well equipped laboratory with trained technicians is available at the Base Hospital. The laboratory is proficient in performing the following procedures: Hematology, Bacteriology, Mycology, Parasitology, Biochemistry, Serology and Water Analyses (chemical and bacteriological).

(b) A contagious ward can be set up at the Base Hospital. Buildings and areas on the base can be made available for group quarantine.

(c) A 150-bed base hospital, well staffed, is available for medical treatment. An additional 100 beds are available for use on a twenty-four (24) hour notice).

(3) Preventive Equipment.

(a) Gas Masks: Gas masks are available for each airman on the base. All base personnel have received orientation in their use.

(b) Protective Clothing: No protective clothing is available on the base.

(c) Decontamination: A large steam jacket pressure sterilizer for sterilization of mattresses and clothing in volume is available for use on the base.

(4) Education and Training Measures: Basic sanitation and personal hygiene is stressed to all base personnel. This constitutes a continuous training program.

3. Comments.

a. The problems presented in devising counter methods to meet bacteriological warfare are so great and so numerous that it is felt no solution or program should be formulated until a conference is held with all persons who are primarily responsible, either in a command or staff capacity.

b. It is believed that the majority of these persons have insufficient specific knowledge on this subject to make recommendations or to prepare programs until they have had further indoctrination or training on this matter.

MCDCSU 729 Subj: Survey of Vulnerability to Biological Warfare Agents.

c. It is difficult to conceive that any comprehensive program offering reasonable protection can be wholly practical with present resources, personnel, and facilities.

FOR THE COMMANDER:

B. A. JOHNSON
2d Lt, USAF
Assistant Adjutant

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

6AD-C-7532
(Copy 7 of 7 copies)

EXHIBIT 24

HEADQUARTERS
SECOND AIR FORCE
Barksdale Air Force Base, Louisiana

2AFPB 220 9 October, 1953

SUBJECT: Status of Noncommissioned Officers

TO: Commander
6th Air Division
MacDill Air Force Base
Florida

1. The restoration of the Noncommissioned Officer to his proper place in the command echelon, and development of methods to increase his managerial ability and prestige, is the objective of this and higher headquarters. This current program is receiving Air Force wide attention, and all bases of this command have, no doubt, initiated new policies and procedures to raise the quality of our airmen leaders.

2. To provide this and higher headquarters with a progress report, it is requested that you inform this headquarters of the actions taken or initiated by you to increase the ability and status of the Noncommissioned Officers assigned. Comments on such items as housing, messing, and club privileges should be covered in this reply and any additional items which have proven to be beneficial.

3. Request your comments be forwarded to this headquarters not later than 28 October 1953.

BY ORDER OF THE COMMANDER:

KENNETH O. SANBORN
Colonel, USAF
Chief of Staff

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 24B

Hq 2AF, Barksdale AFB, La, 2AFPB 220, Status of Noncommissioned Officers, 9 Oct 53

MCDCCO 220 (9 Oct 53) 1st Ind 27 October, 1953

HEADQUARTERS 6TH AIR DIVISION, MacDill Air Force Base, Florida

TO: Commander, Second Air Force, Barksdale Air Force Base, Louisiana

1. In compliance with paragraph 3 of basic correspondence, the following comments are submitted.

2. To date no formal program of noncommissioned officer status restoration has been instituted by this headquarters. However, the problem has been recognized and many restorative actions have been taken. The actions taken thus far are:

a. Use of noncommissioned officers in officers positions. Highly qualified noncommissioned officers are bing utilized to fill some junior officer positions in this command. Among these positions are: Base Education Officer and Personnel Officer positions in some squadrons. In addition, some positions of importance are being filled by noncommissioned officers with minimum officer supervision. For example, a major is assigned as Base Transportation Officer and is also the Motor Vehicle Squadron Commander. His squadron duties require most of his time so a master sergeant is in charge of Base Transportation with minimum supervision by the major.

b. Payment by rank. Squadrons of the wings and air base group of the 6th Air Division are generally paying alphabetically by rank at present. It is anticipated that by 31 January, all squadrons will pay in this manner.

c. Club privileges. The privileges of the Noncommissioned Officers' Open Mess at this station are extended to noncommissioned officers only. The activities compare favorable with those of the Officers' Open Mess. In the past several months great command stress has been directed toward the improvement of facilities and the amount and quality of the various activities provided for noncommissioned officers. Noncommissioned officer interest andparticipation has increased tremendously since the inception of this program. Work is underway at present on a patio in connection with the NCO Open Mess. A feature of the patio will be a barbecue pit. Complete air-conditioning of the mess is scheduled for completion by Spring of 1954. The NCO Mess program is rounded out by the activities of a strong NCO Wives Club.

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Hq 2AF, Barksdale AFB, La, 2AFPE 220, Status of Noncommissioned Officers, 9 Oct 53.

d. Messing facilities. Two squadron size mess halls are set aside for the use of noncommissioned officers alone. The USAF Hospital, which is located at such a distance from the NCO mess halls as to prohibit attendance, has set up special tables for assigned noncommissioned officers in the airman mess. Noncommissioned officer mess halls provide table cloths, china plates, and other niceties for utilizing personnel.

e. Membership on boards. Noncommissioned officer prestige is enhanced by inclusion of master and technical sergeants on squadron promotion boards, management councils, and character guidance and morale and welfare councils.

f. Management and leadership training. An evaluation of the 40-hour management course was made to determine the amount of leadership training included in the course. It was found that by adding two hours to the standard 40-hour course, all leadership requirements formerly covered in a separate 16-hour leadership course could be met. The present 42-hour course is composed of officers - 40%, noncommissioned officers - 40%, and civilians - 20%. The combination of management and leadership courses has served to eliminate 14 hours of non-productive time per student due to application of leadership principles taught in the two courses and, in addition, has provided a noncommissioned officer prestige factor because of his inclusion with commissioned officers in the 42-hour course.

g. Manager Identification. The Second Air Force manager utilization program has increased the prestige of identified noncommissioned officer managers by their inclusion with officers and top ranking civilians at monthly managers' luncheons at the Officers' Open Mess. Managers' reports of activity (MCD-U1 Report) have proved to the noncommissioned officer manager that his place in the command echelon is important. This report has provided an instrument whereby he can show his improvements and successes in management to personnel in the command chain terminating at the base commander.

h. Housing. A 37-man BOQ has been set aside for the use of noncommissioned officers presently quartered in airmen's barracks. Facilities are the same as provided married officers living in BOQ's, i.e., rooms will be occupied by two individuals with the following furniture provided:

2 each 3/4 beds
1 each desk
2 each chairs, quarters type
2 each bureaus
1 each desk lamp

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Hq 2AF, Barksdale AFB, La, 2AFPB 220, Status of Noncommissioned Officers, 9 Oct 53

There are large closets in each room and central latrine and shower facilities on each floor. In the very near future 3/4 inner-spring Hollywood-type beds will be provided. A charge of $8.00 per month will be required to provide maid and linen service. Vacancies will be filled in order of rank and will be limited to master and technical sergeants. The one BOQ presently allocated will not provide a sufficient number of rooms for all single noncommissioned officers; consequently a survey is being made to determine the number of buildings on the station that can be made available to house master and technical sergeants separately. Single rooms in airmen's barracks will be used to house staff sergeants and any technical sergeants that cannot be provided separate facilities. Transient noncommissioned officers are, and have been, provided with BOQ-type housing facilities at this station, including separate rooms and maid service.

3. To provide a firm program for the restoration of the noncommissioned officer to his proper place in the command echelon, the following steps are being taken:

a. The formation of three committees and the appointment of a program coordination officer.

(1) A committee of officers of the wings, the air base group and tenant units will be appointed by the Commander, 6th Air Division. The senior member will be chairman.

(2) A committee of noncommissioned officers will be appointed by the sergeant majors of the wings and the air base group. Noncommissioned officers from the tenant units will be included. The senior member will be chairman.

(3) A committee composed of the Commanders of 6th Air Division, 305th Bomb Wing, 306th Bomb Wing, 809th Air Base Group, and the program coordination officer will evaluate the recommendations of the officers' and noncommissioned officers' committees and promulgate policies to be instituted.

(4) A program coordination officer will be appointed by the Commander, 6th Air Division.

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Hq 2AF, Barksdale AFB, La, 2AFPB 220, Status of Noncommissioned Officers, 9 Oct 53

b. Initial meetings of the officers' and noncommissioned officers' committees will be called by the general program coordination officer who will inform them of the general outline of the program. Subsequent meetings will be called by the respective chairman. The progfam coordination officer will attend meetings by request of committee chairmen. The officers' and noncommissioned officers' committees will be required to forward their recommendations to the commanders' committee one month after the initial meeting. The initial policies promulgated by the commanders' committee will be placed in effect on or before 1 January 1954.

c. The following subjects will be provided the committees for evaluation to augment their recommendations:

(1) Utilization of AFR 39-30, dated 1 November, 1953.

(2) Elimination of assignment of noncommissioned officers to menial tasks.

(3) Support of noncommissioned officers by commissioned officers.

(4) Participation of noncommissioned officers in drills and ceremonies.

(5) Control of assignment of noncommissioned officers to duties commensurate with rank.

(6) Indoctrination of officers as to proper treatment and utilization of noncommissioned officers.

(7) Authority commensurate with responsibilities.

(8) Elimination of reference to airman first class and airman second class as sergeant and corporal.

(9) Monthly NCO Call by wing and air base group commanders.

(10) Elimination of the practice of officers calling noncommissioned officers by their first names or their last names without the prefix of "sergeant."

(11) Use of "ID" cards instead of Class "A" passes.

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Hq 2AF, Barksdale AFB, La, 2AFPE 220, Status of Noncommissioned Officers, 9 Oct 53

(12) Certifications of noncommissioned officers as to clothing in their possession, attendance at required lectures, etc.

(13) The advisability of giving more responsibilities and privileges to master sergeants than to technical sergeants, and to technical sergeants than to staff sergeants.

(14) Dissemination of information through section meetings, initialling of distribution, etc.

(15) Indoctrination of noncommissioned officers as to the responsibilities of their rank.

(16) The wearing of Class "A" uniform by supervisory noncommissioned officers.

(17) Separate mess and billets for master sergeants (similar to Navy treatment of chief petty officers).

(18) Closer evaluation of airmen first class before promotion to staff sergeant.

(19) A special evaluation form (similar to the officer effectiveness report) for promotion within the first three grades.

(20) More weight given to noncommissioned officers' recommendations for promotion, demotion, and discipline of airmen.

(21) A distinctive "sticker" or similar device to identify an NCO's automobile.

(22) A special management and leadership course for airmen first class prior to promotion to staff sergeant.

(23) Strict observance of chain of command by lower four grade airmen.

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Hq 2AF, Barksdale AFB, La, 2AFPB 220, Status of Noncommissioned Officers, 9 Oct 53

4. The following recommendations are made for command action:

a. Distinctive insignia for master sergeant.

b. A command school for master sergeants.

c. A regulation expanding the warrant officer program and providing more flexibility in the utilization of warrant officers so that the promotion outlook for master sergeants may be brighter, and warrant officers with command ability may be so utilized.

B. H. MERCHANT
Colonel, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 25

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDCLC 250.4

2 November 1953

SUBJECT: Courts-Martial Trials (October 1953)

TO: Commander
All Organizations
MacDill Air Force Base, Florida

There follows a list of the courts-martial trials held at MacDill Air Force Base, Florida, during the month of October 1953. This list is published for the information and guidance of all concerned and therefore should be DISPLAYED in a prominent place on all bulletin boards.

GENERAL COURTS-MARTIAL

GRADE	AGE	BRIEF OF OFFENSE	PREV CONV	SENTENCE
809th Sup Sq, 809th AB Gp				
1. M/Sgt	38	Art 121 Larceny Art 108 Wrongful sale of Govt property	0	BCD, CHL - 1 yr Total Forf
809th Sup Sq, 809th AB Gp				
2. S/Sgt	33	Art 121 Larceny Art 108 Wrongful sale of Govt property	0	BCD, CHL - 2 yrs 6 mos, Total For
809th Mtr Veh Sq, 809th AB Gp				
3. A/1C	28	Art 121 Larceny Art 126 Arson	0	DD, CHL - 5 yrs Total Forf
809th Fd Sv Sq, 809th AB Gp				
4. A/3C	21	Art 85 Desertion	0	DD, CHL - 6 mos Total Forf
Detachment 1, 306th Bm Wg (M)				
5. A/B	19	Art 121 Larceny	1	DD, CHL - 1 yr Total Forf

SPECIAL COURTS-MARTIAL

809 Instl Sq, 809th AB Gp				
S/Sgt	40	Art 86 AWOL 108 days	0	Reduced to A/2C, Forf $50
Detachment 1, 305th Bm Wg (M)				
A/2C	31	Art 86 AWOL 172 days	0	CHL-6 mos, Forf $20/mo for 6 mos
809th APS, 6th ADIV				
2. A/1C	23	Art 121 Wrongful Appropriation	1	CHL-6 mos, Forf $39/mo for 6 mos
809th Fd Sv Sq, 809th AB Gp				
4. A/B	20	Art 86 AWOL 119 days	2	BCD, CHL - 6 mos Forf $55/mo for 6 mos

SUMMARY COURTS-MARTIAL

809th Fd Sv Sq, 809th AB Gp				
1. A/B	18	Art 134 Break Restriction	3	CHL - 30 days Forf $55
2. A/3C	23	Art 134 Drunk and Disorderly in barracks	2	CHL - 30 days

809th Fd Sv Sq, 809th AB Gp					
3.	A/3C	20	Art 86 AWOL 27 days	0	CHL - 30 days
4.	A/3C	20	Art 86 Fail to Repair	0	Red to A/B, Forf $20
5.	A/3C	19	Art 86 Fail to Repair	0	CHL - 30 days Forf $25
6.	A/2C	22	Art 86 Fail to Repair	1	CHL - 30 days Forf $55
7.	A/3C	18	Art 86 Fail to Repair	0	CHL - 15 days Forf $25
8.	A/3C	18	Art 86 Fail to Repair	0	Rest to Sq 30 days, Red to A/ Forf $25
9.	A/3C	19	Art 86 Fail to Repair	0	CHL - 15 days Forf $20
10.	A/3C	32	Art 86 AWOL 7 days	1	CHL 20 days Forf $40
11.	T/Sgt	35	Art 134 Wrongful Disposition of Govt Property	0	Forf $80
12.	S/Sgt	34	Art of War 96 False Off Statement	0	Forf $55
13.	A/3C	18	Art 86 AWOL 4 days	0	CHL 12 days Forf $20
14.	A/3C	21	Art 86 AWOL 4 days	0	CHL 12 days Forf $20
15.	A/B	18	Art 86 Fail to Repair	2	CHL 30 days, Forf $55
16.	A/3C	19	Art 86 Fail to Repair Art 107 False Off Statement	0	Rest to Sq 30 days, Forf $50
17.	A/3C	21	Art 86 AWOL 14 days Art 87 Missing Movt.	0	CHL 30 days Forf $25
18.	T/Sgt	34	Art 108 Wrongful Disposition of Govt property	0	Forf $35
809th Supply Sq, 809th AB Gp					
19.	S/Sgt	23	Art 107 False Off Statement	0	Forf $50
20.	M/Sgt	36	Art 107 False Off Statement	0	Not Guilty
21.	S/Sgt	41	Art 86 AWOL 5 days	0	Reduced to A/1C Forf $30
22.	A/3C	18	Art 86 Fail to Repair	1	CHL - 30 days Forf $55
305th Med Gp, 305th Bm Wg					
23.	M/Sgt	33	Art 107 False Off Statement	0	Forf $90
367th Bm Sq, 306th Bm Wg					
24.	A/B	21	Art 86 Fail to Repair	2	CHL - 30 days Forf $25

Detachment 1, 305th Bm Wg (M)					
25. A/2C	25	Art 86 Fail to Repair	?	CHL - 30 days Forf $50
26. A/3C	19	Art 86 AWOL 20 days	0	CHL - 30 days Forf $25
27. A/B	29	Art 86 AWOL 3 days	2	CHL - 30 days Forf $50
28. A/B	18	Art 86 AWOL 9 days	2	CHL - 30 days Forf $55
29. A/B	18	Art 86 Fail to Repair	0	CHL - 30 days Forf $55, Conf Susp for 3 mos
Hq 306th Bm Wg (M)				
30. A/3C	19	Art 107 False Off Statement	0	CHL - 30 days Forf $50
Hq 809th AB Gp				
31. T/Sgt	34	Art 107 False Off Statement	0	Forf $70
32. M/Sgt	36	Art 134 Incapacitated for duty	1	Reduced to T/Sg Forf $80
306th PMS, 306th Bm Wg (M)				
33. A/B	25	Art 86 AWOL 7 days	1	CHL - 18 days Forf $40
809th Ops, 809th AB Gp				
34. A/3C	21	Art 86 Fail to Repair	1	CHL - 15 days Forf $40
98th ARS, 6th Air Div				
35. A/B	20	Art 134 Assault NCO with fist	0	CHL - 30 days Forf $50
36. M/Sgt	37	Art 107 False Off Statement	0	Forf $90
37. A/B	18	Art 86 AWOL 25 days	0	CHL - 30 days Forf $55, Conf Susp for 6 mos
38. M/Sgt	34	Art 107 False Off Statement	0	Forf $90
809th AP Sq, 809th AB Gp				
39. S/Sgt	25	Art 86 AWOL 21 days	0	Rest to Base 30 days, Red to A/ Forf $75
40. A/B	18	Art 86 Fail to Repair	0	CHL - 15 days Forf $35
41. A/3C	22	Art 86 Asleep on post	0	CHL - 30 days Forf $50
306th ARS, 306th Bm Wg (M)				
42. M/Sgt	40	Art 107 False Off Statement	0	Forf $90
43. A/1C	26	Art 86 AWOL 16 days	0	Rest 30 days to Sq, Forf $45
44. A/3C	32	Art 86 AWOL 6 days	2	CHL - 18 days Forf $35

Cont'd from page three

809th Instl Sq, 809th AB Gp

45. A/B	19	Art 134	Drunk in Station	2	Perform Hard labor for 45 dr Forf $55
46. A/2C	19	Art 134	Drunk in Station	1	Perform Hard labor for 45 da Forf $55

306th FM Sq, 306th Bm Wg (M)

47. A/3C	29	Art 107	False Off Statement	0	CHL for 30 days

BY ORDER OF THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

DISTRIBUTION D

APPENDIX "B"

MACDILL STATISTICAL SUMMARY - PART I
STATION STRENGTH SHEET

FOR PERIOD 1 - 31 OCT 1953

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD TDY & PNFD	(F) AVG ASGD	(G) AVG PHY PRESENT
Hq 6th Air Div	OFF	10	15		8	11	11
	AMN	7	6		6	6	6
	CIV	3	4				
Hq 809th AB Gp	OFF	54	58	16	60	58	40
	AMN	215	272	13	251	308	272
	CIV	73	73				
809th Supply Sq	OFF	14	13		8	13	9
	AMN	383	417	5	290	458	317
	CIV	139	133				
809th Mtr Veh Sq	OFF	5	3		3	3	3
	AMN	203	306	3	223	343	240
	CIV	8	8				
809th AF Sq	OFF	14	9		6	9	6
	AMN	449	379	43	246	389	245
	CIV	1	1				
809th Instl Sq	OFF	8	5		5	5	5
	AMN	301	329		300	346	296
	CIV	179	175				
809th Fd Sv Sq	OFF	7	4		4	4	4
	AMN	372	475		325	502	342
809th Oprs Sq	OFF	37	25	4	22	26	24
	AMN	422	428	54	402	435	399
	CIV	25	23				
8th Crash Boat Flt	OFF	8	2		2	2	2
	AMN	100	93		87	95	88
TOTAL 809TH ABG	OFF	147	119	20	110	120	93
	AMN	2445	2699	118	2124	2876	2199
	CIV	425	413				
740th AF Band	OFF	1	2		0	0	0
	AMN	34	28		27	32	30
7th ALT Chamber Indoc Flt	OFF	1	1		1	1	1
	AMN	11	11		11	12	12
*Hq 305TH BM WG	OFF	45	47		35	48	36
	AMN	106	119		106	118	106
	CIV	3	2				
*361th Bm Sq	OFF	65	62		58	60	50
	AMN	102	151		146	152	141
*365th Bm Sq	OFF	65	63		60	62	55
	AMN	102	154		148	154	142
*366th Bm Sq	OFF	65	58		56	57	46
	AMN	102	161		155	164	152
*305th A&E Maint Sq	OFF	14	11		9	11	9
	AMN	370	336		315	338	303
*305th Field Maint Sq	OFF	7	6		5	6	5
	AMN	423	504		459	497	448
*305th Periodic Maint Sq	OFF	5	5		4	5	4
	AMN	221	228		220	218	203
*305th Air Ref Sq	OFF	85	78		76	78	75
	AMN	228	252		246	250	232
305th Med Gp	OFF	27	33	38	54	34	52
	AMN	98	90	362	384	90	379
*TOTAL 305TH BOMB WING	OFF	378	363	38	357	361	332
	AMN	1752	1995	362	2179	1981	2106
	CIV	3	2				

*All figures other than authorizations, are as of 2 September 1953.

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PFD & PNFD	(F) AVG ASGD	(G) AVG PHY PRESENT
HQ 306TH BM WG	OFF	45	49		36	48	39
	AMN	106	134		119	128	112
	CIV	3	3				
367th Bm Sq	OFF	65	59		44	59	51
	AMN	102	171		155	155	123
368th Bm Sq	OFF	65	59		42	58	44
	AMN	102	174		159	159	124
369th Bm Sq	OFF	65	54		49	55	42
	AMN	102	176		164	163	127
306th A&E Maint Sq	OFF	13	10		9	10	8
	AMN	337	328		291	330	291
	CIV	4	5				
306th Field	OFF	7	6		6	6	6
Maint Sq	AMN	349	431		389	429	365
	CIV	30	30				
306th Periodic	OFF	5	5		5	5	5
Maint Sq	AMN	175	240		224	228	209
306th Air Ref Sq	OFF	85	76		71	79	69
	AMN	228	252		234	255	222
306th Avn Sq	OFF	15	15		14	14	13
	AMN	33	36		35	37	36
306th Medical Gp	OFF	57	49	4	39	51	45
	AMN	144	165	18	67	175	186
	CIV	54	53				
TOTAL 306TH	OFF	422	382	4	315	385	322
BOMB WING	AMN	1678	2107	18	1837	2059	1795
	CIV	91	91				
TOTAL 307TH ARG	OFF	1	8		8	8	8
	AMN	4	8		8	8	8
SPECIAL MISSION UNITS							
Det "21" 3911th	OFF	4	3		3	3	3
Radar Scor Sq	AMN	30	30		29	31	28
3908th Strat	OFF	16	22		15	22	16
Eval Sq	AMN	47	31		30	30	30
	CIV	1	1				
98th Air Ref Sq	OFF	85	66		48	65	48
	AMN	228	346		302	354	314
TOTAL S.C ORGNS	OFF	1065	981	62	865	979	834
	AMN	6236	7261	498	6553	7309	6528
	CIV	523	511				
Detachment 1,	OFF	12	10	1	9	10	9
26 Weather Sq	AMN	28	25		21	24	21
Hq 1928 AACS Sq	OFF	13	7		6	8	5
	AMN	120	200	8	196	210	198
	CIV	6	4				
Det 3, 136th Comm	OFF	2	2		2	2	2
	AMN	47	44	9	50	49	43
C-97-2 Mobile	OFF	1	1		1	1	1
	AMN	21	22		21	23	21
B-47 Mobile	OFF	1	1		1	1	1
Tng Unit	AMN	17	22		21	23	21
7th OSI	CIV	6	6				
TOTAL NON-S.C	OFF	29	21	1	19	22	18
ORGANIZATIONS	AMN	233	313	17	309	329	304
	CIV	12	10				
TOTAL M.CDILL AFB	OFF	1094	1002	63	884	1001	852
	AMN	6469	7574	515	6862	7718	6832
	CIV	535	521				
GRAND TOTALS		8098	9097	578	7716	8719	7684

RESTRICTED

STATISTICAL SUMMARY

OCTOBER 1953

ORGANIZATION		Punished Art 15		Courts-Martial		AWOL		Morning Reports		Military Expense Summary		Traffic Violations			Air Police Arrests			V. D.		Ground Accidents		
		No.	Rate	No.	Rate	No. Going	Rate	Late	Error	Late	Errors	On Base Moving	Off Base Moving	Combine Rate	Drunkness	Misc	Combine Rate	No.	Rate	Non Disabl	Disabl	Disabl Rate
Hq 6th AD	20	0	0	0	0	0	0	0	0	0	0	1	0	50	0	0	0	0	0	0	0	0
809th AB Gp	2996	21	7	36	12	15	5	6	50	5	17	15	7	7.3	4	21	8.3	8	2.7	14	3	3.2
Hq 809 AB Gp	366	0	0	2	5.5	0	0	0	1	0	3	2	2	11	0	2	5.5	0	0	0	1	8.8
809 Sup Sq	471	2	4.2	6	12.7	3	6.4	3	9	0	4	3	0	6.4	1	3	8.5	1	2.1	3	0	0
809 Mtr Veh Sq	346	9	26	1	2.9	3	8.7	1	6	0	1	4	2	17.3	0	4	11.6	2	5.8	1	0	0
809 AP Sq	398	0	0	3	7.5	0	0	0	5	0	2	0	0	0	0	0	0	0	0	2	1	8.1
809 Instl Sq	351	4	11.4	3	8.5	1	2.8	0	7	0	0	2	1	8.5	2	2	11.4	0	0	4	0	0
809 Fd Sv Sq	506	4	7.9	20	39.5	8	15.8	0	15	0	2	1	1	4.0	1	8	17.8	5	9.9	4	1	6.4
809 Opns Sq	461	2	4.3	1	2.2	0	0	1	1	5	5	3	1	8.7	0	2	4.3	0	0	0	0	0
8th Cr Res Flt	97	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0
305th Bm Wg	2342	2	.9	7	3.0	2	.9	0	0	1	2	1	2	1.3	3	19	9.4	2	.9	6	0	0
Hq 305 Bm Wg	166					0	0					0	0	0	0	3	18.1	0	0	0	0	0
364 Bm Sq	212					0	0					0	0	0	0	2	9.4	0	0	0	0	0
365 Bm Sq	216					0	0					0	0	0	0	0	0	0	0	0	0	0

ORGANIZATION	Punished Art.-15 No.	Punished Art.-15 Rate	Courts Martial No.	Courts Martial Rate	AWOL No. Going	AWOL Rate	Morning Reports Late	Mil. Exp. Summary Error	Mil. Exp. Summary Late	Mil. Exp. Summary Error	Traffic Violations On Base Moving	Traffic Violations Off Base Moving	Traffic Violations Combined Rate	Air Police Arrests Drunkenness	Air Police Arrests Misc	Air Police Arrests Combined Rate	V. D. No.	V. D. Rate	Ground Accidents Non Disabl	Ground Accidents Disabl	Ground Accidents Disabl Rate
366 Bm Sq	221				0	0					0	0	0	0	0	0	0	0	0	0	0
305 A&E Sq	319				1	2.7					0	0	0	0	2	5.7	0	0	1	0	0
305 FM Sq	503				0	0					1	0	2.0	3	5	15.9	2	4.0	1	0	0
305 PM Sq	223				0	0					0	0	0	0	2	9.0	0	0	0	0	0
305 AR Sq	328				1	3.0					0	0	0	0	4	12.2	0	0	2	0	0
305 Med Gp	124	0		1	8.7	0	0				0	2	16.1	0	1	8.1	0	0	2	0	0
306 Bm Wg	2444	11	4.5	8	3.3	2	.8	0	32	2	7	10	10	8.2	2	23	18.2	3	1.2	7	2	2.6
Hq 306 Bm Wg	176	0	0	1	5.7	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0
367 Bm Sq	214	0	0	1	4.7	0	0	0	1	0	0	2	2	18.7	0	2	9.3	0	0	1	0	0
368 Bm Sq	217	0	0	0	0	0	0	0	4	0	1	2	1	13.8	0	1	4.6	0	0	0	0	0
369 Bm Sq	218	1	4.6	0	0	0	0	0	8	1	1	0	0	0	0	0	0	0	0	0	0	0
306 A&E Sq	340	0	0	0	0	0	0	0	5	1	1	1	0	2.9	0	3	8.8	2	5.9	0	1	9.5
306 FM Sq	435	3	6.7	2	4.6	1	2.3	0	1	0	0	0	2	4.6	0	4	9.2	1	2.3	4	1	7.4
306 PM Sq	233	1	4.3	1	4.3	0	0	0	6	0	1	1	1	8.6	0	3	12.9	0	0	0	0	0
306 AR Sq	334	6	18.0	3	9.0	1	3.0	0	4	0	2	2	2	12.0	2	7	26.9	0	0	1	0	0
306 Aviat Sq	51	0	0	0	0	0	0	0	1	0	0	0	1	19.6	0	0	0	0	0	0	0	0
306 Med Gp	226	0	0	0	0	0	0	0	1	0	0	2	1	13.3	0	3	13.3	0	0	0	0	0
307 AB Gp	16	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Det 21,3044 HR	31	0	0	0	0	0	0	0	0	0	0	0	1	29.4	0	0	0	0	0	0	0	0
3908 SES	52	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	19.2	0	0	0	0	0
307 Med Gp		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ORGANIZATION	Strength	Punished Art 15 No.	Punished Art 15 Rate	Courts Martial No.	Courts Martial Rate	AWOL No. Going	AWOL Rate	Morning Reports Late	Morning Reports Error	Mil. Exp. Summary Late	Mil. Exp. Summary Error	Traffic Violations On Base	Traffic Violations Off Base	Air Police Arrests Combin-ed Moving	Air Police Arrests Combin-ed Rate	Drunk-enness	Misc.	V.D. Combin-ed Rate	V.D. No.	V.D. Rate	Ground Accidents Non Disabl	Ground Accidents Disabl	Ground Accidents Disabl Rate
7th AIT Flt	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70th AF Band	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98th AES	119	6	14.3	5	11.9	2	4.8	3	5	0	1	3	5	12.1	4	8	28.6	1	2.4	4	0	0	0
Total S.C Org	8368	40	4.8	56	6.7	21	2.5	9	89	9	27	30	25	6.6	13	72	10.2	14	1.7	31	5	1.9	
Wea Det 26-1	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1228 AACS	218	0	0	0	0	0	0	0	0	3	0	1	1	9.2	0	0	0	0	0	0	0	0	0
Det 3 136 Comm	51	2	39.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C-97-2 M.T.U.	24	0	0	0	0	0	0	0	0	0	0	1	0	11.7	0	0	0	0	0	0	0	0	0
B-47-5 M.T.U.	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Tenants	351	2	5.7	0	0	0	0	0	0	3	0	2	1	8.5	0	0	0	0	0	0	0	0	0
MacDill Total	8719	42	4.8	56	6.4	21	2.4	9	89	12	27	32	26	6.7	13	72	9.7	14	1.6	31	5	1.8	

1. There were five (5) general courts-martials in October. The veneral disease figures are for the period 1 thru 28 October. All other rates are computed on the calendar month basis. All rates, except Ground Accident, are based on the number of cases per 1000 of monthly average assigned personne. Ground accident rates are based on the number of disabling injuries per 100,000 mandays assigned military personnel. Only accidents in which at least one man day is lost are considered as disabling injuries. The 305th Bm Mg information is on the Rear Echelon Detachment. Sources: Report of Punishment under Article 15, Base Legal Office, Air Provost Marshal, V.D. Control Office, Ground Safety Office, AF Forms 183,110A, 110D, Flying Safety Office, Budget Office.

2. HONORS OF THE MONTH: A/1C ELLIS HEINEMANN, Hq. Sq. Sec., 809th A.B.Gp., Morning Report Clerk. Airman Heinemann is congratulated for his continual high quality performance.

3. The 306th BG submitted (2) late Rcpts for Oct. The 809th ABG submitted (14) late Rcpts for the same period. Steps should be taken to stop late reporting. All agencies should make this a priority November project.

OPERATIONS STATISTICAL SUMMARY
OCTOBER 1953

ORGANIZATION	TYPE ACFT	NUMBER OF AIRCRAFT: AVERAGE NUMBER ON HAND DURING MONTH	NUMBER OF AIRCRAFT: E.O.M. TOTAL HRS ON HAND	NUMBER OF HOURS FLOWN: NUMBER OF LANDINGS	NUMBER OF HOURS FLOWN: TOTAL	NUMBER OF HOURS FLOWN: AVG HOURS FLYING PER ACFT	NUMBER OF HOURS FLOWN: HOURS NIGHT FLYING	PERCENT OF TIME IN COMMISSION	PERCENT OF TIME ACFT ON HAND: IN COMM.	PERCENT OF TIME ACFT ON HAND: NOCP	PERCENT OF TIME ACFT ON HAND: NOCM	PERCENT OF TIME PURPOSE OF FLIGHT: NOC OTHER REASONS	PERCENT OF TIME PURPOSE OF FLIGHT: FERRYING-TRANSPORTATION	PERCENT OF TIME PURPOSE OF FLIGHT: OPERATIONAL	PERCENT OF TIME PURPOSE OF FLIGHT: ADMINISTRATIVE	PERCENT OF TIME PURPOSE OF FLIGHT: OTHER	ACCIDENTS	GALLONS OF FUEL ISSUED
305TH BOMB WING	B-47	3	3	2,232	20	9	3	2	1.6	24.7	6.5	66.8	0	0	55.6	0	44.4	0	7,600
	T-33	9	9	6,696	204	198	22	5	4.9	60.2	22.2	6.5	11.1	10.6	76.8	7	5.6	0	57,283
	C-47	2.5	3	1,857	86	206	82	35	15.5	71.6	0	6.5	21.9	4.4	0	92.2	3.4	0	22,747
306TH BOMB WING	B-47	47	47	34,968	774	990	21	164	4.7	60.3	8.8	16.9	14	0	89.4	3.9	6.7	0	1531707
	KC-97	24	20	17,903	267	719	30	263	5.2	77	6.3	9.5	7.2	0	79	17.7	3.3	0	240843
	C-97	1	1	744	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
	C-47	1	1	744	0	0	0	0	0	3.2	96.8	0	0	0	0	0	0	0	0
809TH AIR BASE GROUP	B-25	4	4	2,976	97	155	38	35	8.1	64.1	20.2	3.2	12.5	28.4	0	67.1	4.5	0	21,146
	C-45	3.4	4	2,530	37	53	16	2	4.5	46.6	39.8	9.5	4.1	13.2	0	58.5	28.3	0	1,926
	T-6	.3	2	204	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
	L-16	2.4	2	924	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
98TH ARS	KC-97	12	12	8,928	223	444	34	0	9.4	49.5	15.3	26.3	8.9	0	96.9	0	3.1	0	89509

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HISTORY

6th AIR DIVISION

NOVEMBER 1953

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K-Div-6-H1
Nov 1953

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HISTORY

6TH AIR DIVISION

Including

809th Air Base Group
MacDill Air Force Base

Florida

1 - November - 30

1953

B. A. Johnson
Division Historical Officer
2d Lt. B. A. Johnson

S. E. Wickam
Division Historian
M/Sgt. S. E. Wickam

H. K. Mooney
H. K. MOONEY
Brigadier General, USAF
Commander

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APPENDIX

"A" Documents Arranged as Exhibits
"B" Statistical Summaries

CHRONOLOGY OF MAJOR EVENTS

5 Nov - Headquarters, Second Air Force denied MacDill's request to modernize 15 mobilization type barracks.

6 Nov - Major Donald R. Chinnock named as Acting Director of Materiel, Headquarters, 6th Air Division, vice Colonel R. E. Kimmel, transferred.

9 Nov - Internal Defense Test conducted by 7th District, Office of Special Investigations (OSI). Had simulated sabotage of B-47's been real, the 306th Bomb Wing's Stratojet fleet would have been reduced by 17 percent.

Contemplated inactivation of 740th Air Force Band rescinded by Headquarters, United States Air Force (USAF).

13 Nov - Training course for Dependents' Assistance Program began, following visit of Mrs. Curtis E. LeMay.

17 Nov - Headquarters, 6th Air Division requested more equitable assignment of combat and/or operations officers from local resources to new B-47 units and/or crews.

Division doubted its ability to provide certain critical airmen spaces to 340th Bomb Wing cadre.

20 Nov - 21 Nov Lieutenant General Fevsi Ucaner, Commanding General of the Turkish Air Force, and party of two, visited MacDill AFB.

23 Nov - Suggested amendment to Food Service Career field forwarded by Division to higher headquarters; recommendation would establish an "Apprentice Food Service Attendant, AFSC 62430."

24 Nov - Colonel Paul S. Emrick assigned from 305th Bomb Wing to Headquarters, 6th Air Division for future position as Deputy Commander.

25 Nov - Colonel R. Howard Lackay, 6th Air Division Surgeon and 306th Medical Group Commander, alerted for assignment to Headquarters, USAF. Colonel Mathias F. Regner, 305th Medical Group Commander, scheduled to fill Division Surgeon's post.

Headquarters, Strategic Air Command announced second annual Florida National Sports Car Races for MacDill would be held 31 January, 1954.

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Special Orders

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Tampa Morning Tribune

Tampa Daily Times

The Airman

CHAPTER ONE

ADMINISTRATION and PERSONNEL

Lieutenant General Fevsi Ucaner, Commanding General of the Turkish Air Force, accompanied by Lieutenant Colonel Seref Urul, Chief of the Training Section, TAF, and Captain Cengix Kutluoglu, Secretary to the Commanding General, TAF, visited MacDill Air Force Base on 20-21 November, 1953. The stay at MacDill was part of a tour that began, according to the official itinerary on 15 November and ended on 3 December, for the purpose of allowing "the Commanding General, Turkish Air Force, to gain first-hand information pertaining

to the USAF organization, equipment, training procedures, and to further goodwill between the two countries."[1]

General Ucaner told Tampa newsmen, "Turkey has steady nerves - it is not nervous in a cold war. And Turkey's nerves are even steadier when she knows she has such good allies. No single country can win any future war."[2]

When questioned by reporters as to whether the United States planned air bases in Turkey, the distinguished visitor replied that the American government has built all of the air bases in his country for Turkey's tactical air force; furthermore, at each base American pilots and airmen are helping in the streamlining of the training program that began with the arrival of 200 F-84 fighters via the United States military aid program. General Ucaner observed that his nation has about 60 officers receiving pilot training in the United States and 100 more are expected to arrive in 1954. He said that the Turkish Air Force consists primarily of jet fighters for tactical warfare, and is not equipped for strategic bombardment.[3]

"Everything which the United States does is of great interest to us in Turkey," General Ucaner concluded, "Every move of the United States is followed in Turkey with much interest and satisfaction. So we are here for a closer look and to further good relations between the two countries."

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1. Ltr., DAF to Comdr MacDill AFB, Fla., "(Uncl) Visit of Lieutenant General Fevsi Ucaner, Commanding General, Turkish Air Force," undated, AFOIN-1B4. Exhibit 1.
2. Morning Tribune (Tampa, Fla.), November 21, 1953.
3. Daily Times (Tampa, Fla.), November 20, 1953.

Stressing the fact that "Committee 55[4] "is only a fact-finding" agency, Major Homer C. Oakes, Base Comptroller, requested of the 6th Air Division Historical Officer that the Committee be excused from submitting monthly progress reports on the activities of that group.[5] As of 31 October, 1953, 1,154 cases had been examined; 313 claims had been determined valid; proof had been established that no travel was performed in 108 cases; travel had been performed in advance in 70 cases; 26 cases were determined by further investigation to have involved a "visit" by the dependents concerned rather than a bona fide change of address; the Office of Special Investigations (OSI) had investigated 149 cases; no travel claim was submitted in 633 cases; 12 cases were pending collection; total refund to the United States of money erroneously paid had been made in 199 cases, with total collections of $34,013.14.

"Of the approximate 200 cases remaining to be closed by this Committee, most of them are in the questionable category; have been investigated by OSI, and collections have been or will be made. The life of this Committee can easily extend from its present 12 months to 18 months, even though our work is current at the present date," Major Oakes reported.

MacDill received 76 percent of the maximum 100 percent obtainable

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4. History, 6th Air Division, September 1953, page 6.
5. Disp Form, Base Comptroller to Historical Officer, "Committee 55 Investigations," 3 November, 1953, MCDK. Exhibit 2.

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score under the provisions of the Strategic Air Command (SAC) Management Control System for Air Base Groups for the month of October, 1953.[6] This figure of 76 percent was two points lower than the prediction made by the Base Comptroller's Office.[7] That activity predicted a score of 78.6 percent for November, 1953.[8]

Members of the Executive Ground Safety Council were advised at the monthly meeting on 13 November[9] of the particulars concerning the head-on collision of two automobiles on 11 November that resulted in the death of one airman and serious injuries of another.[10]

The contemplated activation of the 740th Air Force Band effective 25 November, 1953,[11] was revoked by the Department of the Air Force.[12]

The movement of the 98th Air Refuling Squadron from MacDill to Lake Charles Air Force Base, Louisiana,[13] was begun, for statistical

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6. Ltr., Hq SAC to Comdr 6AD, "SAC Management Control Statement, Air Base Groups - October 1953," 3 December 1953, COA 373.
7. History, 6th Air Division, October 1953, pp 4-5.
8. Rpt, "Predicted Scores, November 1953, MacDill AFB, Fla. - SAC Management Control System, Air Base Group," November 1953, prep by Base Comptroller. Exhibit 3.
9. Rpt, "Proceedings of Ground Safety Council, November 1953," prep by Executive Committee of the Ground Safety Council, Flying Safety Division, Hq 6AD, November 1953. Exhibit 4.
10. Morning Tribune (Tampa,Fla.), November 12, 1953.
11. History, 6th Air Division, October 1953, page 6.
12. TWX, Hq 2AF to Comdr 6AD, 2AFPLC 0954, 9 November 1953.
13. History, 6th Air Division, October 1953, page 6.

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purposes, on 21 November and ended on 22 November, 1953.[14] One officer and 153 airmen spaces were withdrawn from base strength as a result of the 98th's movement, according to Captain P. S. Dickey, Base Manpower Officer.[15]

PERSONNEL

Headquarters 6th Air Division, after reviewing statistical charts published by Headquarters Second Air Force, concluded that "the status of assignment of officer personnel in the combat and operations fields is not in consonance with the priority for the assignment of personnel indicated in letter your headquarters, File 2AFPLB 320, subject, 'Manning Categories,' dated 8 September 1953." Division stressed the fact that it was suffering from a shortage of 79 combat and/or operations officers. This number included 22 shortages within the 98th Air Refueling Squadron; however that unit was in process of reassignment to Lake Charles AFB, La.[16] This shortage, combined with the "continual withdrawal of qualified personnel for duty on instructor pilot teams, aircraft commanders to seed newly activated B-47 wings[17] and the cadre for the 340th Bomb Wing,[18] is having a definite detrimental effect on our ability to maintain the 305th and 306th Bomb Wings in a status of readiness to participate in the Emergency War Plan" (EWP). Division requested

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14. TWX, Comdr 806AD to Comdr 6AD, 68ARS 9558, 23 November 1953.
15. Daily Journal, Hq 809th ABGp, 27 November 1953.
16. History, 6th Air Division, October 1953, page 6.
17. History, 6th Air Division, September 1953, pp 7-8.
18. Ibid, pp 6-7.

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that necessary action be taken "to assign personnel in the above fields to this command to enable a manning percentage comparable to that indicated in the above cited letter."[19]

Headquarters Second Air Force was advised that Division resources were insufficient to furnish the number of airmen required in certain career fields for the 340th Bomb Wing cadre. Shortages, and the number in the various Air Force Specialities (AFS) were:

One 32150B (Senior "K" Series Stabilization and Optics Specialist), eight 32150C (Senior "K" Series Radar and Interconnection Specialist), four 32150D (Senior "K" Series Computer Specialist), 49 32150E (Senior "K" Series Mechanic), 14 32170 (Bomb-Navigation System Supervisor), 29 32171E ("K" Series System Technician), 44 32350C (Senior Gunlaying Systems Mechanic B-45, B-47), 13 32370 (Turret System Supervisor), six 32371 (Turret System Technician), 23 32371C (Turret System Techniciain B-45, B-47), 46 40453 (Senior Electri cal Instrument Repairman), 21 47154 (Senior Vehicle and Motorized Equipment Engine Mechanic), three 80270 (Production Scheduling Technician), and three 80271 (Materials Estimator Technician).

Division emphasized that "all possible reclassification actions have been considered and it has been determined that no appreciable help would be realized therefrom." The local command warned that

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19. Ltr., Hq 6AD to Comdr 2AF, "Operational Personnel Shortages," 17 November 1953, DPE 210. Exhibit 5.

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unless it was relieved from the 340th manning requirement, or unless an immediate input was received in the critically short specialities, Division would not be able to "execute its mission in the EWP if the required manning is withdrawn from present resources."[20]

One of the principal deterrents to reenlistment, according to surveys conducted by the Air Force of airmen being discharged is "the lack of a standard airman promotion program (which) has continually been among the first ten reasons given . . . for not reenlisting in the Air Force." Therefore, MacDill was requested to assist Headquarters, Strategic Air Command with a study of this particular problem by recommending a promotion program "that could be utilized within SAC and/or USAF-wide." Factors to be considered were those promotion systems that had been used previously or currently, and their inherent advantages or disadvantages.[21]

The principal method used at MacDill in promoting airmen is by means of an Airman Selection Board and a Group Promotion Board. Briefly, the former group is composed of a senior officer (often the unit commander) and four master sergeants. Applicants for promotion are interviewed in a formal session of the board, and their recommendations are subsequently forwarded to the Group Promotion Board. This group is composed of unit commanders, who conduct a final review of

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20. Ltr., Hq 6AD to Comdr 2AF, "340th Bombardment Wing Cadre Requirements," 17 November 1953, MCDPDP 352. Exhibit 6.
21. TWX, Hq SAC to Comdr 6AD, DPPAM 36846, 28 October 1953. Exhibit 7.

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the junior board's recommendations, then forward the final nominations to the parent (group or wing) commander. The senior board also devises a system for the allocation of airmen promotion quotas, subject to the approval of the senior commander. (Although this system reported herein is used by the 809th Air Base Group, similar methods are utilized by other units.) This system, according to Division's reply, is "deemed adequate by all commanders."[22]

The recommendation was made "that a method of waivering the PAFSC (primary Air Force Specialty Code) requirement, for promotion to all grades . . . be devised whereby airmen who possess all other prerequisites for promotion may be promoted to the next higher grades." Clarification of this general statement was made to the effect that cause of the AFSC requirement for promotion, "some airmen who are fully qualified and have demonstrated ability to perform duty in the next higher grade and AFSC are forced to remain in their present grade and skill level for an entire enlistment due to no vacancy at the seven level (top level) AFSC on the unit manning document. Such personnel are definitely hesitant to reenlist due to such unfavorable conditions."

Division endorsed the present method of airmen promotions being based on command-wide vacancies rather than on unit spaces, but stressed the "definite" disadvantage by the freezing of career fields for promotion where a command-wide overage exists by grade, i.e., in

22. Ltr., Hq 6AD to Comdr SAC, "Standard Airman Promotion Procedures," 25 November 1953, MCDPO 220.2. Exhibit 8.

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October, 1953, 63 career fields were closed for promotion to master sergeant, 61 for technical sergeant, and 37 for staff sergeant within 6th Air Division units.[23]

The local command recommended that the promotion authority of unit and group commanders be supplemented to permit a promotion to a grade from which an airman was demoted, within their organization, regardless of the promotion quota.

The survey conducted by Division indicated that "all commanders are concerned with the low morale and reenlistment rate that has resulted from the insufficient amount of airman second class through staff sergeant promotion quotas being received." The letter cited the fact that a July survey[24] at this headquarters showed that there were 619 airmen in the grade of airman third class eligible for promotion, and a quota of 281 promotions to airman second class was received subsequent to the review. Thus, only 45 percent of the eligibles were advanced in grade. This survey resulted in a request to Headquarters, Second Air Force for increased promotion quotas for this particular grade, and more specifically for the Armament and Electronics, and the Maintenance career fields due to the fact that the majority of subject airmen were "highly qualified technically" by virtue of satisfactory completion of Air Force technical schools. At that time the danger was expressed of losing these men to civilian industry; therefore, "these airmen must be given more incentive to

23. History, 6th Air Division, October 1953, page 11.
24. History, 6thAir Division, July 1953, pp 6-7.

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reenlist upon expiration of their enlistments."

Headquarters, 6th Air Division submitted a proposed change to the food service career field by adding a subdivision (624) to the present food service attendant division (AFSC 62430) which, if accepted, might possibly increase the morale and efficiency of personnel concerned and result in lowered AWOL rates and disciplinary action.[25] The letter stressed that "Strategic Air Command Letter 39-1 ('Enlisted Personnel' - Project Guidance, 19 June, 1953) prohibits further training of helper level personnel in the Food Service field due to the existing overages; whereas SAC Regulation 39-1 ('Enlisted Personnel' - Manning of Food Service Activities, 21 July, 1952) requires that all personnel with the food service function be permanently assigned to the Food Service Squadron."

As of the date of the letter, (23 November) the 809th Food Service Squadron had 26 airmen assigned whose aptitude scores precluded their entry into any career field; furthermore, the unit possessed 135 airmen who were qualified for food service work only. Of course, a large percentage of the disciplinary problems came from within this category (four special courts-martials and four summary courts-martials for November, 1953). Division believed that the low morale could possibly be attributed to the fact that these airmen feel they are not given equal opportunities of others. Of course it is realized that their

25. Ltr., Hq 6AD to Comdr 2AF, "Revision of the Food Service Career Field," 23 November 1953, MCDPEB 220. Exhibit 9.

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training potential must be considered, and this factor is undoubtedly overlooked by the airman himself, thus creating his low morale."

Division's suggestion was the establishment of the "Apprentice Food Service Attendant - 62430," which would not require any formal on-the-job-training, but would require only satisfactory duty performance and conduct for a minimum of 90 days plus recommendations from his superiors. The local command stated that a requirement existed within the cellular structure of the food service unit for a "'supervisor'" of the "Senior Food Service Attendant's skill level; e.g., one man per serving line on each shift in each dining hall."

"This request," concluded Division, "is based on the idea of making the 'Food Service Attendant' a separate career ladder for those whose aptitude scores preclude their assignment into other career fields." It was believed this suggestion would be a practical solution to a problem "needing immediate attention," and would afford low-aptitude personnel an opportunity to advance to the grade of airman first class. In essence, the "Senior Food Service Attendant" would be the old type "kitchen police pusher."

Colonel Paul S. Emrick, Headquarters, 305th Bomb Wing, who had been placed on special duty with Headquarters, 6th Air Division as of 24 October, 1953,[26] was relieved from assignment with the 305th and assigned to 6th Air Division as of 24 November, 1953.[27] Following

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26. SO 294, Hq 6AD, 20 November 1953, par 10.
27. Ibid, par 11.

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B-47 indoctrination training at Pinecastle AFB, Orlando, Fla., survival training at Stead AFB, Nev., and ECM (electronics counter measure) training at Keesler AFB, Miss., Colonel Emrick is scheduled to become Deputy Commander of the 6th Air Division.[28]

According to a biographical sketch published in the base newspaper,[29] Colonel Emrick returned to the United States in September, 1953, from Europe where he had served on the Plans and Policy Staff of Ambassador W. H. Draper, United States special representative, with headquarters at Paris, France.

Colonel Emrick, a native of West Lafayette, Ind., was graduated from Purdue University in 1938 and completed flight training at Kelly Field, Texas, one year later. He served in the China-Burma-India (CBI) theater of operations during World War II, and aided in the formation of the first four B29 Bomb Groups. Between the period of January to August, 1945, Colonel Emrick served as Deputy Chief of Staff for plans of the 20th Air Force, commanded by Major General Curtis E. LeMay. Following the war, Colonel Emrick was assigned as a member of the Office of the Deputy Chief of Staff for Research and Development, Headquarters, Army Air Forces, and held that post until 1947, after which he served as executive officer to the Under-Secretary of the fledgling Air Force.

When the Korean war began in 1950, Colonel Emrick was attending the Air War College, Air University, Maxwell AFB, Ala. Shortly

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28. The Airman (MacDill AFB, Fla.), November 27, 1953.
29. Ibid.

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afterward, he was assigned duty as an air planner for the Joint American Military Air Program; this duty lasted until May, 1951. His next assignment was that of Chief of the Programming Division for Headquarters, United States Air Force Europe (USAFE) in Germany. He held that post until the transfer to Ambassador Draper's staff.

Major Donald R. Chinnock was named as Acting Director of Materiel, Headquarters, 6th Air Division, effective 6 November, 1953,[30] vice Colonel Robert E. Kimmel.[31]

Colonel R. Howard Lackay, 6th Air Division Surgeon and Commander of the 306th Medical Group, was alerted for assignment as Chief of the Medical Education Division, Directorate of Medical Staffing and Education, Office of the Surgeon General, Headquarters, USAF, with a reporting date thereat not later than 4 January, 1954.[32] Headquarters, Second Air Force relayed Strategic Air Command Headquarters' desire that Colonel Mathias F. Regner, 305th Medical Group Commander, be named as Division Surgeon.[33]

Lieutenant Colonel William B. Hoynes, Base Director of Personnel, reported that the following numbers of officers were eligible for promotion and had been duly reported to Headquarters, Second Air Force:

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30. GO 28, Hq 6AD, 10 November 1953, Exhibit 10.
31. History, 6th Air Division, October 1953, page 10.
32. TWX, Hq 2AF to Comdr 6AD, 2AVSE 3014, 25 November 1953.
33. TWX, Hq 2AF to Comdr 6AD, 2AFSE 3282, 27 November 1953.

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Lieutenant Colonel to Colonel - 15
Major to Lieutenant Colonel - 50
Captain to Major - 150
First Lieutenant to Captain - 58

Lieutenant Colonel to Colonel (Medical Service and Chaplain) - 2
Major to Lieutenant Colonel (Medical Service and Chaplain) - 3
Captain to Major (Medical Service and Chaplain) - 8
First Lieutenant to Captain (Medical Service and Chaplain) - 9

(These figures reflect only the 306th Bomb Wing and the 809th Air Base Group).[34]

During November, 1953, 11 officers and 167 airmen were separated from the service for various reasons.[35] Reenlistments totaled 24.

As of 30 November, 1953, there was a total of 7,621 personnel authorized at MacDill AFB; 9,005 assigned, and 868 attached.[36] These figures include officers, airmen, and civilian personnel.

34. Daily Journal, Hq 809th ABGp, 5 November 1953.
35. Data obtained from the Base Statistical Office.
36. Reference MacDill Statistical Summary - Part I, Appendix "B."

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CHAPTER TWO

OPERATIONS and TRAINING

In general, the results of an internal defense test that was conducted on 9 November by the 7th District of the Office of Special Investigations (OSI)[37] were better than those of earlier actions.[38] In its replying indorsement,[39] Headquarters 306th Bomb Wing reported that "had the aircraft (B-47's) indicated as being sabotaged actually been sabotaged, this Wing's fleet would obviously been reduced

37. Ltr., Hq 809th ABGp to Comdr 306th Bomb Wing, "Internal Defense Test (RCS: 1-SAC-Y1)," 27 November 1953, MCDCPM 333. Exhibit 11.
38. History, 6th Air Division, September 1953, pp 36-46.
39. 1st Ind., Hq 306th Bomb Wing to Comdr MacDill AFB, Fla., 2 December 1953, to ltr., Hq 809th ABGp to Comdr 306th Bomb Wing, "Internal Defense Test (RCS: 1-SAC-Y1)," 27 November, 1953. COD 333. Exhibit 11A.

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by some 17 percent of available aircraft. This would have had no immediate effect on the Wing's normal and the routine scheduled training program. However, were they not replaced by the date the USCM (unit simulated combat mission) was scheduled to be conducted, which was some 10 or 11 days after the penetration exercise, this Wing's maximum effort would have been reduced by a proportionate number of aircraft."

The 306th stated that their Wing Defense Plan was being revised, and it would define and clarify the security responsibilities within the organization, and that the Wing Security Officer was "closely monitoring" the development of standard operating procedures that were designed to amplify and specify the details of all squadron personnel in meeting the requirements of the Wing Defense Plan. The revised master plan would alter also certain basic concepts of flight line security; this alteration "will result in the security deployment of squadron personnel in a more realistic manner," and in the opinion of Colonel Hewitt T. Wheless, Wing Commander, "will result in better security throughout our aircraft parking area at the initial and critical phase of an alert."

In the forwarding endorsement from Base to Headquarters, 6th Air Division,[40] the statement was made that steps were being taken to stress the high rate of loss of the SAC Restricted Area Badge (commonly

40. 2nd Ind., Hq 809th ABGp to Comdr 6AD, 16 December 1953, to ltr., Hq 809th ABGp to Comdr 306th Bomb Wing, "Internal Defense Test (RCS: 1-SAC-Y1)," 27 November 1953, MCDCPM 333. Exhibit 11B.

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known as "flight line pass") and to impress all individuals with their responsibility in safeguarding the badges.

The OSI Report, which is attached to the letter to the 306th, cited the laxity of guards in checking passes at gates leading onto the flight line, and in not safeguarding their area of observance. Air Base Group's indorsement remarked that "it must be recognized that the recent reduction in personnel and manning authorization, without a proportionate reduction in the requirements, has imposed certain limitations on their effectiveness, especially during the hours of darkness."[41]

Briefly, the modus operandi consisted of seven OSI agents attempting to penetrate the flight line in a simulated sabotage effort, using various subterfuges, with the aid of "lifted" restricted area badges to gain access to B-47's parked on the flight line.

Three agents obtained "improperly secured" flight line passes in the Base Gym and a barrack; one while an airman was playing basketball, after having left his fatigues in a locker room; three additional passes were obtained by the agents merely walking through a barrack after duty hours and, in plain view of its occupants, who interposed no objections of any type, "borrowing" improperly secured passes. Another pass, belonging to a major, was secured in a similar manner as the first one while the owner was playing basketball at the Base Gym.

On 9 November at 1830 hours, an ambulance was "borrowed" from

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41. History, 6th Air Division, October 1953, pp 6-10.

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a third echelon maintenance area ready line, and three agents attempted to penetrate the flight line with the vehicle. One agent who did not possess a flight line pass lay beneath the ambulatory cot in the ambulance; the other two agents posed as a driver and a doctor. The "doctor" displayed a "borrowed" flight line pass belonging to a Negro airman and was apprehended at the flight line gate; however, the "driver" with the pass of an airman second class was permitted to drive onto the flight line. No inspection was made of the interior of the ambulance, thereby obviating apprehension of the agent beneath the cot.

Once onto the flight line, the agent who had driven the ambulance was apprehended while walking toward a B-47 by an air policeman. The third agent was able to theoretically destroy two B-47's that were parked in front of Hangar Two; the aircraft were marked with red wax pencil on the outside of an engine nacelle as being destroyed. Shortly afterward, this agent was apprehended by an aircraft maintenance man and turned over to an air policeman.

Two other agents made a successful penetration onto the flight line via a gate at 1835 hours. One of the agents was dressed in fatigue clothing that bore no insignia of rank, and displayed a pass belonging to an airman third class; the other agent was dressed in fatigues with the chevrons of an airman second class and wearing a major's flight line pass. Although the security guard checked the passes rather

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carefully, he did not recognize the difference between the photographs on the passes and the agents' physical features. One of the agents theoretically destroyed one B-47 that was parked in the Base Hangar, plus eight additional B-47's that were located on the flight line in the 306th Bomb Wing area. All aircraft were marked with a red wax pencil on the front landing gear. This agent was not approached by anyone on the flight line, and made his exit therefrom by running out a gate while carrying a fire extinguisher, and flashing the flight line pass at the guard. The other agent was apprehended at a flight line check point by an air policeman. The agent was unable to give properly the correct serial number on the pass he was wearing.

Approval was received from Headquarters, Strategic Air Command[42] for the construction of a radar reflector and resolution target at Avon Park Air Force Base, Fla.,[43] in the amount of $6,821. The project was "technically approved for accomplishment by contract."

Plans for the radar reflector were redesigned by SAC to conform to the data furnished by the Technical Services Laboratory, Eglin AFB, Fla. This action, according to SAC, "will provide a prefabricated structure that may be fabricated in a shop for assembly in the field."

Headquarters, SAC further advised that MacDill's request for the construction of a visual bombing target and a night photography target

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42. 2nd Ind., Hq SAC to Comdr 6AD, 20 November 1953, to ltr., Hq 6AD to Comdr 2AF, "Construction of Radar Reflector and Resolution Targets, Avon Park AFB, Florida," 3 October 1953, DM7B 600.1. Exhibit 12.
43. History, 6th Air Division, October 1953, pp 21-22.

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at Avon Park[44] was "being considered by interested agencies in this Headquarters." Second Air Force Headquarters had made a substitution in their forwarding indorsement, but the nature of it was not clarified in subject correspondence to 6th Air Division.

Local headquarters suggested to Headquarters, Second Air Force that the Cedar Keys Air-to-Water Gunnery Range (located north of Tampa, Fla., on the west coast) be closed and the referenced air space restricted area and range be released.[45] A survey by MacDill disclosed that during the previous three months the range had not been used at all, and during the preceding six months, it was used on the average of only once per month.

Strategic Air Command Headquarters advised that during the month of January, 1954, ten B-47 crews of 6th Air Division units would be evaluated by Detachment Two of the 3908th Strategic Evaluation Squadron (SESq)[46] with 20 crews evaluated in February and 20 in March.[47]

Status of the various Communications Projects, according to Captain Clarence J. Westhoff, Base Communications Officer, were:

SAC-2AF-MCD-35/3 - Comm - Venice (Fla.) Loran Station Type UJ Timers. This project was awaiting Air Materiel Command (AMC) supply

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44. History, 6th Air Division, September 1953, pp 53-54.
45. Ltr., Hq 6AD to Comdr 2AF, "Cedar Keys Air-to-Water Gunnery Range," 3 November 1953, DOP 360.1.
46. History, 6th Air Division, September 1953, pp 31-36.
47. TWX Hq SAC to Comdr 3908th SESq., DOTRS 43114, 25 November 1953.

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action.

SAC-2AF-MCD-35/3 - Comm - Venice Loran Station Obstruction Lights. This project was also awaiting AMC supply action.

CE 53-SAC-MCD-AACS-1-HB - L/F (Low Frequency) Homer Beacon, Zaphyrhills, Fla. This project was scheduled for completion on or about 21 December, 1953; 57 percent of the construction was complete.

SAC-2AF-MCD-361 - Comm - Instrument Landing System (ILS). Construction was being completed by AIO (Air Installations Office); the supply action was 85 percent complete.

SAC-2AF-MCD-541/5 - Comm - UHF/DF (Ultra High Frequency Directional Finder. This project was resited near the Control Tower; necessary construction was being done by AIO.

SAC-2AF-MCD-66 1/1 - Comm - RAPCON. This project was complete except for CAA (Civil Aeronautics Authority) requirements.

SAC-2AF-MCD-1191/1 - Comm - Fire Reporting Switchboard and Expansion of Fire Reporting System. Supply action by AMC was not complete.

SAC-2AF-AVP-1030/2 - Comm - Avon Park Outside Plant Facilities. Supply action was not complete by AMC.

SAC Plan 1000 - Communications Buildings and Facilities.[48] Interim antennae was being installed by the 1st AACS I&M Squadron; scheduled date of the move to the receiver building was set for 15 December.

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48. History, 6th Air Division, October 1953, pp 33-34.

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A complaint received from some of his constituents residing in Drew Park, Tampa, Fla., (site of the World War II Drew Field Army Air Base) concerning B-47 jet noise was passed on to Brigadier General H. K. Mooney, 6th Air Division Commander, by United States Representative Courtney Campbell of the 1st District of Florida.[49]

"From what I can understand," wrote Congressman Campbell, "these airplanes are supposed to be making simulated landings at Tampa International Airport. I would greatly appreciate your advising me at your earliest opportunity what action, if any, can be taken to eliminate this undesirable situation."

General Mooney replied that 6th Air Division jet aircraft were using the Instrument Landing and Approach System (ILAS) installed at the Tampa International Airport, thereby establishing the necessary presence of the B-47's in that area.[50] One solution to the problem, General Mooney pointed out, would be to install an ILAS at MacDill, and "I am happy to inform you that this equipment is scheduled and should be ready for use on or about 1 February, 1954."

The 6th Air Division Commander advised the Congressman that B-47 commanders are restricted to a 500-foot minimum altitude, and after making a practice approach will turn West, carrying them out over the northern portion of Tampa Bay and consequently an uninhabitated area. Occasionally, some instances, dictated by flight safety, have required

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49. Ltr., U. S. Representative Courtney Campbell to Brig. Gen. H. K. Mooney, 6th Air Division Commander, undated. Exhibit 13.
50. Ltr., General Mooney to Congressman Campbell, 9 November, 1953. Exhibit 13A.

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the B-47's to turn East after the practice approach, thus bringing the aircraft over the Drew Park area. "Each of these incidents where the aircraft turned over Drew Park have been investigated by my staff through Civil Aeronautics Administration representatives," General Mooney advised. "In all cases the pilot was directed by the Air Controller at the Tampa International Airport to avoid a collision with another aircraft."

A similar complaint concerning B-47 jet noise was received during the previous month.[51]

51. History, 6th Air Division, October 1953, pp 35-36.

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CHAPTER THREE

B-47 OPERATIONAL ENGINEERING

Included within this volume are two B-47 Operational Engineering Section (OES) Specific Item Reports (SIR) pertaining to projects that have been mentioned previously. Therefore, they will be listed briefly herein, with proper references.

SIR Number 104-A concluded the project concerning the APS-23 Radome Deterioration Resulting from the Absorption of Foreign Fluids - B-47 Aircraft (EE-55).[52] The purpose of this project was to "report on the contamination of radomes which results in APS-23 radar signal

52. History, 6th Air Division, September 1953, page 71.

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attentuation by presenting: the effect of such attentuation on radar presentation and definitions; a means of detecting contaminated radomes; the causes of radome deterioration; preventative measures to insure against such contamination, and a process to restore contaminated radomes to usable condition."

As a result of these tests it was concluded that the radomes become contaminated with water and hydraulic fluid by absorption through the plys on the inner surface of the radome, which action decreases the radomes' transmission characters and results in poor definition and decreased range when operating at high altitudes. This condition adversely affects the bombing capability of the aircraft. Too, contamination increases the loss tangent of the radome dielectric material; also excessive ground maintenance and a high radome replacement rate (Megabuck item) requires that good radomes be made available to field organizations as soon as possible.

Determination was made that the radome capacitance checking method affords a reliable means of determining if the transmission characteristics of a radome are acceptable. The Goodyear Erosion Resistant Coating System 23-56 was found to protect reliable radomes from future contamination; however, this was considered to be an interim fix as the coating itself produces an attentuation of from two to four percent.

Tests showed that it was possible and economically feasible to

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restore contaminated radomes to a usable condition by baking them under controlled temperatures, then coating them with the Goodyear Coating System to prevent future contamination.

As to the final solution to the problem, the radome manufacturer, Zenith Plastics Company, devised a production whereby both the inner and outer surfaces of radomes would be sealed permanently against fluid absorption.

The discovery was made that the location of the radome drain hole contributes toward contamination in that critical area of the radome required for satisfactory radar operation. The open storage of crated radomes in supply also causes contamination by absorption.[53]

Specific Item Report Number 119 covered the project of Fourth Crew Member's Position, B-47 Aircraft (ME-80).[54] The purpose of this project was "to establish a configuration for a fourth crew member's station in B-47 type aircraft, and prepare necessary instructions for both installation and removal by field units."

Tests showed that there are three minimum requirements for a fourth crew member station: an intercommunication system which permits listening to mixed interphone and command, and talking on interphone only; a type D-1 oxygen regulator with sufficient mask to regulator tubing to permit movement throught the length of the walkway; and a

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53. Ltr., B-47 OES Hq 6AD to Comdr WADC, "Specific Item Report No. 104-A, APS-23 Radome Deterioration Resulting from the Absorption of Foreign Fluids - B-47 Aircraft (EE-55)," 23 November 1953, DOES 452.0311. Exhibit 14.
54. History, 6th Air Division, September 1953, pp 61-62.

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safety belt installation on the walkway suitable for crash landing or ditching.

Tests showed that when carrying a fourth crew member, the duration of the available oxygen supply within the B-47 would be approximately 25 percent less than normal.

The ability of the fourth crew member to successfully bail-out is doubtful, since the bailout spoiler would be deleted on aircraft equipped with ejection seats, thus leaving the normal escape hatch, the canopy opening, and the port left by ejection of the observer's seat as equally dubious routes. Even with the spoiler installed, the ability to escape would be so questionable that the ejection seats will have to be retro-fitted at the normal crew stations in earlier B-47 aircraft.

The fourth crew member must perforce sit during landings, take-offs, ditchings, and crash landings in the position proposed as the observer's ditching position. Therefore, an additional safety belt would have to be installed in the walkway at station 200 for use by the observer during ditching and crash landings when a fourth crew member would be aboard.

Eighteen manhours would be required per aircraft for the installation of the fourth station when working on a production basis; all of the materials are standard Air Force supply items. The fourth position would add 15 pounds to the aircraft's basic weight.

Furthermore, retention of the spoiler would penalize the aircraft's combat weight by 35 pounds, even after the removable spoiler parts would

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be field-stripped prior to entering combat.[55]

55. Ltr., B-47 OES Hq 6AD to Comdr WADC, "Specific Item Report No. 119, Fourth Crew Member's Position, B-47 Aircraft (ME-80)," 23 November 1953, DOES 452.0311. Exhibit 15.

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CHAPTER FOUR

MATERIEL and FACILITIES

Request was made of Second Air Force by the Air Installations Office for the replacement of existing defective direct burial cable to the new control tower with duct lay cable.[56] This project would entail the replacement of present unsatisfactory direct burial cable which is susceptible to extensive deterioration in the soil with suitable duct system and lead-covered cable.

The present cable, according to the request, is laid adjacent

56. Ltr., Hq 809th ABGp to Comdr 2AF, "Replace Existing Defective Direct Burial Cable, MacDill AFB, Florida," 6 November 1953, MCDMAI 600.1.

1498

to active taxiways and warming-up areas, with consequent extensive damage being experienced from the blasts of B-47 outboard engines. It was estimated that this project, if accomplished, would result in maintenance savings of approximately $1,000 per month. During a period of five months there were approximately 130 failures on the cable.

The project would cost approximately $45,148.10 to accomplish, with work being done by contract.

Second Air Force Headquarters denied MacDill's request for the modernization of mobilization-type barracks.[57] The intermediate command listed four objections to the proposal:[58]

First was that MacDill had already exceeded its installations allotment of funds for lumber and lumber products for the first two quarters of Fiscal Year 1954 by $9,500. Furthermore, "any excess stock of lumber and lumber products must be reported as available for redistribution to other installations" within Second Air Force; the critical shortage of funds for the procurement of lumber and allied products precluded the use of this type of materials for alteration or modification projects; finally, authorized stock levels for lumber and lumber products are sufficient only for the routine maintenance and accomplishment of emergency, operationally essential projects.

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57. History, 6th Air Division, October 1953, pp 41-42.
58. 1st Ind., Hq 2AF to Comdr 6AD, 5 November 1953, to ltr., Hq 6AD to Comdr 2AF, "Modernization of Mobilization Type Barracks, MacDill AFB," 29 October 1953, 2AFMIB 600.1. Exhibit 16.

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Second Air Force suggested that an item for the modernization of mobilization type barracks be included in the next eligible Public Works Program.

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CHAPTER FIVE

MISCELLANEOUS

The second annual Florida National Sports Car Races were scheduled to be held at MacDill on 31 January, 1954, according to information relayed from Headquarters Strategic Air Command via Second Air Force Headquarters.[59] The first such event was held on 21 February, 1953,[60] and netted approximately $30,000 for the Airmen's Living Improvement Fund.[61]

Second Air Force advised MacDill authorities that in order to secure a loan of $2,500 from the Turner Air Force Base (Ga.) Airmen's Living

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59. TWX, Hq 2AF to Comdr 6AD, 2AFRA 3024, 25 November 1953.
60. History, 6th Air Division, February 1953, pp 67-71.
61. History, 6th Air Division, March 1953, pp 70-73.

1501

Improvement Fund in order to finance expenses for the 1954 race, MacDill would have to submit an official request to Headquarters, Strategic Air Command.[62]

Members of the 305th Bomb Wing, on 90 days' temporary duty in the United Kingdom,[63] were informed of MacDill's efforts to provide separate housing for bachelor master and technical sergeants.[64] In a letter to Colonel Elliott (Pete) Vandevanter, Jr., 305th Bomb Wing Commander, Colonel B. H. Merchant, Base Commander, stated that one of the transient officer quarters with space for 37 men would be used as a bachelor non-commissioned officers' quarters.[65] Most of the rooms would be shared by two men. Accommodations would consist of standard billeting furniture. The standard billeting rate of $8.00 per month would be charged to defray the cost of maid service and linen change. Colonel Merchant wrote that 10 of the 37 spaces would be reserved for 305th Wing personnel.

During the month of November, 1953, there was one General Courts-Martial (Article 15 - Desertion); ten Special Courts-Martials, and 23 Summary Courts-Martials. Of the latter figure, ten trials, in which nine of the accused were found guilty, involved Article 107 - False Official Statement, and stemmed from the Committee 55 invest-

62. TWX, Hq 2AF to Comdr 6AD, 2AFPSA 3449, 30 November 1953.
63. History, 6th Air Division, September 1953, pp 16-19.
64. History, 6th Air Division, October 1953, pp 43-44.
65. Ltr., Colonel B. H. Merchant, Base Commander, to Col. Elliott Vandevanter, Jr., 305th Bomb Wing Commander, 3 November 1953. Exhibit 17.

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igations.[66]

In the wake of a two-day visit on 29-30 October by Mrs. Curtis E. LeMay, wife of the Strategic Air Command Commander,[67] the first five-week training course for volunteer workers in the Dependents' Assistance Program began on 13 November.[68]

The group headed by Mrs. LeMay visited MacDill as one of the stops on a tour of SAC bases in surveying similar programs, and to serve as a medium of exchanging information among the various bases. Accompanying Mrs. LeMay were Lieutenant Colonel (Chaplain) Stephen Mayer, Deputy Chief of Chaplains, SAC; Lieutenant Colonel Donald M. Kupfer, Chief of the Personnel Service Division, SAC; Major Joseph M. Boyer, Jr., Chief of Personal Affairs Branch, SAC; Mrs. Reade Tilley and Mrs. Herbert I. Shingler, representatives of the Offutt AFB, Neb., Officers Wives Club, and Mrs. Donald K. Storsbach and Mrs. Roy Morrison, representatives of the Offutt AFB NCO Wives Club.

Dependents' Assistance programs are a semi-official agency, manned by volunteers (officers' and non-commissioned officers' wives) who serve as a liaison between dependents of service personnel, especially those whose husbands are stationed away from the MacDill AFB-Tampa area, and official or semi-official agencies such as

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66. Ltr., Hq 809th ABGp to Comdrs, All Units, MacDill AFB, Fla., "Courts-Martials Trials (November 1953), 1 December 1953, MCDCLC 250.4. Exhibit 18.
67. The Airman (MacDill AFB, Fla.), 6 November 1953.
68. Daily Journal, Hq 809th ABGp, 16 November 1953.

1503

Personal Affairs, Chaplain, Hospital, Air Force Aid Society, Red Cross, etc.

The local program was given official impetus by the appointment of Second Lieutenant John O. Montgomery, a graduate of Ohio State University with a major in sociology, as the officer in charge of the overall program. The office staff is composed of two airmen, assisted by volunteer workers from the wives' organizations.[69]

Mrs. William E. Greer was named as the Dependents' Assistance Program chairman.[70]

General instructions pertaining to hunting game on Avon Park Air Force Base, Fla., were distributed base-wide by the Personnel Services Office.[71]

MacDill, with its total of $16,303.73 contribution, headed all Second Air Force bases in the 1953 Air Force Aid Society drive.[72] MacDill personnel also contributed $9,572.98 to the 1953 Community Chest campaign.[73]

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69. The Airman (MacDill AFB, Fla.), 13 November 1953.
70. Ibid, 20 November 1953.
71. Ltr., Personnel Services Office, MacDill AFB, Fla., to general distribution, "Avon Park Air Force Base Controlled Hunt," 13 November 1953, MCDPPS. Exhibit 19.
72. The Airman (MacDill AFB, Fla.), 6 November 1953.
73. Ibid, 27 November 1953.

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HEADQUARTERS
6TH AIR DIVISION
MacDill Air Force Base, Florida

ROSTER OF PERSONNEL
13 November 1953

NAME	HOME ADDRESS	DY PHONE	HOME PHONE
BRIGADIER GENERAL H. K. MOONEY Commandor 6th ADiv	7803 Bayshore Dr. MacDill AFB, Fla	20-011	39-291
COLONEL E. C. HARDIN JR. Director of Operations	8007 Bayshore Dr. MacDill AFB, Fla	23-011	60-2312
MAJOR D. R. CHINNOCK (Acting) Director of Materiel	16 Bridges Loop Apt #6	24-011	60-2822
LT COL F. R. BERTERO Director Of Personnel	3604 West Sterling Circle, Tampa, Fla	21-011	64-4363
LT COL E. L. BISHOP Deputy Director of Operations	8115 Bayshore Dr. MacDill AFB, Fla	24-681	60-3201
MAJOR K. L. WARNER Training Officer	8005 Bayshore Dr. MacDill AFB, Fla	36-111	60-2254
MAJOR W. H. PATTON Asst Director of Materiel	3013 Meadows St # Tampa, Fla	39-681	None
MAJOR D. R. CHINNOCK Staff Arm. & Elect Officer	16 Bridges Loop Apt #6	39-681	60-2822
1ST LT EVERETTE TAYLOR Aide - de - Camp	BOQ 408, Rm 14, MacDill AFB, Fla	20-111	None
MAJOR B. J. MUMMERLYN Adjutant	6220 Foster Ave # Tampa, Fla	27-111	63-4774

(#) All home addresses on the base unless otherwise indicated.

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

ROSTER OF KEY PERSONNEL
13 November 1953

NAME	*HOME ADDRESS	DUTY PHONE	HOME PHONE
#Colonel B. H. Merchant Base Commander	4 Staff Loop	31-111	36-271
#Lt Col T. G. Sanford Deputy Base Commander	8313 Bayshore Dr.	36-021	60-2331
#Lt Col D. J. Nolan Base Executive Officer	33 Secord Drive	26-321	60-3863
#Major B. J. Mummerlyn Base Adjutant	6220 Foster Ave Tampa	27-111	63-4774
#WOJG C. A. Whittle Asst Base Adjutant	BOQ 368 Apt #3	27-111	35-211
#Lt Col W. B. Hoynes Director of Personnel	5 Secord Dr.	31-031	60-2303
Major A. J. DiLucido Mil Personnel Officer	8207 Bayshore Dr. Apt #4	35-611	60-3351
#Lt Col L. J. B. Mostier Jr. Director of Operations	4 Gardon Dr.	32-501	60-2223
Major H. P. Killingsworth Asst Dir of Operations	6208 Foster Ave. Tampa	32-501	63-5743
#Major S. L. Almon Director of Materiel	3510 Vasconia Tampa	28-071	64-8464
#Major R. G. Williams Air Installations Officer	11 Secord Dr.	31-051	60-3253
#Major H. C. Oakes Base Comptroller	3 Hillsborough Loop	25-301	60-2061
#Lt Col C. L. Lack Base Chaplain	28 Gardon Dr. MacDill AFB, Fla	21-111	None
#1st Lt J. Thomas Personal Affairs	26 Secord Dr. Apt #4	25-061	60-3734
#2/Lt J. Montgomery Dependents Assistance Program	BOQ 394 Room 13	38-371	28-211

Major I. Poskoo Base Legal	1 Bridges Loop Apt #2	25-372	60-2373
#Major W. W. Howard Info Service Officer	2816 Sitios St. Tampa	34-341	82-2423
#Major J. H. Windsor Air Provost Marshal Comdr, 809th Air Police Sq	4 Bridges Loop Apt #6	25-191	60-2833
#Major A. H. Haaf Transportation Officer	4735 West Anita Blvd. Tampa	38-011	63-2671
Lt Col R. N. Bailey Sq Comdr Hqs 809th ABG	106 S. Mantanzas Tampa	37-031	85-0732
Capt F. L. Crouse Comdr Supply Sq	32 Accord Dr. Apt #5	32-031	60-3811
Major A. H. Haaf Comdr Mtr Veh Sq	4735 West Anita Blvd. Tampa	39-311	63-2671
Capt G. P. Foster Comdr Food Sv Sq	3616 Omar Ave. Tampa	25-021	63-4053
Major H. P. Killingsworth Deputy Comdr Ops Sq	6208 Foster Ave. Tampa	34-791	63-5743

(*) All home addresses on the base unless otherwise indicated.
(#) Indicates officers on alert as designated by 809th Standing Directive No. 11-2, 7 October 1952.

C. A. Whittle

C. A. WHITTLE
WOJG, USAF
Asst Adjutant

APPENDIX "A"

CONFIDENTIAL EXHIBIT 1

DEPARTMENT OF THE AIR FORCE
Headquarters United States Air Force
Washington 25, D. C.

SPECIAL HANDLING REQUIRED
NOT RELEASABLE TO FOREIGN NATIONALS
The information contained in this document will not be disclosed to foreign nationals or their representatives.

AFOIN-1B4

SUBJECT : (Uncl) Visit of Lieutenant General Fevsi Ucsner, Commanding General, Turkish Air Force

TO: Commander
MacDill Air Force Base
Florida

Attn: Lt Col William Hoynes

1. VISIT. Lieutenant General Fevsi Ucsner, Commanding General, Turkish Air Force, accompanied by Lieutenant Colonel Seref Urul, Chief, Training Section, Turkish Air Force, and Captain Cengiv Kutluoglu, Secretary to the Commanding General, will arrive in the United States on 13 November 1953 as guests of the Chief of Staff, USAF, to tour USAF installations. Biographical sketches attached as Inclosure 2. The USAF Escort Officer is Lt Colonel John D. Harris, AO 726390. Brig Gen Webster, Commander, TUSAFG JAMTAT will accompany party.

2. PURPOSE. Purpose of this tour is to allow the Commanding General, Turkish Air Force, to gain first-hand information pertaining to the USAF organization, equipment, training procedures and to further goodwill between the two countries.

3. SECURITY CLEARANCE. Classified information released to the visitors will be in accordance with the provisions of paragraph 6g of Registered Secret Document AFDCMI. For Commanders, Graham and Bartow Air Bases, who may not have access to AFDCMI, visitors are allowed access to information up to and including RESTRICTED only.

CONFIDENTIAL

4. DOCUMENTARY INFORMATION. Since the approval for the release to foreign nationals of classified documentary information is a function of the Directorate of Intelligence, Headquarters USAF, it is imperative that (a) no classified documents be released for retention by foreign visitors and (b) no firm commitment be made concerning the releasability of any classified document. Two alternatives exist when and if a direct request is made by a foreign national for a classified document: (a) Tactfully advise the visitor that such a request should be submitted through his government's Air Attache in Washington, or (b) State that the material requested will be forwarded to the Foreign Liaison Branch, Directorate of Intelligence, Headquarters USAF.

5. ENTERTAINMENT. Official entertainment funds will be made available in the amount indicated below, and this expense will be met by the escort officer. All bills should be itemized, consolidated and presented to the escort officer in sufficient time for him to make payment before departing the base. A guest list of all functions will also be provided the escort officer. The cost of quarters and rations will be paid by the escort officer and is not included in the funds allotted for entertainment.

MacDill AFB - $75.00

For your information and guidance, quoted herewith is paragraph 2 of letter dated 1 July 1952, from Major General McKee, Assistant Vice Chief of Staff, to all major commands: "Effective 1 July 1952, expenses incident to the entertainment of foreign dignitaries on escorted trips directed by this Headquarters within the Zone of Interior will be the funding responsibility of this Headquarters, through the media of making funds available to the escort officer. Accordingly, your Fiscal Year 1952 Funding Program does not include any funds for this purpose."

In accordance, therefore, with the above directive, base contingency funds will not be used to augment the Headquarters funds which are in the hands of the escort officer and which are specifically allotted to defray entertainment expenses for the tour. In order to remain within the allotted funds, it is suggested that receptions for the visiting VIPs be held to a minimum and small intimate dinner parties and/or luncheons with specially interested members of the staff be substituted.

6. TRAVEL. The itinerary is attached as Inclosure 1. The escort officer will notify all bases as soon as practicable in advance if the time of arrival varies from the specified time on the itinerary. Travel will be by C-47 SAM aircraft.

7. ACCOMMODATIONS. All addressees are requested to meet the party, provide suitable VIP accommodations and make available any local transportation required. Request Bartow Air Base house visitors on base if quarters are adequate. If not, reserve 5 single rooms in a suitable hotel near Base. Necessary quarters on the base should be provided for the SAM crew. This expense will be borne by the individual crew members.

8. HONORS. Rendering of personal salutes and honors will be in accordance with the provisions of AFR 900-4. General Vedner is entitled to all honors normally rendered the Chief of Staff, USAF.

9. PRESS COVERAGE. There is no objection to publicity in connection with this visit and it should be handled locally. An initial release will be made by the Director of Public Information of this Headquarters. Any released publicity should revolve around a general statement as given in paragraph 2 above. It is also requested that, for goodwill purposes, copies of local press releases be given to visitors before they depart the base.

10. SPECIAL INSTRUCTIONS. In order that the USAF gain maximum results from this tour, good photographic coverage is essential. At the end of the tour, the photographs are mounted in an album and presented to these foreign visitors by the U. S. Air Attache on behalf of the Chief of Staff, USAF. In view of the above, efforts should be made to secure photographs of military interest consistent with the requirements of security. Preferred photographs are those which include arrival ceremonies, receptions, photographs of important personages and of military briefings, sites and shops. Proofs of all exposures should be screened by the Base PIO and in keeping with the aforementioned suggestions, the six best and most suitable exposures should be selected and four copies of each of these six selected pictures furnished the Foreign Liaison Branch, Directorate of Intelligence, Headquarters USAF, so that one copy of each print may be presented to each member of the visiting party. Further request that all individuals and locations photographed be completely identified.

11. CONTACTS. For further information concerning this visit, contact Lt Colonel Robert S. Adamins or Lieutenant James R. Plitt, telephone LIberty 5-6700, extensions 53602, 71097 and 73989, Washington, D. C., at the address in paragraph 10 above.

BY ORDER OF THE CHIEF OF STAFF:

2 Incls
1. Itinerary
2. Biographies

/s/ EVERETT H. WARE
/t/ EVERETT H. WARE
Colonel, USAF
Foreign Liaison Branch
Directorate of Intelligence

"A CERTIFIED TRUE COPY"
(Including Inclosures)

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

Basic ltr, Hq USAF, subj: Visit of Lieutenant General Revsi Ucaner, Commanding General, Turkish Air Force

DISTRIBUTION:

Commander, Air Ground Operations School, Southern Pines, N. C.
Commander, Graham Air Base, Marianna, Florida
Commander, Bartow Air Base, Bartow, Florida
Commander, Brookley AFB, Mobile, Alabama
Commander, Air University, Maxwell AFB, Alabama
Commander, Maxwell AFB, Alabama
Commander, TAC, Langley AFB, Viriginia
Commander, Alexandria AFB, Louisiana
Commander, ATRC, Scott AFB, Illinois
Commander, Scott AFB, Illinois
Commander, AMC, Wright-Patterson AFB, Ohio, Attn: MCGI
Commander, Wright-Patterson AFB, Ohio, ATTN: MCP-PIO
Commander, WADC, Wright-Patterson AFB, Ohio
Commander, ARDC, P. O. Box 1395, Baltimore, Md.

SAF/OPI
CSD/CMA, Attn: Col Gevan, Liaison Division
AFCCS, Attn: Mrs. Knope
CSD/OPI
Department of State, Room 2279, MS, Washington 25, D.C.
Attn: Mr. Edwin M. Wright, GTI

ITINERARY

VISIT OF LIEUTENANT GENERAL FEVSI UCANER

COMMANDING GENERAL, TURKISH AIR FORCE

DATE	LOCAL TIME	ACTIVITY
Friday 13 Nov		Arrive Washington, D. C.
Saturday 14 Nov		Remain Washington, D. C.
Sunday 15 Nov	1000 1130	Depart Washington, D. C. Arrive Air Ground Operations School Southern Pines, N.C.
Monday 16 Nov		Attend Air Ground Operations School
Tuesday 17 Nov		Attend Air Ground Operations School
Wednesday 18 Nov		Attend Air Ground Operations School
Thursday 19 Nov		Attend Air Ground Operations School
Friday 20 Nov	0930 1300	Depart Southern Pines Arrive MacDill AFB Florida (RON) (Originally schedule for Graham AFB, Fla.)
Saturday 21 Nov	1130 1200	Depart MacDill AFB, Florida Arrive Bartow Air Base, Florida
Sunday 22 Nov	1400 1610	Depart Bartow Air Base Arrive Brookley AFB, Mobile, Ala.
Monday 23 Nov		Remain Brookley AFB
Tuesday 24 Nov	0900 1000	Depart Brookley AFB Arrive Air University, Maxwell AFB, Ala.
Wednesday 25 Nov	0900 1130	Depart Air University Arrive Alexandria AFB, Louisiana
Thursday 26 Nov	1100 1450	Depart Alexandria AFB Arrive Scott AFB, Illinois

Incl 1

DATE	LOCAL TIME	ACTIVITY
Firday 27 Nov		Remain Scott AFB
Saturday 28 Nov	1400 1720	Depart Scott AFB Arrive Wright-Patterson AFB, Ohio
Sunday 29 Nov		Remain Wright-Patterson AFB
Monday 30 Nov		Visit Wright-Patterson AFB
Tuesday 1 Dec	0900 1830	Depart Wright-Patterson AFB Arrive Mitchel AFB, New York
Wednesday 2 Dec		Visit Republic Aviation Corporation
Thursday 3 Dec	0900 1035	Depart Mitchel AFB, New York Arrive Washington, D. C.
Friday 4 Dec		Depart Washington, D.C. for Turkey

CONFIDENTIAL

Biographical Data - Lieutenant General Fevzi Ucaner

1. Lt General Fevzi Ucaner, serial number 334-125, was born in ERZINCAN, Turkey, on December 15, 1900 of Kurdish parents. He joined the Turkish Army after his graduation from the secondary schools of ERZINCAN.

2. UCANER was commissioned in 1916, completed the basic military schools and then was graduated from the War College, the Air School, the Staff College and foreign schools including, French Air Pilot, navigational, and gunnery training during the period 1924-1925.

3. His military career since he was commissioned in 1916: he served during the War of Independence as Aide-de-Camp to a Cavalry Corps Commander. He has commanded an infantry company, a cavalry company, and from the time of the completion of his flight training, has commanded all units from squadron through Air Division. In 1944, he was Commanding Officer of the Third Air Regiment. Upon being promoted to Brigadier General in August 1944, he was given command of the First and later the Second Air Division. For a short time he served as Commandant of the Air Staff College. On 30 August 1945, Ucaner was promoted to Major General. He became Deputy C/S of the General Staff for Air on 30 August 1948, and was promoted to Lt General. Later General Ucaner served as Chief of Staff of the Turkish Air Force under General Zeki Dogan. When General Muzaffer Goksenin was appointed Commanding General, Turkish Air Force, General Ucaner was appointed to a newly created position as Under Secretary of Defense, which position he held until his appointment as Commanding General, Turkish Air Force, on 16 April 1953.

4. General Ucaner is Mohammedan by religion, but is extremely liberal and broad-minded in his religious views. He observes only the basic code of good conduct imposed by his religion, but does not follow all practices prescribed in the Koran. He has developed a speaking knowledge of English and French. He speaks both languages sufficiently well to discuss any subject with ease.

CONFIDENTIAL

1515

Name: Seref Urul

Rank: Lt Colonel, Turkish Air Force

Age: 41

Position: Chief, Training Section

Married: Yes

Children: 2 daughters

Lt Colonel Seref Urul entered the service in 1933 and became a rated pilot in 1935. He drinks in moderation and his hobby is hunting. He has no food preferences. Colonel Urul has never been out of Turkey.

Incl 2

Name:	Cengiz Kutluoglu
Rank:	Captain, Turkish Air Force
Age:	30
Position:	Secretary to the Commanding General and Translator
Married:	Yes
Children:	No
Military Service:	Captain Kutluoglu entered the service in 1943 and took his pilot training in the United States
Drink:	Yes (moderation)
Food Preference:	None

Comments of the U.S. Air Attache, Turkey: Captain Kutluoglu has been a good friend of the U.S. Air Attache. He thinks that no country in the world compares with the U.S. He is known among the U. S. Colony in Turkey as "Tex."

Incl 2[3]

EXHIBIT 2

CONFIDENTIAL
SECURITY INFORMATION

MCLK Committee 55 Investigations

Base Historical Officer Base Comptroller 3 Nov. 53

1. Reference your [illegible] of 23 September 1953 requesting certain information pertinent to investigations performed by Committee "55". Our files and records are not set up to reflect the specific information you have requested. Being only a fact finding Committee, we do not know the ultimate disposition of many of the cases. Many of the personnel involved have been transferred to other bases, or discharged.

2. Due to the continuing nature of the actions of this Committee and the cross-posting of actions, it is not practical to render a monthly progress report. After consideration of the following report as of 31 October 1953, request further reports be not required except that we will furnish you copies of final reports made to higher headquarters.

3. We record the cases as we complete them and the information shown as factual data in this report will include only those cases where a final case report has been made to the Base Legal Officer. Naturally, much of the various parts of the investigation has been completed on remaining unclosed cases.

4. Specific data as of 31 October 1953 is reported as follows:

a. Number of cases examined: 1154
b. Number of claims determined valid: 313
c. Number of cases where no travel was performed: 108
d. Number of cases where travel performed in advance of orders: 70
e. Number of cases determined a visit: 26
f. Number of cases investigated by OSI: 149
g. Number of cases no travel claim submitted: 633
h. Number of cases pending collection: 12
i. Number of cases collected: 199
j. Total amount of money collected: $[illegible],013.11

5. Of the approximate 200 cases remaining to be closed by this Committee, most of them are in the questionable category; have been investigated by OSI, and collections have been or will be made. The life of this Committee can easily extend from its present 12 months to 18 months, even though our work is current at the present date.

cc: B/Gen Mooney
Col Merchant

H. C. OAKES
Major, USAF
Base Comptroller
Ext. 25-301

CONFIDENTIAL

LAD C-8323

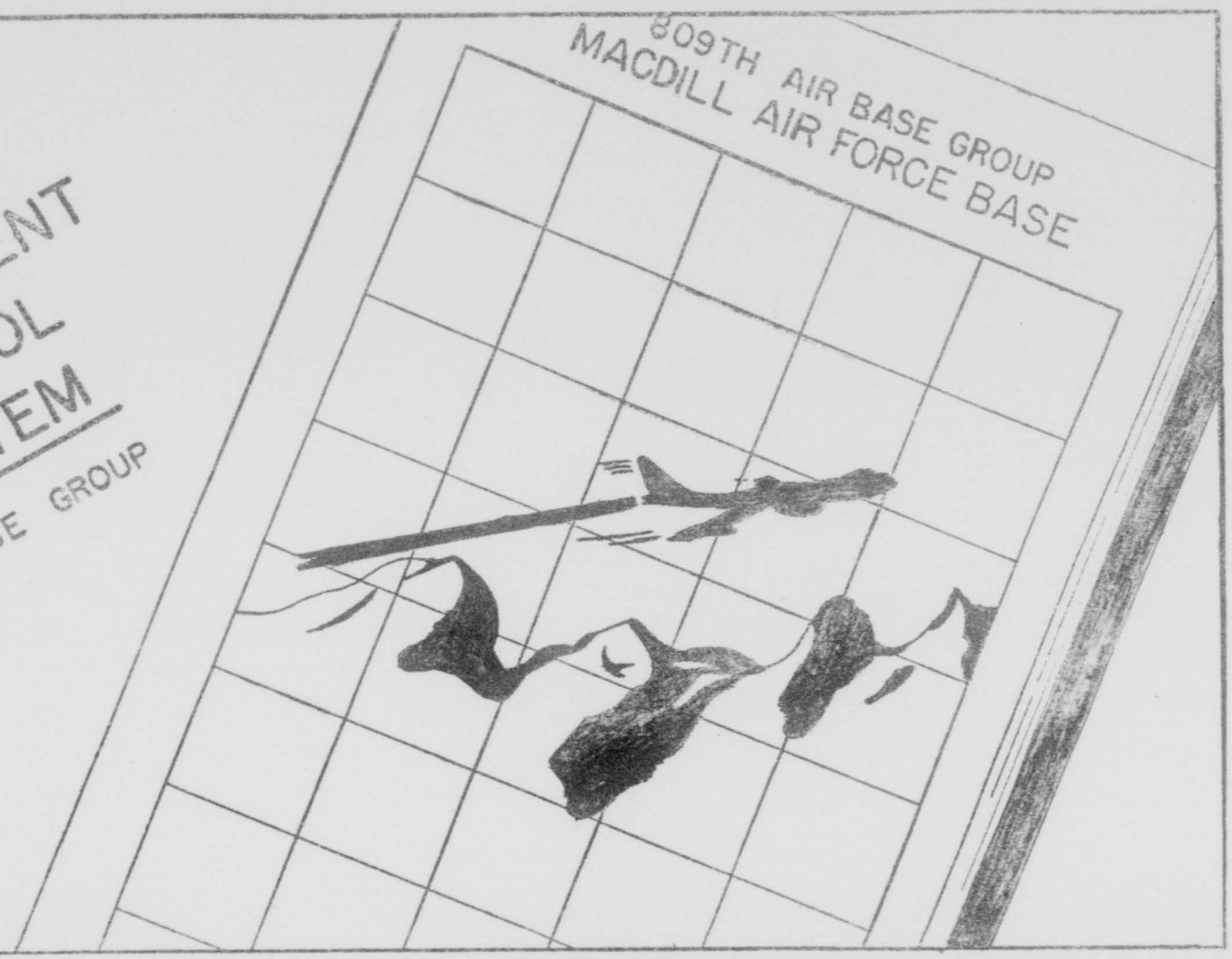
EXHIBIT 3

SAC MANAGEMENT CONTROL SYSTEM

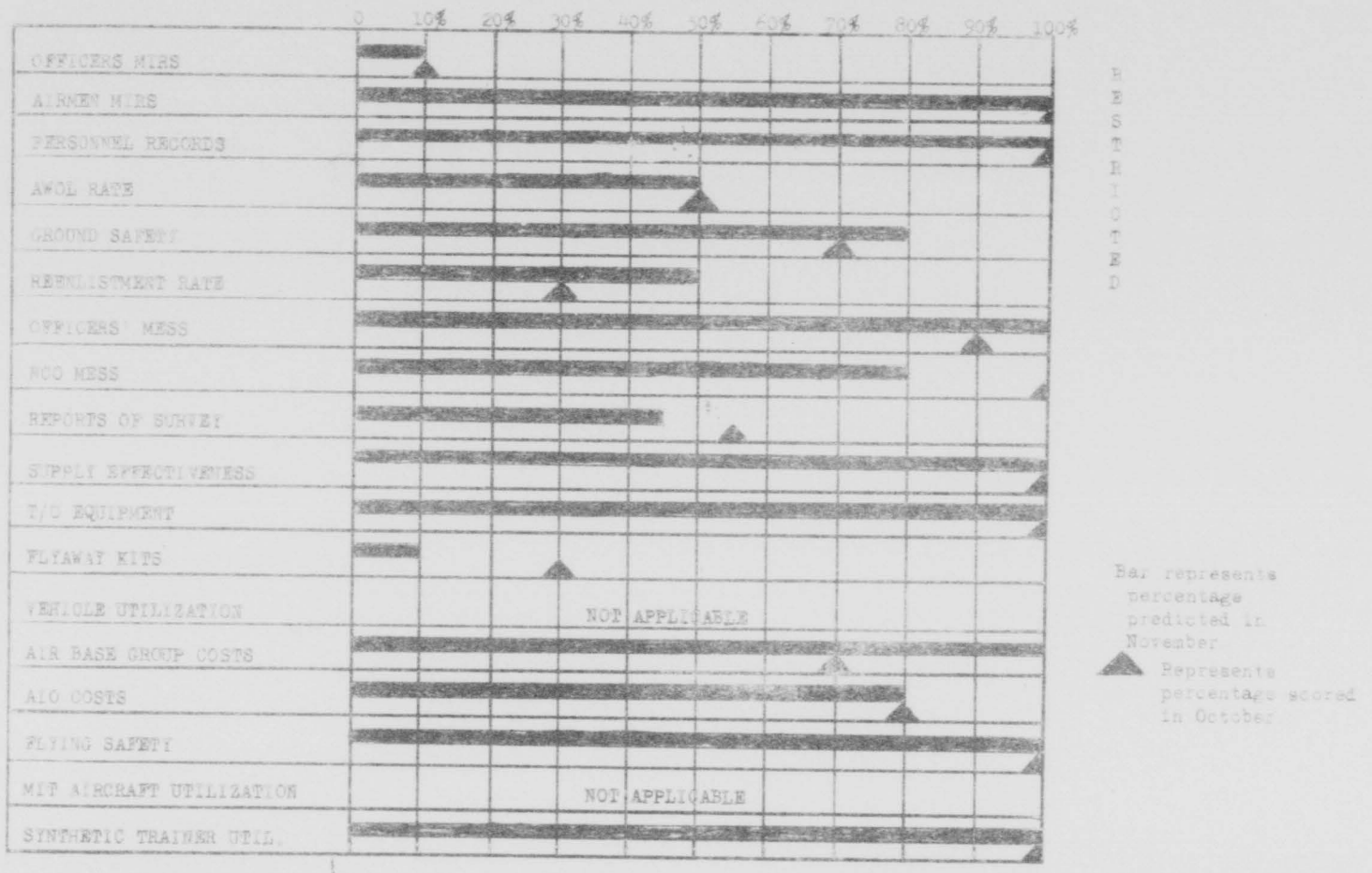
AIR BASE GROUP

NOVEMBER 1953

PREPARED BY:
BASE COMPTROLLER



NOVEMBER 1953 - 809TH AIR BASE GROUP SAC MANAGEMENT CONTROL PERCENTAGES



R E S T R I C T E D

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
NOVEMBER 1953

14 December 1953

	MAXIMUM SCORE	SAC OCTOBER % MAX SCORE	SAC OCTOBER SCORE	PREDICTED NOVEMBER % MAX SCORE	PREDICTED NOVEMBER SCORE
Meaning:					
Officers MIRS	20	10	2	10	2
Airmen MIRS	80	100	80	100	80
Personnel Records	50	100	50	100	50
AWOL Rate	50	50	25	50	25
Ground Safety	70	70	49	80	56
Reenlistment Rate	50	30	15	50	25
Messes:					
Officers' Mess	25	90	22.5	100	25
NCO Mess	25	100	25	80	20
Reports of Survey	60	55	33	45	27
Supply Effectiveness	100	100	100	100	100
T/O Equipment, Air Base Group	20	100	20	100	20
Flyaway Kits	60	30	18	10	6
Vehicle Utilization		- - - -	NOT APPLICABLE	- - -	
Air Base Group Costs	80	70	56	100	80
AIO Costs - Incident to Maint.	60	80	48	80	48
Flying Safety	70	100	70	100	70
MIT Aircraft Utilization		- - - -	NOT APPLICABLE	- - -	
Synthetic Trainer Utilization	50	100	50	100	50
TOTAL SCORE	870		620.5		684
PERCENTAGE OF TOTAL SCORE			76.3		78.6

R E S T R I C T E D

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
NOVEMBER 1953

14 December 1953

	MAXIMUM SCORE	SAC OCTOBER SCORE	PREDICTED NOV. SCORE	POINT CHANGE	COMMENTS
Manning Officers MIRS	20	2	2	NC	There were 109 spaces manned in required specialties out of 157 authorized for a 69.4% manning as compared to 111 manned out of 157 authorized in October (70.7% manning). With an assigned strength of 133, 84.7% of assigned officers were MIRS in November.
Airmen MIRS	80	80	80	NC	100% of maximum score attained. There were 2288 airmen MIRS out of 2,440 authorized.
Personnel Records	50	50	50	NC	100% of the maximum score attained.

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SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
NOVEMBER 1953

14 December 1953

	MAXIMUM SCORE	SAC OCTOBER SCORE	PREDICTED NOV.SCORE	POINT CHANGE	COMMENTS
AWOL Rate	50	25	25	NC	The 7 AWOLs in November resulted in a three month total of 33. The rate wa 3.7 per thousand for 50% of the maxim score, or 25 points, the same as for October. There have been 4 AWOLs thr 9 December. If there are no more AWO through December, based on the same m strength, the result will be 70% of t maximum score, or 35 points. A total 7 AWOLs in December (same as Nov.) ba on the same mean strength will result 70% of the maximum score or 35 points
Ground Safety	70	49	56	+7	A Ground Safety Index of 5.14 combine with an accident cost index of $2.99 resulted in a score of 56 points (80% of the maximum). Had there been one military accident and one less motor vehicle accident, the November score would have been 90% of the maximum sc or 63 points. The Ground Safety Inde 5.14 was within the 90% scoring brack but the Accident Cost Index of $2.99 limited the score attained to 80% of maximum possible score.

R E S T R I C T E D

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
NOVEMBER 1953

14 December 1953

	MAXIMUM SCORE	SAC OCTOBER SCORE	PREDICTED NOV. SCORE	POINT CHANGE	COMMENTS
Reenlistment Rate	50	15	25	+10	The combined three months immediate reenlistments (10) and regular terminations (24) result in a rate of 41.7 for 50% of the maximum score or 25 points.
Messes:					
Officers' Mess	25	22.5	25	+ 2.5	Fifteen points were attained under the SAC "Financial Efficiency Index" for 100% of the maximum score.
NCO Mess	25	25	20	- 5	Thirteen points were attained under the SAC "Financial Efficiency Index" for 80% of the maximum score. Points were lost in Factors 7 and 8 (Net Profit or (Loss) from Operations Before Dues for Month an Year to Date).
Reports of Survey	60	33	27	- 6	An average survey dollar value of $400.7 combined with a 3.9 rate per thousand resulted in 45% of the maximum score or 27 points. The incidence rate was withi the 90% scoring bracket but the average survey dollar value limited the score attained to 45% of the maximum possible score.

R E S T R I C T E D

RESTRICTED

SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
NOVEMBER 1953

14 December 1953

	MAXIMUM SCORE	SAC OCTOBER SCORE	PREDICTED NOV. SCORE	POINT CHANGE	COMMENTS
Supply Effectiveness	100	100	100	NC	100% of the maximum score attained.
T/O Equipment	20	20	20	NC	100% of the maximum score attained.
Flyaway Kits	60	18	6	-12	Based on report submitted (3-SAC-E21) the percentage of completeness of 59.75% attained 10% of the maximum score or 6 points. The loss of the 98 ARS with its high percentage of completeness adversely affected the November score. The score is not expected to rise until additions or deletions are made and an official change is announced.
Air Base Group Costs	80	56	80	+24	The net cost for the Air Base Group for November was $1,051,773, a decrease of $250,023 from October cost. The Base population decreased 92. The per capita cost of $116.80 resulted in a performance index of 122 for 100% of the maximum score. Account 31,399 (Installation maint., Other) decreased $22,302. Acct. 73,700, (Net Inv. Losses) decreased $33,618 and acct. 73,800, (Property Losses) decreased $50,220. The balance of decrease was due to numerous decreases of $1,000 to $14000 each.

RESTRICTED

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SAC MANAGEMENT CONTROL STATEMENT
809TH AIR BASE GROUP
NOVEMBER 1953

14 December 1953

	MAXIMUM SCORE	SAC OCTOBER SCORE	PREDICTED NOV. SCORE	POINT CHANGE	COMMENTS
AIO Costs - % Incld. to Maint.	60	48	48	NC	The percent of AIO Manageable Resources expended on maintenance and repair incident to maintenance was 97.6 for 80% of the maximum score or 48 points. Maximum score would have been attained if the cost of minor construction, minor additions, alterations and deletions (Accounts 09108.2A and 09108.3A) during the fiscal year to date had been limited to $7,104.87 as compared to the $18,443.24 actually expended.
Flying Safety	70	70	70	NC	100% of maximum score attained.
Synthetic Trainer Util.	50	50	50	NC	100% of maximum score attained.

1526

EXHIBIT 4

REPORT OF PROCEEDINGS OF THE EXECUTIVE GROUND SAFETY COUNCIL

Headquarters
MacDill Air Force Base, Florida

Proceedings of a meeting of the Executive Ground Safety Council which convened at MacDill Air Force Base, Florida, under the provisions of Second Air Force Regulation 36-2, 28 June 1952, and pursuant to Letter Order MCDCaG-28 February 1953, Headquarters 809th Air Base Group, MacDill Air Force Base, Florida.

The Council met pursuant to the foregoing order at Headquarters MacDill Air Force Base, Florida at 1400 hours, 13 November 1953.

Members present:

Lt Col William P. Hoynes - Base Director of Personnel (Acting President)
Lt Col D. W. Rains, Commander, 307th Air Base Group
Maj George R. Adams, for Commander, 306th Bomb Wing (M)
Maj H. E. Patty, Deputy D/P, 306th Bomb Wing (M)
Maj John H. Windsor, Base Provost Marshal
2/Lt R. B. Billman - for Base Surgeon
WOJG J. V. Henderson - For Commander 305th Bomb Wing (M)
M/Sgt James A. Morgan, for Base Director of Materiel
Mr. Frank Joseph, Base Fire Chief
Mr. George R. White, Ground Safety Director (Recorder)

1. Discussion:

a. Action taken on recommendations of 15 October Minutes is as follows:

(1) The two photographs of a finger ring, torn from an airman's hand, were made into a photo poster and distributed to all squadrons of the 809th Air Base Group and 306th Bomb Wing (M). Copies will be given to the 305th Bomb Wing when they return to MacDill from present TDY assignment.

(2) The 306th Bomb Wing has been advised to schedule vehicle safety indoctrination lectures each month after the Character Guidance scheduled meetings. A study will be made to determine if the Character Guidance Program of the Air Base Group can be lengthened to include a period of vehicle safety indoctrination each month.

b. The Injury and Accident experience for the month of October was reviewed in detail and graphic charts were shown to clarify the experience to date this year. It was noted that the military injury rate for October was the lowest for 1953, registering a rate of 1.67. The total cost of accidents registered another low of $3,201.00, which was $500.00 lower than any previous month in 1953. The three government vehicle accidents resulted in a rate figure of .84 as compared with .64

Report of Proceedings of the Executive Ground Safety Council (Contd)

for October. (Statistical Summary, Incl #1)

c. Three (3) USAF Ground Accident Abstracts were distributed for reveiw. The "Abstracts" dealt with the following subjects:

(1) 2nd and 3rd degree burns sustained by airman attempting to prime carburetor of private vehicle with open containor of raw gasoline.

(2) A SCARWAF Sgt. caught his arm in conveyor belt of a rock crusher, resulting in amputation of left arm midway between shoulder and elbow.

(3) An airman recieved acute poisoning from inhalation of carbon tetrachloride by cleaning undercarriage of fire truck in unventilated room.

d. The members were advised of the particulars surrounding the fatality that occurred 11 November 1953, when two private vehicles had a head-on collision on MacDill Avenue, just 3/4 miles off the base. The Safety Director announced that a courteous driving campaign would be activated next week and would continue for the next nine (9) weeks. One airman or officer each week will be selected as the "Courteous Driver of the Week". His name, rank, and organization will be announced in the Airman newspaper and will be awarded a Ronson or Zippo lighter.

e. The members were advised that in the past, squadron commanders were not required to explain what corrective action was taken in event of non-disabling injuries to their personnel. It was strongly indicated that in many instances the supervisor was unaware of any minor or non-disabling injuries to his personnel. It was pointed out that every injury was an indication of a failure, either human or mechanical. In most instances something could be done by the supervisor to preclude future recurrence of similar type accidents involving personnel in his squadron. To better inform the Squadron Commander and the Supervisor, the Safety Director advised the council members that a letter should be sent to the appropriate commander in each instance of a non-disabling injury, requesting that he indicate his findings and action taken by indorsing the letter back to the Ground Safety Office.

f. The members were informed that the safety section's audio, visual education program was now in progress. A total of ten (10) films has been received in October. The first group was announced in the 6 October "Airman;" however, few organizations took advantage of the films. The second group of films were publicized by forwarding a mimeographed discription of their subjects to all the squadron safety officers and NCO's to insure that all organizations know what films were available. The program is expected to encompass a three or four month's period.

Report of Proceedings of the Executive Ground Safety Council (Contd)

g. The announcement was made that the members of the Federal Safety Council of Greater Tampa Area would meet at the MacDill Officers' Open Mess on 19 November 1953. Fire Chief Joseph will give a firefighting demonstration immediately following the luncheon and short business meeting.

2. Recommendations:

a. That the form letter informing Squadron Commanders of non-disabling injuries be adopted and put into practice by the Ground Safety office.

b. That the Safety Director work out a plan, with the Comptroller, to use appropriated funds in conjunction with mailing charges on free loan films used in the Ground Safety Program.

3. Adjournment:

a. The meeting adjourned at 1500 hours, 13 November 1953.

WILLIAM B. HOYNES
Lt Colonel, USAF
Acting President

GEORGE R. WHITE
Recorder

1 Incl
Statistical Summary

HEADQUARTERS MACDILL AIR FORCE BASE, FLORIDA

Approved.

TOM G. SANFORD
Lt Colonel, USAF
Commander

MONTHLY GROUND ACCIDENT SUMMARY

MONTH OF OCTOBER — MACDILL AFB — COMMAND

RATES AND COSTS	809th AB GRP	305th WING	306th WING	98th ARS	SAC-DET	NON-SAC DET	6th AIR DIV TOTAL	**
Mil Non-Disab Inj (On)	10	4	6	1	0	0	21	
Mil Non-Disab Inj (Off)	8	7	2	3	0	0	20	
Civ Non-Disab Inj	2	0	0	0	0	0	2	43
Mil Disab Inj (On-Duty)	2	0	1	0	0	0	3	
Mil Disab Inj (Off-Duty)	1	0	1	0	0	0	2	
Civ Disab Inj	0	0	0	0	0	0	0	
Mil Fatalities	0	0	0	0	0	0	0	5
USAF Vehicle Accidents	2	0	1	0	0	0	3	
Aircraft Accident Cost	12.00	0	0	0	0	0	0	
Property Damage Cost	0	0	0	0	0	0	0	
USAF Veh Accid Rate *	0.88	0.00	3.65	0.00	0.00	0.00	0.84	
USAF Veh Repair Cost	670.00	0.00	688.00	0.00	0.00	0.00	1358.00	
Mil Disab Inj Rate-On	4.70	0.00	3.96	0.00	0.00	0.00	3.02	
Mil Disab Inj Rate-Off	1.18	0.00	1.98	0.00	0.00	0.00	1.00	
Tot Disab Inj Rate-Mil *	2.35	0.00	2.64	0.00	0.00	0.00	1.67	
Civ Disab Inj Rate *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mil Inj Cost/Manita	0.17	0.03	0.58	0.00	0.03	0.00	0.27	
Civ Inj Cost/Capita	0.04	0.00	0.00	0.00	0.00	0.00	0.01	
Total Cost/Capita *	0.22	0.03	0.58	0.00	0.03	0.00	0.28	
Cost of Mil Injuries	696.00	77.00	1016.00	28.00	0.00	0.00	1817.00	
Cost of Civ Injuries	14.00	0.00	0.00	0.00	0.00	0.00	14.00	
Total Accident Cost	1392.00	77.00	1704.00	28.00	0.00	0.00	3201.00	
Effectiveness%	100	100	80	100	100	100	100	
Points Scored	70	70	56	70	70	70	70	

* Effectiveness % and Score based on figures in this column (except 809th AB Grp.)
** 6th Air Div. figures do not include experience of SAC and Non-SAC Detachments.

EXHIBIT 5

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

DPE 210 17 November, 1953

SUBJECT: Operational Personnel Shortages

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. A study of the statistical charts of the Second Air Force stations prepared and distributed by your headquarters for the past several months indicates that the status of assignment of officer personnel in the combat and operations fields is not in consonance with the priority for the assignment of personnel indicated in letter your headquarters, File DAFPIB 320, subject: Manning Categories, dated 8 September 1953.

2. At the present time, this Command has a shortage in the above fields totalling 79 officers, including 22 shortages in the 98th Air Refueling squadron which is due for reassignment during the month of November. This shortage, as well as the continual withdrawal of qualified personnel for duty on instructor pilot teams, aircraft commanders to seed newly activated B-47 wings and the Cadre for the 340th Bomb Wing, is having a definite detrimental effect on our ability to maintain the 305th and 306th Bomb Wings in a status of readiness to participate in the Emergency War Plan.

3. It is requested that action be taken to assign personnel in the above fields to this command to enable a manning percentage comparable to that indicated in the above cited letter.

H. K. MOONEY
Brigadier General
Commander

"A CERTIFIED TRUE COPY"

E. A. Johnson

E. A. JOHNSON
2nd Lt., USAF

EXHIBIT 6

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDPDP 352 17 November, 1953

SUBJECT: 340th Bombardment Wing Cadre Requirements

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. A study with regard to manning requirements for the 340th Bombardment Wing has been effected with a view toward determination of ability to provide required commitment.

2. This study has revealed the inability of this organization to furnish sufficient airmen in the classifications as indicated in inclosure 1. All possible reclassification actions have been considered and it has been determined that no appreciable help would be realized therefrom.

3. It is emphasized that unless this command is relieved from manning requirements for the 340th Bombardment Wing in the AFSC's indicated in inclosure 1, or immediate input in those outlined critically short specialities effected, this command will not be able to execute its mission in the EWP if the required manning is withdrawn from the present 6th Air Division resources.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

1 Incl
Study of Short
Specialities

"A CERTIFIED TRUE COPY"
(Including Inclosure)

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

AFSC	6th AD REQMT	340th REQMT	Proposed Avon Park T/D	Total REQMT	Total INPUT	Pres ASGD	Proj ASGD	Short
32150B	6	1		7	2	4	6	1
32150C	12	1		13		4	4	8
32150D	6	1		7		3	3	4
32150E	100	11		111	4	58	62	49
32170	12	3		15		1	1	14
32171E	66	7		73	1	43	44	29
32350C	72	9	6	87		43	43	44
32370	17	3	1	21		8	8	13
32371	4	2		6		None	None	6
32371C	24	3		27		4	4	23
40453	54	6		60		14	14	46
47154	21	5		26		5	5	21
80270	2	1		3		None	None	3
80271	2	1		3		None	None	3

Incl 1

EXHIBIT 7

JESBA B38

JEDMH A51
RM JEDBO JESDA JESDL JEDHN JEPKH JETU JLESA JWFAF 888
DE JEDMH 327
FM COMDRSAC OFFUTT AFB NEBR
*   *   *
TO JESDI/COMDRAIDIV 6 MACDILL AFB FLA
*   *   *

R E S T R I C T E D/ DPFAM 36846. THIS HQS IS CUR CONDUCTING A STUDY TO DETERMINE THE BEST METHODS AND PRO THAT SHOULD BE IMPLEMENTED TO AFFECT A STD AMN PROM SYSM. AMN DISCH SURVEYS CONDUCTED BY THIS HQS AND HQS USAF HAS DISCLOSED THAT THE LACK OF A STD AMN PROM PRO HAS CONTINUALLY BEEN AMONG THE 1ST 1Ø REASONS GIVEN BY AMN FOR NOT REENL IN THE AF. IN ORDER TO ASSIST THE COMD W/THIS STUDY, REQ THAT EACH ZI STA & O/S ADIV & RAMEY AFB SBM ASAP BUT NLT 1 DEC 53 A REC PROM PRO THAT COULD BE UTILIZED W/I SAC AND OR USAF WIDE. TAKE INTO CONSIDERATION PROM SYS THAT HAVE BEEN OR ARE BEING UTILIZED AND THEIR INHERENT DEFICIENCIES OR ADVANTAGES. IN ADD, INCLUDE REC FOR PROM ANDDEMOTION AUTH BY EACH GRADE. THIS REQ IS EXEMPT FR RQMT OF A RPT CONTROL SYMBOL IAW PAR 9B (14) AFR 174-1, 9 AUG 51. THIS MSG MAY BE DOWNGRADED UPON REC.
28/1943Z OCT JEDMH

"A CERTIFIED TRUE EXTRACT COPY"

B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 8

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDPC 220.2 25 November, 1953

SUBJECT: Standard Airman Promotion Procedure

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska

1. Reference is made to your message, DPAAM 36846, subject same as above, dated 28 October, 1953.

2. Upon receipt of above cited message, this headquarters immediately conducted a survey in reference to information required. The results of this survey are as follows:

a. The present promotion procedures now in effect, this station, are deemed adequate by all commanders. Copies of promotion procedures are attached hereto as inclosures.

b. That a method of waivering the PAFSC requirement, for promotion to all grades, should be devised whereby airmen who possess all other prerequisites for promotion may be promoted to the next higher grades.

(1) Due to the AFSC requirement for promotion, some airmen who are fully qualified and have demonstrated ability to perform duty in the next higher grade and AFSC are forced to remain in their present grade and skill level for an entire enlistment due to no vacancy at the seven (7) level AFSC on the unit manning document. Such personnel are definitely hesitant in reenlisting due to such unfavorable conditions.

c. That an advantage of the present Air Force promotion system is:

(1) Promotion of airmen on command wide vacancies instead of unit vacancies.

Ltr Hq 6th ADiv, MacDill AFB Fla., subj: Standard Amn Prom Procedure, file MDDFO 220.2, d'd 24 Nov 53

d. That a definite disadvantage of the present Air Force promotion system is:

(1) The freezing of career fields, for promotion, where a command wide overage exist by grade.

e. That unit commander's and group commander's promotion authority should be supplemented to allow a promotion to a grade from which an airman was demoted, within their organization, without regard to a quota.

f. That only a minority of unit commanders recommended changes to promotion and demotion authority, by grade.

g. That all commanders are concerned with the low morale and reenlistment rate that has resulted in the insufficient amount of A/2C through S/Sgt promotion quotas being received. For example: A survey conducted in July of this year revealed approximately six hundred and nineteen (619) airmen in the grade of A/3C who were eligible for promotion. Subsequent to this survey, a total of two hundred and eighty-one (281) A/2C promotion quotas have been received. This means that only forty-five four percent (45.4%) of those airmen eligible at the time of the survey have been promoted.

(1) In many instances, these airmen are highly qualified technically, having completed an Air Force Technical School. Their qualifications are constantly in demand within civilian industries, particularly in the Armament and Electronics and Maintenance career fields. If the Air Force is to prevent a continuous loss of such technically qualified personnel, these airmen must be given more incentive to reenlist upon expiration of their enlistments.

3. It is requested that consideration be given to above recommendations and comments when formulating a standard airman promotion procedure.

FOR THE COMMANDER:

2 Incls:
1. 809th ABGp Amn Prom Procedure
2. 306th Bm Wg Ltr 39-3

C. A. WHITTLE
WOJG, USAF
Asst Adj

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

1536

Base Procedure 512-6

HEADQUARTERS
MacDill Air Force Base, Florida

809th Air Base Group
Personnel Directorate

Military Personnel Function
Administrative Branch
30 November 1953

SUBJECT: Airman Promotion Procedure

(This Procedure supersedes Base Procedure 512-6, 1 August 1953)

PURPOSE: To establish procedures for processing of recommendations for promotion, operation of airman promotion boards, and allocating of airman promotion quotas.

RESPONSIBILITY: The overall responsibility for effecting airmen promotions is delegated to the Base Director of Personnel. Recommendations for promotions of airmen is the responsibility of each supervisor. The responsibility for selecting airmen for promotion is vested in the Group Promotion Board.

PROCEDURES: 1. Two (2) boards will be appointed. One to be known as the Airman Selection Board and the other as the Group Promotion Board.

a. Each organization will appoint, on unit special orders, an Airman Selection Board. This board will consist of five (5) members; the unit commander, or the senior ranking officer assigned, and four (4) enlisted members, in the grade of Master Sergeant, if available.

(1) Technical advisors may be appointed as members, without voting rights.

b. The Group Promotion Board will be appointed on Headquarters, 809th Air Base Group orders and will consist of commanders of each organization assigned or attached to the 809th Air Base Group.

2. Upon notification from the Base Director of Personnel, unit commanders will cause the Airman Selection Board, within their organization, to convene.

a. All personnel recommended for promotion, who are physically present for duty, will be required to appear before their Airman Selection Board for interview and consideration for promotion.

b. Personnel recommended for promotion, who are not physically present for duty, will be afforded an equal opportunity for promotion as those airmen who physically appear before the board.

3. Upon completion of all board action, a priority rating list, by grade, with all pertinent forms, will be forwarded to the President of the Group Promotion Board, through the Base Director of Personnel.

a. The Administrative Branch, Base Personnel Office, will screen all Promotion Data Sheets and DA AGO Forms 20, to determine accuracy and eligibility of each airmen concerned. Upon completion of all required action, all forms and priority lists will be forwarded to the President of the Group Promotion Board.

4. Upon receipt of priority rating lists and all pertinent forms, the board will convene for the purpose of reviewing all recommendations, priority rating lists, and making final selection of airmen for promotion.

a. The President of the Group Promotion Board, may at his discretion, require any or all of those airmen who appeared before the Airman Selection Board, to appear before his board for interview.

b. Upon completion of all required action, the recorder will prepare and submit minutes of the meeting, recommending approval for promotion of those airmen finally selected for promotion, within the First Three Grades, to the Commander of the 809th Air Base Group.

c. A priority list, approving promotion of these airmen within the lower four greder, will be prepared and forwarded to units concerned authorizing the issuance of orders announcing such promotions.

5. Upon approval, minutes of the Group Promotion Board will be forwarded to the Base Director of Personnel who will cause orders to be published announcing promotion of those airmen selected and approved by the Commander, 809th Air Base Group.

6. The Group Promotion Board will be responsible for devising a system for the allocation of Airmen Promotion Quotas, subject to the approval of the Group Commander.

7. Forms applicable to airmen promotions, as listed below, will be stocked by Base Publications and may be drawn through normal supply channels.

a. Recommendation for Promotion Data Sheet, 6AD Form 121

1538

Base Procedure 510-6

b. Airman Selection Board Rating Sheet, 6AD Form 122

8. REFERENCES:

AFR 39-29
SAC Reg 39-6
AFR 35-400 series

(OFFICIAL SEAL)

Headquarters, MacDill Air Force Base
Florida

"A CERTIFIED TRUE COPY"

B.A. Johnson

B.A. JOHNSON
2nd Lt., USAF

1539

EXHIBIT 9

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDPSB 220 23 November, 1953

SUBJECT: Revision of the Food Service Career Field

TO: Commander
Second Air Force
Barksdale Air ForceBase,
Louisiana

1. Under the provisions of Air Force Regulation 35-706, dated 18 August, 1950, a proposed change to the Food Service Career field, by adding career field subdivision (624) is forwarded for your consideration.

2. In reference to the above the following comments are submitted: Project Guidance (SAC ltr 39-1, 19 Jun 53) prohibits further training of helper level personnel in the Food Service field due to the existing overages, while SAC Regulation 39-1, 21 July 1952, requires all personnel with the food service function to be permanently assigned to the Food Service Squadron. The 809th Food Service Squadron at present has twenty-six (26) airmen assigned whose aptitude scores prohibit entry into any career field, and approximately one hundred thirty-five (135) who are qualified only for food service. A large percentage of the delinquents, AWOL's, etc., are airmen in the low aptitude area. Morale has been a serious problem, and may possibly be attributed to the fact that these airmen feel they are not given equal opportunities of others. Of course it is realized that their training potential must be considered, and this is undoubtedly overlooked by the airman himself, thus creating his low morale. In an effort to alleviate this condition, request the following recommendations be given consideration together with the career field change request.

a. That a new career field subdivision (624) be authorized with AFS, "Apprentice Food Service Attendant - 62430." The requirements for this skill level being no Formal-On-Job-Training, but satisfactory duty performance and conduct for at least ninety (90) days and recommendations from his supervisors.

b. A requirement exists within the cellular structure of the Food Service squadron for a "supervisor" of the "Senior Food Service Attendant's" skill level; for example, one man per serving line, per shift, in each dining hall.

Hq 6th Air Div, MacDill AFB, Fla., MDPED 220, Subj: Revision of the Food Service Career Field.

3. This request is based on the idea of making the "Food Service Attendant" a separate career ladder for those whose aptitude scores preclude their assignment into other career fields. This is a practical solution to a serious problem needing immediate attention, and will afford personnel of this category a promotional opportunity to the grade of Airman First Class. The "Senior Food Service Attendant" would be parallel to the former "KP Pusher."

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

1 Incl
Format for
AFSC 62450

"A CERTIFIED TRUE COPY"
(Including Inclosure)

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1541

AIR FORCE

POSITION DESCRIPTION FORMAT
IDENTIFYING INFORMATION

JUSTIFICATION

In accordance with SAC Regulation 39-1, 21 July 1952, all personnel connected with the Food Service function will be permanently assigned to a Food Service Squadron. SAC letter 39-1, 19 June 1953, prohibits further input into the Food Service Career Field. At the present time there are airmen assigned this organization whose aptitude scores prohibit entry into any career field as outlined in Section IV, AFM 35-1. This is causing a serious morale problem in Food Service, and a large percent of the delinquents and AWOL's are from personnel of this group. This may possibly be attributed to the fact that these low aptitude airmen are not qualified for reclassification and/or training into other career fields and therefore not afforded the opportunities of others. In view of the potential of this category a lrman recommendations for the authorization of a new career field subdivision with a grade spread up to and including grade four is recommended in order to provide promotional opportunity and incentive for airmen who are not qualified for advancement in any other career field.

APPLICABLE TO.

This organization is currently authorized one hundred and twenty-six (126) Food Service Attendants.

CURRENT AFSC. - None

CURRENT PAY GRADS. - None

CURRENT JOB TITLE. - None

PROPOSED PAY GRADE SPREAD. - E-1 through E-4.

Incl 1

JUSTIFICATION FOR REQUESTED GRADE AUTHORIZATION.

Request that the grade of Airman First Class be authorized the "Senior Food Service Attendant." This will provide incentive for personnel and will materially reflect in the morale of this category airman. The complexity of the work is moderate in degree, and although compared with other jobs of equal difficulty, it is considerably more tedious and less rewarding, which directly effects morale.

TROOP SPACES REQUIRED OR REDUCED.

Personnel identified by proposed Air Force Speciality can be absorbed within the currently allotted troop spaces.

TRAINING.

This proposal will not necessitate additional special training nor any modification of present training courses. Training can be completed entire at organizational level.

PREPARED BY.

Commander, 809th Food Service Squadron, 809th Air Base Group, MacDill Air Force Base, Florida.

REVIEWED BY.

DATE ASSIGNED.

DATE SUBMITTED.

REMARKS.

1543

AIR FORCE SPECIALTY

AFSC 62450 SENIOR FOOD SERVICE ATTENDANT

1. JOB SUMMARY: Performs routine tasks in consolidated, organizational, and field messes.

2. JOB DESCRIPTION:

a. Duties and Tasks

(1) Monitors and carries out the instructions received from the Food Service Supervisor and Senior Cooks in the Food Service activity. Assists and supervises subordinate mess attendants in the preparation of food for cooking; washes, peels, cuts, and dices fruits and vegetables. Prepares dining halls for serving by sweeping and scrubbing floors, dusts and arranges furniture, sets tables with sauces, sugar, salt, pepper, and napkins. Assists in portioning food on the serving line when assistance is needed. Cleans utensils, tools, and equipment. Washes plates, trays, pots, pans, utensils, and stores in proper places. Scrubs and cleans kitchen after meal has been served. Policies area and removes and empties garbage cans. Empties and cleans garbage cans in order to prevent odor and maintain maximum sanitation. Assists cooks in rendering fats, cutting meats, and greasing baking pans. Measures ingredients in accordance with recipes or other instructions. Moves supplies and equipment, fuels, and trash from work area to supply and garbage areas. Carries supplies to and from store room, arranges stores in accordance with standard procedure.

1544

b. Supervision

(1) Supervision exercised: Exercises supervision over all subordinate food service attendants.

(2) Supervision received: Receives immediate supervision from the Food Service Supervisor and Senior Cooks.

3. JOB REQUIREMENTS:

a. Training and Experience

(1) Requires considerable training and experience in the initial preparation of foods, sanitation, personal hygiene, and the use and care of kitchen equipment.

(2) Calls for moderate experience in the supervision of others.

b. Knowledge and Skills

(1) Requires no minimum aptitude scores.

(2) Requires moderate concentration and initiative in carrying out the instructions and orders of the Food Service Supervisor and Senior Cooks.

(3) Necessitates moderate ability to read simple instructions. Must have considerable knowledge of safety precautions in the use of electrical appliances, tools, knives, and machinery used in the grinding and slicing of foods.

(4) Requires moderate dexterity in the performance of assigned duties.

c. Physical Requirements

(1) Requires minimum physical profile (PULHES) of 323222 in both combat support and base assignment. Full movement of shoulder and pelvic girle is required in the lifting, carrying, and cleaning tasks. Spacial physical requirements for food handlers are prescribed by other directives.

1545

d. Leadership and Control

(1) Requires some judgement in arranging perishable and non-perishable foods in kitchens, storerooms, and refrigerators.

(2) Requires some responsibility to prevent misuse and waste of materials and equipment.

(3) Calls for some responsibility for the safety of others, and the prevention of accidents incident to the work performed.

4. JOB PROGRESSION

a. This Air Force Specialty covers pay grade four.

b. Progression to this Specialty is from "Apprentice Food Service Attendant" (AFSC 62430). There is no progression in this career ladder above this level.

1546

EXHIBIT 10

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 28)

10 November 1953

STAFF ASSIGNMENT----Confirming VOComdr of 6 November 1953, ESTMC, MAJOR DONALD R CHINNOCK A0855143 Headquarters 6th Air Division, SAC, this station is appointed Acting Director of Materiel in addition to other duties, effective 6 November 1953.

BY ORDER OF THE COMMANDER:

OFFICIAL:

D.C. AUTHERLIN
Major, USAF
Adjutant

C.A. WHITTLE
MAJ, USAF
Asst Adjutant

DISTRIBUTION:
"B"
2 cys Comdr DAF
1 cy SO Section

CONFIDENTIAL EXHIBIT 11

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MDDOPM 333 27 November, 1953

SUBJECT: Internal Defense Test (RCS: 1-SAC-Y1)

TO: Commander
306th Bombardment Wing
MacDill Air Force Base
Florida

1. Transmitted herewith is the Report of the Internal Defense Test conducted 9 November 1953 at this station by the 7th District of Special Investigations in accordance with paragraph 4, SAC Regulation 205-4, dated 24 July 1953.

2. Reference paragraph 7a of cited regulation, this report requires an indorsement to the Division Commander indicating the extent to which the accomplishment of the primary mission would have been effected if the simulated sabotage penetration had, in fact, been hostile in nature.

3. Further request indorsement to include corrective action taken at Wing level to preclude a recurrence of the contributing security failures by personnel of the 306th Bombardment Wing as enumerated in paragraph 4 of report.

4. For your information, the overall corrective action taken at Base level will be included in the Division Commander's indorsement to numbered air force headquarters.

5. Attention is invited to the provisions of paragraph 5, Air Force Regulation 205-1, which limits the dissemination of classified security information to those personnel whose official military or other governmental duties require knowledge or possession of such information.

1 Incl:
Internal Defense Test
Report, 7th Dist OSI,
dtd 18 Nov 53

TOM G. SANFORD
Lt Col USAF
Commander

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

(306-C-4578)
(6AD-C-8868)

CONFIDENTIAL

CONFIDENTIAL

Ltr fr 306th ABGp MacDill AFB, Fla., MCDCPM 333, Subj: Internal Defense Test (RCS: 1-SAC-Y1)

CCD 333 (27 Nov 53) 1st Ind 2 December 1953

HQ 306TH BOMBARDMENT WING (M), MacDill Air Force Base, Fla.

TO: Commander, MacDill Air Force Base, Florida

1. In compliance with paragraph 3 of the basic communication, the following specific actions have been taken on the security deficiencies attributed to this wing as outlined in paragraph 4 of the inclosure:

a. Each of the individuals whose lost passes increased the capability of the penetration team has been personally severely reprimanded by the undersigned. Had the aircraft indicated as being sabotaged actually been sabotaged, this wing's fleet would obviously been reduced by some 17% of its available B-47 type aircraft. This would have had no immediate effect on the wing's normal and the routine scheduled training program. However, were they not replaced by the date the UEGM was scheduled to be conducted, which was some 10 or 11 days after the penetration exercise, this wing's maximum effort would have been reduced by a proportionate number of aircraft.

b. A revised Wing Defense Plan has now been published which defines and clarifies security responsibilities and procedures within the wing, and the Wing Security Officer is presently closely monitoring the development of formal Squadron Standard Operating Procedures designed to amplify and specify the details which involve all squadron personnel in meeting the requirements of the Wing Defense Plan. The Wing Plan also alters certain basic concepts of the flight line security, which will result in the security deployment of squadron personnel in a more realistic manner and will result, I believe, in better security throughout our aircraft parking area at the initial and critical phase of an alert.

1 Incl
Internal Defense Test
Report, 7th Dist OSI,
dtd 18 Nov 53
(1 cy w/d)

HEWITT T. WHEELESS
Colonel, USAF
Commander

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

(306-C-4678)
(6AD-C-8868)

CONFIDENTIAL

CONFIDENTIAL

Basic: Ltr, Hq 809th AB Gp, MacDill AFB, Fla, MCDCPM 333, Subj: "Internal Defense Test (ROC: 1-SAC-Y1)."

MCDCPM 333 (27 Nov 53) 2nd Ind 16 December 1953

HEADQUARTERS 809TH AIR BASE GROUP, MacDill Air Force Base, Florida

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. The effect of the simulated sabotage on the primary mission of the 306th Bombardment Wing is as indicated by the Commander in paragraph 2, First Indorsement.

2. Action taken at base level to correct and prevent a recurrence of the cited security failures is as follows:

a. Headquarters, 6th Air Division letter, file MCDCPM 200.2, Subject: "Loss or Theft of SAC Restricted Area Badges," dated 2 December 1953, was published to alert commanders and individuals to the high rate of loss of the SAC badge at this station due to negligence on the part of individuals and to impress them with their responsibility in this matter. The most constructive part of this letter is the attached "Check List for Safeguarding the Restricted Area Badge," which provides commanders with a workable solution to this problem. It further provides individuals with everyday precautionary measures for safeguarding the badge, which, if conscientiously followed, will reduce the rate of loss and potential threat to the security system. A copy of this check list is now given each individual with the initial issue of the badge by the Provost Marshal. (see inclosure 2, added).

b. Paragraph 16, MacDill Base Regulation 205-7, pertaining to the loss of SAC Restricted Area Badges has been amended to outline a course of positive action by commanders on all incidents of lost badges by individuals and to direct punitive action where carelessness or negligence is evident. (see inclosure 3, added).

c. In evaluating the capability of the Air Police in the Restricted Area, it must be recognized that the recent reduction in personnel and manning authorization, without a proportionate reduction in the requirements, has imposed certain limitations on their effectiveness, especially during the hours of darkness. In regard to the specific failures, the Provost Marshal has instructed the Security Control Officer and subordinate Flight Leaders, as a daily procedure, to carefully brief all personnel as to their duties, and evaluate the mental alertness of all personnel selected for Restricted Area guard duty. Demotion action has

CONFIDENTIAL

Hq 809th AB Gp, MacDill AFB, Fla, MDDOPM 300, Subj: "Internal Defense Test (SCS: 1-SAC-Y1)"

MDDOPM 300 (27 Nov 53) 2nd Ind Cont'd

been initiated against the Flight Leader in regards to the security failures in this test. These security failures have been brought to the attention of all Air Police personnel.

3 Incls
Incl 1 n/c
Added 2 Incls
2. Ck list for safeguarding SAC SA Badges
3. Base Reg 205-7, dtd 16 Nov 53

B. W. MERCHANT
Colonel USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

CONFIDENTIAL

UNITED STATES AIR FORCE
THE INSPECTOR GENERAL
OFFICE OF SPECIAL INVESTIGATIONS

REPORT OF INVESTIGATION

FILE NO. 35-11 | DATE 18 Nov 1953 fw

REPORT MADE BY: Paul T. Bronson, s/a

TITLE: (Confidential-Security Information)
SECURITY VULNERABILITY TEST (LIMITED)
6th Air Division, SAC
MacDill AFB, Florida

REPORT MADE AT: DO #7, MacDill AFB, Florida

PERIOD: 4, 6, 9, 10 November 1953

OFFICE OF ORIGIN: DO #7, MacDill AFB, Florida

STATUS: CLOSED

CHARACTER: SECURITY SURVEY

REFERENCE: Reference from Commander, MacDill AFB, Florida, dated 21 October 1953

SYNOPSIS:

Investigation requested by Colonel B. H. MERCHANT, Base Commander, MacDill AFB, Fla. Two Agents were able to obtain improperly secured flight line passes in Base Gym and barracks. One agent posing as a doctor in an ambulance was apprehended at entrance to flight line. One agent, without flight line pass, entered flight line concealed in rear of ambulance and was able to theoretically destroy two B47 aircraft before being apprehended. Driver of ambulance permitted to enter flight line on foot with improper pass. Two agents entered flight line on foot with improper passes. Three agents were apprehended on flight line and returned to Security Headquarters. Remaining agent on the flight line was able to theoretically destroy nine B-47 aircraft and depart from the flight line without being apprehended. Four agents who were apprehended at the flight line entrance and on the flight line were properly identified at 7th OSI District Headquarters.

DISTRIBUTION

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(See rev erse)

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ACTION COPY FORWARDED TO:
Commander
MacDill AFB, Florida
ATTN: Provost Marshal

APPROVED
JAMES W. LOVENBURY
Lt. Colonel, USAF
District Commander

FILE STAMP

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

AFHQ FORM 15 JAN 49 0-208 Replaces AFOSI Form [illegible]

CONFIDENTIAL

6AD-C-8868 306-C-4578

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DETAILS:

1. This investigation is predicated upon verbal request from Colonel B. H. MERCHANT, 262A, Base Commander, MacDill Air Force Base, Florida, on 21 October 1953 that a penetration of the Flight Line Area be conducted in order to test the vulnerability of controlled points of the Flight Line perimeter. This test was conducted on 9 November 1953. Headquarters, Office of Special Investigations was notified of date of vulnerability test by TWX from District Office #7 on 30 October 1953.

AT MACDILL AIR FORCE BASE, FLORIDA

2. This is a joint investigation of Special Agents ROBERT ROPER, RALPH PALMER, ALLAN BIERMAN, EUGENE IRVING, JOSEPH MORRISON, JAN JANSEN and the writer.

3. On 4 November 1953 at approximately 1130 hours Special Agent JANSEN and the writer were able to "lift" a flight line pass in the locker room of the Base Gym from the fatigues belonging to T Sgt. J. O. STOKES (Negro), AF 19226256, 809th Supply Squadron, 809th Air Base Group, MacDill AFB, Florida, while subject Airman was playing basketball.

4. On 6 November 1953, between 1900 and 2000 hours, Special Agent MORRISON and the writer were able to "lift" three flight line passes from barracks housing personnel of the 306th Armament and Electronics Squadron, the 306th Field Maintenance Squadron and the Base Gym. One pass was obtained from a khaki shirt pocket belonging to Major W. A. SLADE, 20573A, 369th Bomb Squadron, 306th Bombardment Wing, while this officer was participating in a basketball game; another pass was obtained from fatigues belonging to A/3C D. A. PAPKE, AF 12411674, 306th Field Maintenance Squadron; the third pass was obtained in a like manner from the fatigues belonging to A/2C W. W. CARLTON, AF 15442330, 306th Armament and Electronics Squadron, all at MacDill AFB, Florida. These agents "lifting" the above mentioned passes were not questioned by personnel living in these barracks.

5. On 9 November 1953, at 1830 hours, Special Agent MORRISON was able to "borrow" a Cadillac ambulance, number 097, from the ready line of the Third Echelon Maintenance area. With Special Agents ROPER and BIERMAN an attempt was made to penetrate Operation Gate #1 at approximately 1835 hours. Agent ROPER did not possess a flight line pass and was laying beneath the ambulatory cot. Agents MORRISON and BIERMAN were posing as driver and doctor. Agent BIERMAN was wearing a white hospital coat, wearing Major's insignia and utilizing the flight line pass belonging to T Sgt STOKES (Negro). Agent MORRISON was utilizing flight pass belonging to A/2C W. W. CARLTON. Agent BIERMAN was apprehended at Gate #1 by A/3C SAMUEL HINTON, AF 13459750, 809th Air Police Squadron, MacDill AFB, when

HINTON recognized that BIERMAN was not carrying a correct flight line pass. Agent MORRISON was permitted to enter the flight line area in the ambulance and Agent ROPER was not detected in the rear of the ambulance. Agent MORRISON was apprehended on the flight line while walking toward a B-47 aircraft by RANDOLPH F. NEESE, A/1C, AF 13321860, 809th Air Police Squadron, at 1845 hours. Agent ROPER was able to theoretically destroy B-47 aircraft No. 51-2230 and No. 51-2225 which were parked in front of Hangar #2. These aircraft were marked with red wax pencil on the outside of engine nacelle as being destroyed. Agent ROPER was apprehended at 1850 hours by S/Sgt CHARLES W. MORRELL, JR., AF 14369069, 367th Bomb Squadron, 306th Bomb Wing, MacDill AFB, and turned over to S/Sgt FRANCIS S. GODFREY, JR., AF 15100479, 809th Air Police Squadron, MacDill AFB. All three agents were escorted to Air Police Security Headquarters and in turn identified at 7th OSI District Headquarters.

6. Special Agent PALMER, dressed in fatigues bearing no rank insignia and displaying flight line pass belonging to A/3C D. A. PARKS, together with Special Agent IRVING, dressed in fatigues bearing A/2C rank insigia and displaying a flight line pass belonging to Major W. A. BLADE, entered Gate #22 at 1835 hours. The Security Guard at Gate #22 looked at the passes rather carefully; however, he did not recognize the difference between passes shown and the agents' physical features. Agent IRVING was able to theoretically destroy B-47 Aircraft No. 51-2299 located in Base Hangar, and the following B-47 Aircraft located on the flight line in the 306th Bombardment Wing area: 12277, 12196, 12076, 12082, 12075, 12084, 12070, 12282. All aircraft were marked by a red wax pencil on the front landing gear. Agent IRVING was not approached by anyone while on the flight line. Agent IRVING was able to leave the flight line by running out the Operations Gate #1 while carrying a fire extinguisher and flashing the false flight line pass to the Security Guard. Special Agent PALMER was apprehended at a flight line check point in front of Base Hangar by A/3C FRED WILLIAMS, AF 14462830, 809th Air Police Squadron, MacDill AFB, when he failed to give the correct serial number on the pass he was wearing. Agent PALMER was taken to Air Police Security Headquarters and later identified at 7th OSI District Headquarters.

7. Special Agents BIERMAN, MORRISON, IRVING and PALMER advised that the Security Guards at the gates observed their flight line passes rather closely but failed to recognize the difference between the pictures and the agents wearing them, with the exception of Agent BIERMAN who was wearing a Negro's pass.

FINDINGS

8. Flight Line passes are not secured properly when not in use. A

large number of barracks personnel are leaving Flight Line passes in or attached to their fatigues when leaving the barracks after duty hours; however, physical security afforded flight line passes was at a higher degree than during past penetrations. (Paragraph 6)

9. Personnel participating in sporting events which necessitate the changing of clothing are not safeguarding flight line passes. (Paragraphs 3, 4)

10. A proper search of vehicles is not being made when a suspicious situation arises in the Flight Line area. (Paragraph 5)

11. Guards on duty at various gates leading to the Flight Line areas do not inspect Flight Line passes closely enough to ascertain if bearer is rightful owner of the pass. (Paragraphs 5, 6, 7)

12. Some guards performing duty at check points on the line are not safeguarding their area of observance. (Paragraph 6)

CLOSED

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Flori

MCDCPM 200.2 2 December 1953

SUBJECT: Loss or Theft of SAC Restricted Area Badges

TO: See Distribution

1. Attention is invited to paragraph 18e, Second Air Force Regulation 205-8A, 20 October 1953, outlining the responsibilities of individuals for safeguarding the SAC restricted area badge and directing positive action by commanders.

2. Since the inception of the SAC restricted area badge system at this station 1 June 1953, 65 badges have been lost by personnel of this command and never recovered. This rate of loss, if continued will result in the compromise of the security system and exposure of the essential elements of the mission to sabotage.

3. The majority of the cases of loss resulted from negligence or carelessness on the part of the individual and ineffective or no disciplinary action was taken.

4. The proper indoctrination of the individual with the importance of the badge, as a key to the security system, is essential as a preventive measure in safeguarding the badge. This will be accomplished by unit security officers as an additional topic with Lesson I, Phase I, SAC Regulation 205-16, 15 May 1952, and prior to requesting issuance of the badge from the Provost Marshal. In addition, the safeguarding of the badge will be made a recurring topic at each monthly unit security meeting.

5. Suggested measures for safeguarding the badge for commanders and individuals are outlined in the attached inclosure.

6. Paragraph 16, Base Regulation 205-7, 27 April 1953, as amended by Base Regulation 205-7A, 18 November 1953, outlines a positive course of administrative and/or disciplinary action to be taken by commanders in the event of loss of a badge by an individual of their command.

BY ORDER OF THE COMMANDER:

C. A. WHITTLE
WOJG USAF
Asst Adjutant

1 Incl
a/s

DISTRIBUTION
D

Incl 2

CHECK LIST FOR SAFEGUARDING SAC RESTRICTED AREA BADGES

All Individuals:

1. Upon initial issuance of the badge, check the strap and the badge itself for faulty workmanship, legibility, and identification data.

2. When attaching the badge to the outer garment upon entering the restricted area, check the strap for signs of deterioration and button for looseness and check to see that the strap is securely fastened to the badge itself by the rivet; make sure it is securely fastened by buttoning the pocket flap over the top of the strap and not just hanging on the outside of the button.

3. Upon leaving the restricted area, the badge should be removed from the outer garment and put inside the pocket and the pocket buttoned or put in a wallet in such a way that it cannot become loose and fall out.

4. When the pass is being carried in the wallet, particular attention should be given to safeguarding the wallet.

5. Check all clothing to insure that the badge is not negligently sent to the cleaners or laundry.

6. At no time will the badge be worn outside the limits of the base or displayed to the general public.

Personnel Billeted in Barracks:

1. When in the barracks, the badge should be put in a locked wall or foot locker and not left in the pockets or hanging on the outside of the uniform.

2. After duty hours and while engaged in recreational activities on the base, (e.g. movies, gym, library, hobby shop, etc.), do not wear the badge, but secure it in your foot locker or wall locker. If neither of the aforementioned storage items cannot be locked, turn it in to the charge of quarters for safekeeping.

3. Do not take the badge off-base with you. Secure it as outlined above.

Personnel Residing Off-Base:

1. When in your private residence, the badge should be kept in a secure place. Explain the importance of the badge to your spouse and/or dependents, so that in case of your negligence, it will not be inadvertently misplaced by them or sent to the cleaners or laundry.

2. Secure the badge at home while engaged in shopping or recreational activities so that in the event your wallet is stolen, it is not included in the theft.

Incl #1

For Commanders:

1. Require all personnel departing on leave to turn in their badge to the orderly room for safekeeping when picking up leave orders.

2. Require all personnel departing TDY where the pass is not required, to turn in their badge to the orderly room for safekeeping.

3. Require individuals who only have intermittent use for the badge (applies particularly to the 809th Air Base Group) to secure it in the orderly room when not in use.

4. Require airmen living in barracks to secure their badges after duty hours in locked foot lockers or the orderly room and while engaged in recreational activities on and off the base.

5. Require daily checks of the barracks by the adjutant, first sergeant and charge of quarters for improperly secured badges.

6. Require officers and NCO supervisors to make frequent checks of their men for faulty or mutilated badges.

7. Take positive disciplinary action in all cases of negligence or carelessness on the part of an individual in the loss of his badge.

Incl #1

Page 2 of 2 pages.

AMENDMENT BASE REG 205-7A

BASE REGULATION) HEADQUARTERS MACDILL AIR FORCE BASE
NUMBER 205-7A) Florida 18 November 1953

SECURITY

Restricted Areas - Circulation Control

Base Regulation 205-7, 27 April 1953 is amended as follows:

* * *

16. LOSS OR CONFISCATION OF THE SAC RESTRICTED AREA BADGE. Personnel will immediately, no matter what the hour, notify Central Security Control by telephone (Ext 23-401) of the loss of their SAC badge so that the flight line gate guards and security force personnel may be on the alert for any attempt by a subversive agent to utilize the pass to gain entrance to the restricted area. A watch-list for lost passes will be maintained at Central Security Control and all restricted area gates.

a. In the event of loss by military personnel, commanders will take the following action:

(1) Direct the individual to report to the unit security officer who will investigate the circumstances and render a report in writing as to his findings.

(a) Unit security officers will furnish an information copy of the report of findings for the unit commander, to the Base Pass Section. The information copy will be honored to issue a five (5) day temporary flight line pass to the loser, pending receipt of action copies through channels.

(2) Unit commanders will review the report of circumstances surrounding the loss and findings and in all cases where disciplinary action is warranted due to carelessness or negligence, and dependent on the degree of neglect, the individual will receive one of the following:

(a) Non-judicial punishment under Article 15, UCMJ.

(b) Trial by summary courts-martial for violation of Article 108, UCMJ.

(3) The completed report (in 4 copies), including action taken, or explanation of why disciplinary action was not taken, will be forwarded or indorsed by unit commanders, through channels, so as to reach the Provost

INCL 3

Marshal within five (5) days after discovery of loss. (Ref par 18e, 2AF Reg 205-8A, 20 Oct 53)

b. In the case of civilian government employes and/or technical representatives, the using organization will be responsible for complying with the above procedures.

* * *

18. INVENTORY OF SAC RESTRICTED AREA BADGES. As prescribed in SAC Regulation 205-11, Change 1, paragraph c, 1, a quarterly inventory of SAC restricted area badges will be conducted by the unit security officer. Results of this inventory will be forwarded in writing to the Base Provost Marshal.

a. In the event of an intra-wing or intra-base transfer, restricted area badge holders will clear through the Bayshore Gate Pass Section so that the need can be redetermined and the restricted area badge accounting system kept current.

* * *

BY ORDER OF THE COMMANDER:

B. J. MURNAHAN
Major USAF
Adjutant

OFFICIAL:

/s/ C. A. Whittle
/t/ C. A. WHITTLE
WOJG USAF
Asst Adjutant

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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EXHIBIT 12

Basic: MCDMAT 600.1, Hq 809AEG, Subject: Construction of Radar Reflector & Resolution Targets, Avon Park AFR, Florida

DMTB 600.1 (3 Oct 53) 2d Ind 20 November, 1953

HEADQUARTERS STRATEGIC AIR COMMAND, Offutt Air Force Base, Omaha, Nebraska

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. MacDill Air Force Base Request 53-54, SAC 82-54, in the amount of $6,221.00, for construction of a radar reflector and resolution targets at Avon Park, Florida, is technically approved for accomplishment by contract.

2. The plans for the radar reflector have been redesigned by this headquarters to conform to data furnished by Technical Services Laboratory, Eglin Air Force Base, Florida. This will provide a prefabricated structure that may be fabricated in a shop for assembly in the field. The technical provisions of the specifications for this project are approved subject to the corrections indicated in red pencil on the attached copy.

3. Your headquarters will immediately prepare necessary contract documents including plans, technical and special provisions, etc. Authority is granted to solicit bids but acceptance will be delayed pending receipt of determination of essentiality by the Air Force Review Panel. Your headquarters will be further advised. Base commander's certificate as required by message, this headquarters, DMMA 62805, 20 March, 1953, has been received.

4. Substitution as requested in paragraph 2, 1st Indorsement, Headquarters Second Air Force, DAFMIB 600.1, 6 October 1953, to Basic Letter, Headquarters 6th Air Division, MCDMAT 600.1, 24 September 1953, subject: "Construction of a Visual Bombing Target and Night Photography Target, Avon Park Air Force Base, Florida," is being considered by interested agencies in this headquarters. In the event the proposed substitutions receives favorable consideration, funds will be made available to your headquarters for accomplishment of this project. Your headquarters will be further advised.

BY ORDER OF THE COMMANDER:

WARD T. ABBOTT
Col. USAF
Installations Officer

4 Incls
w/d 1 Inc - 2
w/d quad, trip & dup cys Incls 1 & 4
w/d trip & dup cys Incl 3
added 1 Incl
5. Dwg - Redesigned (in dup)

"A CERTIFIED TRUE COPY"
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

cc: Comdr, 2AF w/Incls 1, 3, 4, & 5

EXHIBIT 13

Courtney Campbell
1st District, Florida

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
Washington, D. C.

Tampa, Florida

Please reply to:

Room 233, First National
Bank Building
Tampa, Florida

Brigadier General Henry K. Mooney
Commanding General
MacDill Air Force Base
Tampa, Florida

Dear General Mooney:

Since my arrival in Tampa, I have been receiving a number of complaints from citizens of Drew Park concerning the low-flying Air Force jet airplanes over that area.

From what I can understand these airplanes are supposed to be making assimilated (sic) landings at Tampa International Airport. I would greatly appreciate your advising me at your earliest opportunity what action, if any, can be taken to eliminate this undesirable situation.

Your cooperation in the matter will be very much appreciated.

Sincerely yours,

/s/ Courtney Campbell,
/t/ COURTNEY CAMPBELL, M. C.

CC:mnh

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 13A

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

BCH/jap
9 November 1953

Honorable Courtney Campbell
Representative in Congress
Room 233
First National Bank Building
Tampa, Florida

Dear Mr. Campbell:

This will acknowledge receipt of your recent letter concerning the disturbing effects of jet aircraft noises to people on the ground in the Drew Park area.

I have again personally reviewed the requirement MacDill Air Force Base has for utilizing the Instrument Landing and Approach System installed at Tampa International Airport, as well as the action taken by my predecessor and by me, to eliminate and alleviate the cause for the complaints of residents in that area. One solution to this problem would be to install an Instrument Landing and Approach System at MacDill. I am happy to inform you that this equipment is scheduled and should be ready for use on or about 1 February 1954.

Meanwhile, the following procedures have been directed for our aircraft, when operating at Tampa International Airport, in order to minimize the jet noises. Our pilots are restricted to a 500 ft minimum altitude. After making a practice approach, the pilots have been instructed to turn West which carries them over an uninhabitated area. There have been a few isolated cases where safety of flight dictated a turn to the East, thus carrying the aircraft over the Drew Park area. Each of these incidents where the aircraft turned over Drew Park have been investigated by my Staff through Civial Aeronautics Administration representatives. In all cases the pilot was directed by the Air Controller at the Tampa International Airport to make such a turn to avoid a collision with another aircraft.

It is necessary, of course, for our aircraft to constantly practice maneuvers to provide a striking capability commensurate with our mission. The techniques and procedures involved in bad weather approaches and landings are one of the most critical of such maneuvers and, therefore, must be practiced frequently to insure proficiency as well as to provide an all weather capability. Such practice will also insure that we have a seven day week all weather strategic striking force.

/

You will be interested to know that the Air Force, as well as other agencies of the Federal Government interested in Aviation, and the Aviation Industry are all working together in an effort to reduce or eliminate the hazards and noises resulting from flying. The National Aviation Noise Reduction Committee is studying methods to reduce the nuisance of aviation noise and the United States Air Force is placing added emphasis on rigid control over its flying activities in order to provide maximum safety to personnel in the air and on the ground.

I believe that the above will provide you with information suitable for an explanation of this problem to your constituents. In the event you feel that a more detailed treatment is indicated, please advise me.

Your interest is deeply appreciated.

Sincerely,

H. K. MOONEY
Brigadier General, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

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~~CONFIDENTIAL~~ EXHIBIT 14

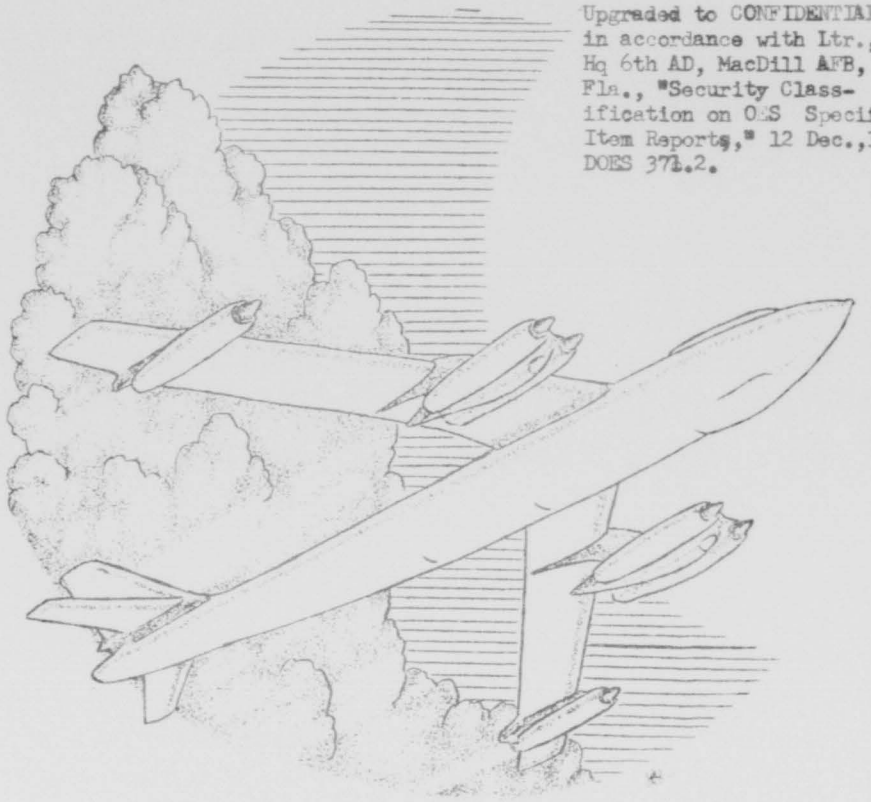
~~RESTRICTED~~

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 114-A

Upgraded to CONFIDENTIAL in accordance with Ltr., Hq 6th AD, MacDill AFB, Fla., "Security Classification on OES Specific Item Reports," 12 Dec., 1953, DOES 371.2.



6TH AIR DIVISION

MAC DILL AFB., FLORIDA

~~SECURITY INFORMATION~~

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Restricted

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 23 November 1953

SPECIFIC ITEM REPORT NO. 104-A

SUBJECT: APS-23 Radome Deterioration Resulting from the Absorption of Foreign Fluids - B-47 Aircraft (EE-55)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base
Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To report on the contamination of radomes which results in APS-23 radar signal attenuation, by presenting:

A. The effect of such attenuation on radar presentation and definition.

B. A means of detecting contaminated radomes.

C. The causes of radome deterioration.

D. Preventative measures to insure against such contamination.

E. A process to restore contaminated radomes to usable condition.

II. FOREWORD:

A. In March 1953, it became apparent at MacDill Air Force Base that certain B-47 aircraft were experiencing unusual radar difficulties. When these aircraft operated at altitudes up to approximately 35,000', radar presentation, definition, and range were more or less normal. However, when these same aircraft flew at altitudes from 35,000' to 42,000', radar presentation and definition decreased and a very noticeable loss of range occurred. In addition, targets faded

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on bomb runs, and in many cases disappeared completely during the last part of the run. This situation became progressively worse as time went on; yet investigation of the APS-23 radar sets revealed no malfunctions which could be attributed to this condition. Power and sensitivity readings taken prior to and immediately after flights of these aircraft were within acceptable limits. After washing and cleaning of the radomes had no effect, an investigation of the transmission characteristics of the radomes on these aircraft was undertaken.

B. Since no known means of determining a radome's transmission characteristics existed at this base, personnel of the 306th A&E Maintenance Squadron devised and constructed a Radome Capacitance Checker as a means with which to evaluate a radome's operational reliability. (Information concerning this Radome Capacitance Checker and its use is included in Specific Item Report No. 104, dated 23 July 1953.) With the aid of this checker, it was possible to conduct tests to determine a radome's reliability, the extent of contamination, preventative measures to protect radomes against future contamination, and whether it was possible to restore contaminated radomes to a usable state. Full details of these tests are found in paragraph V.

III. CONCLUSIONS:

A. Radomes become contaminated with water and hydraulic fluid by absorption through the plys on the inner surface of the radome. This decreases their transmission characteristics and results in poor definition and decreased range when operating at high altitudes. This condition adversely affects the bombing capability of the B-47 aircraft.

B. Contamination increases the loss tangent of the radome dielectric material.

C. Excessive ground maintenance and a high radome replacement rate (Megabuck item) dictate that good radomes be made available to field organizations as soon as possible.

D. The Radome Capacitance Checking Method affords a reliable means of determining if the transmission characteristics of a radome are acceptable.

E. The Goodyear Erosion Resistant Coating System 23-56 will protect reliable radomes from future contamination, but this is considered an interim fix since this coating itself produces an attenuation of 2 to 4%.

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F. It is possible and economically feasible to restore contaminated radomes to a usable condition by baking them under controlled temperatures and then coating them with the Goodyear Coating System to prevent future contamination.

G. As the final solution to this problem, it is necessary for the radome manufacturer, Zenith Plastics Company, to devise a production process whereby both the inner and outer surfaces of radomes will be sealed permanently against fluid absorption.

H. The location of the radome drain hole is a contributing factor in producing contamination in that critical area of the radome required for satisfactory radar operation.

I. Open storage of crated radomes in supply also causes contamination by absorption.

IV. RECOMMENDATIONS:

A. Headquarters Air Materiel Command authorize the adoption of the Radome Capacitance Checking Method by all B-47 Wings and the manufacture of the Radome Capacitance Checker by each Wing as per SIR No. 104.

B. Headquarters Air Materiel Command authorize the coating of the inner surface of all serviceable B-47 radomes, Stock Nos. 1AFE-ZP-1044 and 1AFE-ZP-1044A, with Goodyear Erosion Resistant Coating System 23-56 at depot and base level.

C. Headquarters Air Materiel Command authorize and initiate a reconditioning program at depot level to insure that all radomes in supply are usable: (1) Check all radomes to determine if their capacitance is within the allowable limit, (2) restore contaminated radomes by baking, and (3) coat all radomes having suitable operating characteristics.

D. Headquarters Air Materiel Command direct the radome manufacturer to coat all new radomes in production with the Goodyear coating until a radome which will not absorb liquids is developed and produced.

E. Wright Air Development Center investigate the feasibility of relocating the radome drain hole.

F. Headquarters Air Materiel Command notify supply personnel at depot and base level to discontinue immediately the practice of placing radomes in open storage.

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V. DISCUSSION:

During this project it became evident that four lines of investigation were required. These were: (1) methods of distinguishing between good and bad radomes, (2) establishing the cause of deterioration, (3) means of reclaiming bad radomes, and (4) methods of precluding the deterioration. These are discussed in this sequence in the following paragraphs.

A. Detection of Contaminated Radomes.

1. The Radome Capacitance Checking Method was advanced by CWO H. E. Palmer of the 306th A&E Maintenance Squadron. This method is based on the principle that contaminants (polar solvents, etc.), which increase the loss tangent (dissipation factor) of a radome, will also increase its aggregate dielectric constant. If a radome deteriorates because of absorbing some foreign material, its aggregate dielectric constant increases. Therefore, by using the radome as the dielectric of a condenser and taking capacitance measurements of some area of a questionable radome and comparing them with capacitance measurements of the same area of a known reliable radome, it then is possible to determine the condition of the questionable radome. Preliminary tests proved that this method was feasible, and the Radome Capacitance Checker desribed in SIR No. 104, dated 23 July 1953, was developed.

2. Using this checker, capacitance measurements were made of all the radomes in the 306th Bomb Wing, and it was found that radomes having capacitance measurements exceeding 120 mmf had a poor performance history and poor scope definition, while radomes measuring less than 120 mmf had performed satisfactorily. Radomes with high capacitance measurements were replaced and the radar system performance was improved.

3. Capacitance checks of some new radomes indicated that they were not within the acceptable limits. However, as the reliability of the Capacitance Checker had not been established at this time, these radomes were installed and subsequent flights proved that they were not usable. It was subsequently determined that the deterioration of these new radomes was partially caused by the storage methods being utilized (see par V, B, 2).

B. Determining the Causes of Contamination.

1. Radome contamination was believed to be caused by the absorption of foreign liquids and investigation of the values of various dielectric constants led to the theory of water absorption. Since the dielectric constants of most oils are in the neighborhood

of 2 plus, and since the normal aggregate dielectric constant of the radome is approximately the same value, it was reasoned that the effect of hydraulic fluid absorption would not be great enough to increase capacitance measurements to the magnitude of those readings obtained from some defective radomes. For example, a reliable radome should measure 120 mmf or less and some readings obtained from contaminated radomes were in excess of 2000 mmf. Water, having a dielectric constant of 81, appeared to be the logical cause of contamination, for its presence in small quantities in a radome could increase capacitance measurements greatly.

2. As indicated in par V, A, 3, above, capacitance checks of new radomes received from Base Supply showed many of these radomes to have excessive capacitance measurements. Investigation revealed that crated radomes were being placed in open storage both at depot and base level. The radome crates were not waterproof, the radomes rested with the inner surface up, and excessive quantities of rain soaked into them, resulting in radome contamination. Several crates and radomes, upon being opened, contained as much as an inch of water. The radome proved to be unusable in all cases where water was found in the packing crate. This situation was corrected locally by having the radomes placed in warehouses.

3. Radomes were examined immediately after aircraft had landed from high altitude missions, and it was found that condensation occurred on the concave inner surface of the radome during descent from operating altitudes. It also was found that the radome drain hole is not in the optimum position to afford proper drainage. Therefore, the condensation formed a substantial pool of water just forward of the drain hole. Unless the radome was lowered immediately after flight and the concave surface of the radome wiped dry, this pool of water remained in the radome and caused deterioration. All radomes checked gave their highest capacitance measurements in the area forward of the drain hole, said area being extremely critical for reliable radar presentation during bombing. These findings further substantiated the theory of water absorption.

4. Discoloration of areas of some unreliable (contaminated) radomes was noted. These areas were the same color as hydraulic fluid, and when a small hole was made in the inner surface of such a discolored area, a fluid which appeared to be hydraulic oil seeped from the hole. Capacitance measurements of these discolored areas of radomes were taken and found to be high in most cases. However, it was found that those unreliable radomes with indications of water absorption produced higher capacitance measurements than those unreliable radomes having indications of hydraulic fluid absorption. Once again this substantiated the belief that water absorption produces a greater attenuation effect than does hydraulic fluid absorption.

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5. Examination of the inner and outer surfaces of reliable and unreliable radomes, under a ten power microscope, revealed that the inner surfaces of unreliable radomes showed a definite porosity not visible in normal radomes. In all cases, the outer surfaces appeared to be non-porous when examined with the microscope. It is believed that this porosity of the inner surfaces of unreliable radomes is the result of a progressive deterioration brought about by the presence of moisture and hydraulic fluid, and that moisture is the main cause of contamination.

C. Reclamation of Unusable Radomes.

1. The problem of reclaiming unreliable radomes was approached with the idea of baking out the absorbed liquids without producing a breakdown of the resins used in the construction of the radomes. An unreliable radome which had been removed from an aircraft because of poor transmission characteristics and high capacitance measurements was obtained for testing purposes. Previous flights on this radome at high altitudes had resulted in aborted missions due to poor radar definition and loss of targets. This contaminated radome was placed within a dry radome packing crate and baked under nine 500 watt infrared lamps placed at strategic positions within the crate to produce a uniform temperature of 115°F at the concave inner surface of the radome. Capacitance measurements taken periodically revealed that after 539 hours of baking the radome was serviceable. More recent tests indicate that this drying time can be greatly reduced by using higher temperatures and providing a means of circulating and dehydrating the air.

2. The reclaimed radome then was installed on aircraft serial number 51-2289 in the 305th Bomb Wing, and test missions were flown at high altitudes. During the test and all subsequent flights, radar definition and range remained good at operating altitudes of 40,000 feet and above. This radome has been in service since 27 June 1953, and at present its capacitance is one of the lowest of all radomes in the 305th Bomb Wing.

3. These tests definitely indicated that the restoration of moisture contaminated radomes is feasible and desirable in view of the high cost of the radome ($1535). However, because of the space and equipment necessary, this should be accomplished at depot level.

4. Results of the radome reclamation tests were forwarded to WADC and it was suggested that the possibility of establishing a restoration program, at depot level utilizing the Radome Capacitance Checking Method as a basis of determining a radome's reliability, be investigated. Informal information has been received recently that OCAMA has established a procedure to reclaim and neoprene-coat moisture contaminated radomes. They state a linited quantity of reworked radomes are available and that the supply procedures for obtaining reworked radomes has been disseminated to all units concerned.

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D. Coating Usable Radomes.

1. It now was apparent that a need existed for a moisture repellent coating to be applied to the inner surface of reliable radomes in order to retard or preclude possible contamination through fluid absorption. Investigation by this Section and by personnel of WADC disclosed the fact that the Goodyear Erosion Resistant Coating System 23-56 would provide satisfactory protection against fluid saturation with a minimum of radar signal attenuation. This system, utilizing a neoprene (synthetic rubber) coating to seal the radome surface, was selected because no other Air Force approved sealants were available. Laboratory tests conducted by WADC determined that radomes coated with 0.010 inches of neoprene rain erosion coating had a one way transmission efficiency of 98%. WADC recommended using a minimum of two applications of neoprene rain erosion coating (System 23-56) and stated that a maximum of 0.010 inches should not be exceeded. (Coating should be accomplished in accordance with T.O. 01-1-372). WADC tests indicated that a radome having a transmission efficiency of 90% will have an efficiency of 88% after being coated with 0.010 inches of neoprene rain erosion material. (i.e., laboratory tests show that coating causes an attenuation of one to two percent in one way transmission). WADC personnel indicated that a 5% attenuation could not be detected in normal operation. Further tests made by WADC in an altitude chamber indicated that no deterioration of coated radomes occurred after 50 simulated flights to operating altitudes. Similar tests with uncoated radomes revealed that they absorbed sufficient water after several simulated flights to render them unusable.

2. Two radomes in the 305th Bomb Wing were coated with neoprene and test missions were flown at altitudes up to 42,000 feet. Six missions were flown and monitored prior to the departure of these aircraft for a period of TDY in the United Kingdom, and results of four missions flown in Europe now have reached this Section. Due to the persistence of APS-23 malfunctions, the missions flown in the USA were difficult to evaluate; however, the foreign missions indicated satisfactory results with these coated radomes.

3. It is the opinion of this Section that neoprene coating of the inner surface of all reliable radomes now in operational use and in supply channels will serve as an interim fix for this radome contamination problem and will enhance the operational life of reliable radomes. It is understood that AMC is issuing a T.O. which will authorize the neoprene coating of radomes and that the T.O. will require the use of a Radome Capacitance Checker to determine the condition of the radome prior to coating.

4. WADC has indicated informally that a new production process has been developed which results in the radomes being sealed on the interior surface as well as the exterior surface during production. This, of course, will eliminate the requirement of coating the radome. Until these radomes appear in the field, however, the need for a moisture repellent coating still exists as an interim fix for this situation. It

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is understood that AMC will require that all new radomes be coated with neoprene by the manufacturer before shipment to the Air Force.

5. The subject deficiency adversely affects the combat capability of the B-47 aircraft and the immediate implementation of corrective action suggested herein is strongly recommended as an interim solution. However, a final fix for the problem can be obtained only when the manufacturer produces a radome impervious to both moisture and hydraulic fluid.

JOHN L. BALEGA
Captain, USAF
Project Officer

APPROVED:

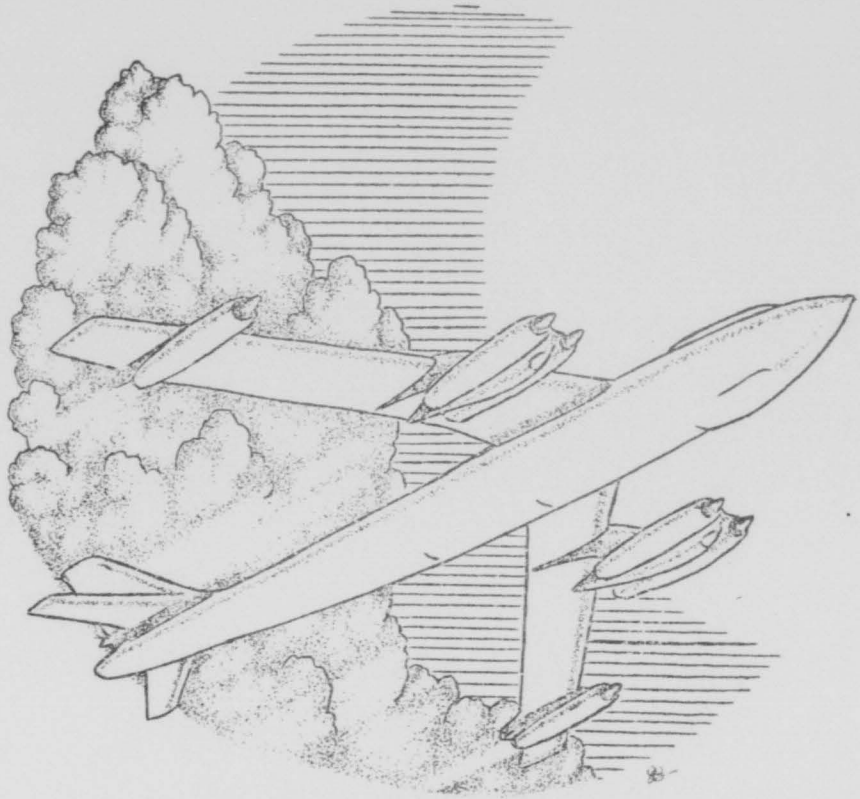
THOMAS P. SAVAGE
Major, USAF
Chief, O.E.S.

RESTRICTED EXHIBIT 15

D-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 119



6TH AIR DIVISION

MAC DILL AFB., FLORIDA

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OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452 0311 23 November 1953

SPECIFIC ITEM REPORT NO. 119

SUBJECT: Fourth Crew Member s Position, B-47 Aircraft (ME-80).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCOWH (B-47)

I. PURPOSE:

To establish a configuration for a fourth crew member's station in B-47 type aircraft, and prepare necessary instructions for both installation and removal by field units.

II. FOREWORD:

A. The production B-47 aircraft has no facilities for carrying an additional person, such as an observer instructor, a combat crew evaluator or a crew chief, who might be necessary during training operations. B-47 operating units have circumvented this problem to some extent by a makeshift installation which is a flight safety risk.

B. The configuration described in this report is based on a prototype installation made in B-47B serial number 51-2299 of the 306th Bombardment Wing (M). Recommendations of the 3908th Strategic Squadron, the 306th Bombardment Wing (M) and the Fifteenth Air Force were combined to arrive at a fourth crew member station which should be adequate for any foreseeable condition

C. This project was established in compliance with SAC message DORUA 32611, dated 9 October 1953

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III. CONCLUSIONS:

A. The minimum requirements for a fourth crew member station are:

1. An intercommunication system which permits listening to mixed INTERPHONE and COMMAND and talking on INTERPHONE only.

2. A type D-1 oxygen regulator with sufficient mask to regulator tubing to permit movement throughout the length of the walkway.

3. A safety belt installation on the walkway which is suitable for crash landing or ditching.

B. When carrying a fourth crew member, the duration of the available oxygen supply will be approximately 25% less than normal.

C. The ability of the fourth crew member to successfully evacuate the aircraft is doubtful. The bailout spoiler is to be deleted on aircraft equipped with ejection seats, leaving the normal escape hatch, the canopy opening, and the port left by ejection of the observer's seat as equally dubious routes. Even with the spoiler installed, the ability to escape is so questionable that the ejection seats will be retrofitted at the normal crew stations in early B-47 aircraft.

D. The fourth crew member must sit during landings, take-offs, ditchings, and crash landings in the position proposed as the observer's ditching position. Therefore, an additional safety belt must be installed in the walkway at station 200 for use by the observer during ditching and crash landing when a fourth crew member is carried.

E. For installation of the fourth station, eighteen (18) man-hours will be required per aircraft when working on a production basis. All materials are standard Air Force supply items.

F. The additional position will add fifteen (15) pounds to the aircraft's basic weight.

G. Retention of the spoiler will penalize the aircraft's combat weight by thirty-five (35) pounds, even after the removable spoiler parts are field stripped prior to entering combat.

IV. RECOMMENDATIONS:

A. If it is mandatory that a fourth crew member be carried during peacetime B-47 missions, it is recommended that:

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1. The Air Materiel Command and Air Research and Development Command authorize, by a Technical Order, the field modification of each B-47 to incorporate the fourth crew station configuration as presented herein

2. The escape spoiler be retained in production aircraft

3. Prior to entering combat, provisions for the fourth crew member, as well as removable parts of the bailout spoiler, be removed This should be authorized in the same Technical Order which directs the installation of the fourth crew member station

V DISCUSSION:

A The fourth crew member's station presented herein was designed to meet the requirements outlined in paragraph III A, with particular emphasis on simplicity and ease of installation All components are standard Air Force supply items or are within the capability of field units to fabricate Appendix A is a list of required parts.

B. No location is available for a fourth crew member s safety belt installation which does not interfere with the observer s movement between his station and the proposed observer's ditching position at station 250 (ECP-1284-1). Therefore, it is necessary that the fourth crew member utilize the proposed observer's primary ditching position An alternate observer's ditching position must be located on the walkway at station 200 for use by the observer when a fourth crew member is aboard Figure I of Appendix B illustrates the positions to be taken by the fourth crew member and observer during crash landing or ditching. The rear position will be used by the fourth crew member for take-off and landing A safety belt and shoulder harness will be installed at the rear position in accordance with ECP-1284-1, but actual dates of incorporation in production line aircraft and in-service aircraft have not been established. WADC has authorized the installation of a safety belt at the rear position as an interim measure until the ECP is incorporated When an aircraft is modified for a fourth crew member station, a safety belt should be installed at both positions in the walkway the rear in accordance with the ECP engineering which is available and the forward belt as per paragraph V E 3 below

C. Escape During Flight

1. Any discussion concerning the requirements for the fourth crew member must include the possibility of escape during the flight In the B-47B aircraft and some B-47E aircraft, the escape spoiler has been installed If the aircraft is in stabilized flight below the limiting airspeed, the fourth crew member has a reasonable chance of escape, providing he is the first man to leave the aircraft It is the opinion of many people that, if the main canopy has been released, exit cannot be made from the normal escape hatch: when the hatch is open, the air flow pattern is from the escape hatch, through the cockpit and out the canopy opening Even under optimum conditions, escape through the normal escape hatch with the spoiler installed appears to be doubtful enough to warrant the retrofit of ejection seats in earlier B-47 aircraft. With the spoiler not installed, it appears doubtful if the fourth crew member can exit from the aircraft during flight The only possible escape routes are through the normal escape hatch, the main canopy opening, and the hole in the bottom of the aircraft through which the navigator s seat has been ejected Exit through the first opening is dangerous, as has been proven by Boeing tests exit through the other two openings is now being investigated, but it appears that survival after exit is extremely doubtful. If a fourth crew member is to be carried, the spoiler should be retained and the aircraft operating instructions be modified to firmly establish the procedure for crew evacuation from the aircraft Retention of the spoiler is almost mandatory for psychological reasons However, if an emergency exists in the air, the crew procedure for escaping under uncontrolled flight conditions may jeopardize the life of the three crew members having ejection seats who are held in the aircraft until the fourth member has, or has attempted to exit

2 The weight of the complete spoiler installation is 128 lbs Field stripping the easily removable parts of the spoiler installation will net a saving of 93 lbs Inasmuch as no consideration is being given to carrying the fourth crew member during combat, it appears that retention of the spoiler during training and field stripping prior to entering combat is a sound plan

D. Figures 1 and 2 of Appendix B illustrate the general arrangement of the fourth crew member's facilities. With this arrangement, movement is permitted anywhere between the observer's position and the aft walkway Positioning of the oxygen regulator and interphone control (Figure 6) has been dictated by space limitations. No special provision is needed for an observer evaluator's seat, since he can either sit on the chemical toilet (tentatively scheduled for removal under weight reduction program), the floor, or a folding chair.

E Instructions for Field Installation.

1 Oxygen System Modification.

a D-1 Oxygen Regulator Mount: Figures 1 and 3 of Appendix B illustrate the location and design of the fourth crew member's oxygen regulator mount This location is compatible for both the B-47B and B-47E airplanes. The mount consists of a sheet metal box with legs which are attached to the left hand cabin wall at station 208 by means of Riv Nuts and screws. To protect the face of the regulator, the regulator is recessed 3/4" into the mount, and a Plexiglas door is attached to the mount, covering the front of the regulator In fabricating the mount, an oxygen regulator should be used as a guide to insure proper positioning of the Dzus fasteners, which secure the regulator to its mount. The mount is primed with zinc chromate and finished in black. The D-2 regulator can be installed in the mount, in lieu of the D-1 unit.

b. Oxygen Tubing Modification: Figure 4 illustrates the necessary oxygen tubing modification The installation results in the fourth crew member being supplied by metal tubing from a portion of both the pilot's and co-pilot's oxygen systems through a style D check valve. For convenience, the tubing installation should be accomplished before mounting either the oxygen regulator mount or the AIC-10 interphone control unit Care should be taken to insure that the tubing does not contact the map case or other projections An eight (8) foot length of flexible

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tubing, composed of one (1) AN-6003-T2A tubing (2 feet long) and one (1) AN-6003-6A tubing (6 feet long), connects the regulator with the oxygen mask; the AN-6003-T2A piece connected to the regulator. The entire hose is supported at its approximate midpoint by a nine inch (9") fabric strap which may be snapped to the side of the fuselage, utilizing supports which are already available in the aircraft for forward and aft positions of the fourth crew member.

2. Interphone Modification.

a. AF Combat Interphone System: For B-47 aircraft which incorporate the AF Combat Interphone System, the fourth crew member is connected to the pilot's interphone system as illustrated by Figure 5 of Appendix B. A three conductor cable is routed from the pilot's interphone panel (terminal strip RM-26) across the aircraft, just forward of the co-pilot's instrument panel, to a jack (JK-43) located under the pilot's Position Light Panel on the left side of the aircraft (Figure 5). The screws which secure the clamps for the co-pilot's static pressure tubing are also used as mounting clamps for the interphone cable. A ten (10) foot length of interphone extension cable, with a plug (PL-68) at one end and a receptacle (U61/U) and snap switch (SW-141-G) at the other, runs from the jack (JK-43) to the fourth crew member's headset. The extension cable is secured to the oxygen mask to regulator tubing by means of eight (8) retaining straps (P/N 45A 17833) spaced at equal intervals. When the pilot's mixer switch is in the "OFF" position, the extra crew member will be able to listen and talk over the INTERPHONE. When the mixer switch is "ON", the fourth man will hear mixed COMMAND and INTERPHONE, but can talk on INTERPHONE only.

b. AIC-10 Intercommunication Set:

(1) The C-823/AIC-10 control unit is designed to receive only INTERPHONE, and must be modified internally as shown in figure 6 to permit hearing mixed INTERPHONE and COMMAND. To accomplish this, pin C, which is

reserved for 150 ohm headset operation, is utilized as illustrated in Figure 6 of Appendix B to connect COMMAND AUDIO with the INTERPHONE circuit through a 27000 ohm resistor. The COMMAND AUDIO lead is routed to the control unit through a SPST switch which permits selecting either INTERPHONE or mixed COMMAND and INTERPHONE. Whenever a control unit is removed from an airplane, it should be restored to its original configuration before returned to Supply channels.

(2) For B-47 aircraft which incorporate the AIC-10 Interphone System, an interphone control unit (C-823/AIC-10) must be used This unit has been selected because of its simplicity, compactness and low weight. Wire is routed from the terminal strip, RM-28, via the same route as with the AF Combat Interphone System. The C-823/AIC-10 control unit is mounted directly on the pressure seal as illustrated in Figure 6 by means of Riv Nuts.

3. Observer's Alternate Ditching Position Installation:

A safety belt will be located at station 200 as illustrated in Figure 7. The mount for the right-hand belt consists of a six (6) inch length of one (1) inch 24ST extrusion bolted to the walkway floor. The left-hand belt mount consists of two (2) sections of one (1) inch extrusion bolted to the pressure seal at stations 205 and 194. At station 205, the mount is bolted by drilling out the 4th and 6th rivets, counting from the walkway, and utilizing the remaining holes for number 10-32 bolts. The 5th rivet is removed and replaced with a flush rivet. At station 194, the 4th and 5th rivets, counting from the walkway, are also drilled out and the remaining holes utilized for bolting the forward end of the mount. A .125 inch backing plate is installed on the outer side of the pressure seal at each end of the mount as illustrated by Figure 8. Figure 8 contains full size templates of the mounts installed in B-47B No. 52-2299. However, it is not known if alignment of the bolt holes will apply to all other B-47 aircraft. Fabric straps for stowing the safety belts are fabricated and mounted as shown in Figure 7. All aluminum is primed with zinc chromate.

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F. Removal of Fourth Crew Member's Station:

Before entering combat operations, all facilities for a fourth crew member should be removed from B-47 aircraft. The added oxygen tubing will be removed, except that TEES will be left in place and capped. Upon removing the left-hand safety belt mount, bolts through the pressure seal will be replaced by rivets. Screws will be left in all remaining Riv Nuts.

G. The following is the weight and balance information applying for this installation:

ITEM	ARM-IN	WT-LB	MOMENT/1000
D-1 Oxygen Regulator and Tubing	208	8	1.664
Seat Belt	200	3.5	.700
Interphone Installation (AF Combat)	208	2	.416
Interphone Installation (AIC-10)	213	4	.852

Joseph D Bowen

2 Appendices
1. Appendix A - Parts List
2. Appendix B - Illus. & Wiring Diagrams w/Fig 1 thru 8

JOSEPH D. BOWEN
1st Lt., USAF
Project Officer

APPROVED:

Thomas P Savage

THOMAS P. SAVAGE
Major, USAF
Chief, O. E. S.

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APPENDIX A

PARTS LIST
FOURTH CREW MEMBER INSTALLATION - B-47B & E AIRCRAFT

ITEM	QUANTITY		STOCK NUMBER
1	1 ea	Regulator-Oxygen Type D-1	5542-2868A1
2	1 ea	Hose Assy - Oxygen LO - PRES	5509-AN-6039-5-1
3	1 ea	Tubing-Oxygen Mask to Regulator	5509-AN 6003 T2A
4	1 ea	Tubing Assy - Oxygen Mask to Regulator	5509-AN 6003-6A
5	1 ea	Valve Assy-Oxygen LO-PRES Check	5509-AN 6033-1
6	2 ea	Tee-Flared, Tubing AN-824-5D	6500-919525
7	8 ea	Nut-Flared Tubing, AN818-5D	
8	2 ft	Tubing - 5/16" O.D. 5280, .035 Wall Thickness	
9	8 ea	Strap-Electrical Leads Hose Retaining	P/N 45A17833
10	1 ea	Belt-Lap Safety Installation	P/N 94-3201
11	1 ea	*Jack (JK-43)	
12	1 ea	*Receptacle (U61/U)	
13	1 ea	*Plug (PL 68)	
14	1 ea	*Switch SW-141-G	
15	21 ft	*Cable, interphone 3 wire	
16	1 ea	**Control Unit-Interphone AIC-10/C-823	1600-211945165
17	1 ea	**U-94/U Receptacle	
18	1 ea	**Connector AN-3106-20-27S	
19	10 ft	**Cable WM-85/U	
20	1 ea	Mount Assy - Oxygen Regulator	Local Manufacture
21	1 ea	Mount - C-823/AIC-10 Mixer Switch	" "
22	1 ea	Strap - Oxygen Mask Tubing Support	" "
23	1 ea	Mount - Safety Belt LH	" "
24	1 ea	Mount - Safety Belt RH	" "
25	2 ea	Strap - Safety Belt Stowage	" "
26	1 ea	**Switch- SPST Interphone Mixer	

*AF Combat Interphone System Only.
**AIC-10 Intercommunication Set Only

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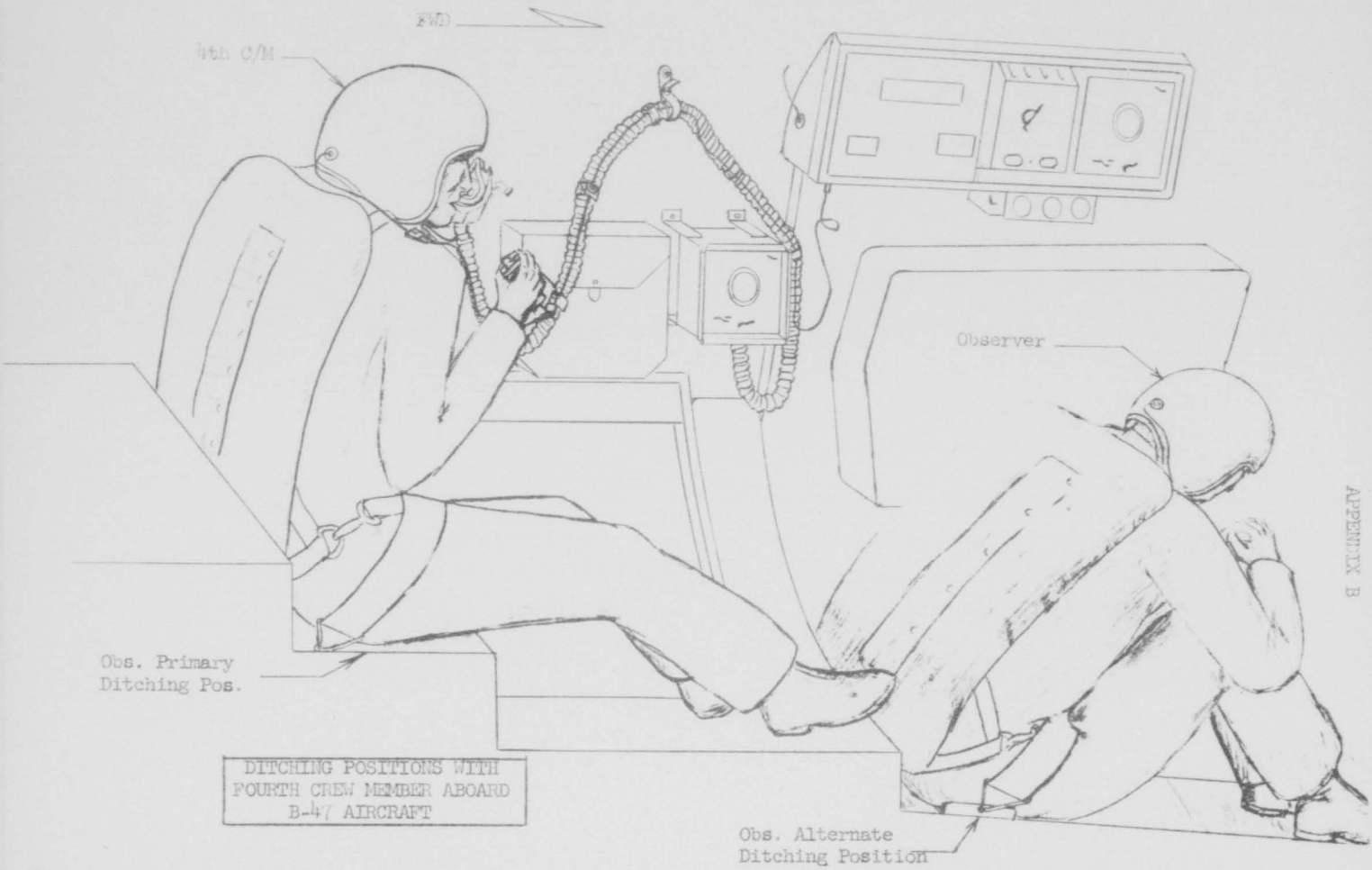


DITCHING POSITIONS WITH
FOURTH CREW MEMBER ABOARD
B-47 AIRCRAFT

Figure 1

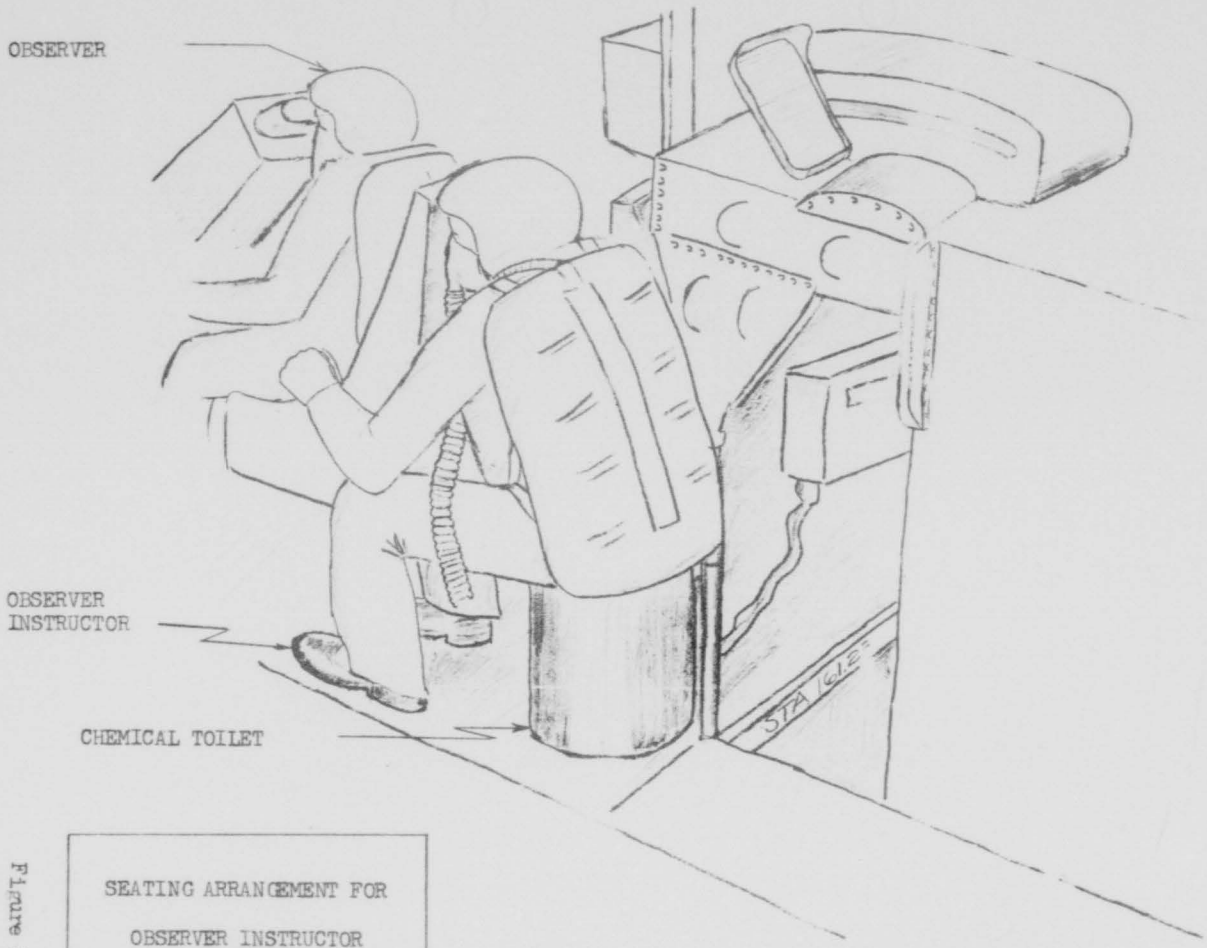
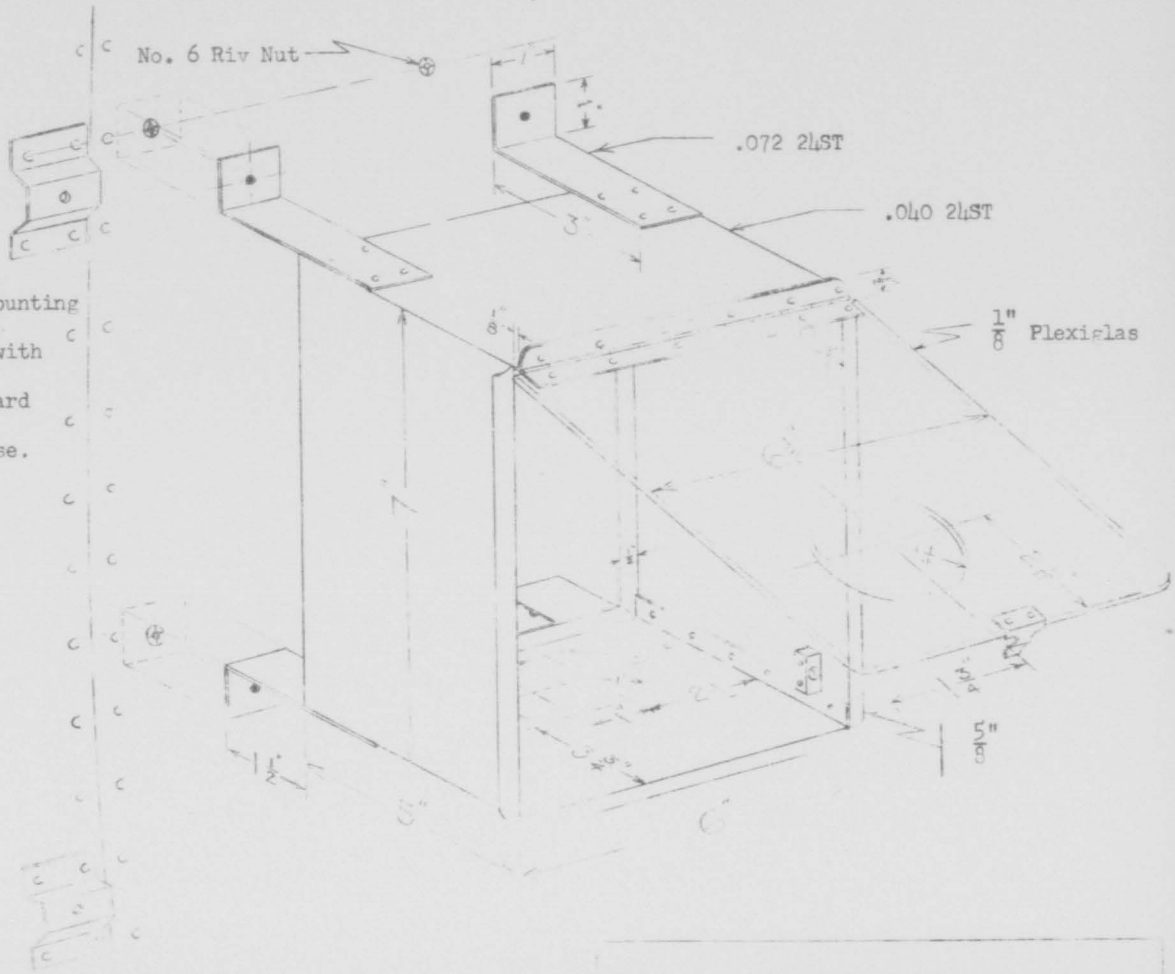


Figure 2

SEATING ARRANGEMENT FOR
OBSERVER INSTRUCTOR
B-47 AIRCRAFT

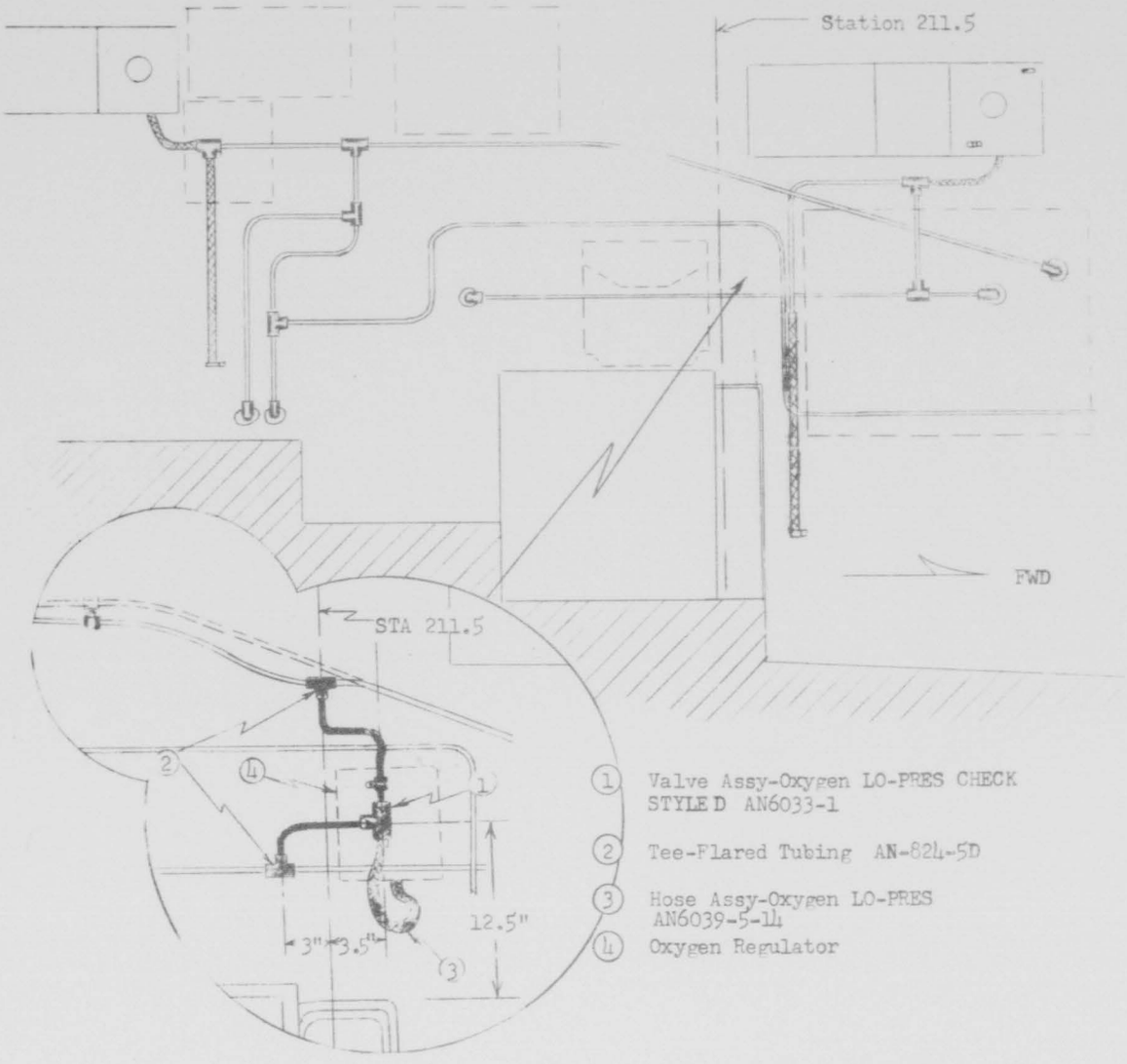


Note: Horizontally align mounting screw holes of upper legs with upper rivets of upper forward mounting bracket of map case.

OXYGEN REGULATOR MOUNT
FOURTH CREWMEMBER POSITION
B-47 AIRCRAFT

Figu

APPENDIX B



1. Valve Assy-Oxygen LO-PRES CHECK STYLE D AN6033-1
2. Tee-Flared Tubing AN-824-5D
3. Hose Assy-Oxygen LO-PRES AN6039-5-14
4. Oxygen Regulator

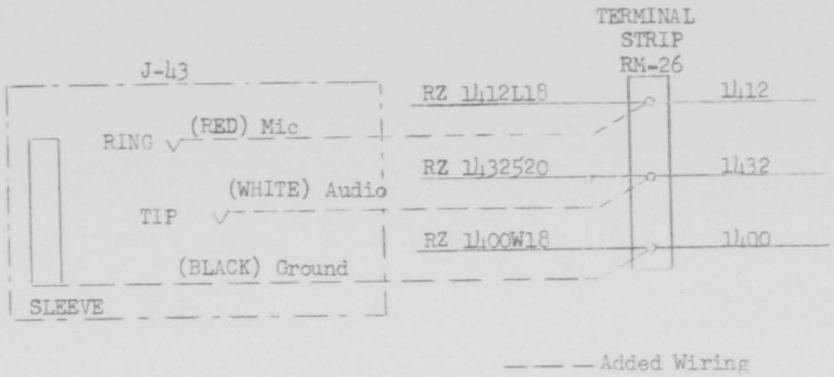
OXYGEN SYSTEM MODIFICATION

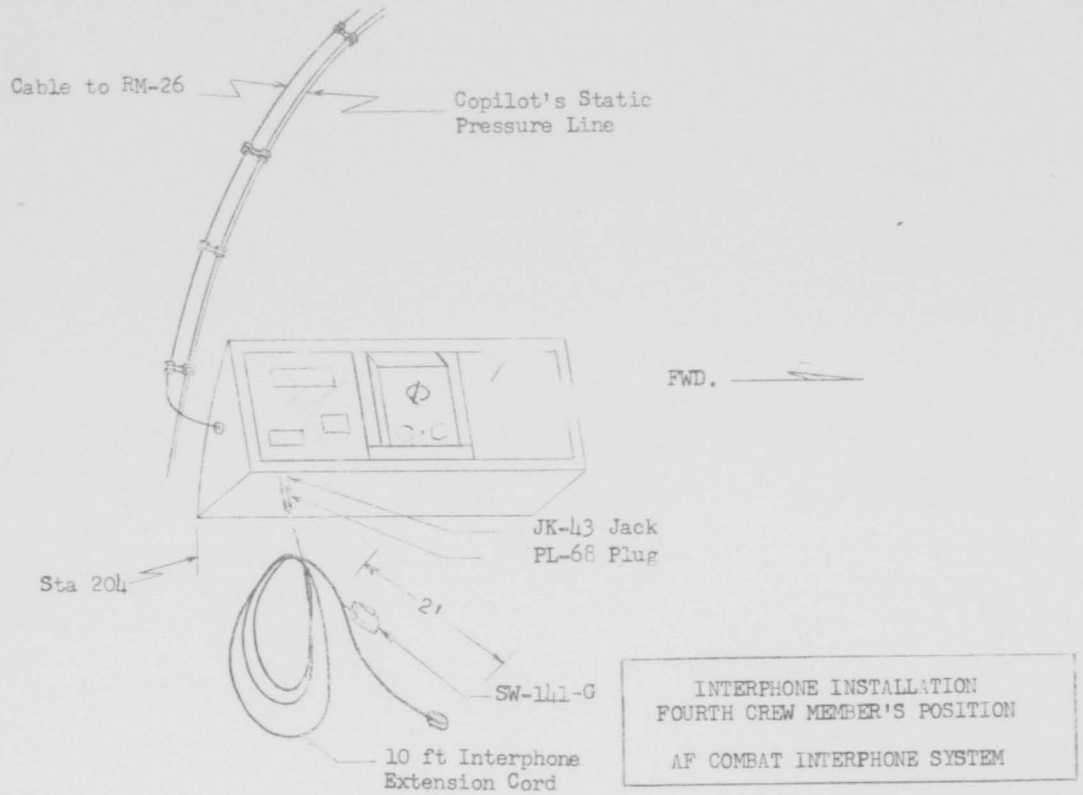
FOURTH CREW MEMBER POSITION

B-47 AIRCRAFT

Figure 4

APPENDIX B



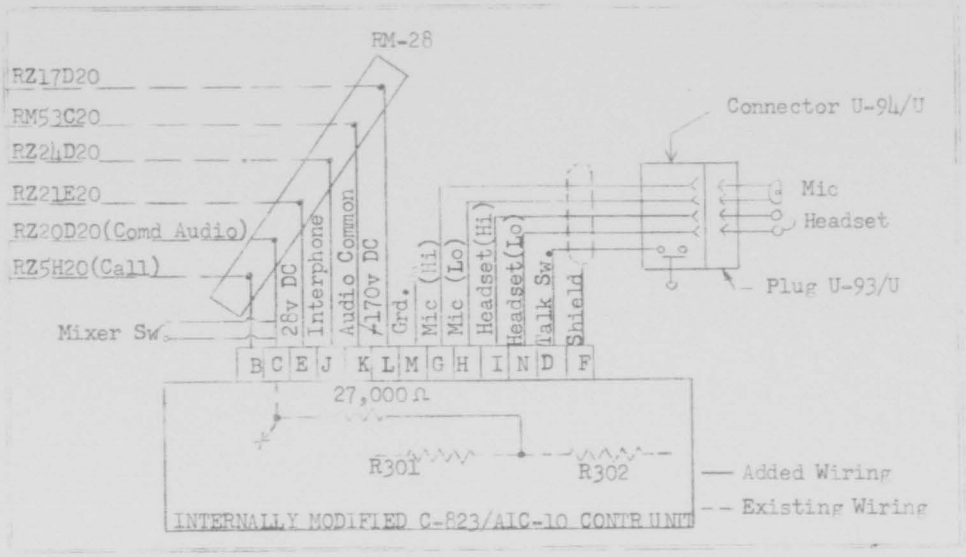


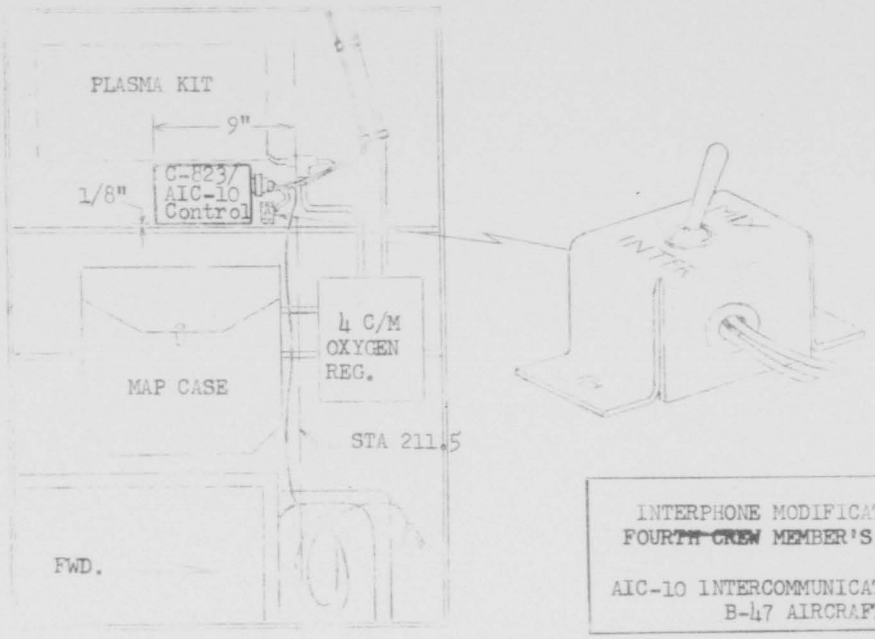
INTERPHONE INSTALLATION
FOURTH CREW MEMBER'S POSITION

AF COMBAT INTERPHONE SYSTEM

Figure 5

APPENDIX B





INTERPHONE MODIFICATION FOR
FOURTH CREW MEMBER'S POSITION

AIC-10 INTERCOMMUNICATION SYSTEM
B-47 AIRCRAFT

Figure 6

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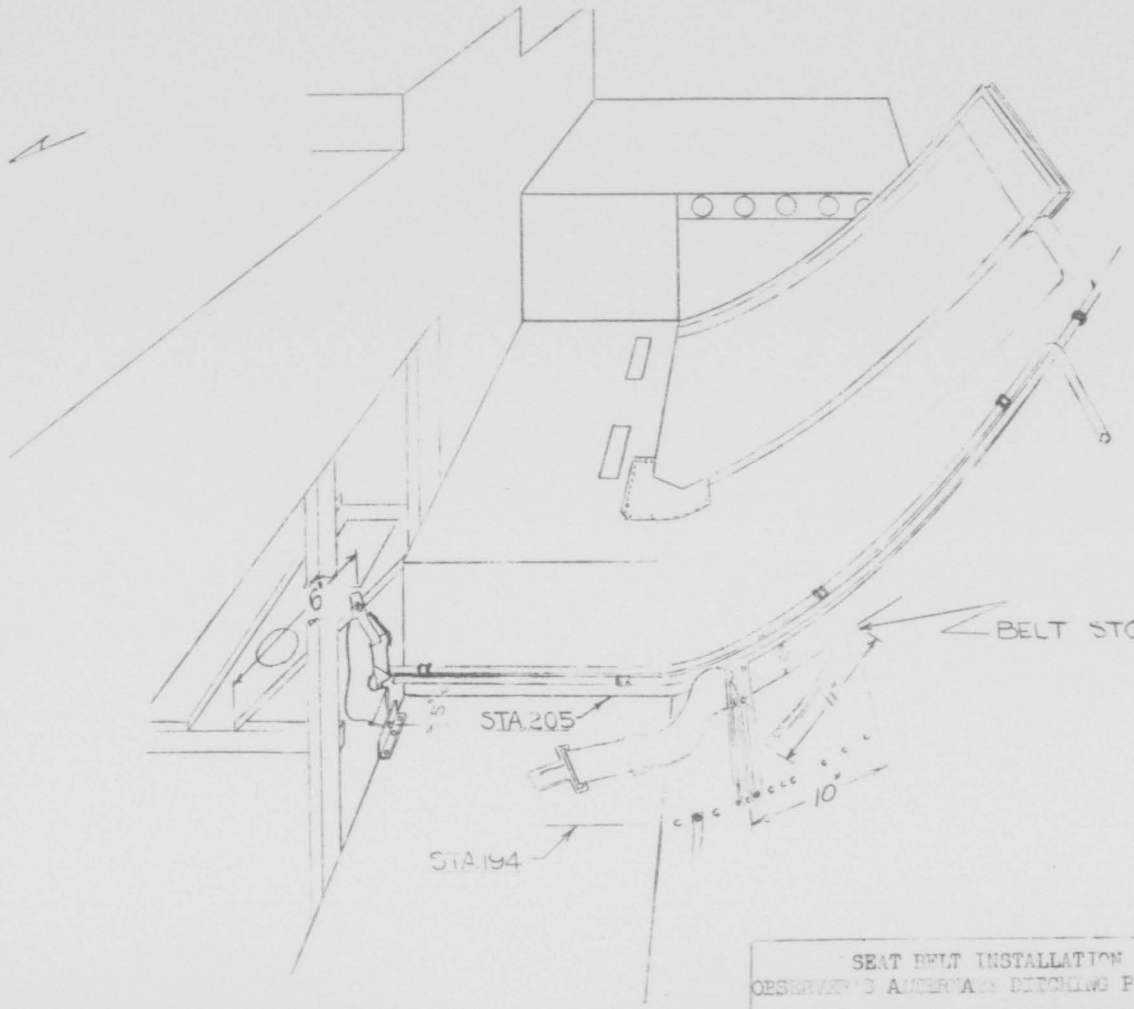
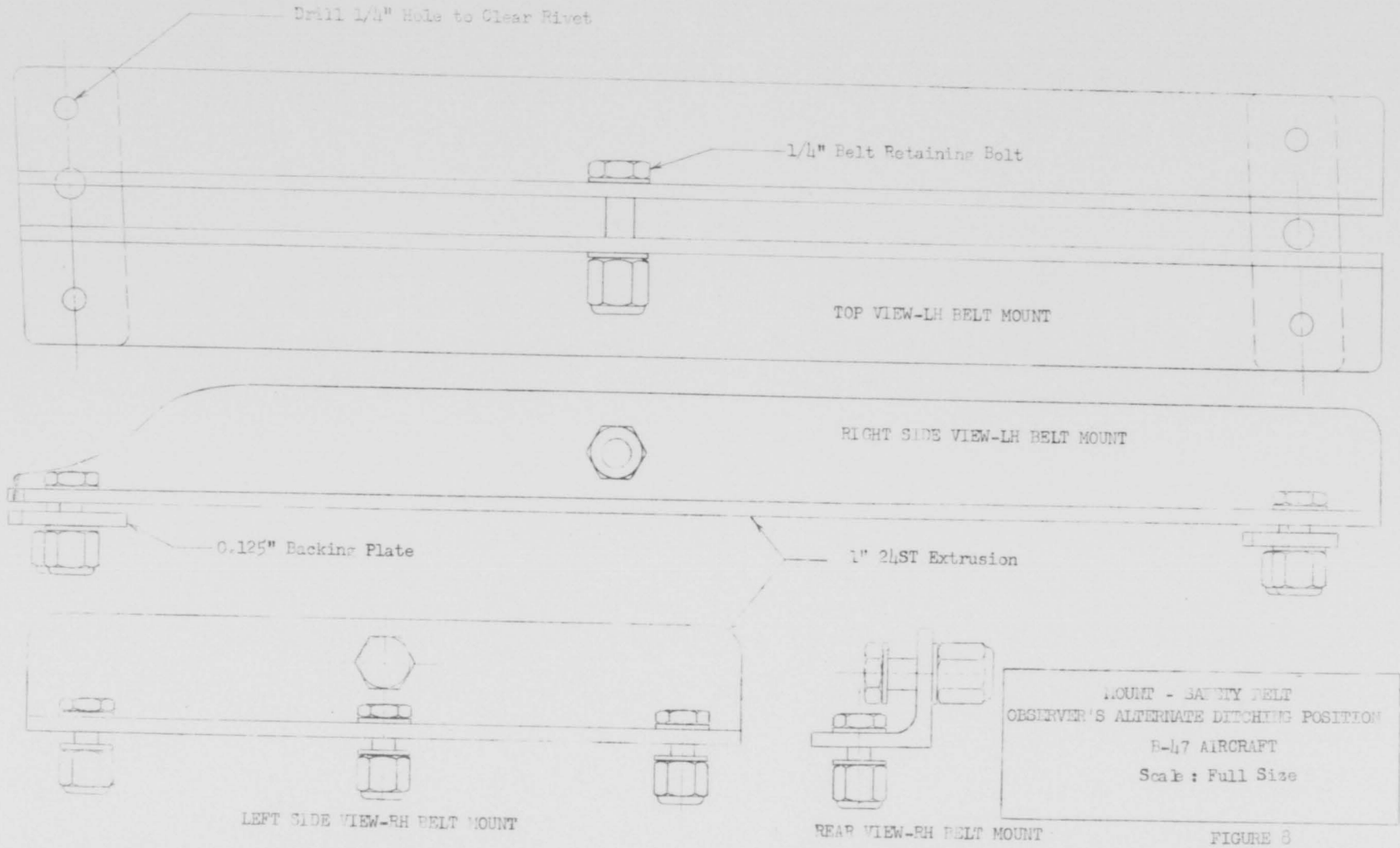


SEAT BELT INSTALLATION
OBSERVER'S AUXILIARY DITCHING POSITION

B-47 AIRCRAFT

Figure 7



MOUNT - SAFETY BELT
OBSERVER'S ALTERNATE DITCHING POSITION
B-47 AIRCRAFT
Scale : Full Size

FIGURE 8

Re. Inv. 1

APPENDIX B

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EXHIBIT 16

Hq 6AD, MCDWAI 600.1, Subject: Modernization of Mobilization Type Barracks, MacDill AFB

2AFMTE 600.1 (29 Oct 53) 1st Ind

HEADQUARTERS SECOND AIR FORCE, Barksdale Air Force Base, Louisiana
5 November, 1953

TO: Commander, 6th Air Division, MacDill Air Force Base, Florida

1. Request for permission to submit a project for modernization of MOB barracks is returned not favorably considered for the following reasons:

a. The critical shortage of funds for procurement of lumber and lumber products precludes the use of this type material for alteration or modification projects.

b. Expenditure of funds for lumber and lumber products by MacDill Air Force Base has already exceeded installations allotment for the first two quarters of FY 1954 by $9,500.00.

c. Any excess stock of lumber and lumber products must be reported as available for redistribution to other installations within this command in accordance with paragraph 6c of letter this headquarters, 2AFMED 400.12, 15 September, 1953, Subject: Central Procurement and Distribution of Lumber, FY 1954.

d. Authorized stock levels for lumber and lumber products are sufficient only for routine maintenance and accomplishment of emergency, operationally essential projects.

2. It is suggested that an item for modernization of MOB barracks be included in the next eligible Public Works Program.

BY ORDER OF THE COMMANDER:

R. E. STAUFFER
CMSgt, USAF
Asst Adjutant

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 17

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Fla.

3 November, 1953

Colonel S. Vandevanter, Jr.
Commander
305th Bombardment Wing Medium
APO 147, c/o Postmaster
New York, New York

Dear Pete:

Just another word on billeting - this time, a little more pleasant I hope. In accordance with the Air Force's policy and General Mooney's desires, we are working on a program to house bachelor non-commissioned officers separately. The initial phase has been completed, and we have selected one of our Transient Officers' Quarters to become the first Bachelor Non-Commissioned Officers' Quarters. This building has space for thirty-seven (37) people and they will be housed in exactly the same manner that our married officers (are) who do not have their families with them . In most cases there will be two men per room. The rooms have standard billeting furniture, and in the very near future, we will put inner-spring mattresses in each room. We are charging the standard billeting rate of $8.00 per month to take care of maid service, linen change, etc. Of the thirty-seven (37) spaces we have available, I have saved ten (10) spaces for possible use by your non-commissioned officers upon their return. At present, we are limiting occupancy to Master Sergeants and Technical Sergeants, and with date of rank being the final determining factor.

I would appreciate it if you would get the word out to your people, so they can be thinking about it. You need not give me any figures before you return, but I felt like you and your people would like to know what is going on here at home.

Sincerely,

B. H. MERCHANT
Colonel, USAF
Commander

"A CERTIFIED TRUE COPY"

L. A. Johnson

L. A. JOHNSON
2nd Lt., USAF

EXHIBIT 18

HEADQUARTERS
809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDOLC 250.4 1 December 1953

SUBJECT: Courts-Martial Trials (November 1953)

TO: Commander
All Organizations
MacDill Air Force Base, Florida

There follows a list of the courts-martial trials held at MacDill Air Force Base, Florida, during the month of November 1953. This list is published for the information and guidance of all concerned and therefore should be DISPLAYED in a prominent place on all bulletin boards.

GENERAL COURTS-MARTIAL

GRADE	AGE	BRIEF OF OFFENSE	PREV CONV	SENTENCE
809th AP Sq, 809th ABG				
1. A/3C	26	Art 85 Desertion	4	DD, CHL 16 mos Total Forf

SPECIAL COURTS-MARTIAL

809th Fd Sv Sq, 809th ABG				
2. A/[illegible]	19	Art 86 AWOL 23 days	2	BCD, CHL 3 mos Forf $54/mo for 3 mos
3. A/[illegible]	18	Art 86 AWOL 24 days	1	CHL 2 mos, Forf $54/mo for 2 mos
4. A/[illegible]	18	Art 95 Escape Confinement	1	CHL 3 mos, Forf $50/mo for 3 mos
5. A/[illegible]	20	Art 86 AWOL 2 days Art 95 Escape Confinement	1	BCD, CHL 6 mos Forf $55/mo for 6 mos
809th Sup Sq, 809th ABG				
6. A/[illegible]	21	Art 86 AWOL 25 days Art 92 Failure to Obey Lawful Order	1	CHL 4 mos, Forf $25/mo for 4 mos
7. A/[illegible]	24	Art 86 AWOL 156 days	0	CHL 4 mos, Forf $65/mo for 4 mos
809th AP Sq, 809th ABG				
8. S/Sgt	23	Art 86 AWOL 29 days	0	Reduced to A/1C Forf $50/mo for 2 mos
9. A/[illegible]	21	Art 86 AWOL 100 days	2	BCD, CHL 6 mos Forf $60/mo for 6 mos
809th Instl Sq, 809th ABG				
10. A/3C	19	Art 86 AWOL 49 days	0	CHL 2 mos, Forf $25/mo for 2 mos
98th ARS, 6th ADiv				
11. A/3C	31	Art 86 AWOL 19 days	2	CHL 3 mos, Forf $35/mo for 3 mos

SUMMARY COURTS-MARTIAL

809th Fd Sv Sq, 809th AFG					
12. A/3	19	Art 86 Fail to Repair	1		CHL 30 days Forf $55
13. A/3	22	Art 121 Larceny	2		CHL 30 days Forf $55
14. A/3C	19	Art 86 Fail to Repair Art 134 Break Restriction	1		CHL 30 days Forf $55
15. A/3	18	Art 86 Fail to Repair	3		CHL 30 days Forf $55
Hq Sq, 306th Tm Wg (M)					
16. M/Sgt	31	Art 107 False Off Statement	0		Forf $90
17. T/Sgt	37	Art 107 False Off Statement	0		Forf $70
98th ARS, 6th AIDiv					
18. A/1C	40	Art 86 AWOL 17 days	0		CHL 30 days Forf $30
19. M/Sgt	38	Art of War 96 False Off Stat Art 107 False Off Statement	0		Case Dismissed
20. T/Sgt	25	Art 107 False Off Statement	0		Forf $70
Det #1, 305th Tm Wg (M)					
21. A/3	18	Art 86 Fail to Repair	0		Perform HL 30 days Forf $20
22. A/3C	19	Art 86 AWOL 7 days	0		CHL 15 days, Forf $30 Conf Susp 6 mo
809th Opns Sq, 809th AFG					
23. A/3	18	Art 86 Fail to Repair	0		CHL 15 days, Forf $20 Susp 3 mos
24. A/3	18	Art 86 Fail to Repair	1		CHL 30 days, Forf $55
306th TM Sq, 306th Tm Wg (M)					
25. A/3C	19	Art 107 False Off Statement	0		Perform HL 30 days Forf $50
809th Mtr Veh Sq, 809th AFG					
26. A/3C	19	Art 78 Accessory After the fact	1		CHL 30 days, Forf $50 Susp 3 mos
809th Instl Sq, 809th AFG					
27. A/3C	27	Art 86 Fail to Repair	0		CHL 1 mo, Forf $25 Susp 3 mos
306th Medical Gp, 306th Tm Wg (M)					
28. T/Sgt	33	Art 107 False Off Statement	0		Forf $70
Hq Sq 809th AFG					
29. M/Sgt	31	Art 107 False Off Statement	0		Forf $90
30. A/1C	25	Art 92 Failure to Obey Art 95 Resist Arrest	0		Not Guilty
306th ARS, 306th Tm Wg (M)					
31. M/Sgt	36	Art of War 96 False Off Stat Art 107 False Off Statement	0		Forf $100
32. A/1C	23	Art 86 Fail to Repair	0		Rest MacDill AFB 30 days Forf $85
33. M/Sgt	37	Art 107 False Off Statement	0		Forf $90

Hq 809th ABG, MacDill AFB, Fla., CM Trials for Nov 53, dtd 1 Dec 53 (Cont'd)

306th A & E Sq, 306th Bm Wg (M)
34. M/Sgt 33 Art 107 False Off Statement 0 Forf 090

BY ORDER OF THE COMMANDER:

C. A. WHITTLE
MOJG, USAF
Asst Adjutant

DISTRIBUTION D

EXHIBIT 19

PERSONNEL SERVICES
MacDill Air Force Base
Florida

LCDPPS 13 November 1953

SUBJECT: Avon Park Air Force Base Controlled Hunt

TO: See Distribution

1. The United States Air Force in co-peration with the Florida Game and Fresh Water Fish Commission announces the opening of controlled hunts on Avon Park Bombing Range each weekend of the hunting season, commencing 20 November 1953. National holidays unless falling on Saturday or Sunday are excluded.

2. The following rules will govern:

a. The United States Air Force reserves the right to cancel, without prior notification, any hunt during the hunting season, should military necessity so direct.

b. Opening and closing times:

(1) The gate will open and briefing start at 12:00 hours each Saturday.

(2) Camping on the reservation will be authorized Saturday nights in designated areas. All hunters wishing to camp will so state upon arrival and must be at the authorized camp site by 1900 hours, Saturday evening. Camp sites will be supervised by wildlife officers and failure to comply with the 1900 hours deadline will result in confiscation of game and expulsion from the hunting area for the duration of the season.

(3) Hunters not camping must be checked out of the main gate on/or before 1900 hours, Saturday night. Failure to do so will result in confiscation of game and disbarment from the hunting area for the remainder of the hunting season.

(4) No entrance to the area will be allowed after 1900 hours Saturday nights.

(5) The gate will open Sunday morning at 0600 hours.

(6) All hunters must check out of the main gate on /or before 1900 hours Sunday nite, failure to do so will result in confiscation of game and dis-barment from the hunting area for the remainder of the season.

c. Movement from the gate to the hunting area and from the hunting area to the gate will be un-interrupted. Personnel stopping enroute may be subject to prosecution.

d. No rifles or guns other than shot guns of not more than three (3) shell capacity will be allowed on the reservation. No shot smaller than No. #2 buck-shot shall be used for deer.

e. Wild hogs on the range will not be killed or removed from the Range.

f. Deer, turkey, quail, squirrel, waterfowl and coot and doves are in season.

g. Bag limits:

(1) Deer: Buck deer with one or more 5" antlers. Days bag: One (1) Seasons bag Two (2).

(2) Turkey: Either Sex.

Days Bag: Two (2)

Seasons Bag: Three (3)

(3) Quail:

Days Bag: Ten (10)

(4) Squirrel:

Days Bag: Gat Squirrel, Ten (10), Fox Squirrel, One (1).

(5) Waterfowl and coot:

Duck: Days Bag, Four (4), (Including one (1) wood duck).

(6) Dove:

Days Bag: Eight (8)

h. Shooting Hours: One-half hour before sunrise to sunset.

3. Licenses:

a. Civilians and dependents over 16 years of age will be required to show the following:

(1) State or Higlands County or Polk County game license.

(2) Public hunting area stamp.

b. Service Personnel:

(1) Service Personnel must present proper identification. In addition they must possess either a Florida State Hunting License, or a Highland County or Polk County Hunting Licenses and if they intend to hunt ducks they must possess a Federal Duck Stamp.

(2) County Hunting license costs only $2.00 and may be purchased from the Game Warden at Avon Park Air Base Main Gate anytime including Saturday and Sunday. Florida State Hunting License (cost $7.50) may be purchased at most sporting goods stores and the Federal Duck Stamp (cost $2.00) may be purchased at any central U.S. Post Office. (Including Base Post Office)

c. Dogs must have a collar with name and address of owner attached.

4. Intoxicated persons will not be allowed on the reservation.

5. Vechicles are subject to search at anytime while entering, leaving, or on the reservation.

SUBJECT: Avon Park Air Force Base Controlled Hunt
(continued)

6. No fires other than camp fires in the authorized camping areas shall be started.

7. Hunt participants must report their hunting take at the Main Gate Checking Station upon leaving the reservation.

8. All rules and regulations of the Game and Fresh Water Fish Commission, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the United States Air Force will be observed and complied with during the hunts.

9. Recommended AAA Routes between Tampa, Florida and Avon Park, Florida.

a. Take Route No. 60 (Lafyt St.) from Tampa, to Bartow Florida from Bartow, take Route 98 to Avon Park, Florida. This route by-passes Lake Wales.

Reproduced by Special Services, MacDill Air Force Base, Tampa, Florida, 13 November 1963 in conjunction with Base Operations and Training Office and OIC MacDill Detachment Avon Park.

DISTRIBUTION
"D"

APPENDIX "B"

MACDILL STATISTICAL SUMMARY - PART I
STATION STRENGTH SHEET

FOR PERIOD 1 - 30 NOV 1953

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PFD & UNFD	(F) AVG ASGD	(G) AVG PHY PRESENT
Hq 6th Air Div	OFF	10	15		12	11	11
	AMN	7	6		6	6	6
	CIV	3	4				
Hq 809th AB Gp	OFF	54	55	19	67	55	61
	AMN	215	270	19	248	262	233
	CIV	73	74				
809th Supply Sq	OFF	14	13		8	13	8
	AMN	383	427	8	301	416	283
	CIV	145	137				
809th Mtr Veh Sq	OFF	5	3		3	3	3
	AMN	203	301		211	301	201
	CIV	8	8				
809th AP Sq	OFF	14	10		7	10	6
	AMN	449	357	33	212	366	220
	CIV	1	1				
809th Instl Sq	OFF	8	6		5	6	6
	AMN	301	340		296	338	295
	CIV	178	175				
809th Fd Sv Sq	OFF	7	3		3	4	4
	AMN	359	452		298	462	306
809th Oprs Sq	OFF	37	28	6	23	25	21
	AMN	422	436	77	431	431	414
	CIV	25	22				
8th Crash Boat Flt	OFF	8	2		1	2	2
	AMN	100	98		87	96	85
TOTAL 809TH ABG	OFF	147	118	25	117	119	111
	AMN	2432	2681	137	2084	2672	2037
	CIV	430	417				
740th AF Band	OFF	1	0		0	0	0
	AMN	34	23		21	26	23
7th ALT Chamber Indoc Flt	OFF	1	1		1	1	1
	AMN	11	10		9	10	9
*Hq 305th Bm Wg	OFF	45	47		35	48	36
	AMN	106	119		106	118	106
	CIV	3	2				
*364th Bm Sq	OFF	65	62		58	60	50
	AMN	102	151		146	152	141
*365th Bm Sq	OFF	65	63		60	62	55
	AMN	102	158		148	154	142
*366th Bm Sq	OFF	65	58		56	57	46
	AMN	102	161		155	164	152
*305th A&E Maint Sq	OFF	13	11		9	11	9
	AMN	337	336		315	338	303
*305th Field Maint Sq	OFF	7	6		5	6	5
	AMN	349	504		459	497	448
*305th Periodic Maint Sq	OFF	5	5		4	5	4
	AMN	175	228		220	218	203
*305th Air Ref Sq	OFF	85	78		76	78	75
	AMN	228	252		246	250	232
305th Med Gp	OFF	27	33	72	78	33	57
	AMN	98	87	550	574	87	477
TOTAL 305th Bm Wg	OFF	377	363	72	381	360	337
	AMN	1599	1992	550	2369	1978	2204
	CIV	3	2				

*All figures other than authorizations, are as of 2 Sep 1953.

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PFD & PNFD	(F) AVG ASGD	(G) AVG PHY PRESENT
Hq 306th Bm Wg	OFF	45	48		41	49	38
	AMN	106	129		114	129	114
	CIV	3	3				
367th Bm Sq	OFF	65	57		47	59	50
	AMN	102	181		171	178	160
368th Bm Sq	OFF	65	58		49	61	53
	AMN	102	185		169	182	163
369th Bm Sq	OFF	65	53		44	54	49
	AMN	102	185		175	182	165
303th A&E Maint Sq	OFF	13	10		8	10	10
	AMN	337	319		298	326	291
	CIV	4	5				
306th Field Maint Sq	OFF	7	6		4	6	5
	AMN	349	449		428	446	405
	CIV	30	30				
306th Periodic Maint Sq	OFF	5	6		5	6	6
	AMN	175	243		226	246	222
306th Air Ref Sq	OFF	65	82		65	79	67
	AMN	228	295	2	279	283	263
306th Avn Sq	OFF	15	13		11	14	13
	AMN	33	36		34	36	36
306th Med Gp	OFF	57	45	4	37	46	37
	AMN	144	159	13	158	161	157
	CIV	54	54				
Total 306th Bm Wg	OFF	422	378	4	312	384	328
	AMN	1678	2181	15	2052	2189	1976
	CIV	91	92				
Total 307th AEG	OFF	1	8		8	8	8
	AMN	4	8		8	8	8
SPECIAL MISSION UNITS							
Det "21" 3944th Radar Scor Sq	OFF	4	3		3	3	3
	AMN	30	29	1	27	29	27
3908th Strat Eval Sq	OFF	16	29	13	22	26	20
	AMN	47	33	15	31	32	31
	CIV	1	1				
**98th Air Ref Sq	OFF		61		1	65	26
	AMN		190		1	264	163
Total SAC Orgns	OFF	979	976	114	857	980	845
	AMN	5842	7153	748	6608	7194	6484
	CIV	528	516				
Detachment 1, 26 Weather Sq	OFF	12	10	1	8	10	9
	AMN	28	28		26	27	24
Hq 1928 AACS Sq	OFF	13	7		5	7	5
	AMN	120	205	5	197	205	192
	CIV	4	4				
Det 3, 136th Comm	OFF	2	2		2	2	2
	AMN	47	53		50	53	52
C-97-2 Mobile	OFF	1	1		0	1	1
	AMN	21	24		23	24	23
B-47 Mobile Tng Unit	OFF	1	1		1	1	1
	AMN	17	19		16	20	17
7th OSI	CIV	6	6				
TOTAL NON-SAC ORGANIZATIONS	OFF	29	21	1	16	21	18
	AMN	233	329	5	312	329	308
	CIV	10	10				
TOTAL MACDILL AFB	OFF	1008	997	115	873	1001	863
	AMN	6075	7482	753	6920	7523	6792
	CIV	538	526				
ORGNL TOTALS		7621	9005	868	7793	8524	7655

*All figures other than authorizations, are as of 2 Sep 53.
**All figures are as of 30 Nov 53.

SECRET

HISTORY

6th AIR DIVISION

SECRET

DECEMBER 1953

SECRET

1607

SECRET

RDP-6 [illegible]
DEC 1953

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SECRET

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SECRET

CLASS. Secret
AUTH. Comdr 6 AD ltr
DATE 27 Jan 54
INITIALS B. A. Johnson

HISTORY

6TH AIR DIVISION

Including

809th Air Base Group
MacDill Air Force Base

Florida

1 - December - 31

1953

B. A. Johnson
Division Historical Officer
2d Lt. B. A. Johnson

S. E. Wickam
Division Historian
M/Sgt. S. E. Wickam

H. K. Mooney
H. K. MOONEY
Brigadier General, USAF
Commander

SECRET

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APPENDIX

"A" Documents Arranged as Exhibits
"B" Statistical Summaries
"C" Under Separate Cover (TOP SECRET)

CHRONOLOGY OF MAJOR EVENTS

4 Dec - Detachment One, Headquarters, 305th Bomb Wing, was discontinued effective 2400 hours, with the return of the parent unit to MacDill Air Force Base, Florida, from 90 days' temporary duty in the United Kingdom.

8 Dec - Flight "B," 36th Communications Security Squadron, attached to 809th Air Base Group for logistical support.

809th Supply Squadron was reorganized.

9 Dec - Further plans made to restore prestige and authority of non-commissioned officers by the formation of boards of officers and/or non-commissioned officers to write and publish a policy brochure on the same subject.

10 Dec - Colonel George P. Cole, Headquarters, 306th Bomb Wing, assigned to Headquarters, 6th Air Division for duty as Director of Materiel.

14 Dec - Information received via Headquarters, Strategic Air Command, that Headquarters, United States Air Force had approved the construction of a radar reflector and resolution target at Avon Park Air Force Base, Florida.

21 Dec - 6th Air Division Operation Plan 129-53 published concerning a Special Weapons inspection beginning 4 January, 1954.

B I B L I O G R A P H Y

Letters

Directives

Special Reports

General Orders

Special Orders

Daily Journal

Teletype Messages

Memoranda

Tampa Morning Tribune

CHAPTER ONE

ADMINISTRATION and PERSONNEL

With the return of the 305th Bomb Wing from 90 days' temporary duty (TDY) in the United Kingdom,[1] Detachment One of that unit's headquarters was discontinued effective 2400 hours, 4 December, 1953,[2-3] in accordance with Strategic Air Command (SAC) Operations Order 80-53, 19 November, 1953.[4] Detailed information regarding the return of the Wing may be found in that unit's history for the corresponding period.

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1. History, 6th Air Division, October 1953, pp 13-17.
2. GO 30, Hq 6AD, 5 December 1953. Exhibit 1.
3. GO 33, Hq 6AD, 9 December 1953. Exhibit 2.
4. GO 32, Hq 6AD, 5 December 1953. Exhibit 3.

Headquarters, Second Air Force, Barksdale Air Force Base, La., informed its subordinate units that "bases of this command need no longer submit serious incident reports under provisions of SAC Regulation 125-7 ('Air Provost Marshal' - Reports of Serious Crimes or Serious Incidents, 29 April 1953) on those cases involving fraud against the Government (Committee 55)."[5] The message[6] stated that it constituted also the authority to close pending serious incident cases regarding fraud.

Members of the Executive Ground Safety Council were informed at the 15 December meeting that two fatalities in November, both the result of private vehicle accidents, brought MacDill's fatality total to seven as compared to 12 during the same period in 1952.[7]

Flight "B" of the 36th Communications Security Squadron, which had been organized in November, 1953, was attached to the 809th Air Base Group for logistical support, and further attached to the 306th Medical Group for rations, Special and Summary Courts-Martial and Board action only, effective 8 December, 1953. The unit replaced (administrative action only) Detachment Three of the 136th CSS.[8]

In accordance with the proposed plan to incorporate the Division-Base historical program with the Information Services (formerly known

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5. History, 6th Air Division, November 1953, page 3.
6. TWX, Hq 2AF to Comdr 6AD, 2AFIGP 1437, 11 December 1953.
7. Rpt, "Proceedings of Ground Safety Council, December 1953," prep by Executive Committee of the Ground Safety Council, Flying Safety Division, Hq 6AD, December 1953. Exhibit 4.
8. GO 19, Hq 809th ABGp, 5 December 1953. Exhibit 5.

1615

as Public Information Office), and which, according to semi-official information will occur sometime during March, 1954, "all authorized troop spaces within the historical function at all echelons of command, incumbents, and current organizations are frozen until transferred."[9] During the interim, the Base Adjutant will retain responsibility for the history.

PERSONNEL

The 307th Air Refueling Squadron was inactivated effective 18 November, 1953, at Bergstrom Air Force Base, Texas, and reverted to the control of the Department of the Air Force.[10] Although the unit was never stationed at MacDill, some of its personnel came from within 307th Bomb Wing-307th Air Base Group resources.

The 809th Supply Squadron was reorganized effective 8 December, 1953, with an authorized strength of 14 officers and 374 airmen.[11]

The requested Table of Distribution (T/D) for Avon Park[12] was approved by Headquarters, Strategic Air Command with a strength of three officers and 70 airmen, according to Captain P. S. Dickey, Base Manpower Officer.[13] The request for a separate morning report detachment was not approved, however. The unit was scheduled to be organized

---

9. TWX, Hq 2AF to Comdr 6AD, 2AFPIC 1069, 8 December 1953.
10. GO 80, Hq SAC, 16 November 1953.
11. GO 78, Hq SAC, 10 November, 1953.
12. History, 6th Air Division, October 1953, page 18.
13. Daily Journal, Hq 809th ABGp, 8 December 1953.

1616

as Detachment One of the 809th Operations Squadron effective 1 January, 1954. The personnel spaces authorized on the 809th Operations Squadron T/D-A with grade spreads were: three master sergeants, nine technical sergeants, 14 staff sergeants, 31 airmen first class, and 13 airmen second class.

Promotion quotas allotted to SAC units at MacDill for the month of December (exclusive of the 3908th Strategic Evaluation Squadron) were:[14]

	M/Sgt	T/Sgt	S/Sgt	A/1C	A/2C
6th Air Division, 809th Air Base Group, and 307th Air Base Group	4	12	29	34	60
305th Bomb Wing	3	7	20	32	50
306th Bomb Wing	3	8	27	28	52

Colonel George P. Cole was relieved from assignment with Headquarters, 306th Bomb Wing and reassigned to Headquarters, 6th Air Division effective 10 December[15] for duty as Director of Materiel.[16]

Colonel Raleigh Howard Lackay, 6th Air Division Surgeon, was reassigned to the Office of the Surgeon General, Headquarters USAF,[17] effective 4 January, 1954.[18] Colonel Mathias F. Regner assumed the duties of Division Surgeon and Staff Surgeon of the 809th Air Base Group effective 1 January, 1954.[19]

---

14. Ltr., Hq 6AD to General Distribution, "Promotion of Airman (Dec 53)," 7 December 1953, MCDPO 220.2.
15. SO 312, Hq 6AD, 10 December 1953, par 26.
16. History, 6th Air Division, November 1953, page 13.
17. Ibid.
18. SO 303, Hq 6th AD, 1 December 1953, par 1.
19. PAM 380, Hq 809th ABGp, 31 December 1953, par 2.

1617

Major Charles B. Lounsbury was transferred from Headquarters, 306th Bomb Wing to Headquarters, 6th Air Division effective 3 December, 1953, for duty as Staff Materiel Officer.[20]

Lieutenant Colonel David J. Nolan was transferred from Headquarters, 809th Air Base Group where he had been serving as Executive Officer to the 809th Installations Squadron for duty as Base Air Installations Officer, effective 1 January, 1954.[21]

Captain Joseph C. Westercamp, Headquarters 306th Bomb Wing, was assigned duty as the 6th Air Division Intelligence Officer, in addition to his other duties.[22]

Second Lieutenant Joseph W. Elliott, Headquarters Squadron, 809th Air Base Group, was appointed Commander of the 740th Air Force Band, in addition to his other duties, vice Lieutenant Colonel Roy N. Bailey.[23]

A total of seven officers and 212 airmen were separated from the service for various reasons during the month of December, 1953, according to the Base Statistical Office. During the same period, reenlistments totaled 48.

---

20. SO 305, Hq 6th AD, 3 December 1953, par 8.
21. SO 326, Hq 6th AD, 28 December 1953, par 16.
22. Ibid, par 17.
23. SO 224, Hq 809th ABGp, par 5, 21 December 1953.

1618

The strength of MacDill during the period 1 - 31 December, 1953, was 7,393 personnel authorized, 8,860 assigned, and 111 attached.[24] These figures include officers, airmen, and civilian employes.

24. Reference MacDill Statistical Summary - Part I, Appendix "B."

1619

CHAPTER TWO

OPERATIONS and TRAINING

Per notification from Headquarters, Strategic Air Command,[25] 6th Air Division Headquarters instituted Operations Plan 129-53 pertaining to an inspection of all special weapons activities by five officers from SAC and four officers from Headquarters, Eighth Air Force, Carswell Air Force Base, Texas, beginning 4 January, 1954.

This inspection, according to the operations plan, would be of

25. TWX, Hq 2AF to Comdr 6AD, 2AFIG 0245, 2 December, 1953.

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the preparation and assembly of weapons, testing procedures, in-flight procedures, EWP (emergency war plan) requirements, ground support procedures, and supply and technical support procedures.

Tasks scheduled for the 305th and 306th Bomb Wings were: to provide six B-47 aircraft for ring-out, loading, post-loading, and in-flight checks; to provide four teams with the necessary equipment for ring-out, loading supervision, and post-loading checks; to provide necessary ground power equipment with qualified operators to perform these tests; to provide three A-2 tractors or suitable substitutes with qualified operators to support the loading operations; to provide six combat-ready flight crews (which would be selected by the Inspection Team) to perform in-flight insertion, required checks and supervision, and other activities as could be required by the inspectors; to conduct a briefing of special weapons requirements to include the deployment through applicable pick-up site, loading and ferrying of weapons, spares, and capsules; finally, to provide a project officer (from each wing) to coordinate all activities.

The 306th Aviation Squadron was scheduled to perform a continuous operation on a two-shift basis; to conduct briefing on mission and problems of special weapons activities of the squadron; and to prepare for the technical inspection by the team members.

The 809th Air Base Group was scheduled to provide six loading teams with the necessary equipment, less ground power equipment, to perform

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simultaneous loading of six weapons; to provide three P-3 and three N-1 dollies for the loading operations; to provide a security party of one officer and 12 airmen for the loading operations; to provide one fire truck and crew to stand by in loading area during the loading operations; to provide office space and a stenographer with Top Secret clearance for the necessary correspondence required by the team; to provide transportation to support the Wings' activities; to provide a sedan on a full time basis for use by the inspection team chief, and additional transportation for the team as required; to provide a project officer to coordinate all the activities; and to provide billeting and Restricted Area Passes for the nine members of the team.

According to the operations plan, there would be no flying of the aircraft. Weapons to be used in the testing would be MK 5 and MK 6, plus MOD 3 Alpha fuses.[26]

Headquarters, Strategic Air Command informed Division that the proposed construction of a radar reflector and resolution target at Avon Park AFB, Fla., (MacDill AFB Project 53-54) had been declared essential by Headquarters, USAF,[27] and that $6,821 of funds were being made available. The reflector that was redesigned by SAC would be used in the project.[28]

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26. Operations Plan 129-53, Hq 6AD, 21 December 1953. Exhibit 6.
27. History, 6th Air Division, November 1953, pp 19-20.
28. TWX, Hq SAC to Comdr 6AD, DM7B, 47328, 14 December 1953.

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The remarks of Major General Frank A. Armstrong, Jr., Commander of the Second Air Force concerning the results of the USCM (unit simulated combat mission) test conducted at MacDill during the period of 28 August - 1 September, 1953,[29] are included under separate cover because of their higher classification.

Status of the various Communications Projects, according to Captain Clarence J. Westhoff, Base Communications Officer, were:

SAC-2AF-MCD-35/3-Comm - Venice (Fla.) Loran Station Type UJ Timers: awaiting AMC (Air Materiel Command) supply action.

SAC-2AF-MCD-35/3-Comm - Venice Loran Station Obstruction Lights: awaiting AMC supply action.

CE 35-SAC-MCD-AACS-1-HB - L/F (low frequency) Homer Beacon, Zephyrhills, Fla.: Construction completed.

SAC-2AF-MCD-361-Comm - Instrument Landing System: construction being completed by AIO (Air Installations Office); supply action 98 percent complete.

SAC-2AF-MCD-541/5-Comm - UHF/DF (ultra-high frequency directional finder): resited near the control tower; necessary construction being completed by AIO.

SAC-2AF-MCD-661/1-Comm - RAPCON: complete except for CAA (Civil Aeronautics Authority) requirements.

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29. History, 6th Air Division, September 1953, pp 36-46.

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SAC-2AF-MCD-1191/1-Comm - Fire Reporting Switchboard and Expansion of Fire Reporting System: supply action not complete by AMC.

SAC-2AF-AVP-1030/1-Comm - Avon Park Outside Plant Facilities: supply action not complete by AMC.

SAC-2AF-AVP-1030/2-Comm - Avon Park Outside Plant Facilities: supply action not complete by AMC.

SAC Plan 1000: Interim antennae being installed by 1st AACS I&M Squadron; scheduled date of move to receiver building set for 15 January, 1954.

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CHAPTER THREE

B-47 OPERATIONAL ENGINEERING

During the period of 1 November through 31 December, 1953, The B-47 Operational Engineering Section initiated nine new projects and completed five.[30] In addition, 28 projects were still active.

As arranged within subject report, the first project was that of Evaluation of a Modification to Correct Radial Line Sweep Distortion of the IP-231/APS-23 10-Inch Indicator (EE-58A). This project was

30. Ltr., B-47 OES Hq 6AD to Comdr WADC, "B-47 Operational Engineering Bi-Monthly Progress Report," DOES, 31 December 1953. Exhibit 7.

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initiated at the request of Headquarters, Second Air Force for the evaluation of an interim "fix" for radar display distortion, as suggested by the Wright Air Development Center (WADC), Wright-Patterson AFB, Ohio. Subject display distortion, which is more commonly known as a radial line sweep distortion, is apparent on 10-inch indicators, and "causes the display to be unusable for bombing during the last minute of the bomb run," according to OES. The desired modification was accomplished on a 306th Bomb Wing B-47 and test flown, using the 5-inch radar scope with a magnifying lens on which the distortion was apparent. The results showed no improvement of the radar picture; consequently, plans were being formulated to install the 10-inch radar indicator in the aircraft for a final evaluation of the modification.

Another new project was 18S4 H. F. Control Box Location (EE-67) which was initiatially a Headquarters, Strategic Air Command idea to determine the suitability of the current method of mounting the Collins 18S4 H. F. control box. Subsequent investigation revealed that electrical faulting within the control box was due to excessive vibration, but had not been a problem. One such incident was later determined to be due to a poor connection at a terminal strip. However, as a means of making a completely satisfactory installation for operating accessibility and a standard acceptable method of mounting, an SIR (Specific Item

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Report) would be published at a later date, and which would contain recommendations for the remounting of the H. F. control box.

Another project was that of the Test of AT-225/APN-12 Stub Antenna with APN-76 in B-47 Aircraft (EE-68). The purpose of this project was to determine if the range and the reliability of the rendezvous equipment could be improved. Per authorization from Headquarters, SAC, an AT-225/APN-12 (APN-76) antenna was installed on a B-47 aircraft, to compare the performance of subject antenna with the standard flush mounted antenna for the APN-76 transpondor.

Still another project was that of Non-Coincidence of K-System Optical and Radar Cross-Hairs (EE-70), which was originated as the result of operator reports, O-23 and O-15 pictures, and RBS (radar bomb scoring) scores which indicated range non-coincidence of the cross-hairs. Consequent analyzation determined that the factors in this range non-coincidence were optical refraction and the curvature of the earth. The index of refraction as a function of altitude for an average clear day, and a geometrical solution for the error that was caused by the earth's curvature were derived. "From these," OES reported, "a formula for range non-coincidence was obtained as a three-term cubic polynomial in R_G AND H (K-System ground range and altitude). The effects of this non-coincidence on the wind introduced

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into the computer account for three-fourths of the bombing error as measured by RBS for the 38 missions studied." An SIR was being written on the subject.

Another project was that of B-47 Main Landing Gear Strut "D" Ring Evaluation (ME-78A). This project was requested by WADC, via SAC Headquarters, for the purpose of installing and service testing "D" ring seals in the B-47 aircraft main landing gear strut. Spiral failures of the "O" ring seals installed in the struts have occurred during extension or compression of the strut; consequently, the "D" ring seal was designed to prevent rolling and subsequent failure of the seal. Twenty of the "D" ring seals were to be installed on B-47 main landing gear struts on an attrition basis, and their performance would be monitored until 500 landings per strut had been accomplished, or unless there was a termination through test data gathered during the evaluation. Results were to be published in an SIR.

Still another project was that of the Evaluation of KC-97 Tail Cone Lights (ME-84). As described in SIR Number 79, 19 January, 1953, a deficiency exists in KC-97 tanker tail cone lighting required for night rendezvous operation with B-47 bombers during aerial refueling missions. WADC approved the OES recommendation for the

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installation of additional lighting in the tail cone of the KC-97 aircraft, and requested via SAC that the OES conduct an evaluation of four different tail cone light configurations devised by the contractor. Consequently, the lights were installed and simulated night aerial refueling missions were accomplished, using a fifth KC-97 as the receiver. An additional light configuration was fabricated for further flight evaluation, based upon observations during this particular flight. Following completion of these tests, the results will be published in an SIR.

The project of Service Test of B-47 Brake Parachutes (ME-85) was also initiated during this reporting period. WADC was conducting an investigation to determine the maximum service life of B-47 aircraft brake parachutes, Type D-1, and to determine loss of strength versus number of deployments, both at normal landing speeds and at 160 knots or above. WADC requested, via SAC, that the MacDill OES establish a project to service test five parachutes. The parachutes would be deployed five, ten, fifteen, twenty, and twenty-five times, respectively, and shipped, together with the necessary test data to the Equipment Laboratory, WADC, in order of completion of the specified number of deployments. The project was initiated with the arrival of the parachutes on 28 December. The publication of an SIR will be contingent upon the test results.

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The eighth project initiated was that of B-47 Test Canopy (ME-86). A special B-47 canopy was furnished by WADC for this test. The canopy incorporates segmented design and a periscopic sextant mount at the co-pilot's position. The OES was scheduled to monitor the service life of the canopy and to gather comments of the aircrew on the functional suitability of the periscopic sextant provisions. An SIR will be forthcoming following completion of the test.

The last project was that of Alternator Bearing Tests (ME-87), which was initiated at the request of WADC with SAC's approval. This program was established to determine by service test which of several different alternator bearing and lubricant combinations would result in maximum service life. Fifteen each of three special bearing and/or lubricant versions of the P/N A35A9118 alternator and five P/N A35A9118-2 alternators would be furnished MacDill by Westinghouse Electric Corporation for the service test. Following installation of the alternators, OES will maintain records of the accumulated time on each until either 1000 hours operating time have been accumulated, or alternator or bearing failure occurs. The service life of these alternators would be compared with that of six P/N A35A9119 and 15 P/N A35A9118 alternators which are already installed on MacDill B-47 aircraft. Findings will be published in a subsequent SIR.

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Specific Item Report 112, 5 October, 1953,[31] terminated the project of Westinghouse 20 KVA Alternator Malfunctions (EE-46) which was begun on 28 April, 1953.[32] Findings and recommendations are contained within the subject SIR and will not be repeated herein. In addition to noting that the project was completed and that no further action would be taken by either WADC or itself, OES asserted, "the performance of the bearings in these new alternators will be monitored to establish the reliability and life expectancy, and Project ME-87 (see previous page of this volume) will cover this program."

OES action on the project of APS-23 Radome Deterioration (EE-55) was completed with the publication of SIR 104-A, 23 November, 1953.[33] The project was begun in May, 1953.[34] Subject SIR summarized the causes of radome deterioration, methods of restoration, and preventative measures. According to Headquarters, Second Air Force, T.O. (technical order) 01-20EN-354 concerning the removal and prevention of radome contamination was in the final stages of preparation at OCAMA (Oklahoma City (Okla.) Air Materiel Area).[35]

The project of Evaluation of the O-23 Camera (EE-56) was completed

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31. History, 6th Air Division, September 1953, page 68.
32. History, 6th Air Division, August 1953, pp 51-52.
33. History, 6th Air Division, November 1953, pp 24-26.
34. History, 6th Air Division, September 1953, page 71.
35. TWX, Hq 2AF to Comdr 6AD, 2AFMW 3275, 29 December 1953.

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with the publication of Specific Item Report 118.[36] The project was initiated in May, 1953.[37] According to the SIR, recommendations were made that WADC take necessary action to correct mechanical deficiencies in the O-23 camera system; two-power filters and Linagraph Pan Safety film be permitted as an authorized interim fix for overexposed optical pictures; an iris diaphragm be incorporated to provide greater camera depth of field and as a final fix for the problem of over-exposure of optical pictures; and a T.O. be issued on the camera.

Specific Item Report 121[38] completed the initial phase of the Evaluation of IP-231/APS-23 10-Inch Scope in B-47 Aircraft (EE-58) that began 8 June, 1953.[39] The SIR recommended that subject scope (which was the type unit specifically evaluated) not be considered for installation in B-47 aircraft; furthermore, that WADC investigate and develop fixes for radial line sweep distortion in future 10-inch radar indicators prior to installation in B-47 aircraft. Currently, OES is testing an interim fix for the distortion as proposed by WADC.[40]

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36. Ltr., Hq 6AD B-47 OES to Comdr WADC, "Specific Item Report No. 118, Evaluation of the O-23 Camera in the Y-4 Periscopic Bombsight, B-47 Aircraft (EE-56)," 24 December 1953, DOES 452.0311. Exhibit 7A.
37. History, 6th Air Division, July 1953, page 23.
38. Ltr., Hq 6AD B-47 OES to Comdr WADC, "Specific Item Report No. 121, IP 231/APS-23 10-Inch Radar Indicator in B-47B Aircraft (EE-58)," 24 December 1953, DOES 452.0311. Exhibit 7B.
39. History, 6th Air Division, July 1953, page 23.
40. Pp 12-13, this chapter.

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The project of Crew Comfort and Survival Equipment (ME-44) which was begun on 3 April, 1952,[41] was completed with the publication of Specific Item Report 123.[42] Subject report recommended that the underarm life preserver, with certain specified modifications, be adopted as a replacement for the B-5 type life preserver (Mae West), subject to its compatibility with other personal equipment programmed for SAC. The report recommended also that this preserver, or a similar unit, be provided as soon as possible as unsuitability of the B-5 preserver was considered to be a major cause of crew fatigue in B-47 aircraft.

OES action on the project of Fourth Crew Member Position, B-47 Aircraft (ME-80) was completed with the publication of Specific Item Report 119[43] which included drawings and instructions for a standardized field installation of a fourth crew member's position in the B-47 aircraft.

A brief description follows of the 28 continuing projects which have been mentioned in previous histories:

Flight Analyzer Installation, B-47 Aircraft (AE-22). This project was begun on 30 April, 1953, for the purpose of recording flight conditions of airspeed, altitude, and vertical acceleration for study by the WADC Structures Analysis Branch.

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41. History, 6th Air Division, July 1953, page 14.
42. Ltr., Hq 6AD B-47 OES to Comdr WADC, "Specific Item Report No. 123, Evaluation of the Type MA-1 Underarm Life Preserver," 26 December 1953, DOES 452.0311.
43. History, 6th Air Division, November 1953, pp 26-28.

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Evaluation of Landing Speed Indicator, Angle of Attack Indicator, and Angle of Sideslip Indicator Installations in the B-47 Aircraft (AE-24). This project was begun on 30 September, 1953, for the purpose of determining if the subject instruments would be of sufficient assistance to B-47 pilots to overcome the undesirable approach characteristics of the aircraft and increase the safety of flight.

B-47 - KC-97 Aerial Refueling Speed Evaluation (AE-25). This project was originated on 30 October, 1953, for the purpose of determining the minimum practical aerial refueling formating speeds and maximum refueling altitudes for the B-47 - KC-97 aircraft and to determine the rated power performance data for the KC-97G tanker in refueling configuration.

Inverter Malfunctions (EE-10). This project which was initiated on 19 September, 1952, for the purpose of evaluating, on a competitive basis, nine AN-3516 inverters from four different manufacturers resulted in the publication of SIR 122 concerning the service test of Eclipse-Pioneer Inverter, Type AN-3516, P/N 4213-32E03-1-A.[44]

Fuel Boost Pump Failure (EE-16). This project was begun on 18 March, 1952, for the purpose of monitoring failures of modified fuel boost pumps at MacDill.

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44. Ltr., Hq 6AD B-47 OES to Comdr WADC, "Specific Item Report No. 122, Service Test of Eclipse-Pioneer Inverter, Type AN-3516, P/N 4213-32E03-1-A, in B-47 Aircraft (EE-10)," 26 December 1953, DOES 452.0311. Exhibit 7C.

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Remote Radar Indicator ID-218 in Co-Pilot's Position (EE-44). This project originated 5 February, 1953, to investigate the feasibility and advantages of installing an auxiliary radar scope in the co-pilot's position.

Service Test of Improved Speed Governor for Jack & Heintz AN-3516 Inverters. Purpose of this project, which was originated on 26 February, 1953, is the evaluation of a new speed governor for the Jack & Heintz Type AN-3516 Inverter.

Service Test of FRS-2 Control Assembly for Jack & Heintz Inverters (EE-47A). This project was initiated in October, 1953, for the purpose of service testing a new voltage and frequency control assembly for the AN-3516 Inverter manufactured by Jack & Heintz.

Failure of IN-23B Crystals in RT-124/APS-23 (EE-48). This project began 2 March, 1953, for the purpose of investigating excessive IN-23B crystal failures that occurred during the past two months.

Emergency K-System Bombing Computer. Originated in February, 1953, the purpose of this project is the determination of the feasibility of using an emergency bombing computer in the B-47 aircraft when a failure of the computing section of the K-System exists.

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Evaluation of New Thermal Delay Relay, A-1 Power Supply, in Conjunction with Fast Blow Fuses, K-System (EE-54). This project, which originated in May, 1953, has as its purpose the evaluation of the new type thermal delay relays, K-301, located in the A-1 power supplies of the K-System.

Compass Errors in K-Systems (EE-59A). This project began in October, 1953, for the purpose of determining the magnitude of errors in the compass portion of the K-System which are not normally compensated for during compass swings which may be attributable to the magnetic fields of the aircraft engines and associated equipment, and the errors introduced by the tow vehicle and ground power unit used during the compass swing.

Jump of Radar Presentation on ID-218/APS-23 Caused by C-15 Camera (EE-52). This project began 27 July, 1953, to find means of preventing "jump" of the radar picture on the indicator, ID-218, when the C-15 scope camera is actuated.

Radar Target Folder Viewer (EE-63). This project was begun on 1 October, 1953, for the purpose of evaluating the Radar Target Folder Viewer for use in B-47 aircraft.

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Functional Tests of New Brushes for the B-47 Starter-Generator (EE-64). Purpose of this project which began in October, 1953, was the functional testing of new brushes for the starter-generators on B-47 aircraft.

Modification of AS-361/APS-23 Antenna to Improve Return Uniformity (EE-65). This project was originated in October, 1953, for the purpose of determining if the uniformity of the radar returns of the APS-23 can be improved by repositioning the cosecant reflector of the AS-361/APS-23 antenna.

Pulse Length and Bandwidth Modification of APS-23 to Increase Received Signal Power (EE-65A). Purpose of this project which began 12 October, 1953, is to service test a proposed modification which increases the pulse length and decreases the bandwidth of the AN/APS-23.

Use of the K-System in Conjunction with an APN-11 Beacon as a Blind Approach Landing System for B-47 Aircraft (EE-66). The purpose of this project which began in October, 1953, is the same as its title.

B-47 Canopy Sunshade (ME-26A). This project originated on 30 October, 1953, for the purpose of service testing the suitability of a canopy sunshade for B-47 aircraft, with particular attention directed

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to ease of handling, installation and ability to withstand high wind conditions.

Fuel Loading Procedures (ME-28). This project originated in February, 1952, for the purpose of developing a firm method of refueling the B-47 aircraft prior to long range missions.

Fuel Tank Leads, B-47 Aircraft (ME-53). Purpose of this project which began on 19 February, 1952, is to report fuel tank leaks and to recommend corrective action.

Service Life of B-47 Surface Control Pump Assemblies (ME-54). This project originated on 12 June, 1952, for the purpose of monitoring the operation of 12 each assemblies, Part Number 4869-167 WQ 300, for the purpose of determining periodic replacement time.

Tow Target Reel Installation and Flight Evaluation (ME-69). This project began on 13 February, 1953, for the purpose of determining the feasibility of installing a tow target reel which can be readily removed or installed for towing winged targets with B-47 aircraft.

Extruded Compressor Stator Blades J47-25 Engines. (ME-75). Initiated on 28 May, 1953, this project has the purpose of monitoring effects on engine life of a modified extruded compressor stator blade.

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Main Landing Gear Seal Failures (ME-78). This project began 8 July, 1953, for the purpose of determining if soft strut servicing in accordance with T. O. 01-20EN-231 is the cause of "O" ring failures.

Service Testing the LeTourneau A-3 Air Tow Vehicle (ME-81). An interim SIR (number 120) on this project, which was begun 30 October, 1953, for the purpose of service testing the LeTourneau A-3 Air Tow vehicle in every respect of its operational suitability, was published 10 December, 1953.[45]

Eseco Ground Power Equipment (ME-82). This project was begun 31 October, 1953, for the purpose of evaluating the Eseco ground power equipment for use with B-47 aircraft.

Water-Alcohol Injection for B-47 Wings (ME-83). Purpose of this project which was originated in October, 1953, is to determine the necessary equipment and procedures for the tactical servicing of B-47 aircraft with a specified water-alcohol solution.

In addition to these aforementioned projects, subject Progress Report includes brief summaries on an additional 23 projects which have

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45. Ltr., Hq 6AD B-47 OES to Comdr, WADC, "Specific Item Report No. 120 (Interim), LeTourneau A-3 Air Tow Vehicle Evaluation (ME-81)," 10 December 1953, DOSS 452.0311. Exhibit 7D.

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been completed by OES and are awaiting WADC action.

Specific Item Report 117, pertaining to instrument calibration requirements for B-47 aircraft (Project AE-23) was published 23 December, 1953.[46]

46. Ltr., Hq 6AD B-47 OES to Comdr WADC, "Specific Item Report No. 117, Instrument Calibration Requirements for B-47 Aircraft (AE-23)," 23 December 1953, DOES 452.0311. Exhibit 7E.

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CHAPTER FOUR

MATERIEL and FACILITIES

Requests totaling approximately $161,000 for repair work on five projects were submitted to Headquarters, Second Air Force by Air Installations Office over the signature of Colonel B. H. Merchant, Base Commander.

The first request was for the repairing and reroofing of 71 buildings on the base. The proposal would entail the removing and and replacing about 1,726 squares of 90-pound mineral surfaced roll

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roofing, 731 squares of 19-inch selvage edge mineral surface roll roofing, and 504 squares of 3-ply built-up roofing, together with the removal and replacement of deteriorated roof framing, sheathing, and the wood trim and painting of all new, exposed wood, eaves, and gable rakes.

According to the request, the subject buildings had not been reroofed since 1947, and, "as a result roofing materials have deteriorated under climatic conditions . . . to a point that complete replacement of roofing materials is urgently needed to preserve the structures and prevent excessive damage from leaking roofs." Air Installations stressed that deterioration had accelerated to such an extent within the past year that normal day-to-day maintenance and patching was completely inadequate and past the abilities of installation engineer shop personnel.

The recommendation was made that the project be approved in the amount of $76,217.76, and that funds in the amount of $76,218 be allotted to accomplish the work by contract.

Under a previous proposal, the project had been tentatively selected for funding in the amount of $45,000; however, "following an extensive engineering survey, it was found that due to the pitch of roofs, it was necessary to design selvage edge and built-up roofs for several buildings. It was also determined that considerable roof sheathing, framing, and trim had deteriorated and will require replacement and repainting of exposed roof rafters and trim."

Air Installations recommended that the new version of the project

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be funded by, in addition to the $45,000 which had previously been approved tentatively, using $14,500 from the cancelled project of the replacement of existing direct burial cable,[47] and $7,600 from the cancelled project of replacing existing 2.4/4 36 KV underground service to the sewer lift pump. (Cancellation of the latter project had been requested by separate correspondence.)[48] The balance of $9,118 would have to come from other sources.

Also requested were $31,800.20 for the resealing and patching of approximately 92,500 square yards of dispersal taxiways and the repairing of flexible paved 12-1/2 foot wide collars on 25 concrete hardstands by means of scarifying, adding limerock, reshaping, recompacting, priming, and resealing. The existing dispersal taxiways were constructed in 1942 and resealed in 1948. According to Air Installations, "the life expectancy of the 1948 resealing has now been exceeded." That facility said that the deterioration of the seal coat had reached the point where "indications of destructive water penetration through numerous cracks throughout the pavement is becoming increasingly evident. These cracks and damaged areas are increasing to the point where normal maintenance can no longer keep pace with the deterioration."[49]

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47. History, 6th Air Division, November 1953, pp 29-30.
48. Ltr., Hq 809th ABGp to Comdr 2AF, "Repair and Reroof 71 Buildings, MacDill AFB, Florida," 8 December 1953, MCDMAI 600.1. Exhibit 8.
49. Ltr., Hq 809th ABGp to Comdr 2AF, "Resealing Dispersal Taxiways and Hardstands, MacDill Air Force Base, Florida," 19 December, 1953, MCDMAI 600.1. Exhibit 8A.

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The request was made for approval of funds in the amount of $6,926.07 (funds in the amount of $4,810.87 be allotted to MacDill in order to accomplish the work by contract) for the repairing of approximately 578 lineal feet of railroad (on-base) by replacement of 85-pound worn rail with 90-pound rail, the installation of four sets of wheel stops, the reworking of two street crossings, and reballasting where required.[50] The work requested concerns primarily a section of the railroad on a curve where rails are subjected to abnormal wear. According to the Air Installations request, the railroad was constructed in 1941, and rail in this particular section was turned in 1948 "and now is critically worn on both sides. Complete replacement is indicated."

Rail traffic at MacDill, according to the cited letter, "is now in excess of 1,000 cars per month. Major new construction in successive Public Works Programs has resulted in increased rail traffic to the extent that a new larger diesel locomotive has recently been added to the rolling stock of the base."

A request was submitted also for funds in the amount of $31,477.38 for the patching and resurfacing of streets in the "North Area" of MacDill, plus the Hospital Road from Hangar Loop to the Hospital Area. The work would be, if approved, accomplished by contract. "The purpose

50. Ltr., Hq 809th ABGp to Comdr 2AF, "Repairs to Railroad, MacDill AFB, Florida," 19 December 1953, MCDMAI 600.1. Exhibit 8B.

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of this project," the letter asserted, "is to patch damaged areas in existing bituminous surface streets with a cold mix asphalt and accomplish resurfacing by application of a bituminous single surface treatment over the entire width of the streets." The letter added that the project also provided for the reconstruction and regrassing of the shoulders on Hospital Road and the stabilizing and sand sealing of indicated portions of shoulders in the North Area.

The Hospital Road was constructed in 1941, and the streets of the North Area in 1943. According to AIO, "during the economy years immediately following the close of World War II, proper and adequate maintenance was not possible due to drastic curtailment of personnel and funds." Therefore, the streets and road deteriorated to the point where "normal maintenance will no longer maintain the facilities at acceptable Air Force standards."[51]

A request was made also for $14,547.86 to be used in the replacement of deteriorated pole line structures in the existing overhead station electrical distribution system. The purpose of the project is that of restoring deteriorated pole line structures that are unsafe because of rotted poles and excessively deteriorated crossarms. AIO stated that "accomplishment of the work is necessary to provide adequate physical safety to linemen at this station . . . and to bring the exist-

51. Ltr., Hq 809th ABGp to Comdr 2AF, "Patching and Resurfacing of Streets, MacDill Air Force Base, Florida," 19 December, 1953, MCDMAI 600.1. Exhibit 8C.

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ing distribution electric power lines up to the National Bureau of Standards Handbook H-43." If approved, the necessary work would be accomplished by contract.[52]

Headquarters, 6th Air Division, in reply to a query from that headquarters, notified Second Air Force that "information received from Homestead Air Force Base (Fla.) is to the effect that the proposed GCA (ground-controlled approach) site is a portion of the land to be purchased for construction of the new principal runway. The land in question is tied up in controversy at this time and the location of the proposed new runway could be changed, in which case the siting of the referenced GCA would also be changed." In view of this situation, 6th Air Division was unable to furnish data concerning topographic survey, off-site profiles of road and power line connections, clearing requirements, soil surveys, etc., as requested by Second Air Force. However, "if the GCA site is acquired with the basic land addition," practically all of the required data would be furnished therein. Division was unable also to establish any firm date when the land purchase would be completed.[53]

Notificationwas received of the approval of three major repair projects that had been requested in September, 1953,[54] which were the

52. Ltr., Hq 809th ABGp to Comdr 2AF, "Replacement of Deteriorated Pole Line Structures, MacDill AFB, Florida," 19 December, 1953, MCDMAI 600.1. Exhibit 8D.
53. Ltr., Hq 6th AD to Comdr SAC, "GCA AN/COPN-4-MPN-1 Homestead AFB, Florida," 11 December 1953, MCDMAI 600.1. Exhibit 9.
54. History, 6th Air Division, September 1953, pp 103-105.

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repairing and resealing of Runway 13-31 in the amount of $31,000; the exterior painting of ten administrative type buildings, 33 barracks, and five trainer buildings in the amount of $28,000; and the exterior painting of five hangars and 20 miscellaneous type buildings in the amount of $25,000. According to the message,[55] the actual allocation of funds for the latter two projects would not be made to MacDill until the projects had been approved by Headquarters, Strategic Air Command. In order to insure funding during the current Fiscal Year, Second Air Force advised Division to expedite the preparation of the formal project.

55. TWX, Hq 2AF to Comdr 6AD, 2AFMIB 0314, 2 December 1953.

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CHAPTER FIVE

MISCELLANEOUS

In furthering the current campaign to restore noncommissioned officers to a semblance, at least, of the prestige and authority which they held in the United States Army Air Corps prior to World War II,[56] 6th Air Division Headquarters began a program "designed to terminate in . . . policy brochure."[57] All wing, group, and tenant unit commanders were informed of the establishment of three committees, with commissioned and non-commissioned members, whose purpose would be the formulating and writing of the subject brochure.

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56. History, 6th Air Division, October 1953, pp 43-44.
57. Ltr., Hq 6AD to Comdr 809th ABGp, "Noncommissioned Officers Development Program," 9 December 1953, DPE 220. Exhibit 10.

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One committee would be composed of "selected officers of the wings, the air base group, and tenant units;" another would be composed of selected noncommissioned officers of similar organizations; and the third committee would be composed of "the Commanders, 6th Air Division, the wings, air base group, and commanders of tenant units as selected by the Commander, 6th Air Division. A Program Coordinating Officer (Lieutenant Colonel Frank R. Bertero) was appointed.

Subject subordinate commanders were informed that "to implement this program you are requested to select three officers and three non-commissioned officers from your command as members of the first two committees . . . These individuals should be selected primarily for their qualities of leadership and their interest in this program. Consideration should be given to length of service so that the committees' thinking will be based on knowledge and experience obtained prior to and during World War II. It is recommended, but not required, that squadron commanders be selected for the officers committee; non-commissioned officers selected should comprise a cross section of your command functions." The initial committee meeting was tentatively selected for some time in January, 1954.

Headquarters, Second Air Force forwarded SAC's permission for the loan of $2,500 from the Turner AFB, Ga., Airmen's Living Improvement Fund to MacDill [58] for financing the second annual sports car race. [59]

58. History, 6th Air Division, November 1953, pp 32-33.
59. TWX, Hq 2AF to Comdr 6AD, 2AFPSA 1726, 24 December 1953.

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The forthcoming sports car races, to be held 31 January, 1954, received at the outset unfavorable publicity from a most unexpected source. An audacious airman, who sagaciously requested that his name be withheld from publication, penned a lengthy dissertation that was published in the "Letters-to-the-Editor" column of a Tampa newspaper.[60]

Entitled, Enlisted Man's Gripe, the letter said:

> "TAMPA - A few months ago, you ran an article concerning the housing situation at MacDill Air Force Base. At this time it was stated that personnel who desired their families to be with them in Tampa were being required to live on the base in either government quarters or Wherry housing (Tampa Bay Garden Apartments). This article was immediately 'clarified' the next day when the base commander stated that only 'key personnel' were being required to live within the boundaries of MacDill.
>
> "However, since these articles were published, a policy has been put into effect requiring that every man arriving at MacDill must apply for quarters on the base if he desires his family to be with him. He is not permitted to live off base unless all vacancies are filled and he cannot get quarters. If he happens to be one of the many enlisted men in the lower four pay grades who do not have sufficient funds to buy furniture, he has three choices: Rent a furnished apartment from Wherry housing at an exorbitant price, buy furniture whether he can afford it or not, or send his family back home to stay with his or her parents.
>
> "At the present time, a new 'policy' is being studied by the various wing and group commanders to form an 'inspection' team. This team will have the responsibility of visiting the homes of enlisted personnel living off base for the purpose of investigating their living conditions. This plan is supposed to have met the approval of all top level commanders at MacDill. I don't know what plan is being made to select officers for this detail, but I don't believe there will be any volunteers. If the other personnel living off base feel the same as I do about this thing, the plan will be a complete failure.
>
> "The first character that sticks his head in my door to

60. Morning Tribune (Tampa, Fla.), 28 December 1953, page 6.

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"'inspect' better have a legal search warrant in his hand. If he hasn't, he can either be expecting to go out my door feet first, or be escorted politely out by a member of the Tampa Police Department.

"I'm also wondering if there will be 2,000 'volunteers' again this year tc clean up MacDill after the sports car races, which we enlisted personnel are so 'enthusiastic' about. Our 'volunteering' was done in the form of a written order signed by the squadron commander.

"The 'brass' in the Strategic Air Command are wondering why so many former career personnel are either getting out of the Air Force completely, or doing their best to get away from LeMay's 'flunkies.' With the kind of treatment enlisted personnel is getting (many officers can be heard screaming, also), why should there be any room for wonder? AMATEUR GRIPER."

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APPENDIX "A"

EXHIBIT 1

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 30)

5 December 1953

DISCONTINUATION OF DET #1 HEADQUARTERS, 305TH BOMBARDMENT WING (M).

1. Detachment #1 Headquarters, 305th Bombardment Wing (M), MacDill Air Force Base, Florida, being no longer required, is discontinued as of 2400 hours, 5 December 1953.

2. Administrative attachment to 305th Medical Group is terminated concurrently.

3. Appropriate remark will be entered on the organizational status table of the morning report on the effective date of discontinuance, in accordance with Chapter 2, SAC Manual 171-1.

4. Personnel and equipment furnished from sources under the control of the Commander, 305th Bombardment Wing (M), will be returned to the source from which procured.

5. Authority: AFR 20-38 and SAC Regulation 20-3.

BY ORDER OF THE COMMANDER:

B.J. HUNTERLY
Major, USAF
Adjutant

OFFICIAL:

C.A. WHITTLE
WOJG, USAF
Asst Adjutant

DISTRIBUTION:
"D"
Plus
2 - Comdr, Second Air Force
1 - SO Section

EXHIBIT 2

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 33)

9 December 1953

1. So much of paragraph 1, General Orders 30, this Headquarters, dated 5 December 1953, relating to discontinuation of detachment #1 Headquarters, 305th Bombardment Wing (M), as reads "is discontinued as of 2400 hours, 5 December 1953" is amended to read "is discontinued as of 2400 hours, 4 December 1953".

BY ORDER OF THE COMMANDER:

OFFICIAL:

B.J. HUNNICUTT
Major, USAF
Adjutant

C.A. WHITTLE
MOJG, USAF
Asst Adjutant

DISTRIBUTION:
"D"
Plus
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CORRECTED COPY--DESTROY ALL OTHERS EXHIBIT 3

HEADQUARTERS
6TH AIR DIVISION (SAC)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 32)

5 December 1953

RETURN OF 305TH BOMBARDMENT WING (M) FROM TDY. 1. Having completed period of temporary duty in the United Kingdom in accordance with General Orders 20, Headquarters, 6th Air Division, dated 1 September 1953 and pursuant to SAC Operations Order 80-53, dated 19 November 1953, the 305th Bombardment Wing (M) will move to MacDill Air Force Base, Florida, effective 0001 hours, 5 December 1953.

2. Appropriate remarks will be entered in the organization status tables of the 305th Bombardment Wing (M) squadrons morning report on the effective date of return in accordance with Chapter 2, SAC Manual 171-1.

3. AUTHORITY: SAC Operations Order 80-53, dated 19 November 1953.

BY ORDER OF THE COMMANDER:

OFFICIAL:

B.J. MUNTERLYN
Major, USAF
Adjutant

C.A. Whittle

C.A. WHITTLE
WOJG, USAF
Asst Adjutant

DISTRIBUTION:
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1 - SC Section

EXHIBIT 4

REPORT OF PROCEEDINGS OF THE EXECUTIVE GROUND SAFETY COUNCIL:

Headquarters
MacDill Air Force Base, Florida

Proceedings of a meeting of the Executive Ground Safety Council which convened at MacDill Air Force Base, Florida, under the provisions of Second Air Force Regulation 35-2, 20 June 1952, and pursuant to Letter Order AFDMC-76 February 1953, Headquarters 3098th Air Base Group, MacDill Air Force Base, Florida.

The Council met pursuant to the foregoing order at Headquarters MacDill Air Force Base, Florida at 1400 hours, 15 December 1953.

Members Present:

Lt Col Tom G. Sanford, Deputy Base Commander (Acting President)
Lt Col T. J. Poulos, for Commander, 306th Bomb Wing (H)
Major A. M. Hoaf, Base Motor Transportation Officer
Capt William Rothwegeon, for Base Director of Personnel
1/Lt Dixie Chapp, for Commander, 306th Bomb Wing (H)
1/Lt Charles E. Greenway, for Provost Marshal
2/Lt Robert D. Billman, for Base Surgeon
M/Sgt Robert W. Denny, for Base Director of Materiel
Mr. George R. White, Ground Safety Director (Recorder)

1. Discussion:

a. Action taken on recommendations of 13 November 1953 meeting is as follows:

(1) The system of requiring the squadrons to endorse a form letter back to ground safety on each non-disabling injury was activated on 16 November. This method of investigating all non-disabling injuries may be continued for an indefinite period.

(2) The reimbursing of film agencies for postage charges on safety films has been satisfactorily worked out between the Comptroller and Ground Safety.

b. The accident and injury experience for November was reviewed and discussed in detail. It was noted that the total cost of accidents for November was the highest so far in 1953. It was also noted that two fatalities occurred, both the result of private vehicle accidents. This brought the fatality total to seven (7) as compared to twelve (12) during the same period in 1952. It was further pointed out that six (6) of the seven (7) fatalities this year were the result of vehicle accidents; 1952 records disclosed that eight (8) of the twelve (12) fatalities were the result of vehicle accidents. (November Summary, Incl #1)

c. A discussion was held on methods of reminding all personnel of the dangerous driving period between now and the end of the holiday period.

d. The Wing representatives were asked to cooperate in executing traffic sentences handed down by the Base Traffic Board. It was pointed out that leniency in dealing with the moving traffic violators would only serve as a deterrent to the state of traffic discipline. The Wing representatives were also advised to adopt the Air Base Group method of requiring all senior staff officers to serve as traffic spotters, with special emphasis placed on noting and/or apprehending moving traffic violators; off-base when it was apparent that the drivers were Air Force personnel.

e. The Council discussed briefly the potential traffic hazard of fire equipment responding to emergencies. Recent incidents indicated that more emphasis should be placed on the emergency driver keeping his vehicle under such control that he could avoid an traffic emergency. Arriving at the emergency scene a few seconds late, appeared to be better than the risk of traffic mixup while enroute.

f. It was announced that the 305th Bombardment Wing (M) was the winner of the ground safety plaque for November. The 305th and 306th Wings have shared equally in the November recording of winnings to date in 1953, however, the 306th Wing has accumulated the least deductible points. The final award will be made to the Wing succeeding in recording the least deductible points. The rotating plaque will be permanently awarded at the January Council Meeting.

g. The Council members were given a copy of the Ground Safety Brief which narratively described all November accidents.

2. Recommendations:

a. That the Ground Safety Director provide a traffic safety slogan for each daily bulletin for the balance of December. That a list of safety slogans be forwarded to each squadron of the Wings and Air Base Group for inclusion on all leave orders.

b. That the Base Adjutant reassign personnel to the Base Traffic Violators School when attendance schedule indicates they did not attend or failed to complete the required number of sessions.

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3. Adjournment:

a. The meeting adjourned at 1515 hours.

/s/ Tom G. Sanford
/t/ TOM G. SANFORD
Lt. Colonel, USAF
Acting President

/s/ George R. White
/t/ GEORGE R. WHITE
Recorder

HEADQUARTERS MACDILL AIR FORCE BASE, FLORIDA

Approved:

/s/ D. H. Merchant
/t/ D. H. MERCHANT
Colonel, USAF
Commander

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MONTHLY GROUND ACCIDENT SUMMARY

MONTH OF NOVEMBER — MACDILL AFB _____ COMMAND

RATES AND COSTS	809th AB GRP	305th Wing	306th Wing	307th AB GRP	SAC-DET	NON-SAC DET	6th Air Div TOTAL	**
Mil Non-Disab Inj (On)	3	3	0	0	0	0	6	
Mil Non-Disab Inj (Off)	14	9	10	0	0	1	33	
Civ Non-Disab Inj	0	0	1	0	0	0	1	40
Mil Disab Inj (On-Duty)	1	1	1	0	0	0	3	
Mil Disab Inj (Off-Duty)	3	0	3	0	0	0	6	
Civ Disab Inj	0	0	0	0	0	0	0	
Mil Fatalities	1	0	1	0	0	0	2	11
USAF Vehicle Accidents	2	0	1	0	0	0	3	
Aircraft Accident Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Property Damage Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
USAF Veh Accid Rate*	0.84	0.00	6.00	0.00	0.00	0.00	1.12	
USAF Veh Repair Cost	34.00	0.00	15.00	0.00	0.00	0.00	49.00	
Mil Disab Inj Rate-On	2.92	4.14	3.91	0.00	0.00	0.00	3.58	
Mil Disab Inj Rate-Off	5.84	0.00	7.83	0.00	0.00	0.00	4.76	
Tot Disab Inj Rate-Mil	4.87	1.38	6.52	0.00	0.00	0.00	4.37	
Civ Disab Inj Rate*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mil Inj Cost/Capita	9.38	0.10	13.20	0.00	0.00	0.02	7.87	
Civ Inj Cost/Capita	0.00	0.00	0.08	0.00	0.00	0.00	0.02	
Total Cost/Capita*	8.46	0.10	12.79	0.00	0.00	0.02	7.47	
Cost of Mil Injuries	32,129.00	234.00	33,730.00	0.00	0.00	7.00	66,093.00	
Cost of Civ Injuries	0.00	0.00	7.00	0.00	0.00	0.00	7.00	
Total Accident Cost	32,163.00	234.00	33,752.00	0.00	0.00	7.00	66,100.00	
Effectiveness %	55	100	5	100	100	100	55	
Points Scored	38½	70	3½	70	70	70	38½	

* Effectiveness % and Score based on figures in this column (except 809th AB GRP.)
** 6th Air Div. figures do not include experience of SAC and Non-SAC Detachments.

EXHIBIT 5

HEADQUARTERS
809TH AIR BASE GROUP (S.C)
MacDill Air Force Base, Florida

GENERAL ORDERS)
NUMBER 19)

5 December 1953

	Section
RESCINDING ATTACHMENT OF UNIT	I
ATTACHMENT OF UNIT	II

I. RESCINDING ATTACHMENT OF UNIT. - Paragraph 5, General Order 2, Hq, 809th Air Base Group, dated 16 June 1952 and General Order 1, Hq, 809th Air Base Group, dated 16 January 1953, relating to attachment of Detachment 3, 136th Communication Security Squadron to 809th Air Base Group, S.C, this station, are rescinded, effective 3 December 1953.

II. ATTACHMENT OF UNIT. - Flight B, 36th Communications Security Squadron, having been organized in accordance with General Order 86, Hq, USAF Security Service, dated 16 November 1953, is attached to 809th Air Base Group for logistical support and further attached 306th Medical Group for rations, Special and Summary Court Martial and Board action only, effective 8 December 1953.

BY ORDER OF THE COMMANDER:

OFFICIAL:

B.J. MURPHY
Major, USAF
Adjutant

C.A. WHITTLE
WOJG, USAF
Asst Adjutant

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1 - SO Section

SECRET EXHIBIT 6

HEADQUARTERS 6TH AIR DIVISION
MACDILL AIR FORCE BASE, FLORIDA
21 DECEMBER 1953 - 0800 HOURS

OPERATIONS PLAN

SERIAL NO. 129-53

(6AD-B-9651)

SECRET

SECRET

CLASSIFICATION: SECRET
AUTH: COMDRAIRDIV 6
DATE: 21 DEC 53
NAME: Werner /jep

HEADQUARTERS 6TH AIR DIVISION
MACDILL AIR FORCE BASE, FLORIDA
21 DECEMBER 1953 - 0800 HOURS

OPERATIONS PLAN SERIAL NO. 129-53

CHART OR MAP REFERENCES: As required

TASK ORGANIZATIONS:

305th Bombardment Wing (M)	Colonel E. Vandevanter
306th Bombardment Wing (M)	Brig Gen H. T. Wheless
809th Air Base Group	Colonel B. H. Merchant
306th Aviation Squadron	Major A. K. Spivey

1. GENERAL SITUATION:

   a. Enemy Forces: Omitted

   b. Friendly Forces:

      (1) Strategic Air Command Special Weapons Inspection Team.

         (1) Performs inspection of all Special Weapons activities within 6th Air Division in accordance with existing directives.

2. MISSION:

   a. To determine the Operational Readiness of 6th Air Division organizations in Special Weapons activities to include the following:

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SECRET

(1) Preparation and assembly of weapons.

(2) Testing procedures.

(3) In-flight procedures.

(4) EWP requirements.

(5) Ground support procedures.

(6) Supply and technical support procedures.

3. TASKS FOR SUBORDINATE UNITS:

a. 305th Bombardment Wing (M):

(1) Provide six (6) B-47 aircraft for ring-out, loading, post-loading, and in-flight checks.

(2) Provide four (4) teams with necessary equipment for ring-out, loading supervision, and post-loading checks.

(3) Provide necessary ground power equipment with qualified operators to perform the above.

(4) Provide three (3) A-2 tractors or suitable substitutes with qualified operators to support the loading operations.

(5) Provide six (6) Combat Ready Flight Crews (to be selected by the Inspection Team) to perform in-flight insertion, required checks and supervision, and other activities as may be required by the Inspection Team.

(6) Conduct a briefing of Special Weapons requirements to include deployment through applicable pick-up site, loading and ferrying of weapons, spares, and capsules.

(7) Provide a Project Officer to coordinate all activities.

b. 306th Bombardment Wing (M):

(1) Same as 3a, above.

c. 809th Air Base Group:

(1) Provide six (6) loading teams with necessary equipment, less ground power equipment, to perform simultaneous loading of six (6) weapons.

(2) Provide three (3) P-3 and three (3) N-1 dollies for the loading operations.

(3) Provide Security Party of one (1) officer and twelve (12) airmen for the loading operations.

(4) Provide one (1) fire truck and crew to stand by in loading area during loading operations.

(5) Provide office space and a Top Secret cleared stenographer for use as required by the Inspection Team.

(6) Provide necessary transportation to support 305th and 306th Wing activities.

(7) Provide a sedan on full time basis for use by Inspection Team Chief and additional transportation to tem, as required.

(8) Provide a Project Officer to coordinate all activities.

(9) Provide billeting and Restricted Area Passes for nine (9) officers who are members of Inspection Team.

(10) Prepare access lists to Area 12 and loading areas for Inspection Team members and control access to these areas.

d. 306th Aviation Squadron:

(1) Peform a continuous operation on a two shift basis.

(2) Conduct briefing on mission and problems of Special Weapons activities of the squadron.

(3) Prepare for technical inspection by the Special Weapons Inspection Team.

x. General Instructions:

(1) Inspection Team will arrive 4 January 1954.

(2) Functional responsibilities for the conduct of operation outlined in par 3a(1), (2), (5), above will be in accordance with the provisions of SAC Regulations 136-6, 82-2, Supplements 4 and 5, and 50-8, Supplement XIV.

(3) Technical procedures as outlined in TO 01-20EN-28 and SAC Manual 82-1 (Atomic SOP's) will apply.

(4) No flying of aircraft is required under this Operations Plan.

(5) Special information for 306th Aviation Squadron:

(a) MK 6 weapons will be prepared from stockpile to CAS condition.

(b) Fuses will be MOD 3 Alpha.

(c) One MK 5 will be prepared from stockpile to CAS condition as directed by Special Weapons Inspection Team.

SECRET

(6) Time Schedule:

(a) 306th Aviation Squadron.

1. 5 Jan 0600 Continuous Operation
2. 5 Jan 0800 Briefing
3. 5 Jan 0900 Technical Support Inspection
4. 5 Jan 1200 Shift Change
5. At all of Team Chief - Critique

(b) 305th Bombardment Wing (M).

1. 5 Jan 0900 EWP Briefing
2. 6 Jan 0700 Aircraft ring-out (4 aircraft), followed by bomb loading (6 bombs), post-loading checks, and in-flight checks.

(c) 306th Bombardment Wing (M).

1. 5 Jan 1400 EWP Briefing
2. 6 Jan 1300 Aircraft ring-out (4 aircraft), followed by bomb loading (6 bombs), post-loading checks, and in-flight checks.

(d) 809th Air Base Group.

1. 4 Jan 1700 Complete bomb loading on dollies in Special Weapons area.
2. 6 Jan 0700 Loading geams with bombs and equipment, fire truck and Security Guards in place at 305th Bomb Wing aircraft lading area, for loading and off loading of bombs.
3. 6 Jan 1300 Loading teams with bombs and equipment, fire truck, and Security Guards in place at 306th Bomb Wing aircraft loading area, for loading and off loading of bombs.

SECRET

4. ADMINISTRATIVE AND LOGISTICAL MATTERS:

a. 809th Air Base Group will provide normal base and housekeeping facilities as required.

5. COMMAND AND COMMUNICATIONS MATTERS:

a. Commander, 6th Air Division will exercise command through Task Organization Commanders.

b. Communications: Omitted.

MOONEY
Brigadier General, USAF
Commander

DISTRIBUTION:
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Comdr, 305 BW - 2 cys
Comdr, 306 BW - 2 cys
Comdr, 809 ABGp - 3 cys
Comdr, 306 Avn Sq - 2 cys

OFFICIAL:

/s/ Keith L. Warner, Major
for
/t/ ERNEST C. HARDIN, Jr.
Colonel, USAF
Director of Operations

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 7

B-47
OPERATIONAL
ENGINEERING
SECTION

BI-MONTHLY
PROGRESS REPORT

1 November through 31 December 1953

6TH AIR DIVISION
MACDILL AFB, FLORIDA

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 31 December 1953

SUBJECT: B-47 Operational Engineering Bi-Monthly Progress Report

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCSH (B-47)

1. The Bi-Monthly Progress Report of this Section is submitted herewith, covering the period from 1 November through 31 December 1953. This report is divided into three parts: (I) new projects initiated and/or old projects completed by this Section during the period, (II) active projects being conducted by the Operational Engineering Section, and (III) B-47 Operational Engineering Section projects completed, awaiting action by your Headquarters.

2. New projects initiated during the period by this Section:

EVALUATION OF A MODIFICATION TO CORRECT RADIAL LINE SWEEP DISTORTION OF THE IP-231/APS-23 10-INCH INDICATOR: (EE-58A).

Headquarters Second Air Force requested that this Section evaluate an interim "fix" for radar display distortion as suggested by WADC. This display distortion, commonly known as radial line sweep distortion, is apparent on 10-inch indicators, and causes the display to be unusable for bombing during the last minute of the bomb run. This modification was accomplished on B-47 aircraft S/N 51-2287 in the 306th Bomb Wing and test flown, utilizing the 5-inch radar scope with a magnifying lens on which the distortion was apparent. Results obtained showed no improvement of the radar picture. Plans are being made to install the 10-inch radar indicator in this aircraft as a final evaluation of this modification.

18S4 H. F. CONTROL BOX LOCATION: (EE-67).

Headquarters Strategic Air Command directed the initiation of this project to determine the suitability of the existing method of mounting the Collins 18S4 H.F control box. Investigation revealed that electrical faulting within the control box due to excessive vibration has not been a problem. One such reported incident was

determined to be due to a poor connection at a terminal strip. However, as a means of providing a completely satisfactory installation for operating accessibility and a standard acceptable method of mounting, an SIR is to be published which will include recommendations for remounting the H. F. control box.

TEST OF AT-225/APN-12 STUB ANTENNA WITH APN-76 IN B-47 AIRCRAFT: (EE-68).

To determine if the range and reliability of the rendezvous equipment can be improved, Headquarters Strategic Air Command has authorized the installation of AT-225/APN-12 (APN-76) antenna on one B-47 aircraft. The performance of this antenna will be compared with the standard flush mounted antenna for the APN-76 transpondor.

NON-COINCIDENCE OF K-SYSTEM OPTICAL AND RADAR CROSS-HAIRS: (EE-70).

As a result of operator reports, O-23 and O-15 pictures, and RBS scores indicating range non-coincidence of the cross-hairs, this project was initiated. Optical refraction and curvature of the earth were analyzed as factors in range non-coincidence. Index of refraction as a function of altitude for an average clear day, and a geometrical solution for the error caused by the earth's curvature were derived. From these, a formula for range non-coincidence was obtained as a three-term cubic polynomial in R_G and H (K-System ground range and altitude). The effects of this non-coincidence on the wind introduced into the computer account for three-fourths of the bombing error as measured by RBS for the 38 missions studied. An SIR is being written on this subject.

B-47 MAIN LANDING GEAR STRUT "D" RING EVALUATION: (ME-78A).

Wright Air Development Center has requested through Headquarters Strategic Air Command that a project be established to install and service test "D" ring seals in the B-47 main landing gear strut. Spiral failures of the "O" ring seals presently installed in the struts have occurred during extension or compression of the strut. The "D" ring seal has been designed to prevent rolling and subsequent failure of the seal. Twenty (20) "D" ring seals will be installed on B-47 main landing gear struts on an attrition basis, and their performance will be monitored until 500 landings per strut have been accomplished, unless sooner terminated through test data gathered during the evaluation. The results will be published in an SIR.

EVALUATION OF KC-97 TAIL CONE LIGHTS: (ME-84).

A deficiency in KC-97 tail cone lighting required for night rendezvous operation with B-47 aircraft during aerial refueling missions exists, as described in SIR #79, dated 19 January 1953.

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WADC approved the OES recommendation for installation of additional lighting in the tail cone of the KC-97 aircraft, and requested through Headquarters Strategic Air Command that the B-47 OES conduct an evaluation of four (4) different tail cone light configurations devised by the Contractor. The lights were installed on four (4) KC-97 aircraft, and simulated night aerial refueling missions were accomplished utilizing a fifth KC-97 as the receiver. Based upon observations during this flight, an additional light configuration was fabricated for further flight evaluation. After completion of these tests, the results will be published in an SIR.

SERVICE TEST OF B-47 BRAKE PARACHUTES: (ME-85).

WADC is conducting an investigation to determine the maximum service life of B-47 aircraft brake parachutes, Type D-1, and to determine loss of strength versus number of deployments, both at normal landing speeds and at 160 knots or above. WADC requested through Headquarters Strategic Air Command that the Operational Engineering Section establish a project to service test five (5) parachutes. The parachutes are to be deployed 5, 10, 15, 20, and 25 times, respectively, and shipped, along with necessary test data, to the Equipment Laboratory, WADC, in order of completion of the specified number of deployments. The parachutes arrived at MacDill AFB on 28 December 1953, and the project has been initiated. An SIR by this Section will be contingent upon the test results.

B-47 TEST CANOPY: (ME-86).

WADC has furnished a special B-47 canopy to MacDill Air Force Base for service test. The canopy incorporates segmented design and a periscopic sextant mount at the co-pilot's position. The OES will monitor the service life of the canopy and will gather comments of the aircrew on the functional suitability of the periscopic sextant provisions. An SIR will be published upon completion of the service test.

ALTERNATOR BEARING TESTS: (ME-87).

At the request of Headquarters WADC and with Headquarters SAC approval, a project has been established to determine by service test which of several different alternator bearing and lubricant combinations will result in maximum service life. Fifteen (15) each of three (3) special bearing and/or lubricant versions of the P/N A35A9118 alternator and five (5) P/N A35A9118-2 alternators are to be furnished to MacDill AFB by Westinghouse Electric Corporation for service test. The OES will arrange for installation of the alternators, and will maintain records of accumulated time on each alternator until either 1000 hours operating time have been

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accumulated or alternator or bearing failure occurs. The service life of these alternators will be compared with that of six (6) P/N A35A9119 and fifteen (15) P/N A35A9118 alternators already installed on B-47 aircraft at MacDill AFB. An SIR will be published covering the evaluation.

3 Old projects completed during the period are:

WESTINGHOUSE 20 KVA ALTERNATOR MALFUNCTIONS: (EE-46).

Specific Item Report No 112, dated 5 October 1953, subject: Water Separators for 20 KVA Alternators in B-47 Aircraft, has been submitted to your Headquarters. This report recommends that the Westinghouse Window Bracket type alternator be adopted as the final solution to the problem of failures caused when precipitation is encountered in flight. Headquarters WADC concurred in this recommendation and has indicated: (1) that the window type alternators will be installed on production B-47E aircraft S/N 52-422 (Article 645) and on, and on RB-47E aircraft S/N 51-15837 (Article 36) and on; (2) new window alternators have been, or will be, delivered to SAC bases for retrofit of in-service aircraft. Project EE-46 is completed and no further action by the OES or by WADC is required. The performance of the bearings in these new alternators will be monitored to establish the reliability and life expectancy, and Project ME-87 will cover this program.

APS-23 RADOME DETERIORATION: (EE-55).

Specific Item Report No 104-A, dated 23 November 1953, subject: APS-23 Radome Deterioration Resulting from the Absorption of Foreign Fluids, has been submitted to your Headquarters. This report summarizes the causes of radome deterioration, methods of restoring them, and preventative measures to protect good radomes. This completes OES action of this project A message from Headquarters Second Air Force (2AFMW 3275, dated 29 Dec 53) indicates that T.O. 01-20EN-354 covering the removal and prevention of radome contamination is in the final stages of preparation at OC/MA.

EVALUATION OF THE O-23 CAMERA: (EE-56).

Specific Item Report No. 118, dated 24 December 1953, subject: Evaluation of the O-23 Camera in the Y-4 Periscopic Bombsight, B-47 Aircraft, has been submitted to your Headquarters. The report recommended that: (1) WADC take the necessary action to correct mechanical deficiencies in the O-23 camera system, (2) two-power filters and Linagraph Pan Safety film be authorized as an interim fix for over-exposed optical pictures, (3) an iris diaphragm be incorporated to provide greater camera depth of field and as a final fix for the problem of over-exposure of optical pictures, and (4) a T.O. be issued on the camera. This completes action by the OES on this project.

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EVALUATION OF IP-231/APS-23 10" SCOPE IN B-47 AIRCRAFT: (EE-58).

Specific Item Report No. 121, dated 24 December 1953, subject: IP-231/APS-23 10-Inch Radar Indicator in B-47B Aircraft, recommends that the IP-231/APS-23 10-inch indicator (the type unit specifically evaluated) not be considered for installation in B-47 aircraft and that WADC investigate and develop fixes for radial line sweep distortion in future 10-inch radar indicators prior to the installation of these items in B-47 aircraft. At the present time an interim fix for this distortion, proposed by WADC, is being tested by this Section (Reference EE-58A, Part I, paragraph 2). However the initial phase of this project is considered complete.

CREW COMFORT AND SURVIVAL EQUIPMENT: (ME-44).

Specific Item Report No. 123, subject: Evaluation of the Type MA-1 Underarm Life Preserver, dated 26 December 1953, has been forwarded to your Headquarters. The report recommended that the underarm life preserver, with certain modifications as specified, be adopted as a replacement for the B-5 type life preserver ("Mae West"), subject to its compatibility with personal equipment programmed for the Strategic Air Command. The report further recommended that this preserver, or similar unit, be provided as soon as possible because unsuitability of the B-5 preserver is considered to be a major cause of crew fatigue in the B-47 aircraft. This completes action by this Section on this project.

FOURTH CREW MEMBER POSITION, B-47 AIRCRAFT: (ME-80):

Specific Item Report No. 119, dated 23 November 1953, subject as above, has been submitted to your Headquarters. The report presents drawings and instructions for a standardized field installation of a fourth crew member's position in the B-47 aircraft. Instructions were also included covering removal of the installation before entering combat. This completes OES action on this project.

THOMAS P. SAVAGE
Major, USAF
Chief, B-47 OES

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PART II

of

B-47 OPERATIONAL ENGINEERING SECTION

BI-MONTHLY PROGRESS REPORT

ACTIVE PROJECTS BEING CONDUCTED BY THE OPERATIONAL

ENGINEERING SECTION

PROJECT NO. AE-22: Flight Analyzer Installation, B-47 Aircraft

PROJECT ENGINEER: Capt John T. Ball, Jr.

DATE OF ORIGIN: 30 April 1953

PURPOSE: To record flight conditions of airspeed, altitude, and vertical acceleration for study by the WADC Structures Analysis Branch.

SUMMARY AS OF 31 OCTOBER 1953: In accordance with a letter from Commander, SAC, No. DMADSLC 452.2, dated 2 April 1953, subject: Flight Analyzer Installations on F-84G and B-47 Series Aircraft, this Section initiated a project to monitor and collect recorded data from flight analyzers installed on five (5) B-47 aircraft assigned to 305th Bomb Wing. A goal of 2000 recorded flight hours was established, but was reduced to 1600 hours when 400 hours of similar flight data recorded for NACA under B-47 OES Project AE-12 was made available to WADC. Some difficulty was experienced, at first, due to faulty installation, instrument malfunctions, and lack of knowledge of the instrumentation by maintenance specialists; however, all instruments are functioning properly and the collection of data is progressing satisfactorily. The subject aircraft are presently TDY overseas where data under different climatic conditions is being obtained. At this time the project is approximately 25% complete.

31 DECEMBER 1953: The aircraft with subject flight analyzers installed have returned from TDY overseas, during which a few malfunctions of analyzers occurred. A check-up has revealed that an accelerometer unit in one analyzer was inoperative and that minor adjustments were necessary To date the project is approximately 40% complete.

PROJECT NO. AE-24: Evaluation of Landing Speed Indicator, Angle of Attack Indicator, and Angle of Sideslip Indicator Installations in the B-47 aircraft

PROJECT ENGINEER: Captain John T. Ball, Jr.

DATE OF ORIGIN: 30 September 1953

PURPOSE: To determine if the subject instruments will be of sufficient help to B-47 pilots to overcome the undesirable approach characteristics of the aircraft and increase the safety of flight.

SUMMARY AS OF 31 DECEMBER 1953: This project was directed by Headquarters SAC in their TWX DOOPO 29863, dated 28 September 1953, for the purpose of determining the value of the Landing Speed Indicator, manufactured by Safe Flight Instrument Corporation, and the Angle of Attack and Angle of Sideslip Indicators, manufactured by Specialties, Inc., installed in the B-47. Two aircraft assigned to 306th Bomb Wing were sent to Wright-Patterson AFB for the installation of subject instruments and, upon their return in early November, a comprehensive evaluation program was initiated to determine the value of their application to various phases of flight. Data for comparison of the Landing Speed Indicator and the Angle of Attack Indicator and for determining the consistency and reliability of the instruments were to be taken by the air crew on normally scheduled training missions. It soon became evident that this was not feasible, so a few special flights were made and the required accurate and reliable data obtained. This and subsequent data will be mathematically analyzed and plotted, but to complete the evaluation many more flights must be made to educate the pilots to this new concept of instrumentation. It has been determined that in order for a pilot to effectively use these instruments he must first be thoroughly schooled in the theory of their operation and then have the capability of the installation demonstrated.

PROJECT NO. AE-25: B-47 - KC-97 Aerial Refueling Speed Evaluation

PROJECT ENGINEER: Captain John T. Ball, Jr.

DATE OF ORIGIN: 30 October 1953

PURPOSE: To determine minimum practical aerial refueling formating speeds and maximum refueling altitudes for the B-47 - KC-97 aircraft and to determine the rated power performance data for the KC-97G tanker in refueling configuration.

SUMMARY AS OF 31 DECEMBER 1953: This project was the result of a conference held at WIBAC on 22-23 July 1953 concerning the suitability of the B-47 - KC-97 aerial refueling data contained in the applicable Technical Orders and was directed by Headquarters SAC in their letter DM4DS8M 452, dated 3 September 1953. The differences between aerial refueling speeds recommended by Boeing Airplane Company incorporated in T.O. 01-20ENB-1 and those recommended by OES in SIR No 53-B, classified Confidential, are to be resolved and the minimum practical speeds will be used to determine maximum refueling formating altitudes. The first phase is to determine rated power performance for the KC-97G in the refueling configuration under hotter than NACA standard day conditions. This information combined with minimum speed schedule will determine maximum altitude limits. Rated power flight data is being collected to obtain this information in preparation for the second phase which will be the flight evaluation of slower speed and higher altitude schedules as compared to the present Technical Order schedules.

PROJECT NO. EE-10: Inverter Malfunctions

PROJECT ENGINEER: Captain J. L. Ralega

DATE OF ORIGIN: 19 September 1952

PURPOSE: To evaluate, on a competitive basis, nine (9) AN-3516 inverters from four different manufacturers.

SUMMARY AS OF 31 OCTOBER 1953: This project was established as a result of SIR No. 39, dated 25 April 1952, recommending competitive evaluation of inverters manufactured by Eicor, Eclipse-Pioneer, Royal, and Jack & Heintz. WADC concurred with this recommendation, and this Section was to receive nine (9) typical AN 3516 inverters from each of the four manufacturers. The inverters were received from Eicor and Eclipse-Pioneer, and evaluation of these inverters was initiated in November 1952

The test on the Eicor inverters was closed with the concurrence of WADC in May 1953. SIR No. 108, dated 19 August 1953, concerning these inverters has been submitted to your Headquarters.

31 DECEMBER 1953: The Eclipse-Pioneer inverter test program has been terminated with the approval of AMC. SIR No. 122, dated 26 December 1953, subject: Service Test of Eclipse-Pioneer Inverter, Type AN-3516, has been forwarded to your Headquarters.

Nine (9) Royal inverters, P/N 13-2500-4-3, have been received by this Section and will be installed in B-47 aircraft in the 306th Bomb Wing. Monitoring of the operational qualities of these Royal inverters will be accomplished by this Section in the same manner as with previous inverters tested.

PROJECT NO. EE-16: Fuel Boost Pump Failure

PROJECT ENGINEER: Major W. E. Frazier

DATE OF ORIGIN: 18 March 1952

PURPOSE: To monitor failures of modified fuel boost pumps at this station.

SUMMARY AS OF 31 DECEMBER 1953: Due to an excessive number of boost pump failures, this project was initiated and SIR No. 41, dated 6 May 1952, was submitted. Later, it was decided that a continuation of this project would be worthwhile, and monitoring of the modified B-18B Thompson pumps was begun during Operation Sky Try when twelve (12) B-18B pumps, P/N TF52400-6, were installed in each of fifteen (15) B-47 aircraft, for a total of 180 such pumps. Fifteen (15) additional aircraft having the unmodified B-18B pumps installed are being monitored to obtain a comparison of failures between modified and unmodified pumps.

Following are results of the monitoring as of 31 December 1953:

Type Pump	No. Failures to Date	Avg Hrs of Failed Pumps	Avg Hrs of Pumps Still Operating	Avg Service Life of Test Group (Hrs)
B-18B Unmodified	61	217	370	318
B-18B Modified	9	266	413	405

The comparison between B-18B unmodified and modified pumps is on a substantially equal basis, covering a like number of pumps over the same period of time during which the aircraft accumulated almost equal flying time. Failure ratio is 6.8 to 1 in favor of the modified pumps.

PROJECT NO. EE-44: Remote Radar Indicator ID-218 in Co-Pilot's Position.

PROJECT ENGINEER: Captain Enoch T. Naversen

DATE OF ORIGIN: 5 February 1953

PURPOSE: To investigate the feasibility and advantages of installing an auxiliary radar scope in the co-pilot's position.

SUMMARY AS OF 31 OCTOBER 1953: An auxiliary indicator in the co-pilot's position was evaluated as regards target identification assistance and navigational assistance by the co-pilot. The results of this evaluation were covered in Specific Item Report No. 107, classified Confidential, dated 31 July 1953.

A similar installation, which incorporates a separate synchronizer and power supply, will be made when construction of the additional components is completed. These units are presently 90% complete; however, further construction has been delayed because of a lack of parts. The evaluation of this installation will include tests on the station keeping capability.

31 DECEMBER 1953: Non-availability of the necessary parts has delayed completion of the three test installations. It is anticipated that the first installation will be ready for bench checking in January 1954.

PROJECT NO. EE-47: Service Test of Improved Speed Governor for Jack & Heintz AN-3516 Inverters.

PROJECT ENGINEER: Captain J. L. Belega

DATE OF ORIGIN: 26 February 1953

PURPOSE: To evaluate a new speed governor for the Jack & Heintz Type AN-3516 Inverter.

SUMMARY AS OF 31 JULY 1953: Unofficial TWX dated 20 January 1953 from B-47 Project Office, subject: Flight Test Evaluation of Inverters, requested this Section to conduct service tests of six (6) Jack & Heintz AN-3516 inverters equipped with improved speed governors. These six inverters have been installed in 306th Bomb Wing aircraft and are undergoing tests. Three (3) Jack & Heintz inverters with the old type of speed governors are being used as control items. The frequency and frequency stability of all nine (9) inverters will be checked every twenty-five (25) flying hours, since these characteristics are functions of speed governor operation. A SIR will be submitted when the inverters have accumulated sufficient operating time to establish conclusive indications of speed governor operation.

The six (6) test inverters have accumulated an average total operating time of 197:00 hours and an average air operating time of 91:11 hours. Frequency adjustments have been necessary on three of the test items, at an average total operating time of approximately 140:00 hours. No adjustments have been required on the control items.

31 AUGUST 1953: No information regarding the operating time of these inverters is available at this time. Information has been received that this speed governor must be adjusted more frequently than the old type of governor.

31 October 1953: While the 306th Bomb Wing was TDY, one test item, serial number 471, was removed from service for an undetermined reason at approximately 260:00 total operating hours and 125:00 air operating hours. This inverter has not been recovered. The remaining five (5) test inverters have accumulated an average total operating time of 417:00 hours, and 231:06 air operating hours. The six (6) test inverters have accumulated a total of two (2) malfunctions, and eight (8) adjustments.

One control item was removed due to a failed speed governor at approximately 221:00 total operating hours, and 121:30 air operating hours. The other two control items, one of which is in the spare position, have accumulated an average total operating time of 257:00 hours and an average air operating time of 226:10 hours. There have been two (2) malfunctions of the control items, and two (2) adjustments.

PROJECT NO. EE-47: Service Test of Improved Speed Governor for Jack & Heintz AN-3516 Inverters. (CONT'D).

31 DECEMBER 1953: One inverter being used as a control item for this test failed due to a broken relay coil at 558:30 total operating hours, and 285:20 air operating hours. This item was repaired and reinstalled in the aircraft. No other malfunctions and/or adjustments were required during this period. As of 12 December 1953 the average total operating time per inverter was 503:18 hours, and the average air operating time per inverter was 286:23 hours.

PROJECT NO. EE-47A: Service Test of FRS-2 Control Assembly for Jack & Heintz Inverters

PROJECT ENGINEER: Captain J. L. Balega

DATE OF ORIGIN: October 1953

PURPOSE: To service test a new voltage and frequency control assembly for the AN 3516 inverters manufactured by Jack & Heintz.

SUMMARY AS OF 31 DECEMBER 1953: Six (6) of the latest type of frequency and voltage control assemblies, Type FRS-2, have been installed on Jack & Heintz AN-3516 inverters, and subject inverters have been installed on B-47 aircraft in the 306th Bomb Wing. Monitoring of operational time, both air and ground, and of all malfunctions currently is taking place. As of 12 December, the average total operating time per inverter was 65:40 hours, and the average air operating time per inverter was 36:33 hours. Other than minor frequency and voltage adjustments, no malfunctions of the FRS-2 control assemblies have been experienced to date.

PROJECT NO. EE-48: Failure of IN-23B Crystals in RT-124/APS-23

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: 2 March 1953

PURPOSE: To investigate excessive IN-23B crystal failures which have occurred at this station in the past two months.

SUMMARY AS OF 31 DECEMBER 1953: 1. Forty-four (44) IN-23B crystal failures were reported in the first 12 weeks of 1953 by the 306th Bomb Wing. Since this failure rate was considered excessive, Project EE-48 was initiated. The following factors were investigated:

a. Failure of the TR Tube:

The reported IB24 TR tube failure rate is only about one-fifth the crystal rate. The TR is checked for recovery time and keep alive current every time the airplane enters the dock and any other time the RT-124 is taken into the shop. For these reasons the TR tube is not considered an important factor in crystal failure.

b. Failure of the Keep Alive Voltage:

Although some IZ2 rectifier tubes have failed because of the condenser input circuit, a BTL ECP (#CW-545) proposes to correct this.

c. Interruption of Unregulated AC Power:

Cases of crystal burnout have been reported due to the magnetron firing again after an AC power interruption before the keep alive voltage has struck. Although a thermal delay relay (similar to K-301 in the A-1 power supply) in the AC input to the MD-78 would cure this, it is felt that this factor is responsible for such a small percentage of crystal failures that such a change is unwarranted.

d. Excessive Power for Nearby Radars:

WECO demonstrated that sufficient power to cause crystal damage can be reflected from the ramp into the antennas of a shutdown APS-23 when another set is transmitting nearby. In June, the WECO Technical Representative, Mr. Parlee, inaugurated a program, still in effect in the 305th and 306th Bomb Wings, of stopping the antennas pointed aft at turn off. Although no apparent change has been made in the failure rate, it cannot be concluded that this measure is without merit, since the damage averted is not of the burnout variety, but an accumulative increase in conversion loss.

PROJECT NO. EE-48: Failure of IN-23B Crystals in RT-124/APS-23 (CONT'D)

e Excessive Vibration:

Although approximately 8 g's have been recorded by flight analyzer during rough runway operation, the JAN design test consisting of a 30" drop onto a hardwood surface involves vibration many times in excess of this amount. Even though the RT-124 is not yet shock-mounted in the B-47B, it is felt that vibration is not a factor in crystal failure.

f Long Pulse Length:

The possibility of increased spike energy during long range operation due to the shape of the 5 micro-second pulse was considered Several sets were operated for five months with the long range pulse length reduced to $3\frac{1}{2}$ microseconds. There was no discernable decrease in crystal failure rate compared to the rest of the Wing.

2. Fifty-four (54) IN-23B crystal failures were reported in the last 12 weeks of 1953 by the 306th Bomb Wing. As soon as the IN-23C crystals are received they will be evaluated for comparison.

PROJECT NO. EE-52: Emergency K-System Bombing Computer

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: February 1953

PURPOSE: To determine the feasibility of utilizing an emergency bombing computer in the B-47 aircraft when a failure of the computing section of the K-System exists.

SUMMARY AS OF 31 OCTOBER 1953: At the request of Headquarters Second Air Force, the OES will evaluate an emergency bombing computer. The purpose of this computer is to provide an emergency radar bombing capability when the A-1 computer fails. It has been determined that the auxiliary indicator, which has a separate synchronizer, incorporates the same features as the emergency bombing computer, i. e., variable range mark and sweep and individual azimuth control. Since construction of this unit was given a higher priority by the Commander of the 306th Bomb Wing, it was decided that the feasibility of the emergency computer would be based on the results of the Auxiliary Indicator tests. The auxiliary indicator is approximately 90% complete. Tests will be made to determine if this equipment can be: (a) calibrated with sufficient accuracy to be used as an emergency bombing computer, and (b) if it is feasible for the co-pilot to utilize this equipment to drop bombs when the normal bombing equipment has failed. Continuation of the emergency computer test project will be predicated upon the results of these tests.

31 DECEMBER 1953: Some progress was made on the combined Fishpond-Emergency Bombing equipment but it is again being held up for parts.

PROJECT NO. EE-54: Evaluation of New Thermal Delay Relay, A-1 Power Supply, in Conjunction with Fast Blow Fuses, K-System

PROJECT ENGINEER: Captain J. L. Balega

DATE OF ORIGIN: May 1953

PURPOSE: To evaluate the new type thermal delay relays, K-301, located in the A-1 power supplies of the K-System.

SUMMARY AS OF 31 MAY 1953: Alternator malfunctions in B-47 aircraft have frequently caused failures of the thermal delay relay, K-301, located in each of the two A-1 power supplies of the K-System. This has resulted in air aborts. The relay manufacturer has produced a new type relay wherein the gage of the wire which has been burning out consistently has been enlarged from 16 mils to 25 mils. Four of these new type relays have been procured by OES and installed in aircraft of the 305th Bomb Wing in order to evaluate their reliability. Simultaneously, the use of 8 amp fast blow fuses in place of the 8 amp slow blow fuses for F-8806 and F-8809 is being monitored to determine the practicability of using a combination of a fast blow fuse and an old type relay as an interim fix until the new type relays are available.

30 JUNE 1953: To date a total of forty (40) flights have been accomplished with aircraft containing the new type thermal delay relays. All but two of these flights have been trouble free in respect to this particular malfunction. On one flight F-8609, the fuse which protects the thermal delay relay, burned out. On this particular aircraft an 8 amp slow blow fuse and a new type relay were installed. The fuse burned out before the new type relay did. On the other flight which had trouble, the thermal delay relay burned out. This aircraft contained a combination of an 8 amp slow blow fuse and an old type relay. These results, though meager, substantiate the fact that the old type relay will burn out before the 8 amp slow blow fuse, and said fuse will burn out before the new type relay. One hundred (100) new type thermal delay relays have been procured for the aircraft in the 305th Bomb Wing. These particular relays have the gauge of the wire in question increased from 16 mils to 20 mils. All A-1 Power Supplies in the wing will be equipped with these new type relays. Upon completion of this change, action by OES will be concluded and an SIR will be forwarded.

31 JULY 1953: All A-1 power supplies in the 305th Bomb Wing have been equipped with the new type thermal delay relay, K-301, with the 20 mil wire. Of ten (10) flights on which malfunctions have occurred, results are as follows: On two (2) flights the relay blew and the fuse did not,

PROJECT NO. EE-54: Evaluation of New Thermal Delay Relay, A-1 Power Supply, in Conjunction with Fast Blow Fuses, K-System (CONT'D)

on three (3) flights the fuse blew and the relay did not, and on five (5) flights both the relay and the fuse blew. All fuses were the slow-blow type. This indicates that the new type relay alone is not the final fix for this malfunction, but that proper fusing also is required. Attempts have been made to obtain appropriate fast blow fuses without success. The assistance of WADC has been solicited in obtaining these fuses. If this type fuse can be acquired, an evaluation of its use with the new type relay will be made.

31 AUGUST 1953: WADC has informed the OES that 8 amp fast blow fuses have been ordered and will be forwarded upon receipt. An informal recommendation has been made to A. C. Spark Plug Field Engineers that their home office conduct a study of surge voltages and transients in the circuits related to K-301 to better determine the proper fusing of subject relay. A study of various types of 5 amp slow blow fuses is being conducted to determine the feasibility of their use in subject equipment to reduce failures caused by voltage fluctuation of the alternators.

31 OCTOBER 1953: Fast blow 8 amp fuses have been installed in F-8806 and F-8609 on fifteen (15) aircraft for 30 days without any failures of the fuses or of the new type relays, K-301. This lack of failures is attributed to the stable operation of the alternator which has resulted since the Boeing water separators were installed.

31 DECEMBER 1953: To date, no failures of the new type relays, K-301, have occurred. Since 31 October 1953, two (2) failures of F-8806 have occurred, both during ground operation utilizing external power and both on the same aircraft.

PROJECT NO. EE-59A: Compass Errors in K-Systems

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: October 1953

PURPOSE: To determine the magnitude of errors in the compass portion of the K-System which are not normally compensated for during compass swings which may be attributable to: (1) the magnetic fields of the aircraft engines and associated equipment, and (2) the errors introduced by the tow vehicle and ground power unit used during the compass swing.

SUMMARY AS OF 31 DECEMBER 1953: Observers of both the 305th and 306th Bomb Wings are recording K-System true heading to the tenth of a degree with the function switch in "STAB", the autopilot "OFF", and tail surface power control "OFF". This is done after preflight, before turn off, and after engine start, before taxi. On some headings, K-System true heading has changed as much as 2° from before to after engine start. This is over six times the maximum deviation encountered with any ground power unit. The data, from over 60 starts, does not appear sufficiently consistent to allow a standard correction to be inserted at compass swing. These figures will be collected for about two more weeks before any analysis is made.

PROJECT NO. EE-62: Jump of Radar Presentation on ID-218/APS-23 Caused by O-15 Camera

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: 27 July 1953

PURPOSE: To prevent "jump" of the radar picture on the indicator, ID-218, when the O-15 scope camera is actuated.

SUMMARY AS OF 31 DECEMBER 1953: The presentation on the radar indicator, ID-218/APS-23, is displaced (jumps) each time the O-15 camera main-spring winding solenoid, B-201, is energized. Since this solenoid is energized for the duration of the CCW scan, the resulting "jump" of this scan is distracting to the observer, especially during a bomb run when an exposure is made every scan. A circuit change which eliminates picture jump by pulsing B-201 during the antenna-braking time at the end of the scan has been designed and successfully tested by the OES. As soon as this modification has been made compatible with the requirements of the P-8 Exposure Frequency Control Box "Direct Radar" mode of operation, an SIR will be published.

PROJECT NO. EE-63: Radar Target Folder Viewer

PROJECT ENGINEER: Captain E. T. Naversen

DATE OF ORIGIN: October 1953

PURPOSE: To evaluate the Radar Target Folder Viewer for use in B-47 aircraft.

SUMMARY AS OF 31 DECEMBER 1953: During the time the Radar Target Folder Viewer has been installed, one run on an unfamiliar target has been made. The RBS score was only fair. In B-47 aircraft, the RTFV has to be inverted due to space limitations. The housing of the unit therefore interferes with free movement of the observer, particularly in using B-scope and optical functions. Difficulty has been experienced in obtaining suitably annotated film. The installation is being changed to another aircraft to expedite evaluation and to obtain comments from additional observers.

PROJECT NO. EE-64: Functional Tests of New Brushes for the B-47 Starter-Generator

PROJECT ENGINEER: Captain J. L. Balega

DATE OF ORIGIN: October 1953

PURPOSE: To functionally test new brushes for the starter-generators on B-47 aircraft.

SUMMARY AS OF 31 DECEMBER 1953: The five (5) starter-generators have been received by this Section from WADC. Arrangements are being made to install these items in B-47 aircraft of the 305th Bomb Wing. Records of total operating time, operating time at various altitudes, total number of starts, and all malfunctions will be kept on each starter-generator by serial number.

PROJECT NO. EE-65: Modification of AS-361/APS-23 Antenna to Improve Return Uniformity

PROJECT ENGINEER: Captain J. L. Balega

DATE OF ORIGIN: October 1953

PURPOSE: To determine if the uniformity of the radar returns of the APS-23 can be improved by repositioning the cosecant reflector of the AS-361/APS-23 antenna.

SUMMARY AS OF 31 DECEMBER 1953: The cosecant reflector of the antenna AS-361/APS-23 has been repositioned on fifteen (15) aircraft in the 306th Bomb Wing. This Section is attempting to determine any resultant loss of ground range both on radar and beacon targets when operating at altitude. Simultaneously, improvements of target illumination at intermediate and close-in ground ranges are being determined. Radar observers' comments concerning this modification are being collected. Radar pictures are being obtained both with and without the subject modification, utilizing the same APS-23 systems, to afford a means of comparison. To date, the majority of radar observers show a dislike for this modification due to the fact that tilt adjustment of the antenna becomes too critical.

PROJECT NO. EE-65A: Pulse Length and Bandwidth Modification of APS-23 to Increase Received Signal Power

PROJECT ENGINEER: Captain John T. A. Ely

DATE OF ORIGIN: 12 October 1953

PURPOSE: To service test a proposed modification which increases the pulse length and decreases the bandwidth of the AN/APS-23.

SUMMARY AS OF 31 DECEMBER 1953: This modification as originally proposed by Bell Telephone Laboratory was performed on fifteen (15) B-47 aircraft of the 306th Bomb Wing. The option of the one microsecond pulse length and three megacycle receiver band pass is given the observer in all radar operations, including TRACK and BOMB, below 80 NM. This modification was designed to improve radar system performance at high altitudes. Flight testing is near completion. Still to be evaluated is an OES variation currently being made on two of the modified aircraft. The latter configuration proposes the following advantages:

1. Retain the anti-jamming capabilities.
2. Provide the slow AFC sweep with the narrow bandwidth when the modification is "ON".
3. Fewer man-hours to accomplish.
4. No changes within the RT-124 signal circuits.
5. Narrow bandwidth and slow AFC sweep whenever one microsecond pulses are transmitted.

PROJECT NO. EE-66: Use of the K-System in Conjunction with an APN-11 Beacon as a Blind Approach Landing System for B-47 Aircraft

PROJECT ENGINEER: Captain E. T. Naversen

DATE OF ORIGIN: October 1953

PURPOSE: See Project Title.

SUMMARY AS OF 31 DECEMBER 1953: Blind landing approach procedures utilizing the K-System in the bomb position (beacon mode) in conjunction with an AN/APN-11 beacon have been developed. Adequate tests of the validity of the procedures have not been made as only five partially complete blind approaches have been made during times when pilots have been making simulated GCA approaches.

PROJECT NO. ME-26A: B-47 Canopy Sunshade

PROJECT ENGINEER: Captain Harold E. Reese

DATE OF ORIGIN: 30 October 1953

PURPOSE: To service test the suitability of a canopy sunshade for B-47 aircraft, with particular attention directed to ease of handling, installation and ability to withstand high wind conditions.

SUMMARY AS OF 31 DECEMBER 1953: This project was established in accordance with Second Air Force message 2AFMMF 3833, dated 30 October 1953, which indicated that Headquarters Strategic Air Command directed shipment of one (1) each sunshade to the 6th Air Division, the 301st Bomb Wing, and the 44th Bomb Wing for a sixty day suitability test. A subsequent Headquarters Second Air Force message 2AFMMF 2532, dated 20 November 1953, indicated that instructions had been changed and that fifteen (15) sunshades were shipped to MacDill AFB from Wilkins AF Depot on AMC Form 63, dated 1 October 1953, Control No. 831-19A-54-82. The fifteen (15) sunshades have not arrived at MacDill as of 31 December 1953. The service test will begin as soon as the sunshades arrive.

PROJECT NO. ME-28: Fuel Loading Procedures

PROJECT ENGINEER: Major Lomax Gwathmey

DATE OF ORIGIN: February 1952

PURPOSE: To develop a firm method of refueling the B-47 aircraft prior to long range missions.

SUMMARY AS OF 31 DECEMBER 1953: Multiengine jet bombers carrying unusually large volumes of fuel in the fuselage called for new techniques in fuel loading. A project was set up by the OES to collect data over a period of time under various operating conditions and make an analysis of the various variables involved for the purpose of recommending the best and most practical system of fuel loading for the B-47 aircraft.

As an auxiliary project under this project, the practicability of providing ground servicing (refueling and electrical power for starting engines) of B-47 aircraft from the KC-97 aircraft was explored during July 1952. With the use of a kit to contain certain equipment for refueling and certain electrical cables, it was determined that refueling and starting engines of B-47's from the KC-97 was entirely practical. Specific Item Report No. 59, 30 August 1952 covered this project.

Another additional auxiliary project was the replenishing of fuel used by a B-47 for engine start and taxi at the end of the take-off runway with all engines running. Such a procedure is considered to be practical and not excessively dangerous when certain rules are obeyed and certain precautions taken. This procedure will permit the aircraft to take off with only 300# less fuel than its fuel system will hold, and for average conditions of taxi out will add 100 to 150 n.m. to its range capability. It is considered a useful procedure for certain combat operations. SIR #101, dated 3 June 1953 covers this project. An SIR will be prepared covering the main project.

PROJECT NO. ME-53: Fuel Tank Leaks, B-47 Aircraft

PROJECT ENGINEER: 2nd Lt. C. B. Shive

DATE OF ORIGIN: 19 February 1952

PURPOSE: To report fuel tank leaks and to recommend corrective action.

SUMMARY AS OF 31 OCTOBER 1953: This Section has been monitoring fuel tank leaks for 18 months. The major problems have been brought to the attention of the proper agencies. WADC, in conjunction with Boeing Airplane Company, has developed various fixes for the deficiencies which have been discovered, and many of these fixes have been incorporated in the B-47 fuel tank system.

Since the Bomb Wings are making a weekly fuel leak summary report to Headquarters SAC, this information, being on a wider scale, will provide a statistical study superior to any that this Section can make on a local basis. Therefore, to avoid duplication, this Section will in the future concern itself primarily with a monitoring of the various fixes and will report upon their effectiveness. To indicate the overall trend of the fuel leak situation, the single item of Aircraft in Commission Days Lost Due to Fuel Leaks for each of the MacDill Bomb Wings will be reported monthly.

At the present time this Section will be concerned with that portion of T. O. 01-20EN-346 which has to do with the new type "O" ring seal heavy spider interconnects. The Boeing team spent several weeks at this station demonstrating the correct installation technique for the new type interconnect and training personnel for this work. The effectiveness of this interconnect will be carefully monitored and reported upon in each bi-monthly report.

31 DECEMBER 1953: Since T. O. 01-20EN-346 has been received at this station, a total of fifty-two (52) aircraft (24 for 305th Bomb Wing, 28 for 306th Bomb Wing) have had this T. O. complied with in a total of seventy-seven (77) tanks. There has been no recurrence of leaks in tanks that have the new type interconnect installed.

Aircraft in-commission days lost due to fuel leaks have been as follows:

	305th Bomb Wing	306th Bomb Wing
November	67	58
December	86	93

PROJECT NO. ME-54: Service Life of P-47 Surface Control Pump Assemblies.

PROJECT ENGINEER: 2nd Lt. C. B. Shive, Jr.

DATE OF ORIGIN: 12 June 1952

PURPOSE: To monitor the operation of twelve each subject assemblies, Part Number 4869-167 WQ 300, for the purpose of determining periodic replacement time.

SUMMARY AS OF 31 AUGUST 1953: SAC message to OES, dated 9 January 1953, concurred with a modified project to monitor twelve (12) surface power control unit pumps. During the month of April, two (2) of the PCU pumps were changed, S/N A-1113 after 202:05 hours and S/N A-1202 after 180:05 hours. No additional units failed through July 1953, at which time the average time on the ten (10) remaining PCU pumps was 254:07 hours. Information on pump failures for August, which is not presently available at MacDill AFB, will be included in the September Progress Report.

31 OCTOBER 1953: No additional failures have occurred through 31 October 1953 on the units being monitored. The average operating time on the ten (10) remaining units is 348 hours. The average operating time of the test group (12 units) is 322 hours.

31 DECEMBER 1953: No additional failures have occurred through 31 December 1953 on units being monitored. Average operating time on the ten (10) remaining units is 417 hours. Average operating time of the test group (12 units) is 380 hours.

PROJECT NO. ME-69: Tow Target Reel Installation and Flight Evaluation.

PROJECT ENGINEER: Major Willis E. Frazier

DATE OF ORIGIN: 13 February 1953

PURPOSE: To determine the feasibility of installing a tow target reel which can be readily removed or installed for towing winged targets with B-47 aircraft.

SUMMARY AS OF 31 DECEMBER 1953: In accordance with Hq SAC message DM4AS8 56503, dated 14 February 1953, a project was initiated to determine the feasibility of a tow target reel installation in a B-47 aircraft. An A-2 reel was installed in the tailcone of a B-47 aircraft at MacDill AFB, and was flight tested using a glider tow target, type A-1, modified to a 45° swept wing, single vertical fin tail configuration.

Test flights proved the unsuitability of the A-2 reel assembly for this application. It is both underpowered and has marginal braking capability. No further flights will be made utilizing the A-2 reel assembly. Headquarters SAC has requested that two A-3 type tow reel assemblies, powered with seven horsepower motors, be made available to the OES at MacDill. Evaluation flights will be resumed upon receipt and installation of this equipment.

PROJECT NO. ME-75: Extruded Compressor Stator Blades J47-25 Engines.

PROJECT ENGINEEER: 2nd Lt C. B. Shive, Jr.

DATE OF ORIGIN: 28 May 1953

PURPOSE: To monitor effects on engine life of a modified extruded compressor stator blade.

SUMMARY AS OF 31 OCTOBER 1953: The engine contractor furnished this station with six (6) J47-25 engines which were supposed to have been equipped with the new extruded compressor stator blades that are being installed on all production engines. These blades are cheaper to manufacture than the forged blade previously used, and can be replaced individually. The subject engines were installed on B-47 A/C 51-2269 on 18 May 1953, and were run up on the ground immediately after installation. During the pre-flight inspection prior to the first flight with the new engines, the #1 engine was noted to have nicked compressor blades, and was replaced on 25 May 1953 with an old type engine.

The remaining five (5) engines operated normally until 26 September 1953, and accumulated 151:25 hours each until that time. On this date, the #4 engine was changed due to a leaking air-oil seal. Inspection of this engine revealed that it did not have extruded compressor stator blades as previously believed. Further investigation by the engine contractor's representative revealed that an error in regard to engine serial number was made in correspondence by the engine contractor. The erroneous serial number caused an old type engine to be shipped and installed with the initial installation.

The four (4) remaining engines are operating normally and have accumulated 193:30 hours each as of 31 October 1953.

31 DECEMBER 1953: The four (4) remaining engines are operating normally and have accumulated 267:10 hours each as of 31 December 1953.

PROJECT NO. ME-78: Main Landing Gear Seal Failures

PROJECT ENGINEER: 2nd Lt C. B. Shive, Jr.

DATE OF ORIGIN: 8 July 1953

PURPOSE: To determine if soft strut servicing in accordance with T.O. 01-20EN-231 is the cause of "O" ring failures.

SUMMARY AS OF 31 DECEMBER 1953: Failures of main landing gear "O" ring seals on B-47 aircraft in the 305th and 306th Bomb Wings are as follow:

ORGN	ACFT NO.	FAILURES DATE	FAILURES POSITION	NO OF LANDINGS AFTER T.O. 01-20EN-231 COMP.	TOTAL LANDINGS AT TIME OF FAILURE
305th BW	2302	26 May 53	Aft	119	125
	2317	10 Jun 53	Aft	116	192
	2309	20 Jun 53	Aft	116	148
	2324	7 Jul 53	Aft	99	146
	2317	10 Jul 53	Fwd	131	213
	2319	13 Jul 53	Aft	108	139
	2338	3 Aug 53	Fwd	74	108
	2342	12 Aug 53	Fwd	47	79
	2305	16 Aug 53	Aft	55	89
	2318	14 Oct 53	Fwd	105	141
	2334	15 Oct 53	Fwd	94	126
306th BW	2240	15 Nov 53	Fwd	74	130

	TOTAL FAILUPES TO DATE	AV LANDINGS AFTER T. O. COMPLIANCE	AV TOTAL LANDINGS AT TIME OF FAILURE
6th AD	12	95	137

PROJECT NO. ME-78: Main Landing Gear Seal Failures (CONT'D)

The underlying cause of failure of the seals has not been established, although seal failures were rare before soft strut servicing and occur more frequently now. Whatever the underlying cause may be, the conditions causing failure are aggravated by the higher pressure developed within the strut during soft strut operation. The sandy soil encountered at MacDill AFB does not appear to be a major factor contributing to failure, because both Wings have been subjected to the same conditions, and the incidence of failure is considerably different in the two Wings. The high temperatures encountered at MacDill during the summer by the 305th Bomb Wing may have been a cause of failure. Another factor causing higher incidence of failure in the 305th Bomb Wing may have been that they accomplished more transition landings during the summer than did the combat ready 306th Bomb Wing at its TDY station.

The OES will continue to gather information relative to the causes of "O" ring seal failure in an attempt to remedy the situation.

PROJECT NO. ME-81: Service Testing the LeTourneau A-3 Air Tow Vehicle.

PROJECT ENGINEER: Major Edward W. Purdy

DATE OF ORIGIN: 30 October 1953

PURPOSE: To service test the LeTourneau A-3 Air Tow vehicle in every respect of its operational suitability.

SUMMARY AS OF 31 DECEMBER 1953: This project to evaluate the LeTourneau A-3 Air Tow Vehicle was established as per verbal request from the Requirements Branch, D/Mat, Headquarters SAC. Publication of Specific Item Report No. 120 (Interim), on 10 December 1953, provides test and operational results of this project to date. Operation of the vehicle in performing the functions for which it was specifically designed has been satisfactory under conditions encountered at MacDill AFB. This project is being continued to determine reliability factors; a complete evaluation will be possible only when this Section is provided with cost data on this unit and other ground power systems.

PROJECT NO. ME-82: Eseco Ground Power Equipment

PROJECT ENGINEER: Captain A. G. Burnes

DATE OF ORIGIN: 31 October 1953

PURPOSE: To evaluate the ESECO ground power equipment for use with B-47 aircraft.

SUMMARY AS OF 31 DECEMBER 1953: This project was initiated at the request of Headquarters WADC to evaluate two (2) sets of ESECO ground power equipment for B-47 aircraft. This evaluation is to include operational suitability and capability, as well as comparative evaluation with other types of ground power equipment presently in use.

One set of equipment was placed in operation during November 1953 in the 306th Bomb Wing to service five (5) aircraft. Except for minor deficiencies encountered during initial operation, the equipment has operated without malfunction. This equipment has an average of 80:00 hours of operation per unit as of 31 December 1953. The units appear to be delivering ample power supply for all operational requirements thus far encountered.

An additional set of ESECO equipment was placed in operation during December 1953 in the Periodic Maintenance Docks of the 306th Bomb Wing. These units have accumulated an average of 40:00 hours of operation during December.

PROJECT NO. ME-83: Water-Alcohol Injection for B-47 Wings

PROJECT ENGINEER: 1st Lt Joseph D. Bowen

DATE OF ORIGIN: October 1953

PURPOSE: To determine the necessary equipment and procedures for the tactical servicing of B-47 aircraft with a specified water-alcohol solution.

SUMMARY AS OF 31 DECEMBER 1953: At the request of WADC, the tests of water-alcohol servicing equipment originally planned for MacDill AFB are being accomplished at Eglin AFB in conjunction with tests being run by the Air Proving Ground Command. An OES representative is participating in these tests at Eglin. The tests were consolidated because of similar requirements for servicing equipment. Accordingly, four (4) modified type F-2 refueling trailers and one (1) mixing cart equipped with a blending valve have been shipped to Eglin.

Tests are to be conducted during January 1954.

PART III

of

B-47 OPERATIONAL ENGINEERING SECTION

BI-MONTHLY PROGRESS REPORT

B-47 OPERATIONAL ENGINEERING SECTION PROJECTS COMPLETED

AWAITING ACTION BY

HEADQUARTERS WRIGHT AIR DEVELOPMENT CENTER

SUMMARY LIST OF B-47 OES COMPLETED PROJECTS AWAITING AMC ACTION

Project No. and Title	Status
AE-4: Analysis of B-47 Mission Capability.	SIR's #53, #53A, and #53D are being considered by Hq WADC. SIR #53E is being withheld by Hq SAC until completion of Project AE-25.
AE-13: PDI Instrument Relocation.	SIR #82, dated 24 Jan 53, forwarded to Hq WADC and an indorsement dated 16 Nov 53 has been received stating that T. O. 01-20EW-337, dated 8 Oct 53, has been published authorizing the interchange of the machmeter with the PDI. This constitutes the closing action for the project.
AE-18: Evaluation of Alco Windshield Wiper	SIR #102, dated 30 Jun 53, has been forwarded to Hq WADC. Testing of rain deflectors and dams installed in front of the windshield has been completed by WADC Flight Test Section without obtaining a configuration which prevents the excessive flow of water over the windshield. The clear vision panel will be incorporated in production on the 815th article. ECP 619-4 will provide for its retrofit during the recycling program. The improved windshield wiper (flexible blade and serrated drive shaft) plus the clear vision panel are considered as a satisfactory fix for this deficiency. No further work will be done on this project and the above will constitute closing action.
AE-23: B-47 Instrument Calibration Requirements.	SIR #117, dated 23 Dec 53, has been forwarded to Hq WADC.
EE-14C: Rendezvous Descent Preliminary to In-Flight Refueling of B-47B Aircraft.	SIR #76C, dated 27 May 53, forwarded to Hq WADC. Although it is reported that the rendezvous procedures will be incorporated in 01-20ENB-1, the status of the T. O. revision is unknown.

Project No. and Title	Status
EE-30: K-System Slewing	SIR #97, dated 8 May 1953, was forwarded to Hq WADC. WADC concurs with the requirement for a feature to preclude excessive slewing. The method proposed by Sperry will be incorporated during an autopilot improvement program. It will include a variable control which will permit the pilot to preset the maximum angle of bank desired. WADC indicates that the time period for getting this change into the aircraft will be reviewed and, if excessive, consideration will be given to authorizing service units to modify the sets locally, utilizing the OES "fix". No further information as to the status of this project is available.
EE-32: Nosa Glass Control	SIR #73, dated 23 December 1952, forwarded to Hq WADC. The status of the improved control unit is unknown.
EE-42: B-4 Armament System Deficiencies.	SIR #111, dated 18 Sept 1953, has been forwarded to Hq WADC.
EE-43: Tracking Range of K-4 Bombing-Navigation System in B-47 Aircraft	Confidential SIR #85A, dated 16 Sept 1953, has been forwarded to Hq WADC. Subject item is to be incorporated in the B-47 when production of the item permits. This project is closed and no further action by WADC is required.
EE-53: K-System Dual Offset Unit	SIR #114, dated 8 October 1953, subject: Evaluation of the K-System Dual Offset Unit in B-47 Aircraft, has been forwarded to Hq WADC. The dual offset capability is to be incorporated in B-47 aircraft in conjunction with the Extended Range Computers when production of these items permits.
EE-57: ARN-14 Antenna Connector	SIR #113, subject: Coaxial Connectors in ARN-14 and ARC-27 Antenna Cables, B-47 Aircraft, dated 3 Oct 1953, has been forwarded to

Project No. and Title		Status
EE-57:	(Cont'd)	Hq WADC. This report recommends that the UG-21/U connectors, which fail frequently because of the withdrawal of the center pin, be replaced with PL-259 and PL-258 connectors when a failure occurs. In addition, it was recommended that the PL-258 and PL-259 connectors be installed during retrofit and production in place of the UG-21/U connector.
EE-59:	Comparative Evaluation of Methods of Swinging the Compass, B-47 Aircraft.	SIR #105, dated 25 July 1953, and SIR #105A, dated 9 September 1953, have been forwarded to Hq WADC. WADC concurs with the Tow Circle procedures for compass swinging the B-47 aircraft. WADC has recommended to AMC that this procedure be incorporated in T. O. 01-20INB-2. However, this procedure was not recommended for inclusion in T. O. 05-15-3. This constitutes closing action on this project.
EE-60:	Deficiencies of B-47B Interphone System Prior to the 455th Aircraft.	SIR #116, dated 26 Oct 1953, has been forwarded to Hq WADC.
EE-61:	Instrument Landing Facilities in the Co-Pilot's Position, B-47 Aircraft.	SIR #110, dated 14 Oct 1953, has been forwarded to Hq WADC.
ME-12:	Directional Damper	SIR #100, dated 26 June 1953, has been forwarded to Hq WADC. Although the Laboratory approved the recommended procedures for preflight inspection of the damper, no action will be taken in view of an indorsement by Hq SAC which indicated that it was desired that modifications to the system should be held in abeyance until WADC tests determine the desirability of retaining the damper in the aircraft. Boeing is to initiate flight tests on this installation. No further information is available on this project.

Project No. and Title		Status
ME-15:	Observer's Ditching Harness.	SIR #45, dated 21 May 1952, and S.R #64, dated 27 October 1952, were forwarded to Hq WADC. ECP 1284-1 calls for installation of a safety belt and shoulder harness on the step in the aisle adjacent to the co-pilot. It is committed for production on the 880th aircraft, and retrofit will be accomplished during the recycling program. This constitutes closing action for this project.
ME-60:	Operational Suitability Test of Phase II Modified B-47B Aircraft.	SIR #75, dated 9 January 1953, forwarded through channels to Hq WADC. No further information is available.
ME-63:	Engine Choo-Choo on J47-23 and -25 Engines.	SIR #98, dated 13 May 1953, forwarded to Hq WADC. This report recommended installation of an orifice in the VCO line to dampen out response to system pulsation. However, at the B-47 Power Plant Conference held at Wright-Patterson AFB on 3 and 4 June 1953, it was agreed that accumulators will be the final fix for choo-choo, and that VCO orifices which were installed would be removed. At a subsequent B-47 Power Plant Conference at Wright-Patterson AFB on 12 November 1953, it was stated that the AMC approved ECP covering the accumulator was to be placed before the OCAMA Change Board.
ME-68:	Multiplace Life Raft Installation in B-47 Aircraft.	SIR #83, dated 29 January 1953, forwarded to Hq WADC. SAC, WADC, AMC, and OCAMA approved static mock-up of Mark IV life raft installed in backbone of B-47. Although committed for production, no final plan for retrofit has been established. The Mark IV raft has not been approved by the Aero Med Lab. Boeing will make a live mock-up and will flight test a complete installation when the first kit is delivered. Present status of this project is unknown.

Project No. and Title	Status
ME-70: Leaking Power Control Unit Seal.	SIR #91, dated 18 March 1953, which recommended use of a leather back-up washer with the -10 "O" ring seal, was forwarded to Hq WADC. The -11 seal, installed according to T. O., has proven not appreciably better than the -10 seal. A TEFLON seal was tested by Boeing and found to be unacceptable. Also, friction forces with -10 and -11 seals with leather back-up washers compromise autopilot performance according to laboratory tests. At present there is no final solution to the problem.
ME-74: J47-23 and -25 Engine Speed Switch.	SIR #103, dated 22 July 1953, forwarded to Hq WADC. No further information is available.
ME-76: Tool-Engine Mount Pin and Internacelle Fairing	SIR #115, dated 20 October 1953, has been forwarded to Hq WADC. The SIR included working drawings of a locally designed tool, and recommended that the tool be authorized all B-47 Wings, on a basis of issue of two (2) each per Combat and Field Maintenance Squadron and four (4) each per Periodic Maintenance Squadron. This project is considered complete.
ME-77: Functional Test of Fuel Tank Float Switches	SIR #106, dated 30 July 1953, forwarded to Hq WADC. Hq WADC did not concur in the report, and in their indorsement stated that the proposed manner of checking the float switches during ground refueling might induce a serious hazard to the aircraft, and that U. R.'s had not been submitted lately on the float switches. The OES takes exception to the above two statements for the following reasons: (1) No new method for functionally testing the float switches was proposed in the SIR, and (2) Kit Change No. K-8635, title: Revised Float Switches, dated 4 June 1953, stated that the float switches are susceptible to malfunctioning because of

Project No. and Title	Status
ME-77: (Cont'd)	binding floats and shock displaced microswitches. Such malfunctions have occurred in the 305th and 306th Bomb Wings, and additional U. R.'s have been submitted. OBS will re-open this problem with WADC through normal channels.

EXHIBIT 7A

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. ##

6TH AIR DIVISION

MACDILL AFB, FLORIDA

INFORMATION COPY

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 24 December 1953

SPECIFIC ITEM REPORT NO. 118

SUBJECT: Evaluation of the O-23 Camera in the Y-4 Periscopic Bombsight, B-47 Aircraft. (EE-56)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base
Ohio
ATTN: WCSH (B-47)

I. PURPOSE:

To report on the evaluation of the O-23 camera incorporated in the Y-4 periscope in the K-System, B-47 aircraft.

II. FOREWORD:

A. Headquarters Strategic Air Command directed the OES to evaluate the O-23 camera system (Reference DM6BM-3-413-5, dated 13 April 1953.)

B. The O-23 recording camera system is composed of: (1) C-2 camera body, (2) C-7 magazine, and (3) M-1 control. The system is designed to record on film the optical and radar (RAI) presentation of the Y-4 periscope.

III. CONCLUSIONS:

A. The O-23 camera system is basically sound but requires some modification to make it a reliable photographic instrument in B-47 aircraft.

B. O-23 photography is invaluable for analysis and scoring of actual bomb drops and for bomb damage assessment.

C. Picture Suitability:

1. Optical images are over-exposed a variable amount (8 to 16 times), depending on the sighting angle used on the Y-4 periscope.

2. Based upon negative density measurements, the present optical negatives are 25% denser at the start of the bomb run than at the cross-over point with the shutter speed at 1/200th second.

3. Periodically, optical negatives are produced which are only 50% as dense as the normal negative on some cameras.

4. The depth of field of the camera is marginal.

D. The camera mirror often malfunctions causing the mirror to obscure the visual target from the observer while taking optical and radar-optical pictures.

E. The O-23 camera affects the ability of the periscope to hold a vacuum level.

F. The spring retaining ring on the bottom of the clutch can is not sufficiently rigid to prevent the clutch from being tilted and jammed by the normal action of the start solenoid actuating arm.

G. There is no Technical Order on the O-23 camera and as a result maintenance malpractices have occurred.

H. Aircraft cabling is not compatible with the O-23 camera system and the M-1 control does not physically fit its mounting bracket.

IV. RECOMMENDATIONS:

A. AMC and WADC take expeditious action to correct deficiencies in the O-23 camera system as outlined in this report, so that the full potential of this system may be utilized.

B. Picture Suitability:

1. WADC, in conjunction with General Mills and Fairchild, investigate the following factors or combinations of these factors to eliminate optical over-exposure and to obtain greater camera depth of field for a long term fix.

a. Investigate retrofitting all O-23 cameras with a redesigned top shutter to obtain higher shutter speeds than are available with the present cameras.

b. Investigate mounting an iris diaphragm in the camera's optical path. This will solve the exposure and depth of field problems and is considered the most desirable solution.

2. AMC authorize the use of Linagraph Pan Safety film (Stock No. 7400-275904, Class 10A), and retrofit the Y-4 periscope with a 2x optical filter as an interim fix for the exposure problem.

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C. General Mills be required to exercise closer quality control on the camera mirror installation.

D. AMC initiate a Technical Order authorizing the sealing of the screw holes holding the camera barrel to the body with EC 612 sealant (T. O. AN 11-5AA-13) and the camera lens with a suitable sealant to prevent leakage of moist cabin air into the Y-4 periscope.

E. Fairchild redesign the: (1) spring retaining ring on the bottom of the clutch cam, and (2) the bevel gear counter actuating arm and effect retrofit by issuing kits for the cameras.

F. AMC issue a Technical Order on operation, maintenance, and erection of the O-23 recording camera.

G. AMC issue a Technical Order to correct wiring and connector deficiencies and a Technical Order correcting the deficiency in the mounting bracket.

V. DISCUSSION:

A. The O-23 camera system is basically a sound system. Present discrepancies in the operation of the O-23 camera are the results of changes in development and procurement plans since the initial consideration of the camera installation in the Y-4 periscope. The original camera was designed by Perkin Elmer Optical Company but never accepted by WADC for production. The engineering and production responsibilities were transferred to Fairchild Camera and Instrument Company. Unfortunately, Boeing used the Perkin Elmer Data in its engineering being unaware of any changes in electrical and physical dimensions. In addition, a miscalculation in the optical speed of the lens system was made, making optical pictures approximately twelve (12) times as dense as desirable. As a result of this, four (4) general discrepancies exist in the O-23 system:

1. Incorrect wiring.

2. Incorrect space for M-1 camera control.

3. Poor optical photography with the O-23 camera.

4. Lack of a Technical Order on the O-23 camera system.

B. The wiring deficiency has been corrected partially by two using organizations - the 305th and 306th Bomb Wings. It is understood that Technical Order 01-20ENB-246, date unknown, will give the necessary instructions to make aircraft cabling compatible with the O-23 camera system. Basically, this consists of adding two wires to the aircraft wiring, providing a power source for one wire, and changing four connectors to the camera system.

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C. The inadequate space for the M-1 control and the P-8 control (O-15) on the control bracket has not been resolved. It appears that a section of the control bracket can be removed in the B-47B configuration to accommodate both controls on the bracket. It is not known if this deficiency exists on B-47E or RB-47E aircraft.

D. The optical photography problem is being given serious attention by General Mills. It is understood that General Mills is investigating: (1) denser filters, and (2) the possibility of installing an iris diaphragm in the optical path to improve the optical photographs. The optical picture problem is discussed further in succeeding paragraphs.

E. The lack of a Technical Order on the O-23 camera system has hampered operation and maintenance of the system. A supplemental method of getting written technical information into the field is necessary as maintenance malpractices may result from lack of technical information. In the case of the O-23 camera, the 306th Bomb Wing equipped one squadron first with O-23 cameras. This squadron has the majority of the present camera malfunctions, which indicates that these cameras were the guinea pigs for the later cameras installed in the other squadrons. Adequate technical information would have minimized problems of this nature. One specific difficulty exemplifies this deficiency. The 306th Bomb Wing Camera Repair personnel are finding O-23 cameras with lubricant in the clutches malfunctioning. Camera Repair personnel and the Fairchild Technical Representative believe that the clutches should not be lubricated. Upon removal of the lubricant, further malfunctions have not occurred.

F. The O-23 image recording camera consists of three main parts: (1) C-2 camera body, (2) C-7 camera magazine, and (3) M-1 camera control. The camera body has an optical flat in place of a lens. Radar images (R&I) are transmitted from the B-scope through a series of radar mirrors to the radar lens in the Y-4 periscope and recorded on the O-23 camera. Reference Figure 2, page 5.

1. The camera body contains the camera shutter, clutch, film actuating claws and the necessary mechanical components to operate the camera. The camera body is attached to the Y-4 periscope body on the radar optical assembly housing.

2. The camera magazine contains the film supply and the mechanism for film take-up and the associated functions. The magazine seats on the body by means of two male bayonet prongs which mate with the corresponding female bayonet fittings on the camera body and the magazine is locked onto the body by means of a lock bar. The bayonet fittings are electrical connections for the camera heater.

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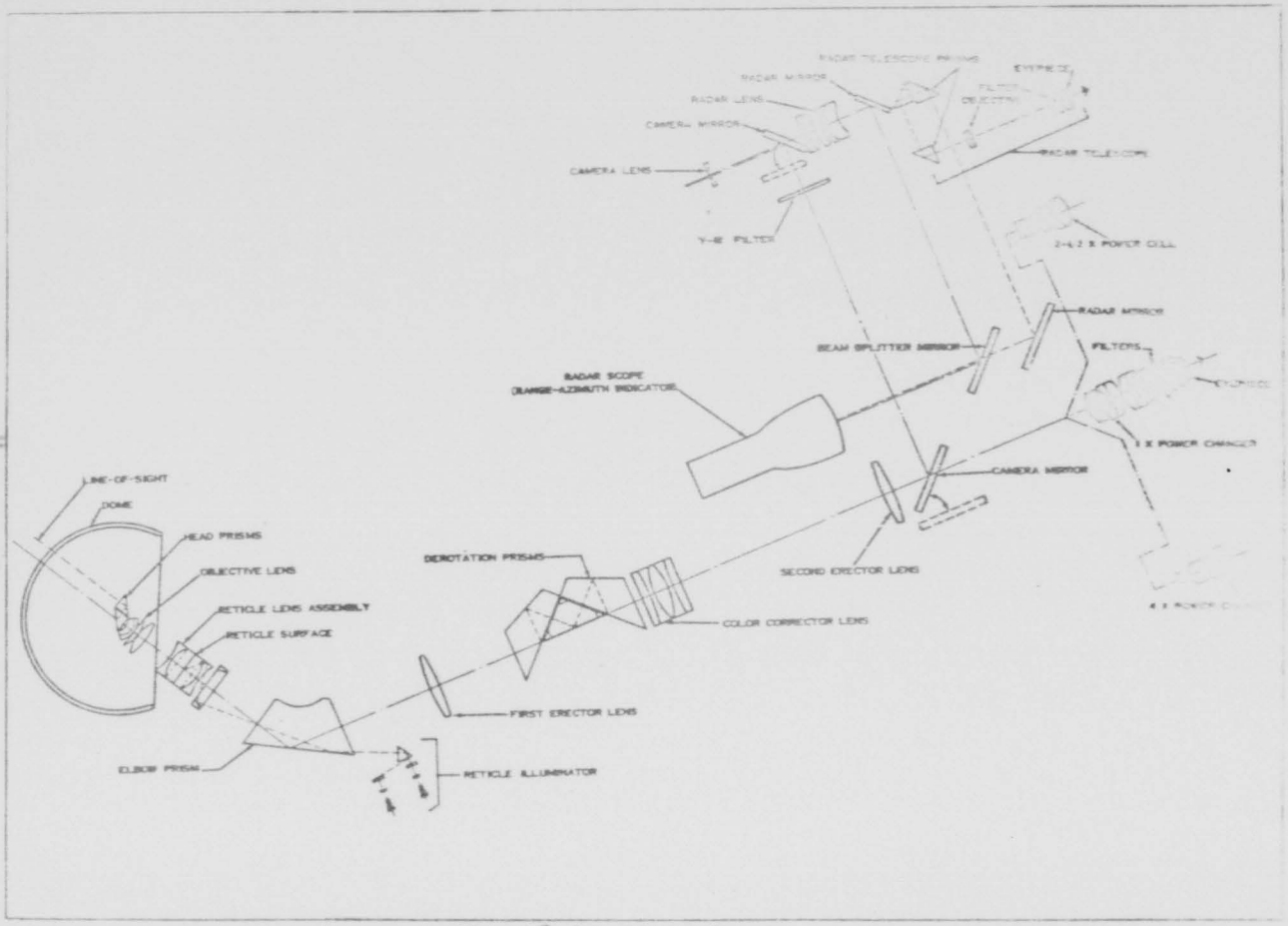

Figure F-2. Optical System Diagram

3. The M-1 camera control is mounted on the left side of the observer's compartment directly above the P-8 control for the O-15 camera system. The M-1 camera control has the necessary switches and electrical wiring to the camera to select mode of operation, to thread film in the camera, has the power switch, and an exposure counter. It should be noted that the O-15 camera must be operating in order for the A-23 to function.

G. Optical, radar (RAI or B Scope), or radar-optical pictures can be recorded in the camera upon selection by the radar operator.

1. Optical images are recorded on the O-23 camera through the Y-4 lens system (Ref Fig 2). The camera optical system is faster by a variable factor of eight to sixteen (8-16) times than was originally conceived. It was thought that the camera system would have a relative speed of f22 whereas in actuality the relative speed of the Y-4 periscope and camera approaches f5.6. Optical exposures can be taken at 1/200, 1/100, 1/50, 1/25, and 1/10 of a second. The only usable exposure time is 1/200 but this speed is actually too slow as optical pictures are over-exposed 8 to 16 times even at the fastest speed of the camera. It has been found that the negative density is 25% greater at the start of a bomb run than at the cross-over point using a shutter speed of 1/200.

2. A minus blue filter (-10) having 75% light transmissibility is contained in the optical path of the camera. In order to achieve better picture quality, a filter having 50% light transmissibility was tested on two B-47 aircraft. Optical over-exposure was experienced when using the authorized Super XX film (ASA100) and Plus X film (ASA50). Use of Linagraph Pan Film (ASA25) in conjunction with the 50% filter resulted in fair optical pictures and with no degradation of the RAI pictures. This combination is 8 times less sensitive than the standard combination using Super XX film and the 75% light transmissibility filter. Being 8 times less sensitive, the combination very nearly meets the exact requirements of the Y-4 lens system since the standard combination resulted in an estimated 8 to 16 times optical over-exposure. Disadvantages of Linagraph film are the larger grain and poor resolution, but usable pictures are obtained with this type film.

3. There are four (4) ways of reducing the effective speed: (1) slower film (less sensitive), (2) increasing shutter speed, (3) increasing the filter factor, and (4) install a variable position iris diaphragm in the optical path.

a. Of all slow films tested, only Linagraph Pan Film was satisfactory for both optical and RAI photography.

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b. Increasing the camera shutter speed may only involve a slight redesign of the camera shutter mechanism and therefore may be practical. On some films, alternate optical negatives are dense and less dense. It is thought that the less dense negatives are the result of a shorter exposure caused by a malfunction of the shutters. That is, the two shutters were positioned relative to one another so as to give a narrower than normal slit so that the shutter speed was increased (about 1/350th of a second on test film.)

c. Changing the filter from one of 75% light transmissibility to one having 25 to 50% transmissibility has merits for a quick fix when used with Linagraph film.

d. Installation of a variable diaphragm in the optical path of the camera is desirable. This proposal appears to be the most practical for the long term solution and the filter proposal in conjunction with Linagraph film as the interim fix.

H. Most optical photographs have appeared to be out of focus. Checking with the TSY 7065, camera image viewer, in the normal O-23 camera position, no focus discrepancy was noted on three aircraft reporting out of focus pictures. It has been suggested (not definitely known) that the optical tolerance of the O-23 camera system is ± .003 inches and therefore camera focus cannot be maintained for the eye accommodation of all operators with this tolerance. The adoption of an iris diaphragm in the optical path will result in a greater depth of field for the camera, thereby eliminating the possibility of out of focus pictures.

I. Radar photography in the radar mode is satisfactory with Super XX (ASA tungsten 64 and Plus X film ASA tungsten 32) on 75% of missions. The radar RAI mode uses a constant, unchangeable shutter speed. Control of picture exposure is possible only by the RAI brilliance control and the gain control knob on the C413/APS-23 control box. On every fourth scan a B scope picture is taken.

J. The radar image is recorded on the camera focal plane by sending the image from the RAI to: (1) the beam splitting mirror, (2) the radar mirror, and (3) through the radar lens, thence to the O-23 camera (Figure 2). Clipping part of the O-23 radar picture occurs when the small camera mirror is moved too slowly onto or out of position for taking optical pictures. Clipping is indicated by loss of 1/10 to 1/5 of either edge of the RAI picture. Proper focus of the RAI can be established by use of the TSY 7065 test set to check the focus of a test fixture on the face of the B scope.

K. Radar optical images are recorded when the M-1 control is set to the radar-optical mode. A radar scope picture is recorded every fourth scan followed immediately by an optical picture. The most common malfunction of this mode is overlapping pictures. The condition is caused by a slipping clutch.

L. Some common malfunctions of the O-23 camera system follow:

1. Jammed or Inoperative Counter. The bevel gear counter actuating arm is striking the optical or lens barrel as it reaches the upper extreme of its cycle. This results in jamming of the counter or failure of the counter to be actuated because the actuating arm is not traveling a complete cycle or distance. This is the probable cause of inoperative counters. The bevel gear actuating arm should be dressed down on the barrel side of the pin sufficiently to clear the barrel.

2. Jamming Film. Accordion pleating on the feed side of magazine. The upper shutter disk may not be installed high enough; therefore, the bearing surfaces (high spots) on the film actuating arm are not engaging the cam on the upper shutter disk. This results in the film actuating claws not engaging in the film perforations, and not drawing the film through the magazine, thereby jamming the film on the supply side of the magazine. Normally, a .005 inch shim and a .077 inch spacer are installed between the upper and lower shutter disk. On some cameras, an additional .077 inch spacer is required for the feed mechanisms to operate properly.

3. Camera Mechanism Jammed. The construction of the upper clutch assembly is such that there is a wobble in the upper clutch cam. This wobble is caused by the flimsy retaining ring on the bottom of the clutch cam. The start solenoid actuating arm when energized, momentarily, strikes the side of the clutch cam. As it strikes, in a bounce-shock movement, it tilts the clutch cam upward and jams it. The cause seems to be the ineffective spring retaining ring on the bottom of the upper clutch which allows the cam to slip out of its position in the slot. The jamming of the clutch mechanism causes failure of the whole camera system. To correct this condition, it is proposed to replace the retaining ring with a square cut ring (piston ring type) and mill its slot for precision fit of a square ring.

4. Blurred Data Plate. The upper shutter disk is sometimes improperly positioned (down too far on shutter shaft). This prevents the shutter from properly actuating the capping shutter over the data plate port. The failure of the capping shutter to be actuated causes blurred images on the data plate by leaving the data plate uncovered during the time the film is being transported. Extreme care in assembling the shutter is necessary. A .005 inch spacer gauge is required to position the upper shutter disk in its proper place. See Figure 2, Appendix 2.

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M. A recapitulation of common O-23 camera system malfunctions, the symptoms and the causes of the malfunctions follow:

Malfunction	Symptom	Cause
1. Jammed magazine	No film winding	a. Bent film claws. b. Film actuator arm not engaging shutter disk cam.
2. Counter stuck		
a. M-1 Counter	a. Counters inoperative	a. Micro switch inoperative.
b. Camera Counter	b. Counters inoperative	b. Cable fouled counter gear.
3. Jammed mechanism	Camera inoperative	Clutch cam tilted and jammed by start solenoid actuating arm.
4. Fuzzy optical pictures	Out of focus pictures	a. .003" camera depth of field. b. Magazine improperly seated.
5. Heater contacts bent	Bending of bayonet fittings. Magazine incorrectly seated	Blind fitting of contacts.
6. Overlapping pictures	Overlapping of radar and optical pictures	Slipping clutch
7. Not working in all modes	No impulse. No pictures	Short in wiring or a malfunctioning mechanism.
8. Data plate out of focus, pictures in focus	Data plate out of focus on film	Upper shutter improperly positioned.
9. Cannot zero counters	Reset arm stuck	Reset arm bent against camera casting.
10. RAI pictures only	No optic pictures on film	Cam which actuates switch to operate camera mirror not contacting switch.

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	Malfunction	Symptom	Causes
11.	Shutter speed reading	Greatly over-exposed	Observer or mechanic pulls down on shutter speed selector upon changing shutter speed causing bevel gear to become unseated.
12.	Camera mirror obscuring optics	Camera mirror remains in picture taking position	3 cams in mirror out of adjustment.

N. The dowel pin in the camera body for alignment of the shutter speed control knob is loosely fitted and slides out of the case. The hole is drilled completely through the case and when a pin is loose it may fall into body, thereby jamming the camera mechanism. The hole should be stop-drilled into case or have a shoulder inside camera to preclude malfunctions due to the dowel pin falling out of place.

O. A simple shutter disk puller for the O-23 camera is used by 305th and 306th Bomb Wing camera repair personnel. Details of construction are outlined in Figure 1, Appendix II.

P. The O-23 camera system has gotten a poor reputation which it does not deserve. There are some weak parts in the camera system as spot-lighted in this report. However, it is felt that these can be corrected without any great difficulty. The camera can have a very great value for the mission of the Strategic Air Command and if this is considered important enough, the difficulties can soon be resolved.

for Phillip W O'Kane Capt
ENOCH T. NAVERSEN
Captain, USAF
Project Officer

4 Appendices
- Appendix I - O-23 Camera System Malfunction
- Appendix II - O-23 Radar Scope Recording System
- Appendix III - O-23 Camera Preflight Checks
- Appendix IV - O-23 Camera UR Summary

APPROVED:

Thomas P. Savage
THOMAS P. SAVAGE
Major, USAF
Chief, OES

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APPENDIX I

O-23 CAMERA SYSTEM MALFUNCTIONS

MALFUNCTION	SYMPTOM	CAUSE
Jammed magazine	No film winding	1. Bent film claws. 2. Film actuating arm not engaging shutter disc cam.
Counter Stuck (a) M-1 Counter (b) Camera Counter	(a) Counters inoperative (b) Counters inoperative Video viewing film	(a) Micro switch inoperative or short. (b) Cable fouled counter gear
Jammed mechanism	Camera inoperative	Clutch cam tilted & jammed by short solenoid actuating arm
Fuzzy optical pictures	Out of focus pictures	(a) .003" camera depth of field (b) Magazine improperly seated
Heater contacts bent	Bending of bayonet-fitting. Magazine incorrectly seated.	Blind fitting of contacts.
Overlapping pictures	Overlapping of radar & Optical pictures	Slipping clutch
Not working in all modes	No impulse No pictures	Short in wiring or a malfunctioning mechanism.
Data plate out of focus, pictures in focus	Data plate out of focus on film	Upper shutter improperly positioned.
Cannot zero counters	Reset arm stuck	Reset arm bent against broken casting
RAI pictures only	No optic pictures on film.	Cam which actuates switch to operate camera mirror not contacting switch.

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MALFUNCTION	SYMPTOM	CAUSE
Shutter speed reading not set in accordance with dial	Greatly over-exposed optical pictures	Observer or mechanic pulls down on shutter speed selector upon changing shutter speed causing gear to become stripped.
Camera Mirror obscuring optics	Camera mirror remains in picture taking position	3 cam in mirror out of adjustment

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APPENDIX NO. 2.

SUBJECT: O-23 Radar Scope Recording System.

I. The purpose of the O-23 Radar Scope Recording System is to record on film at pre-determined intervals, the Radar and Optical presentation of the Y-4 Bombsight.

A. Components:

The O-23 system consists of the following components:

1. Camera, Type C-2.

2. Magazine, Type C-7.

3. Control, Type M-1.

B. Operation:

1. (a) The Camera (and Magazine) is mounted on the Y-4 bombsight in such a position that it will record, on film, the Radar and Optical presentation of the Bombsight.

(b) It is connected to the M-1 Control by an electrical cable, receives its power from, and functions by, impulses received from the M-1 Control.

2. (a) The M-1 Control is connected, by means of electrical cables, to the P-8 Control, the C-2 Camera and the Bombsight Optical Mirror.

(b) It is designed for operation on three (3) modes:

(1) Radar Mode.

(2) Radar-Optical Mode.

(3) Optical Mode.

(c) The M-1 Control is entirely dependent on the P-8 Control for power and radar impulses to operate the camera, and cannot function without it.

3. The P-8 actually controls the operation of the M-1 by providing power and impulses to the M-1 in order that the camera may photograph the presentation of the bombsight as follows:

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(a) RADAR MODE: The P-8 sends impulses to the M-1 Control in order that the M-1 will cause the camera to take a picture of the bombsight radar presentation. This, the M-1 will do every 4th scan of the radar antenna, regardless of the mode setting of the P-8.

(b) RADAR-OPTICAL MODE: During the Radar phase of this mode, the control and camera function the same as in paragraph "a" above. However, at the end of this phase the M-1 receives an impulse from the recycle micro switch in this camera which it relays to the bombsight mirror, causing the mirror to flip over to Optical. When this occurs, the bombsight mirror sends another impulse to the control and camera to take a picture of the Optical presentation of the bombsight. These two pictures are so close together that they do not interrupt the time element of the next Radar phase.

(c) OPTICAL MODE: When set on this mode the camera itself, by means of a Geneva wheel and Micro switch, times the intervals between the picture. This time element is approximately 4.8 seconds and is comparable to the time element of every fourth sweep on the Radar antenna.

On this mode the P-8 Control serves ONLY to supply the necessary 28VDC to operate the Camera.

C. Nomenclature:

In order that the "cycle of operation" of the system be fully understood, the nomenclature of various components must be explained.

D. Camera:

The camera body contains the following assemblies:

1. Motor: The motor is continuously running, operating immediately when the "on" switch is actuated on the M-1 Control.

2. Gears (reduction): A series of gears connected directly to the motor and over-riding clutch assembly. Ratio 50 to 1.

3. Clutch: Consists of two over-riding clutches on concentric shafts designed to control the operation of the two shutter discs.

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4. Cams: Four cams are attached to the clutch assembly. The Upper cam controls the action of the Lower shutter disc. The Center cam controls the action of the Upper shutter disc. The "Step Cam", which is pinned to the center cam in conjunction with the shutter Speed Control assembly (on the mechanism plate), govern the width of the slit opening between the shutter discs. The Lower cam actuates the M-1 Counter Micro switch and the Recycle Micro Switch.

5. Solenoids: Two solenoids are attached to the mechanism plate, they are the Start solenoid and Radar Hold solenoid.

6. Micro Switches: Three micro switches are provided. They are known as the M-1 Counter switch (operates on all modes), Recycle switch (effective on Radar-Optical and Optical only), and Timing switch (effective on Optical mode only).

7. Timing Wheel (Geneva): Actuates the Timing Micro switch to send out an impulse to the M-1 Control, to have the camera take a picture of the Optical presentation of the bombsight. This switch is effective on the Optical mode ONLY.

8. Mechanism Plate: Contains the necessary Release, Timing and Holding Levers that engage and release the cams and also the Clutch Timing mechanism to control the size of the shutter slit opening.

9. Shutter: Consists of two partial discs revolving on concentric shafts. The Upper disc contains an off-center stud mounted on a cam. The cam serves to engage and disengage the film advance claw from the film. The off-center stud actuates the claw when engaged in the film to advance same and also supplies power to the magazine drive mechanism to rotate the take-up spool.

10. Exposure Counter: Located in camera body and mechanically operated by stud on lower cam.

11. Recording Chamber: Contains Watch, Data Card, Recording Chamber lights and Range Lights (6).

12. Capping Curtain: Disc type, actuated by the upper shutter disc. When open, allows chamber data to be recorded on the film.

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13. Heaters: Thermostatically controlled.

14. Magazine Lock Bars: Crank controlled to positively lock magazine on the camera.

15. Magazine Wind Stud: Refer to paragraph #9.

16. Film Actuating Claw: Located in camera body. Advances film for next exposure. Refer to paragraph #9.

E. Magazine:

The Magazine Body contains the following assemblies:

1. Load Spool Shaft.

2. Take-up Spool Shaft.

3. Film Threading Gears (2)

4. Unexposed Film Footage Indicator.

5. Focal Plane Pressure Plate.

6. Magazine Wind Mechanism.

7. Magazine Wind Mechanism.

8. Film Movement Tell-tale Indicators.

9. Heaters, thermostatically controlled.

F. Control:

The M-1 Control contains the necessary electrical relays, condensers, resistors, etc., to operate the camera on all three modes. The Face Plate is indirectly lighted and contains the Off-On switch, Film Threading Switch, Weston Film Rating Potentiometer adjusting screw Mode Selector Dial, Control Counter re-set knob, Fuse Receptacles and extra fuses.

Cycle of Operation (Mechanical)

G. Radar Mode:

1. Power switch of control is turned "on" which:

(a) Provides current to the heaters.

(b) Provides power to operate the camera motor. This motor runs continuously.

2. Selector switch of control is set on Radar and the camera operates on impulses received from the P-8 Control through the M-1 Control.

3. The first impulse releases the over-riding clutch assembly by energizing the "Start" solenoid, removing the holding lever from the nose of the center cam. This permits the lower clutch assembly to rotate and open the upper shutter disc. On the same impulse the "Holding" solenoid is energized, engaging a lever in the path of the upper cam and preventing this cam from revolving. This holds the lower shutter disc stationary during the Radar phase.

4. At this state a picture of the Radar Scope of the bombsight is being recorded.

5. The upper shutter disc completes its cycle and the camming action of the clutch assembly re-engages the "Start" solenoid lever and disengages the "Holding" solenoid lever from the path of the cams. The camera is now ready for the next exposure impulse.

6. During the rotation of the upper shutter disc, the disc engages the arm of the Recording Chamber Capping Curtain, opening the curtain momentarily to permit the recording chamber data to be recorded on the film.

7. Near the end of the rotation of the upper shutter disc the Film Advance Claw, actuated by the cam and stud on the upper shutter disc, engages in the film and advances it for the next exposure. The same action also winds the Magazine Drive Mechanism.

8. The camming action of the lower cam advances the counter in the camera by contacting a lever attached to the counter and the counter in the M-1 control by means of a microswitch.

NOTE: The "Speed Timing" mechanism does not function during the radar mode.

H. Radar-Optical Mode:

During the Radar phase of this mode, the camera operates in the same manner specified above. However, the M-1 control next has to provide impulses to operate the camera through the "Optical" phase of this mode, as follows:

1. An impulse from the camera through the counter micro switch of the control to the bombsight shifts the mirror in the bombsight to the "Optical" position. This, in turn, sends another impulse to the control to have the camera take a picture of the "Optical" presentation of the bombsight.

2. This pulse serves two purposes, as follows:

   (a) It energizes the "Start Solenoid" disengaging the holding lever from the path of the lower clutch assembly cam, permitting the lower cam to rotate and the upper shutter disc starts to open.

   (b) At the same time it energizes the "Holding Solenoid" engaging the holding lever in the nose of the upper clutch assembly cam and preventing the lower shutter disc from rotating. This action is only momentary as the lever almost immediately releases. However, the lower shutter disc is prevented from rotating by the action of the "Timing Mechanism", which engages a lever in the path of the cam and a Timing Lever falls in the recess of the Step Cam". This prevents the complete revolution of the lower shutter disc until the "Step Cam" lever is cammed out of place, releasing the Timing Lever from the nose of the cam and permitting the lower shutter disc to rotate through its cycle.

3. Inasmuch as the upper shutter disc started its rotation ahead of the lower disc, the space of slit opening between these discs during their rotation constitutes the speed of the shutter. This speed or relationship between the discs is controlled by the Speed Control Knob on the camera body.

4. At the end of this phase, the lower cam contacts the "Recycle Micro Switch" and cuts off the impulse to the bombsight mirror and the mirror motor reverses to flip the mirror back to the Radar side.

5. Near the end of the discs rotation the "Film Advance Claw" actuated by the stud and cam on the upper shutter disc, engage the film slots and advances the film. At the same time, it is also providing power to the magazine wind mechanism.

6. The lower cam actuates the exposure counter in the camera by means of a lever and the counter in the M-1 Control by means of a micro switch.

I. Optical Mode:

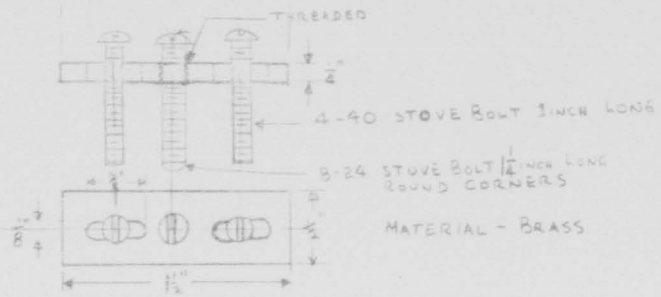
During this mode the camera functions in the same manner as specified in paragraphs 1 to 6 of the Radar-Optical Mode with this exception: The Geneva Wheel (on mechanism plate) sends an impulse to the M-1 control every 4.8 seconds. The M-1 control in turn sends this impulse to the camera to take a picture of the Optical presentator of the bombsight. Also on this phase, the bombsight mirror stays on "Optical" until the control selector dial is set for either of the other two modes.

II. Disassembly Procedure:

A. Special Tools:

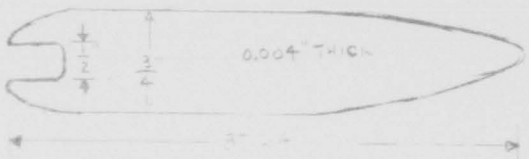
1. A specially made "Gear Puller" tool will be necessary in order to remove the shutter discs. Specifications below:

FIG. No. 1
GEAR PULLER



2. A special shim .003 to .005 will have to be fabricated in order to maintain the tolerance between the two clutch assemblies. This is illustrated below:

FIG No. 2
ASSEMBLY FEELER GAGE



APPENDIX 2

B. Lubrication:

Not recommended.

C. Maintenance:

Unless malfunctions occur, maintenance is not recommended for at least 50,000 cycles.

D. Camera:

1. Remove "speed control knob" by setting speed to 1/200th and removing three screws and lock washers.

2. Remove Watch and Data Card from recording chamber.

3. Loosen side plate of data chamber by removing 8 flat head screws.

4. Pull shielded range lights wire and lights from the path of the counter reset gear.

5. Remove side plate.

6. Remove 13 flat head screws from camera mechanism face plate.

7. Insert narrow blade screwdriver on securing screws of "Winchester" terminal, from power cable to camera, and pry up and down to loosen camera mechanism plate from camera body. DO NOT pry open the face plate of camera as tolerances are critical and any burrs on the seating or mating surfaces may affect proper operation and resolution.

8. Remove camera mechanism face plate.

9. Remove upper shutter disc by use of special tool, taking care not to mar the cam or stud attached to this disc.

10. Remove "half-moon" shaped key from this shaft.

11. Remove shim and spacer from the top of the lower shutter disc. Shim is .006 in thickness, but can be variable. Spacer is .077 in thickness and is not variable.

12. Remove lower disc by use of special tool.

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13. Remove key from shaft.

14. Remove three fillister head screws from mechanism to plate and lift mechanism plate from posts.

15. Remove horseshoe clips from mechanism arms and levers in order to remove four fillister screws and a mechanism plate (yellow).

16. Upper and lower clutch assemblies may now be removed by lifting clutch assembly from bearing hole and engagement with power gear.

17. Clutch assembly can now be separated for inspection and repair. It is not recommended that the clutch assemblies and springs be disassembled further due to the critical nature of the pinning of this assembly. It consists of springs riding in a chamber and moving the clutch by binding against the wall of the clutch chamber and thereby moving the shutter discs. When the stop levers engage the nose of the cams, it prevents the binding action and permits the clutch assembly to rotate without moving the shutter discs. The clutch assembly is constantly in motion, being geared directly to the motor by the use of reduction gears.

III. Re-Assembly:

A. To re-assemble, reverse the above procedure. However, when installing the upper clutch assembly on top of the lower, it will be necessary to insert the .003 to .005 shim in order to maintain the correct tolerance between these assemblies. After the shutter discs are installed and secured the shim can then be removed.

B. The use of this shim is vitally necessary in order that these assemblies be kept slightly apart to prevent binding of clutch and the resultant mechanism jam.

C. To install side plate, set counter to 000, keep tension on gear clutch chamber, push in counter reset lever, before seating side plate.

D. Set mechanism speed to 1/200".

E. Set speed control knob at 1/200".

IV. Disassembly:

A. Magazine:

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1. Open film chamber.

2. Remove three screws holding mechanism plate to magazine body, two flat head screws at base of pressure plate and "screw boss" at bottom of lower chamber of magazine.

3. Tilt mechanism plate and remove from body.

V. Re-assembly:

Reverse above procedure.

NOTE: Explain proper loading procedure.

VI. Disassembly:

A. Control:

1. Loosen seven Dzus fasteners on back of control cover.

2. Remove control from cover very carefully so as not to distort spring seal.

3. Further disassembly can be made of the electrical components by referring to the schematic wiring diagram.

VII. Re-assembly:

Reverse above procedure.

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APPENDIX NO. 3

PRE-FLIGHT CHECK FOR THE O-23 CAMERA SYSTEM

I. Magazine Pre-flight in Shop.

a. Check cleanliness of magazine and absence of burrs on polished surfaces. Check proper operation of film gate. Lock film footage indicator arm in the open position.

b. Load magazine in dark room.

(1) Provide adequate loops for film and be certain the film is seated properly in the sprockets.

(2) Secure the film gate.

(3) Lock the spool retaining arms in the slots provided in the spool.

(4) Close the cover which automatically positions the footage indicator.

CAUTION: After the magazine is loaded DO NOT turn the magazine drive coupling. Check heater pins on magazine to ascertain they are not bent.

II. Bench Check.

a. Install magazine on O-23 camera mock-up and run off approximately 20 exposures, observing the telltale indicators for proper movement.

b. Check film at magazine aperture for torn or mutilated sprocket holes.

c. Close protective cover over the mating surface.

d. Indicate on the data plate, type of film, amount of film, and the name of the person loading it.

III. Visual Inspection of Camera System in Aircraft.

a. Remove the protective cover on camera and place in holder.

b. Check the mating surface for burrs, cleanliness, and obstructions in the heater sockets.

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c. Check the recording lens for cleanliness.

d. Check the speed control shutter knob for ease of operation and correct timing. Leave it set at 1/200th of a second or other predetermined shutter speed.

IV. Power Check.

a. Install the magazine on the camera, making certain the heater connectors are positioned and the mating surfaces flush, and lock into position.

b. Turn on the M-1 control power switch.

c. Depress the threading switch for a series of 5 pictures, and observe the telltale knobs for proper movement. Repeat this procedure approximately four times.

d. Set the potentiometer for the tungsten speed of the film being used.

e. Observe the counter on the M-1 for the proper operation and reset to zero.

f. Remove the data plate, observe the range light holes for obstructions, and check the recording chamber lights. Set counter to zero.

LUBRICATION - Not recommended

MAINTENANCE - Unless malfunctions occur, maintenance is not recommended for at least 50,000 cycles.

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APPENDIX NO. 4

UNSATISFACTORY REPORT SUMMARY

Mounting Panel in Aircraft	306 BW 53-67 15 Jan 53
Securing Cable to Data Plate	306 BW 53-68 15 Jan 53
Threaded Steel Insert	306 BW 53-69 15 Jan 53
Stock Listing of O-23 Film	306 BW 53-170 27 Jan 53
Jammed Camera Mechanism	306 BW 53-377 19 Feb 53
Jammed Camera Mechanism	306 BW 53-378 19 Feb 53
Jammed Camera Mechanism	306 BW 53-379 19 Feb 53
Jammed Camera Mechanism	306 BW 53-380 19 Feb 53
Jammed Camera Mechanism	306 BW 53-381 19 Feb 53
M1 Control Electrical Short	306 BW 53-382 19 Feb 53
C-7 Magazine	306 BW 53-752 16 Sep 53
Overlapping pictures	306 BW 53-480 26 Aug 53
Overlapping Pictures	306 BW 53-481 26 Aug 53
Overexposure Optical Mode	306 BW 53-858 13 Oct 53
Overexposure Optical Mode	306 BW 53-859 13 Oct 53
Jammed Counter	306 BW 53-860 13 Oct 53
Overlapping Picture	306 BW 53-861 13 Oct 53
Jammed Mechanism	306 BW 53-904 22 Oct 53
Mismating camera magazine heater contacts	306 BW 53-905 22 Oct 53
Loose Dowel Pins	306 BW 53-906 13 Oct 53
Jammed Magazine	306 BW 53-907 22 Oct 53
Inoperative Counter	306 BW 53-908 22 Oct 53
Inoperative Counter	306 BW 53-909 22 Oct 53
Upper Locking Bar	306 BW 53-912 22 Oct 53

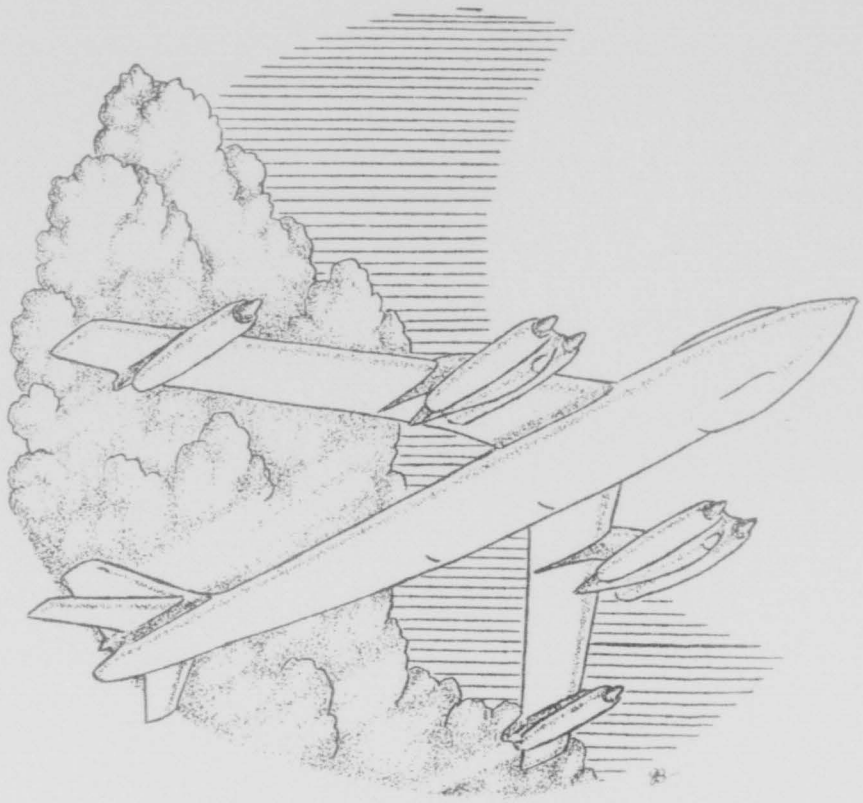
APPENDIX 4.

EXHIBIT 7B

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 121



6TH AIR DIVISION
MAC DILL AFB., FLORIDA

INFORMATION COPY

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 24 December 1953

SPECIFIC ITEM REPORT NO. 121

SUBJECT: IP 231/APS-23 10-Inch Radar Indicator in B-47B Aircraft (EE-58)

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCSH (B-47)

I. PURPOSE:

To evaluate the installation of an IP 231/APS-23 radar indicator in B-47B aircraft.

II. FOREWORD:

A. This project was authorized by Headquarters Strategic Air Command message DMSDA22 10195, dated 2 March 1953 (Confidential).

B. The 10-inch IP-231/APS-23 Indicator was developed to replace the 5-inch ID-218/APS-23 Indicator which is normally used with the APS-23 radar system.

III. CONCLUSIONS:

A. The IP 231/APS-23 (ten (10) inch) is an inferior indicator for bombing over the ID 218/APS-23 (five (5) inch) due to radial line sweep distortion on the larger indicator.

B. Radial line sweep distortion in the track and bomb positions is a systems problem which becomes apparent with the 10-inch indicator.

1. The sweep distortion has a deleterious effect on radar definition from 50-60 seconds time to go to the bomb release point.

2. The interim WADC fix for radial line sweep distortion has had no effect on the 10-inch indicator on

mock-up checks. This distortion must be removed prior to the time that a new Motorola 10-inch indicator becomes available.

C. The rubber light hood for the IP 231/APS-23 is inadequate to block light reflections from the face of the indicator.

D. The control range of the brilliance control is inadequate.

E. The sweep amplitude and back lash controls are located too far from the observer.

F. The sixteen (16) inch viewing distance available in the B-47B aircraft installation was not satisfactory.

IV. RECOMMENDATIONS:

A. The IP 231/APS-23 radar indicator not be procured for use in B-47 aircraft.

B. WADC further investigate radial line sweep distortion and develop and install fixes for future 10-inch indicators prior to the time that the production model of the Motorola indicator is installed in B-47 aircraft.

C. Adequate light hoods be procured for future 10-inch indicators to eliminate light reflection from stray light.

D. The brilliance control should have its normal operating point in the center of its mechanical range to extend tuning of marginal radar indicators.

E. Controls for future 10-inch indicators be located in an accessible location.

F. The viewing distance of future 10-inch indicators be a minimum of eighteen (18) inches from the observer.

V. DISCUSSION:

A. Headquarters SAC requested that two (2) 10-inch indicators be evaluated in 6th Air Division B-47B aircraft. One installation was made in B-47 No. 51-2220, 306th Bomb Wing, with the 10-inch indicator replacing the ID 218/APS-23 indicator. The second 10-inch indicator was installed in B-47B No. 51-2232, 305th Bomb Wing, and was tested in conjunction with the Extended Tracking Range Computer and the Dual Offset Unit. In the latter installation, the 10-inch indicator was installed adjacent to the 5-inch indicator for comparative purposes.

B. All test observers preferred to make bomb runs with the 5-inch indicator due to the loss of radar definition during the critical time of 50-60 seconds before bomb release. This loss of definition is

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caused by noise interference, and is known as radial line sweep distortion. The effect of radial sweep distortion is not usually apparent on the 5-inch indicator. On the 10-inch indicator, this distortion causes deterioration of target definition as the bomb run progresses. A series of axial or radial lines brighten the scope in the bomb and track positions so that the targets are obscured. The effect is negligible down to 20 nm range from the target, but from this point on, distortion becomes progressively worse so that no targets are identifiable on the 10-inch PPI from 20 to 30 seconds from bomb release.

C. An interim fix proposed by WADC for radial line sweep distortions has been tested on the 306th Bomb Wing bench mock-up and on a B-47 with a 5-inch indicator, which had this distortion, with no apparent effect. Flight tests, with a 10-inch indicator installed in this aircraft, are planned and the results will be reported.

D. Test observers reported that reflections from the "memory point light," the "offset lights," and other stray light sources were very distracting. A second hood was locally manufactured which eliminated light reflection but it proved to be in the way for other observer functions. It should be noted that in the full scan operation (Nav Position) for radar navigation the 10-inch scope was superior to the 5-inch scope.

E. Another common complaint was that the control range of the brilliance control was inadequate. On one installation, the operator did not have sufficient range on the brilliance control to permit him to set optimum brilliance on the C.R.T. If the normal operating point was in the middle of the control range of the brilliance control, this condition could be avoided.

F. Controls on the indicator are located too far away for the observer to reach them conveniently during the bomb run. In particular, the sweep amplitude and back lash controls were difficult to reach. Future 10-inch indicators should have all controls centrally located to afford easy access and should be in a position where normal observer motions will not disturb control settings.

G. The physical size of the IP 231/APS-23 does not permit the indicator to be installed in an optimum position in the B-47B aircraft. In the best of the two installations, the viewing distance was only sixteen (16) inches from the observer. The seat rotation adjustment did not permit viewing the scope parallel to the line of sight. This condition caused undue fatiguing of the observer. The second installation was made even less optimum in order to be able to compare the radar presentations of the ID-218 5-inch indicator with the 10-inch indicator and give the observer the option of using the better presentation. The 10-inch scope in this installation interfered with the use of the optics and RAI because of the limited space. The space occupied by the aerial refueling plumbing could have been used to good advantage for the 10-inch scope. If the aerial refueling slipway door was located as in the RB-47, a 10-15% increase

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in useful space would be afforded K-System compoents in the observer's compartment.

H. In summary, the IP 231/APS-23 indicator was very unsatisfactory for bombing. The test observer on one aircraft blamed this indicator for a pronounced rise in the average circular bombing error while the scope was installed. This comment apparently has real value, for in the other aircraft, where a 5-inch indicator was available, no observer used the 10-inch indicator for any complete bomb run. The Project Officer observed many runs on both indicators and agrees that the deterioration of the target area on the 10-inch scope was pronounced during the critical portion (last minute) of the bomb run. The viewing distance from the 10-inch scope caused observers undue eye strain and the unnatural sideward lean, necessary to view the scope, induces fatigue. Most of the deficiencies associated with the installation details and the physical location of the IP 231/APS-23 indicator appeared to be corrected in the mock-up installation of the new Motorola 10-inch indicator. During engineering tests of this new indicator, elimination of radial line sweep distortion should be demonstrated in order to insure that a satisfactory 10-inch radar indicator is provided for bombing in B-47 aircraft.

for ENOCH T. NIVERSEN
Captain, USAF
Project Officer

APPROVED:

THOMAS P. SAVAGE
Major, USAF
Chief, O.E.S.

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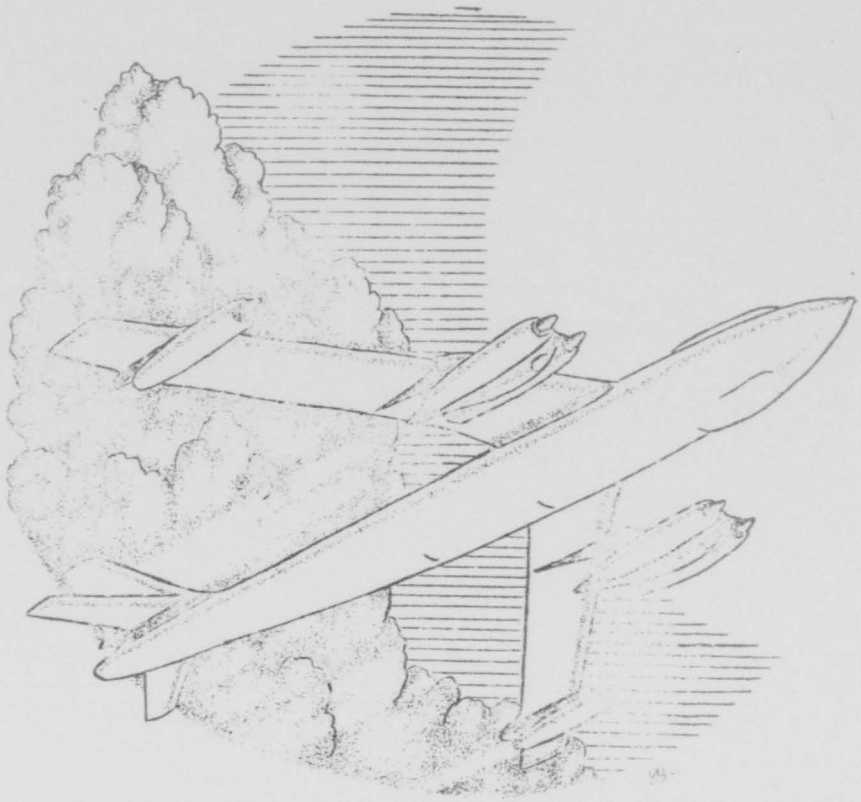
EXHIBIT 7C

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 122



6TH AIR DIVISION

MACDILL AFB., FLORIDA

INFORMATION COPY

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 26 December 1953

SPECIFIC ITEM REPORT NO. 122

SUBJECT: Service Test of Eclipse-Pioneer Inverter, Type AN-3516, P/N 4213-32E03-1-A, in B-47 Aircraft (EE-10).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCSH (B-47)

I. PURPOSE:

To summarize information gained during suitability tests of the Eclipse-Pioneer, P/N 4213-32E03-1-A, Type AN-3516 inverters installed in B-47 aircraft.

II. FOREWORD:

A. B-47 OES SIR #39, dated 25 April 1952, subject: Rotary Inverters, Type AN-3516, B-47 Aircraft, pointed out deficiencies in inverters installed at that time and recommended that a test program be initiated to determine the most reliable inverter for use in B-47 aircraft.

B. WADC concurred with this recommendation and provided nine (9) Eclipse-Pioneer inverters, P/N 4213-32E03-1-A, to this Section for the purpose of this program. These inverters were installed in B-47 aircraft for flight testing. Operating time was recorded by running time meters. Results of testing the Eicor inverters were presented in SIR #108, dated 19 August 1953.

C. Service test of Eclipse-Pioneer inverters was terminated with the concurrence of WADC on 12 November 1953.

D. The inverter location designated as the "Secondary" position in the B-47B aircraft is the same as the position that is called the "A-5 inverter" in the B-47E aircraft. Comments in this report on the "Secondary" position are applicable to the "A-5 inverter" location.

III. CONCLUSIONS:

A. The Eclipse-Pioneer inverter is satisfactory for use in the main and secondary positions in B-47 aircraft when equipped with high altitude brushes, Eclipse-Pioneer P/N 51, Air Force Stock No. 4213-865256.

B. The Eclipse-Pioneer inverter meets the dimensional limitations of Specification AN-3516. However, this inverter will fit only in the main and secondary positions on B-47B aircraft due to the placement of input leads in the inverter compartment.

C. The present cooling sleeves installed in the secondary position on B-47B aircraft will not accommodate the Eclipse-Pioneer inverter end-bell.

D. Maintenance required on this inverter is not considered excessive as an average of one (1) maintenance man-hour was required for each 28:41 flying hours; however, this figure would increase to one (1) maintenance man-hour for each 52:29 flying hours if the maintenance man-hours utilized in replacing the low altitude A.C. brushes were not included.

E. An average of 350 hours air operating time and 672 hours total operating time were accumulated per inverter prior to closing out the test program.

IV. RECOMMENDATIONS:

A. AMC-WADC qualify the Eclipse-Pioneer inverter as being suitable for use in the main and secondary positions on B-47 aircraft when equipped with high altitude brushes, Eclipse-Pioneer P/N 51, Air Force Stock No. 4213-865256.

B. AMC-WADC inform the using agency that cooling sleeves installed at the secondary position must be modified prior to installation of this inverter.

C. AMC-WADC insure that inverter specifications are written to: (1) designate the diameter and length of the cooling air inlet so that cooling provisions provided by aircraft manufacturers will accommodate all inverters of the same type, and (2) define inverter dimensional limitations which are compatible with the aircraft in which the equipment is to be installed.

V. DISCUSSION:

A. It was found that the Eclipse-Pioneer inverters would not fit in the spare position on B-47B aircraft due to the fact that the input leads to both the secondary and spare inverters interfered with the control box on top of the inverter. This Section has been informed that

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the inverter compartment in the forward wheel-well has not been redesigned on B-47E aircraft therefore, this inverter will not fit in the secondary position (A-5 position) on B-47E aircraft It was determined that the inverter meets the dimensional limitations of Specification AN-3516 The AN-3516 Specification must not be compatible with the criteria to which the compartment was designed or vice versa.

B. The air operating time shown in Appendix I is based upon aircraft flying time. Since the test inverters were installed in main and secondary positions, the air operating time given in Appendix I very closely approximates the actual air operating time, as the main and secondary inverters operate constantly during flight except when malfunctioning. Total operating times shown in Appendix I were recorded by running time meters.

C. The following causes for malfunctioning of the inverter were found during this test period:

1. As originally received, the inverters had low altitude AC brushes installed (Eclipse-Pioneer P/N V-54). After approximately twenty-six (26) hours total operating time per inverter, three (3) inverters installed in the secondary position failed due to completely worn out AC brushes and burned slip rings At this time all nine (9) inverters were modified with high altitude brushes, Eclipse-Pioneer P/N 51, and put back in service. One further failure of an inverter, S/N R-84, due to worn out AC brushes and burned slip rings, was noted at inverter total operating time 430:00 hours, air operating time 232:00 hours. This inverter, S/N R-84, was one of the inverters which initially had failed because of the low altitude brushes The original slip rings had been turned down on a lathe after the first failure and then re-installed After the second failure, this inverter was non-reparable and thus failed to complete the entire testing period. It is felt that the first three (3) failures of this nature were due to the use of improper AC brushes (low altitude type), plus improper cooling during ground and air operation.

2 During the early stages of the program a second common malfunction was caused by improper cooling during ground operation. This malfunction usually occurred after the inverter was run for a period of time on the ground; for example, during pre-flight. The inverter operated normally on the ground but then failed shortly after take-off. Subsequently, when the inverter was checked, nothing was ever found wrong with it. It was thought that during ground operation the inverter received

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insufficient cooling therefore, it overheated, the voltage rose, and the inverter was switched off by the change-over relay. A total of eight (8) malfunctions of this type were noted during the service test of subject inverters: two (2) were in the "main" inverter position and six (6) in the "secondary" position. Modified cooling sleeves were locally designed and manufactured to fit the inverters installed in the secondary position. Specification AN-3516 allows a maximum end-bell diameter of $7\frac{1}{2}$" for inverters, and the Eclipse-Pioneer inverter end-bell diameter is approximately $7\frac{1}{4}$". The original cooling sleeves were not large enough to accommodate the Eclipse-Pioneer inverter therefore, it is believed that the manufacturer of the cooling sleeves did not abide with the aforementioned specification. The local modification of the cooling sleeves merely replaced the original fabric sleeve with a fabric sleeve large enough in diameter to fit the maximum allowable inverter end-bell measurement as set forth by AN-3516. The end of each sleeve was fitted with draw strings to facilitate close fastening of the sleeve to the inverter. Care was taken to open the lower radar compartment door and the access panel of the secondary and spare inverter compartment during prolonged ground operation. No failures of this type were encountered after this modification and procedure were put into effect.

3. One malfunction of an Eclipse-Pioneer inverter was caused by failure of the DC input relay. This failure occurred at 418:00 total operating hours, 226:10 air operating hours. No further damage was done to this inverter through failure of the relay.

4. One instance of failure of the carbon pile voltage and frequency controls was noted. This occurred at 312:00 total operating hours, 158:15 air operating hours. The carbon pile assemblies were replaced on this inverter.

D. The Eclipse-Pioneer inverter was not discussed in SIR #39, dated 25 April 1953; however, this inverter was found to be well above the average in reliability as compared with the inverters so discussed.

1. The following graph portrays the average air time per malfunction of the three (3) types of inverters discussed in SIR #39:

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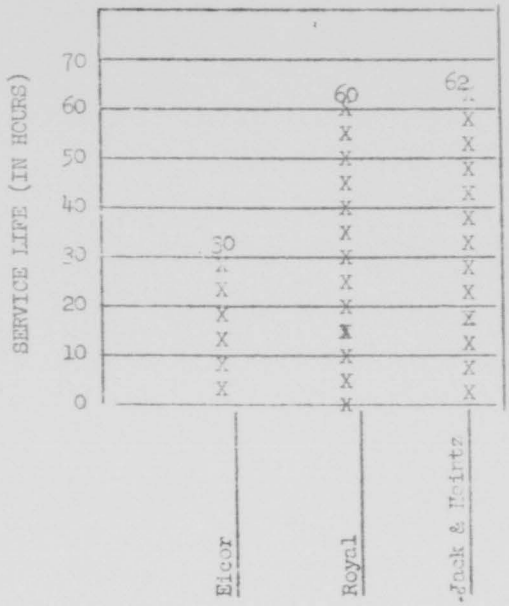
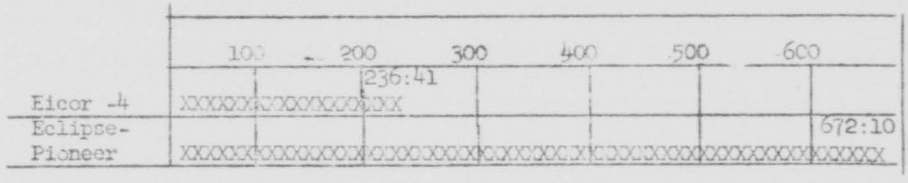


GRAPH #1

2. SIR #108 discussed the Eicor -4 inverters, which proved to be more reliable than the previous Eicor inverter tested, but which still proved to be unreliable for B-47 operational use. By comparison, the Eclipse-Pioneer inverter proved to be far superior to the Eicor -4 inverter. The following graphs compare the Eclipse-Pioneer inverter with the Eicor -4 inverter:



GRAPH #2 Average Total Operating Time per Inverter (In Hours)

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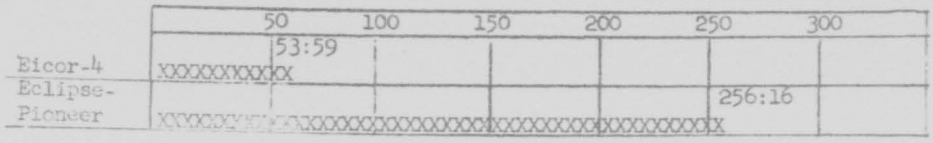
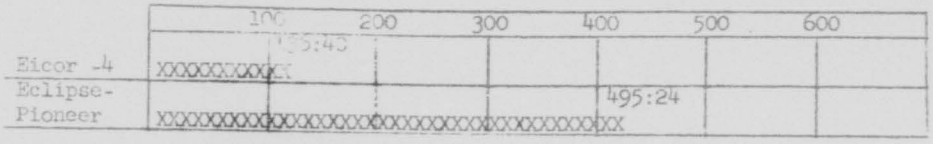
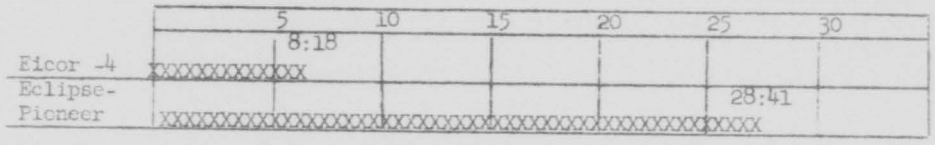


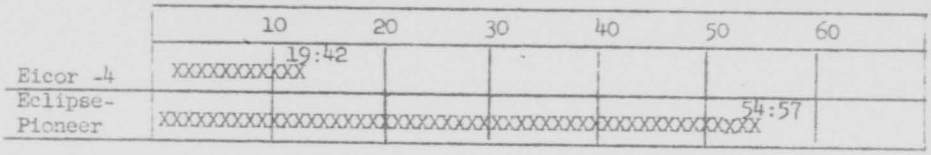
GRAPH #3 Average Air Operating Time Per Malfunction (In Hours)



GRAPH #4 Average Total Operating Time Per Malfunction (In Hours)



GRAPH #5 Average Air Operating Time Per Maintenance Man-Hour (In Hrs)



GRAPH #6 Average Total Operating Time Per Maintenance Man-Hour (In Hours)

NOTE: The figures for the Eclipse-Pioneer inverters in Graphs #3 and #4 include the three (3) malfunctions caused by improper brushes mentioned in paragraph C, 1, page 3.

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3. At the conclusion of the testing period, eight (8) of the original nine (9) inverters were still in service and were operating satisfactorily. (Refer to paragraph V, C, 1, page 3). It is interesting to note that the ratio of air to total operating time was approximately 1/2 for the Eclipse-Pioneer inverter. This ratio also was found to hold true for the Eicor -4 inverter. (Refer to SIR #108, paragraph V, E, page 5).

4. Quality tests as set forth by Specification AN-1-10b, dated 12 July 1948, were not accomplished by this Section due to the lack of test equipment. Tests such as dielectric strength, radio and conducted interference, output voltage modulation, wave form, and the like were beyond the scope of this program. It is felt that due to the relatively small amount of difficulty experienced, voltage and frequency wise with the Eclipse-Pioneer inverter, that the subject inverter meets the voltage and frequency requirements as set forth by the aforementioned specification.

E. It is concluded, therefore, that the Eclipse-Pioneer inverter is satisfactory for use in B-47 aircraft in the main and secondary positions when subject inverter is equipped with high altitude brushes and proper cooling provisions.

F. It is felt that Parts Catalogs and Maintenance Manuals pertinent to this inverter should be placed in the field as soon as possible for employment by using agencies. Without the above items, inverter maintenance is difficult and maintenance mal-practices result.

1 Appendix

for Philip W. Dorsey, Capt, USAF
MICHAEL W. HUBER
S/Sgt, USAF
Project Engineer

APPROVED:

Thomas P. Savage
THOMAS P. SAVAGE
Major, USAF
Chief, O.E.S.

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APPENDIX I

SPECIFIC ITEM REPORT NO. 122

Page 1.....Malfunction and Parts Replacement Summaries

Page 2.....Statistical Summary of Inverter Operation

Page 3 to 11 .....Operating History for Each Inverter

MALFUNCTION SUMMARY

Burned slip rings and worn-out AC brushes	4 inverters
Failure of DC input relay	1 inverter
Failure of carbon pile voltage and/or frequency regulator	2 inverters
Malfunction after ground operation, but O.K. on subsequent check	8 inverters

PARTS REPLACED

Carbon piles:

1 ea voltage regulating

1 ea frequency regulating

1 ea D.C. input relay

1 ea voltage adjusting rheostat

NOTE: No parts catalog available; therefore, no part numbers known.

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APPENDIX I TO SIR #122

Inverter Serial Number	Air Operating Hours	Total Operating Hours	No of Malfunctions	No. of Bench Checks	No. of Minor Adjustments	Man-hours for Maintenance	Ratio of Total Operating Hrs to Air Operating Hours	Air Operating Hours per Malfunction	Total operating Hours per Malfunction	Air Operating Hours per Maintenance Man-Hours	Total Operating Hrs per Maintenance Man-Hour
R-78	392:10	828:30	0	2	2	11:00	2.11	392:10	828:30	35:42	75:12
R-79	304:50	655:45	4	5	1	18:30	2.15	76:12	163:26	16:30	35:30
R-82	291:30	596:00	1	1	0	8:30	2.05	291:30	596:00	34:18	70:06
R-83	455:45	847:00	0	2	3	9:30	1.86	455:45	847:00	48:00	89:06
R-84	232:00	430:00	3	2	0	13:00	1.86	77:30	143:20	17:51	33:06
R-85	439:50	697:00	2	2	3	11:00	1.59	219:55	348:30	39:54	63:18
R-86	292:35	544:30	1	2	3	11:00	1.86	292:35	544:30	25:36	49:30
R-87	366:30	755:45	1	8	3	17:30	2.06	366:30	755:45	21:00	43:12
R-88	376:15	695:00	3	4	1	19:30	1.85	125:15	231:40	19:18	35:36
Average	350:09	672:10	1.67	3.1	1.78	13:17	1.93	255:16	495:24	28:41	54:57

OPERATING HISTORY

INVERTER NUMBER R-78

Inverter Total Operating Times:

Ground Operating Time	433:50
Air Operating Time	392:10
Bench Time	2:30
Total Operating Time	828:30
Total Man-hours for Maintenance	11:00

---

18 Nov - 17 Dec 52	Installed in main position. Cumulative operating hours: 50:00. Voltage adjusted once. Removed from aircraft and new high altitude AC brushes installed.
	Man-hours for maintenance.....6:30
17 Dec 52 - 4 Feb 53	Reinstalled in main position. Cumulative operating hours: 222:00. Removed and bench checked for high voltage, voltage adjusted.
	Man-hours for maintenance..... 3:30
4 Feb - 12 Nov 53	Reinstalled in main position. Cumulative operating hours at end of test: 828:30 Voltage reported low on one flight, checked O.K. on ground. Inverter still operating satisfactorily at end of test (12 Nov 53).
	Man-hours for maintenance..... 1:00

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OPERATING HISTORY

INVERTER NUMBER R-79

Inverter Total Operating Times:

Ground Operating Time	344:40
Air Operating Time	304:50
Bench Time	6:15
Total Operating Time	655:45
Total Man-hours for Maintenance	18:30

3-10 Dec 52	Installed in secondary position. Cumulative operating hours: 22:00. Removed due to failure caused by burned brushes and slip rings. Slip rings turned down on lathe, new high altitude AC brushes installed.	
	Man-hours for maintenance	7:30
18 Dec 52- 23 Jan 53	Reinstalled in secondary position. Cumulative operating hours: 85:00. Removed for bench check after inverter failed in flight. Voltage was low on pre-flight. Frequency and voltage were adjusted.	
	Man-hours for maintenance	2:00
24 - 28 Jan 53	Reinstalled in secondary position. Cumulative operating hours: 116:00. Inverter failed in flight shortly after T.O. was removed and bench checked O.K.	
	Man-hours for maintenance	2:30
16 Feb - 9 Mar 53	Installed in main position. Cumulative operating hours: 197:00. Inverter failed after approximately 2:00 hours of flight. Removed and bench checked O.K.	
	Man-hours for maintenance	3:00

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OPERATING HISTORY

INVERTER NUMBER R-79

(CONT'D)

12 Mar - 13 Apr 53	Installed in main position. Cumulative operating hours: 220:45. Inverter failed shortly after take-off. Bench checked O.K.
	Man-hours for maintenance.....2:30
13 Apr - 12 Nov 53	Reinstalled in main position. Cumulative operating hours: 655:45. Bench checked and found O.K. once during this period. Still operating satisfactorily at end of test (12 Nov 53).
	Man-hours for maintenance. 1:00

OPERATING HISTORY

INVERTER NUMBER R-82

Inverter Total Operating Times:

Ground Operating Time	302:30
Air Operating Time	291:30
Bench Time	2:00
Total Operating Time	596:00
Total Man-hours for Maintenance	8:30

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24 Nov - 16 Dec 52	Installed in secondary position. Cumulative operating hours: 39:00. Inverter failed due to burned up brushes and slip rings. Slip rings turned down on lathe, new high altitude AC brushes installed.	
	Man-hours for Maintenance	7:30
23 Jan - 12 Nov 53	Installed in main position. Cumulative operating hours: 596:00. Inverter still operating satisfactorily at end of test (12 Nov 53).	
	Man-hours for Maintenance	1:00

OPERATING HISTORY

INVERTER NUMBER R-83

Inverter Total Operating Times:

Ground Operating Time	388:15
Air Operating Time	455:45
Bench time	3:00
Total Operating Time	847:00
Total Man-hours for Maintenance	9:30

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24 Nov - 16 Dec 52	Installed in main position. Cumulative operating hours: 59:00. Removed and new high altitude AC brushes installed.
	Man-hours for maintenance..... 7:00
16 Dec 52 - 12 Nov 53	Reinstalled in main position. Cumulative operating time: 847:00. Voltage adjusted twice, bench checked and found O.K. once during this period. Inverter still operating satisfactorily at end of test (12 Nov 53).
	Man-hours for maintenance..... 2:30

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OPERATING HISTORY

INVERTER NUMBER R-84

Inverter Total Operating Times:

Ground Operating Time	195:00
Air Operating Time	232:00
Bench Time	3:00
Total Operating Time	430:00
Total Man-hours for Maintenance	13:00

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24 Nov - 1 Dec 52	Installed in secondary position. Cumulative operating hours: 16:00. Inverter failed due to burned up brushes and slip rings. Slip rings turned down on lathe, new high altitude AC brushes installed.	
	Man-hours for maintenance.....	7:30
16 Dec 52 - 19 Jun 53	Reinstalled in secondary position. Cumulative operating hours: 378:00. Removed due to unstable frequency. Bench checked, adjusted O.K.	
	Man-hours for maintenance.....	4:30
19 Jun - 25 Jul 53	Reinstalled in secondary position. Cumulative operating hours: 430:00. Removed due to bad AC brushes and slip rings non-reparable.	
	Man-hours for maintenance.....	1:00

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OPERATING HISTORY

INVERTER NUMBER R-85

Inverter Total Operating Times:

Ground Operating Time	254:10
Air Operating Time	439:50
Bench Time	3:00
Total Operating Time	697:00
Total Man-hours for Maintenance	11:00

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24 Nov - 16 Dec 52	Installed in secondary position. Cumulative operating time: 49:00. Removed and new high altitude AC brushes installed.	
	Man-hours for Maintenance	6:30
16 Dec 52 - 12 Nov 53	Reinstalled in secondary position. Cumulative operating time: 697:00. During this period, this inverter failed twice shortly after take-off, but operated O.K. on the ground. The voltage was adjusted twice, and the inverter was bench checked once and found O.K. Inverter operating satisfactorily at end of test (12 Nov 53).	
	Man-hours for Maintenance	4:30

OPERATING HISTORY

INVERTER NUMBER R-86

Inverter Total Operating Times:

Ground Operating Time.....247:55

Air Operating Time.....292:35

Bench Time..... 4:00

Total Operating Time.....544:30

Total Man-hours for Maintenance..... 11:00

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22 Nov - 16 Dec 52 — Installed in secondary position on three (3) different aircraft, to replace regular test inverters. On third aircraft, inverter failed shortly after take-off. Cumulative operating time: 37:00. Inverter operated OK on bench check. New high altitude AC brushes installed.

Man-hours for maintenance..... 5.00

23 Jan - 12 Nov 53 — Reinstalled in secondary position. Cumulative operating time: 544:30. During this period the inverter was bench checked once, and the voltage and/or frequency were adjusted on three occasions. The inverter was still operating satisfactorily at the end of the test (12 Nov 53).

Man-hours for maintenance..... 6.00

APPENDIX I TO SIR #122

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OPERATING HISTORY

INVERTER NUMBER R-87

Inverter Total Operating Times:

Ground Operating Time	380:30
Air Operating Time	366:30
Bench Time	8:45
Total Operating Time	755:45
Total Man-hours for Maintenance	17:30

---

24 Nov - 17 Dec 52	Installed in main position. Cumulative operating time: 57:00. Removed to install new high altitude AC brushes.	
	Man hours for maintenance	5:00
17 Dec 52 - 11 Mar 53	Reinstalled in main position. Cumulative operating time: 312:00. During this period, the inverter was bench checked 3 times. Twice the frequency had to be adjusted and once both the voltage and frequency had to be adjusted. The inverter was removed due to low voltage. The voltage rheostat was failed, and also the carbon pile voltage control. New carbon piles were installed in the inverter.	
	Man-hours for maintenance	9:30
16 Apr - 12 Nov 53	Reinstalled in main position. Cumulative operating hours: 755:45. During this period, the inverter was bench checked four (4) times. Each time the inverter checked O.K. Inverter still operating satisfactorily at end of test (12 Nov 53).	
	Man-hours for maintenance	3:00

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OPERATING HISTORY

INVERTER NUMBER R-88

Inverter Total Operating Times:

Ground Operating Time	313:45
Air Operating Time	376:15
Bench Time	5:00
Total Operating Time	695:00
Total Man-hours for Maintenance	19:30

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18 Nov - 17 Dec 52	Installed in secondary position. Cumulative operating time: 48:00. Removed to install new high altitude AC brushes.	
	Man-hours for maintenance	7:00
17 Dec 52 - 16 Apr 53	Reinstalled in secondary position. Cumulative operating time: 418:00. During this period, the inverter failed twice during ground operation but operated O.K. on bench checks. Once the voltage and frequency were adjusted. The inverter was removed due to failure of the D.C. input relay. The carbon piles from this inverter were installed in R-87. A new control section, complete, was installed in this inverter.	
	Man-hours for maintenance	10:30
24 Apr - 12 Nov 53	Reinstalled in secondary position. Cumulative operating time: 695:00. Inverter still operating satisfactorily at end of test (12 Nov 53).	
	Man-hours for maintenance	2:00

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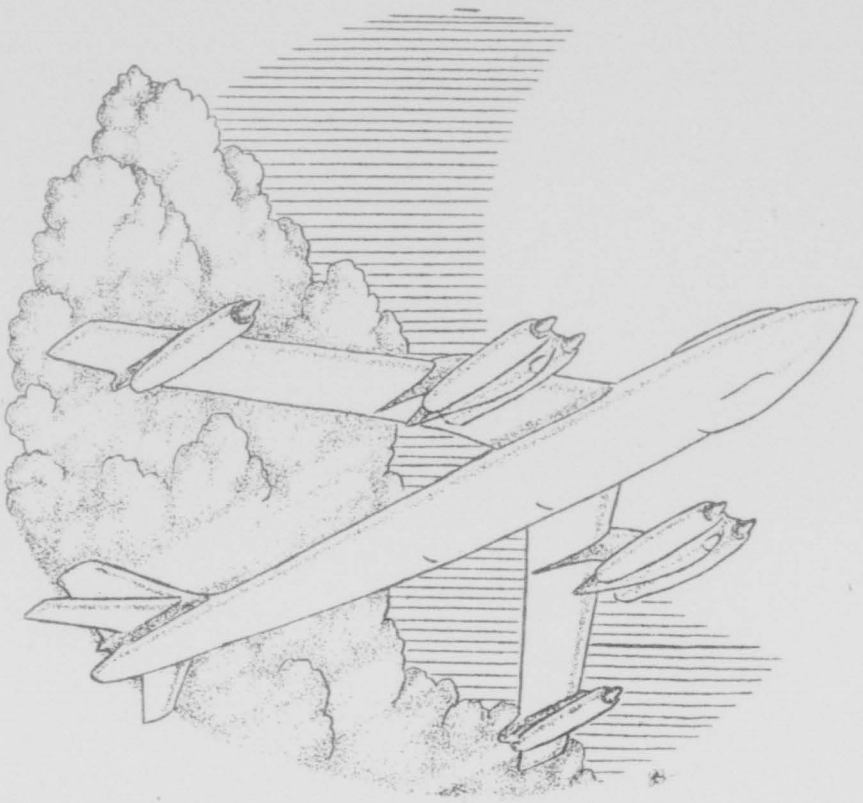
EXHIBIT 70

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 120



6TH AIR DIVISION
MACDILL AFB., FLORIDA

INFORMATION COPY

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311 10 December 1953

SPECIFIC ITEM REPORT NO. 120 (Interim).

SUBJECT: LeTourneau A-3 Air Tow Vehicle Evaluation (ME-81).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCSH (B-47)

I. PURPOSE:

To report on the suitability of subject vehicle during the limited period of operation at this station.

II. FOREWORD:

A. As per verbal request from Headquarters Strategic Air Command, this project to evaluate the LeTourneau A-3 Air Tow Vehicle (see inclosures 1 and 2) was established. Due to the mechanical difficulties experienced since this vehicle arrived at MacDill Air Force Base, on 15 September 1953, operation has been limited to approximately 290 hours; however, evaluation of the functions provided by the vehicle has proved them satisfactory thus far. An identical vehicle is possessed by the Air Proving Ground Command for evaluation purposes.

B. This is considered to be an interim status report as requested by Headquarters Strategic Air Command message DM4B 537 40767, dated 14 November 1953. A final report will be submitted and will include analysis of: (1) the durability and reliability of the unit and its components, and (2) the requirement for a vehicle of this type for Strategic Air Command ground power and towing operations.

III. CONCLUSIONS:

A. Based on the limited operating experience under semi-tropical weather conditions, the LeTourneau unit is considered satisfactory in the following respects:

1. Provides adequate power and traction for towing B-47 and KC-97 aircraft.

2. Electric power for operating the K-System during ground checks is adequate and stable.

3. Electric power for swinging the compass systems on B-47 aircraft is adequate and stable throughout this operation.

4. The magnetic deviation of ± 8 minutes caused by this unit is not considered excessive for compass swinging.

5. The electric power for starting the engines on B-47 aircraft is adequate.

B. The following modifications will materially improve this vehicle:

1. Increased ventilation of the operator's cab by providing an extra window or vents.

2. A means of indicating to the operator the direction in which the drive wheels are turned.

3. Mirrors on the side opposite the cab to provide increased vision.

4. Provisions for starting the unit when the batteries are discharged, such as an external 24 volt receptacle.

5. Two (2) 12-volt batteries in lieu of four (4) 6-volt batteries.

6. Drain holes in fuselage cross frame members through which traction motor cooling air flows.

7. Welded exhaust muffler should be installed.

IV. RECOMMENDATIONS:

A. Headquarters, Air Materiel Command or Air Research and Development Command authorize and direct the contractor to accomplish modifications 1 to 5 inclusive, as listed in paragraph III above, on the test vehicle to facilitate further testing. Modifications 6 and 7 have been accomplished here at MacDill Air Force Base

B. Headquarters Air Materiel Command provide cost data on this unit and the other ground power systems and tow units (by components) providing like functions, in order that a cost analysis can be made between the various systems and combination of systems.

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V. DISCUSSION:

A. At this writing, towing B-47 aircraft with the test vehicle has proved to be satisfactory in every respect. The vehicle exerts a steady and powerful draw-bar pull, moving the aircraft from a standstill with no bucking whatsoever. This fact has been demonstrated both during routine towing on the ramp and during compass swing. There was no evidence of any hunting motion of the governor during any towing operation.

B. Mechanics and electricians "on the line" have stated that the electric power, as provided by the Gremco units which are installed on the LeTourneau vehicles, are equal to or better than the electric power supplied by other ground powered electric equipments organic to the B-47 Wing. Frequency and voltage regulation appear to be entirely satisfactory in every respect. The equipment was able to assume any changes in the demand loading without any evidence of oscillation.

C. As stated by maintenance technicians, the vehicle during the compass swing operation provided suitable electrical power and also enabled towing of the aircraft in a highly satisfactory manner. In determining the deviation introduced into the aircraft compass swinging operation, the vehicle, with gasoline engine operating, electric generators electrically excited, and 28V DC and 115V AC power being supplied to a dummy load bank, was driven around a circle of 37 feet radius. An accurate master compass was located at the center of the circle. The recorded deviations are as follows: North - 1½' W, Northwest - 5' W, West - 8' W, Southwest - 4'W, South -5'W, Southeast - 0', East - 2'E, and Northeast - 0'.

D. Electric power for B-47 jet engine starts, with K-System energized, has been satisfactory. Three (3) six-engine starts have been closely observed. No vehicle engine RPM oscillation has been observed during these three aircraft starts.

E. The following deficiencies have been noted:

1. Operator's cab ventilation is regarded to be totally insufficient. Present cab configuration provides ventilation only through the opening of the access door. This proves to be totally inadequate even when both circulating fans are in operation. It is believed that the window opposite the door should be either a sliding or crank type. This modification will provide necessary comfort for the operator, and will contribute to increasing alertness.

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2. It has been observed during operation of the vehicle that the operator, after having stopped the vehicle, continually leans from the cab to determine the position of both sets of drive wheels. As there is no steering wheel or any other indication of drive wheel position - all wheel positioning being accomplished by means of toggle switches - the driver is continually worried as to the true position of the wheels and therefore must positively determine their position before putting the vehicle into movement. Simply constructed right-left indicating instruments on both operator consoles will eliminate this deficiency and increase safety of operation.

3. As the operator's cab is positioned on one side of the vehicle, his vision to the far side and over either end of the vehicle is seriously obstructed. It is felt that a vertical type mirror or mirrors of the commercial passenger bus type, mounted on the side of the vehicle opposite the cab, will do much for the elimination of this deficiency.

4. A receptacle for external 24 volt power will facilitate starting this vehicle when the vehicle's batteries are in a discharged condition.

5. It is felt that two (2) - 12 volt batteries would comprise a better battery system than four (4) - 6 volt units or one 24 volt unit because there would be fewer terminals to maintain and fewer batteries to charge. The weight per battery will still permit easy handling and the ampere-hour capacity will be as adequate.

6. It was found necessary here at MacDill to drill water drain holes in the cross frame members at both ends of the vehicle through which the cooling air for the traction motors flows. It was found that several inches of water had collected in these cavities and that the cooling air for the traction motors drew some of this water, when it was sloshed by vehicle motion, into the electric traction motor housings.

7. It was found necessary to weld all the seams of the exhaust muffler. Vibrations, apparently due

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to exhaust pulsation, caused all of the rolled seams to loosen. Welding of the seams has eliminated this muffler deficiency.

F. Vehicle operation to date, approximately 290 hours, has necessitated the following listed parts replacement and abnormal maintenance:

1. New ignition coil and distributor points had to be installed prior to operation at this base. Engine hours at this time were approximately 120 hours; no further ignition system difficulties have been experienced.

2. Engine coolant pump had to be replaced at approximately 240 hours operating time. It is believed this failure was caused by utilization of an improper lubricant. The part was returned to LeTourneau, Longview, Texas.

3. The flexible coupling between the two tandem-mounted power generators separated at approximately 260 hours. This was apparently caused by fatigue from stresses set up during forming of metal portion of the coupler.

4. Starter engage gear has been cumulatively damaged on two occasions by inadvertent starter engaging while the engine was in operation.

5. Engine time meter replaced.

Edward W. Purdy

EDWARD W. PURDY
Major, USAF
Project Officer

2 Incls
1 & 2 - Pictures of LeTourneau A-3 Air Tow Vehicle

APPROVED:

Thomas P. Savage

THOMAS P. SAVAGE
Major, USAF
Chief, O.E.S.

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LETOURNEAU

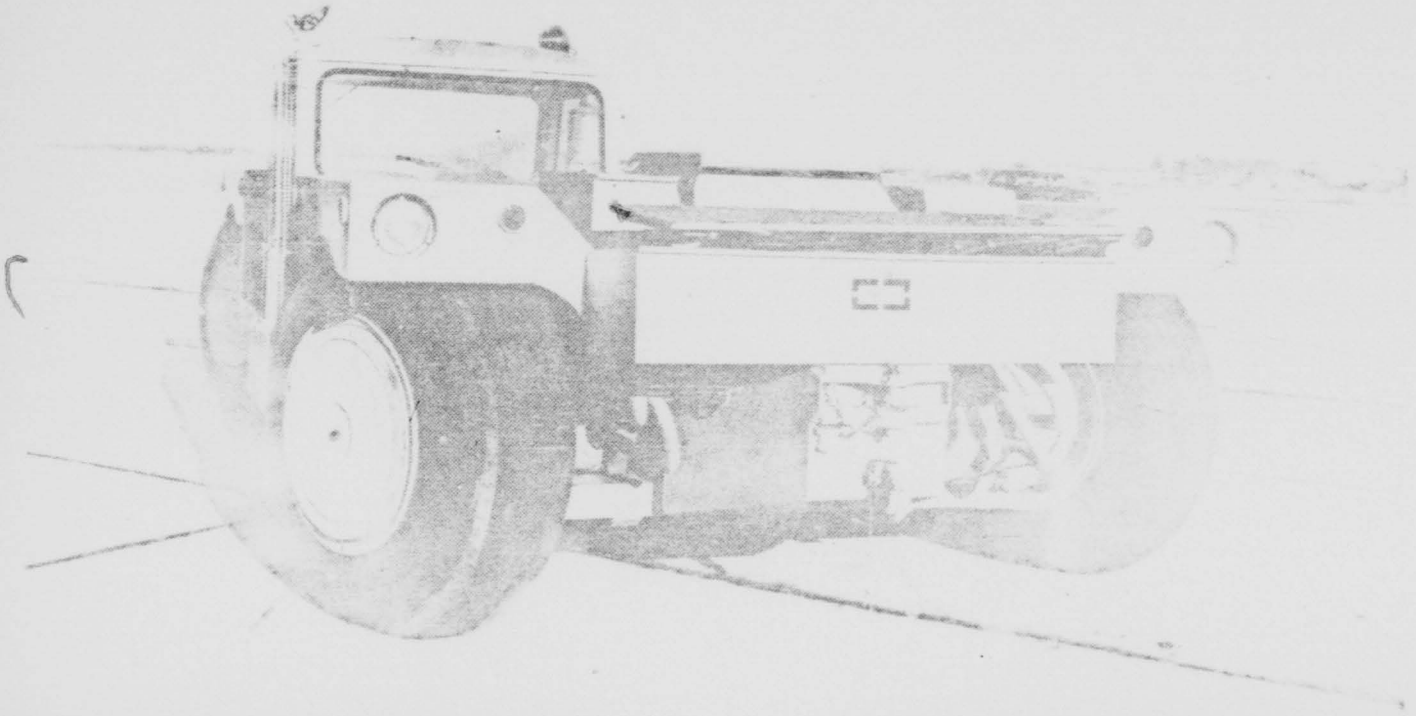
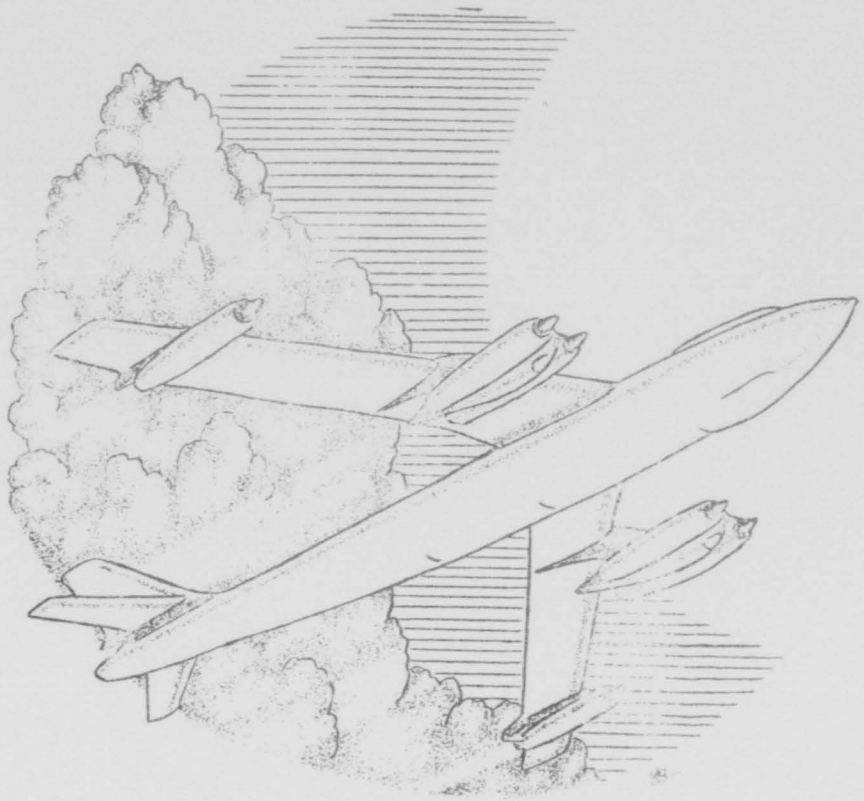


EXHIBIT 7E

B-47

OPERATIONAL ENGINEERING SECTION

SPECIFIC ITEM REPORT NO. 117



6TH AIR DIVISION

MACDILL AFB., FLORIDA

INCOMPLETE COPY

OPERATIONAL ENGINEERING SECTION
Headquarters 6th Air Division
MacDill Air Force Base, Florida

DOES 452.0311

23 December 1953

SPECIFIC ITEM REPORT NO. 117

SUBJECT: Instrument Calibration Requirements for B-47 Aircraft (AE-23).

TO: Commander
Wright Air Development Center
Wright-Patterson Air Force Base, Ohio
ATTN: WCSH (B-47)

I. PURPOSE:

To present the results of: (1) a study made to determine which instruments are necessary for the effective operation of the B-47 aircraft, and (2) a survey of the calibration requirements for these instruments.

II. FOREWORD:

A. The B-47 was designed as a high-speed, high-altitude medium bomber, however, advances in the instrumentation have lagged behind the design and engineering of the aircraft itself. Most of the present instruments installed were designed for slower, propeller-driven aircraft and do not produce the required accuracy demanded by the high performance characteristics of this aircraft.

B. A study was conducted to determine which of the aircraft's instruments are necessary to achieve optimum performance under all conditions and to what degree their accuracy affects the overall operation of the B-47 in accomplishing its primary mission.

C. An investigation was then made to determine whether the calibration equipment authorized for field maintenance organizations is adequate and of sufficient accuracy.

D. Headquarters Strategic Air Command directed this project be conducted in its message DM4DS8U-68345, dated 15 April 1953.

III. CONCLUSIONS:

A. General:

1. The criterion for the effective operation of the B-47 was determined to be the aircraft's performance capability.

2. The instruments of prime importance, performance-wise, are the machmeter, altimeter, fuel quantity indicators, free air temperature indicator, and the tachometers.

3. The instruments of lesser importance are the airspeed indicator and the exhaust gas temperature indicator.

B. Pitot-Static System:

1. The present configuration of the B-47's pitot-static system is unsatisfactory because the existing static source error, when magnified by the high altitudes and mach numbers flown by the B-47, produces inaccurate indications in the machmeter, airspeed indicator, and altimeter which adversely affect the aircraft's performance capability.

2. An accurate and reliable determination of static source error and the use of a device to nullify it will eliminate the majority of the total error in the indications of the affected instruments and thereby increase their accuracy. An improved system utilizing an electro-mechanical airspeed and Mach number computer and servo type repeater indicators would be more advantageous and desirable for the B-47.

C. To provide greater accuracy and reliability in the primary performance instruments, the following corrective action is necessary for the existing deficiencies in the instruments and/or their calibration equipment:

1. The allowable calibration tolerance of the machmeter should be reduced.

2. The new test units, type MD-1 and MD-2, for calibrating and trouble-shooting the fuel quantity indicating system should be authorized and procured for field maintenance organizations to replace the type O-3 tester. The fuel quantity indicators should be relocated so that they can be read more accurately and easily.

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3. The type C-20 altimeter or a more improved model should be used in place of the present type C-12 and C-16 altimeters. As an interim measure, a calibration card should be installed to minimize the total indicated error.

4. The free air temperature indicator should be redesigned to give a greater degree of accuracy and readability and the accuracy of the recovery factor should be firmly established.

5. The type M-5 tachometer tester should be authorized and procured for field maintenance organizations to replace the present two-unit tachometer tester.

D. The corrective action necessary to improve the accuracy and reliability of the lesser important performance instruments is as follows:

1. The present allowable calibration tolerance for the pilot s maximum allowable airspeed indicator, type L-7, should be reduced. Consideration given to replacing the navigator s airspeed indicator, type L-1, with a machmeter and a chart for computing true airspeed from Mach number and temperature observations as illustrated in Figure #5, page 3 of Appendix, should be included in the B-47 Flight Handbook (TO AN01-20ENB-1).

2. The exhaust gas temperature indicator should be shock mounted or redesigned and its allowable calibration tolerances should be reduced. The new portable tester, type N-3, should be authorized and procured for field maintenance organizations to replace the present Jet-Cal portable tester, type N-2.

E. Improved instrumentation is necessary and consideration should be given to the use of new types that combine related instruments and/or reduce the air crew's interpretation and computation requirements.

IV. RECOMMENDATIONS:

A. Priority action be taken to determine an accurate and reliable calibration of the pitot-static system and, if possible, a device should be designed and incorporated in the system to nullify the determined static source error.

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B. Immediate attention be given to the necessary action required to improve the accuracy and reliability of the primary performance instruments and/or their calibration and test equipment as covered in Part V, C, of this report.

C. Consideration be given also to the correction of the deficiencies existing in the performance instruments of lesser importance as noted in Part V, D, of this report.

D. All new instrument designs which will increase the aircraft's performance capabilities and assist the air crew to operate the B-47 more efficiently and safely, be reviewed, evaluated, and considered for installation in the B-47.

V. DISCUSSION:

A. General:

1. From the point of view of the B-47's primary mission, the present instrumentation was evaluated to determine which instruments are the most important and to what degree their accuracies affect the overall operation of the aircraft. Because the primary factor is performance, all instruments directly associated with the aircraft's performance were given first priority in the consideration of their adequacy and calibration requirements.

2. The primary variables which must be most accurately known or determined during flight to obtain the optimum performance for a jet aircraft are Mach number, gross weight, altitude, and free air temperature. Therefore, the instruments which are considered to be of prime importance are the machmeter, fuel quantity indicators, altimeter, free air temperature indicator, and tachometer.

3. Those instruments which are considered to be of lesser importance are the airspeed indicator and exhaust gas temperature indicator.

4. Although the bombing and navigational requirements are highly important, the instruments which are integral parts of electronic systems have not been considered in this report. The other flight and engine instruments, as well as indicators and gages for auxiliary systems, are not considered important inasmuch as their calibration will not materially affect the overall performance of the aircraft.

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B. Pitot-Static System:

1. The present design of the pitot-static system has become outmoded for modern high-speed, high-altitude aircraft. Although the system installed in the B-47 is usable, existing data indicates that it does not meet the Air Force Specifications, MIL-I-6115A, dated 29 March 1951, during the most important portions of the B-47 profile, namely, airspeed during maximum range cruise and altitude throughout the entire range. Moreover, the exact error in the pitot-static system has not been firmly established. Technical Order information (01-20ENB-1, Appendix I) indicates that the position error is negligible although the actual value as determined by Boeing airspeed calibration test results (Boeing Document No. D-13191) varies from over -1 to +2 knots. Phase IV tests of the B-47B conducted by the Air Force Flight Test Center at Edwards, California (AF Technical Report No. AFFTC 52-44) show the position error is approximately 4 knots high at the maximum range speeds. The existence of a positive source error is felt to exist because during routine operations at this station B-47 aircraft have seemingly experienced optimum performance when flown at an indicated Mach number of 0.76, rather than 0.74. This error is definitely not negligible. By use of the expression:

$$\Delta H_p = \Delta V \frac{G_i}{\delta_i} \quad \text{in which } G_i = \frac{V_i \left(1 + V_i/2{,}182{,}840\right)^{2.5}}{11.278}$$

where: ΔH_p = Pressure altitude static source error in feet
ΔV = Airspeed static source error in knots
δ_i = Standard Atmosphere density ratio ρ_i/ρ_o corresponding to indicated pressure altitude.
V_i = Corrected indicated airspeed in knots

Figure #1, page 1 of Appendix, shows the relationship between airspeed error and altimeter error due to the static source error when figured under NACA Standard conditions at Mach number 0.74. To simplify the calculation of the above expression, Figure #2, page 1 of Appendix, gives values of G_i for corresponding values of V_i in knots. By use of the expression:

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$$\Delta M = \frac{1}{38,710}\left(\frac{1}{M_i} + 0.2\,M_i\right)\frac{G_i}{\delta_i}\,\Delta V$$

where: M_i = Corrected indicated Mach number

ΔM = Mach number static source error

δ_i = Standard Atmosphere pressure ratio p_i/p_o corresponding to indicated pressure altitude

Figure #3, page 2 of Appendix, shows the relationship between machmeter error and airspeed error. These expressions are all based on reversible adiabatic flow where the Mach number is less than 1.0 and assuming that the total pressure error is negligible. Combining these relationships, it can be seen what effect static source error has on airspeed, altitude, and Mach number. For example, an airspeed error of 4 knots while flying Mach .74 at 45,000 feet produces an altimeter error of 380 feet and a machmeter error of almost .02 (Figures #1 & #3). This machmeter error results in a computation error of almost 12 knots in true airspeed (see Figure #4).

2. This problem can be corrected by recognizing that the static source error which is present in the aircraft is not negligible and to take the necessary action to either provide a system with no static error or to provide a compensating device so that the error can be removed in each aircraft. Such a device would nullify the inherent system error in each of the affected instruments so that they would then give true readings. The overall pitot-static system can be improved by use of an electro-mechanical Mach number and true airspeed computer, similar to type C-1 or type C-2. The aircraft would require only one calibrated pitot-static source for the computer which feeds electrical data to servo type master and repeater instruments, or a combination type instrument. This would not only provide a single and reliable source of airspeed data for navigational, bombing, and gunnery computing equipment, but would also provide the desired weight saving and space saving features long sought after for this aircraft.

C. Primary Performance Instruments:

1. The Machmeter is of primary importance because it has been determined that optimum aircraft performance is obtained by flying a constant Mach number and because

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the free air temperature, which is the most critical variable affecting aircraft performance, is not reflected in the machmeter indication.

a. The tolerances specified in T.O. 05-10A-7 are not close enough considering the operational requirements and the readability of the machmeter. In the normal cruise range of the B-47, the accumulation of the machmeter position error at Mach 0.74 which was shown to be as much as $\pm$ 0.02 and a maximum allowable instrument error of $\pm$ 0.01 gives the total error of 0.03 or about 4% of scale error. The maximum allowable calibration tolerance in the Mach number range of 0.7 to 1.0 should be not more than one-half of the presently specified tolerance of $\pm$ 0.01, i.e., $\pm$ 0.005. This is compatible with the instrument's presentation inasmuch as the machmeter can be read easily and accurately to 0.005 Mach.

b. The test equipment for the machmeter, type A-1, which is authorized for a field maintenance organization is a locally manufactured device using an airspeed manometer and a calibrated altimeter. It is easily constructed, is sufficiently accurate, and is considered adequate.

2. The Fuel Quantity Indicator is considered to be primarily important since optimum operation is based on a constant W/δ, making the aircraft's weight a primary criterion of aircraft performance.

a. The fuel quantity indicating system is extremely accurate and reliable even throughout the allowable range of jet fuel densities. The accumulation of dead-spot error, indicator tolerance, and density differential results in not more than $2\frac{1}{2}$ percent maximum total error, which is as high a degree of accuracy as is necessary in the application of the aircraft's weight to performance data. Range-wise, however, this maximum error is far from being negligible due to the high speed and high fuel consumption characteristics of this aircraft. This range differential is not appreciable at low fuel weights being in the order of 12-15 nautical miles, but with the maximum fuel weight it can be more than 100 nautical miles.

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(1) The most undesirable feature in this system is the location of the fuel quantity indicators themselves, which are mounted in such a manner that a high degree of parallax results when viewed from a normal sitting position.

(2) In later models of the B-47, the installation of fuel flowmeters and a totalizer increases the ability to more readily determine fuel consumption and fuel remaining, which in turn gives a more accurate indication of gross weight and range remaining.

b. (1) The authorized test equipment, type O-3 variable capacity tester, used in calibrating the fuel quantity indicators, is accurate and reliable. However, only one tester is authorized under the current Unit Essential Equipment list to calibrate the compensated system now used in the B-47B. When fuel is in the tanks, a second tester or a suitable adapter is needed to act as a compensator simulator. This method is a field expedient and is not as accurate as dry tank calibration. However, the need of a second type O-3 tester or an improved tester exists and this situation has been temporarily alleviated by a Headquarters SAC TWX granting authority for a second tester. When this tester is subjected to extensive use, it should have a depot calibration more frequently than the prescribed six months interval. An exchange system set up between depot and field maintenance organizations will solve the time element problem that now exists.

(2) Two new testers for electronic fuel quantity indicating systems have been developed and are being procured. These are the type MD-1 and MD-2. The MD-1 replaces the type O-3 tester and requires only one unit to calibrate the compensated system whether fuel is in the tanks or not. The MD-2 is a companion piece used for trouble shooting the fuel quantity indicating system. These testers should be authorized for field maintenance organizations as soon as possible. In the interim, however, a minimum of two (2) type O-3 testers is needed.

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3. The altimeter is considered to be of primary importance because optimum operation of the B-47 is based on the parameter W/δ and this instrument is the only means provided to determine delta (δ), the atmospheric pressure ratio, in terms of pressure altitude. It is extremely important also when used as a reference for the execution of tactical maneuvers, instrument flying, and pattern flight paths. However, the present models now installed in the B-47 are very unreliable because: (1) the static source error is greatly affected by high altitudes and airspeeds, and (2) the allowable instrument calibration tolerances are abnormally large at high altitudes.

   a. The type C-12 and C-16 altimeters now installed in the B-47 are unsatisfactory due to the extremely large calibration tolerance specified in T.O.05-30-17 for the higher altitudes. An accumulation of position error reported by AFFTC Phase IV tests and maximum allowable calibration tolerance could amount to almost 1,000 feet at 45,000 feet. Were these errors to oppose each other, at maximum tolerance, the resulting error would still be over 200 feet. An improved model, type C-20, now under consideration by your Headquarters for use in the B-47 has less allowable tolerance up to 35,000 feet, but at 45,000 feet it is the same as the present type, requiring further improvement. Because of the large tolerances which are permissible in these models and since the error may be either positive or negative, a calibration card should be provided. This will be an added safety factor since the static source error is positive and similar in all B-47 aircraft and can be more closely estimated or determined.

   b. The authorized calibration equipment used by field maintenance organizations to bench-check altimeters is adequate and the static calibration at room temperature is easily accomplished. However, the required pressure chamber is difficult to maintain and the equipment to perform extreme temperature calibration is usually not available below depot level.

4. The Free Air Temperature Indicator is of paramount importance because the indicated temperature has two specific uses associated with the B-47's performance; the derivation of true airspeed and the determination of engine speed for the required thrust. The free air temperature

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indicator installation, presently in use on the B-47, is unsatisfactory because the indicator scale presentation is poor and the recovery factor (K_A) value of 1.0, now being used, has been found to be inaccurate.

a. Operational Requirements:

(1) The recovery factor (K_A) should be accurately determined. Early information contained in Boeing B-47 Service Letter, File No. 21.400, dated 28 June 1951, gave a K_A value of 1.0 in cruise and 0.90 in climb for the flush type installation used on the B-47 and recommended that K_A value of 1.0 be used. Boeing's Document #D-13191 on test flights made in December 1951 gives inconclusive results because of the short duration of each test run, but the predominance of K_A values plotted in the Mach number range of 0.68 to 0.80 vary from 0.8 to 0.95. The Phase IV test results conducted by AFFTC give a K_A value of 0.96. Since the Technical Order aircraft performance data are based on K_A value of 0.9, the using organizations are forced to accept this as a compromise value. Figure #5, page 3 of Appendix, is a plot of indicated temperature versus Mach number combined to give true airspeed and ambient temperature, based on a K_A value of 0.9. Figure #6, page 4 of Appendix, shows the effect that different values of K_A have on the determination of ambient temperature and true airspeed. For example, this amounts to a difference of 2.2°C and 2 knots for a difference of 0.1 in K_A value at Mach 0.74.

(2) The free air temperature indicator, type G-7, because of its short scale length and minimum scale graduations of 5°C, is not capable of giving the accuracy required by the high degree of performance necessary for optimum operation of the B-47. In its present configuration, the free air temperature indicator cannot be read accurately to within 2½°C, yet the tolerance specified in T.O. 05-40BB-6 and 05-40BC-7 is 1°C at 0°C and 1½°C throughout the complete range. Since performance requirements demand an accuracy to within 1°C, a redesign of the instrument's

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scale and mechanism is necessary. A recommended solution is to lay out the scale around the circumference of the face with graduations of at least 1°C (see Figure #7, page 4 of Appendix). This will result in a readability of 1/2°C and its maximum allowable tolerance could be held to 1/2°C. A long scale free air temperature indicator has been developed by the Equipment Laboratory, designated as type G-10, which is graduated in increments of 2°C and can be read to 1°C. It could be used satisfactorily if the allowable tolerance is held to within ± 1°C. By employing a servo type indicator mechanism, the calibration tolerance could be further reduced to the extent that an accuracy of one-tenth of 1°C is possible.

b. The calibration equipment for the free air temperature indicator, which is authorized for field maintenance organizations, is a locally manufactured device utilizing calibrated resistances to determine required scale reading. It is easily constructed, is sufficiently accurate, and is adequate.

5. The tachometer is one of the instruments considered of primary importance because it is the only means provided for indicating engine power setting. The original model of the type E-29 tachometer has an unsatisfactory condition of oscillation at low speeds. However, this has been corrected by indicator motor redesign and by the use of improved lubricants. It is understood that these modified instruments will be available in sufficient quantities at an early date for complete replacement.

a. The tachometer, type E-29, is sufficiently accurate and the tolerances specified in T.O. 05-5-5 and 05-5E-43, and readability are suitable in its present configuration.

b. A problem exists in the authorization for the calibration equipment used for bench-checking tachometers. The tachometer test stand assembly (Stock No. 7CAD-735550) is listed under Base Support Equipment and the strobotac unit (Stock No. 7CAD-778050) is listed under Unit Essential Equipment. This means that under mobility conditions, if the test stand assembly is not available, the strobotac is useless and tachometers

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cannot be calibrated. The motor unit, which is a component part of the test stand assembly, does not have sufficient range to completely check the type E-29 tachometer and requires a 2 to 1 reduction adapter which probably introduces an additional friction error. An improved test unit designated as type M-5 has been developed by the Equipment Laboratory which combines the generator and indicator test equipment in a single, light-weight, compact unit. It is highly accurate and ideal for mobility conditions. It should be authorized and procured for field maintenance organizations as soon as they become available.

D. Performance Instruments of Less Importance:

1. The Airspeed Indicator, although less important than the Machmeter during cruise, is still used as a cross reference in holding airspeed once the desired Mach number is established. This instrument is used primarily during take-off, climb, refueling, certain tactical maneuvers, descent, and landing. Under these conditions airspeed is critical and performance data are still based on indicated airspeed for the convenience of the pilot.

a. Operational Requirements:

(1) The pilot's maximum allowable airspeed indicator, type L-7, is especially useful in descents and landings, and has good readability, but the calibration tolerances specified in T.O. 05-10-47 throughout the entire range are too high considering the fact that no calibration card is used. The allowable tolerance of $\pm$ 2 knots in the low speed range should be reduced by one-half since the readability of the instrument is within 1 knot, and it would be desirable to reduce the tolerance in the range of 200 to 400 knots so as not to exceed 2 knots. With these reductions in tolerances a calibration card would not be necessary.

(2) The navigator's airspeed indicator, type L-1, is suitable, but is not of much value in computing true airspeeds because of the many errors and inaccuracies involved in its computation. A machmeter would be more useful since the most accurate method of computing true airspeed is by use of a chart as illustrated by Figure #5,

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page 3 of Appendix, utilizing indicated Mach number and indicated free air temperature. It would be desirable to have this chart included in the Flight Handbook of Technical Order AN-01-20ENB-1 for the convenience of pilots and observers.

b. The calibration equipment for the type L-1 and L-7 airspeed indicators, which is merely a sensitive manometer, is adequate and accurate.

2. The Exhaust Gas Temperature Indicator is of less importance during flight because it is only used as a reference to a normal operating range of temperatures and as a comparison of the consistency of indication among all the engines. Its main use is in determining the tabbing for the tailpipe exit area when adjusting the static ground thrust for the engine under different climatic conditions. The effect of the unreliability of the indicating system and the present portable tester on engine life is considered serious, but is not covered in this report.

a. The mechanism of the type K-9 exhaust gas temperature indicator is delicate and prone to variations when subjected to extreme vibration or shock. An indicator that has been bench-checked and accurately calibrated can be out of tolerance by the time it is installed in the aircraft if it is not handled carefully. Since the instrument panel is rigidly mounted, even vibrations from taxiing or rough landings can upset its calibration. A proposed solution is either instrument redesign or installation on a separate panel completely shock mounted.

b. Test Equipment:

(1) The calibration equipment for the exhaust gas temperature indicator, which is the same as for the free air temperature indicator, is adequate, but the instrument's calibration tolerance specified in T.O. 05-40DA-4 and 05-40DB-1 should be reduced and would be possible with an improved instrument.

(2) The Jet-Cal portable tester, type N-2, used to trouble-shoot the system is cumbersome and very unreliable. Since it is designed for an 8 ohm system, it requires the addition of a 14 ohm resistance when used on the 22 ohm system which

1787

the present model of the B-47 employs. An improved portable tester of less weight would be a definite advantage and would decrease the physical burden on the instrument specialist when moving the tester about while making a system check on the aircraft. A new portable tester, designated as type N-3, which has been developed by the Equipment Laboratory, weighs only 20 pounds and can be used on all types of temperature indicating systems.

E. Use of New Instruments: To improve the overall instrumentation, serious consideration should be given to the use of new types of instruments, particularly the types which eliminate the necessity for pilots and observers to compute required data and types that combine two or more related instruments which minimize the interpretation time required by air crew members.

1 Appendix
Figures 1 thru 7

John T. Ball, Jr.
JOHN T. BALL, JR.
Captain, USAF
Project Officer

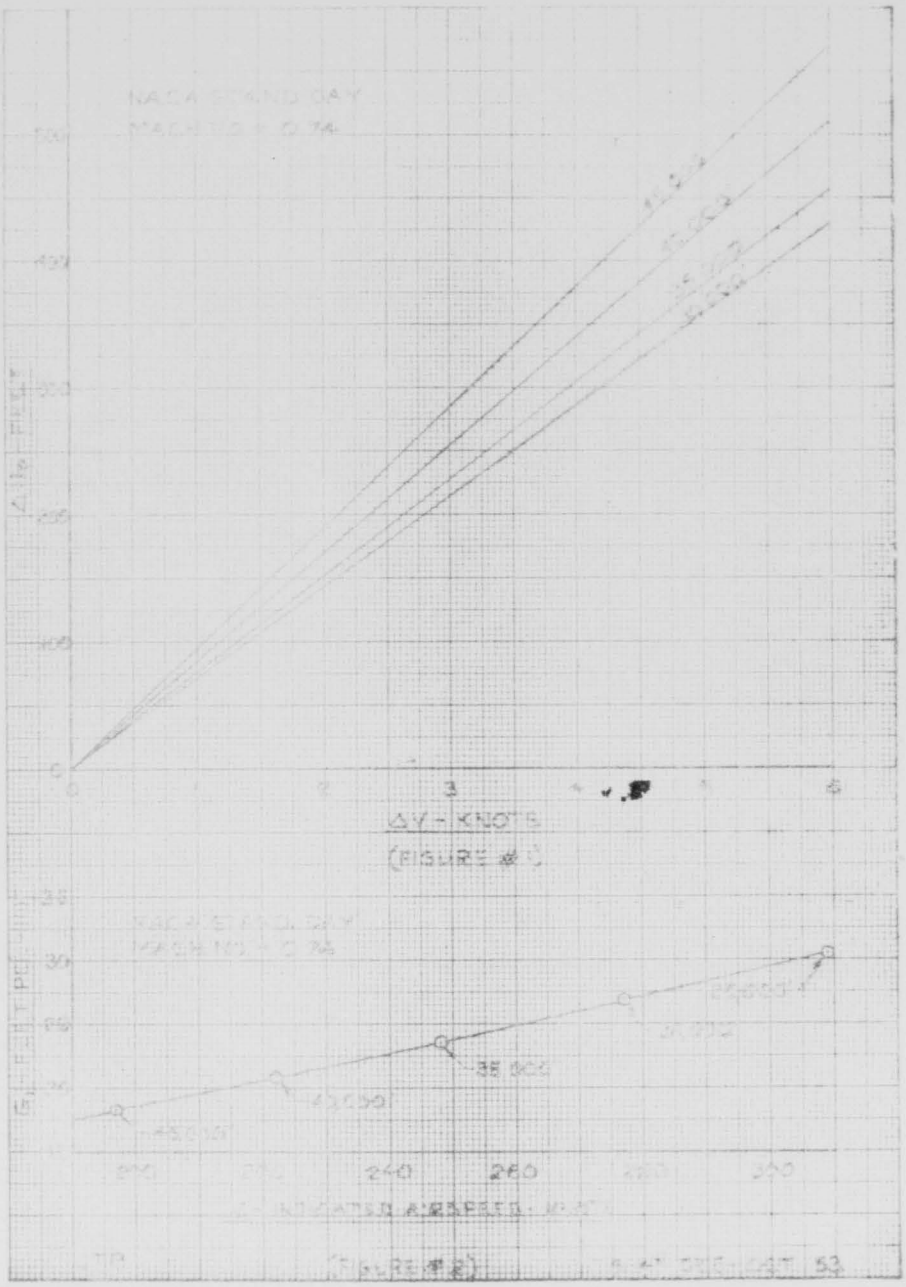
APPROVED:

Thomas P. Savage
THOMAS P. SAVAGE
Major, USAF
Chief, O.E.S.

1788

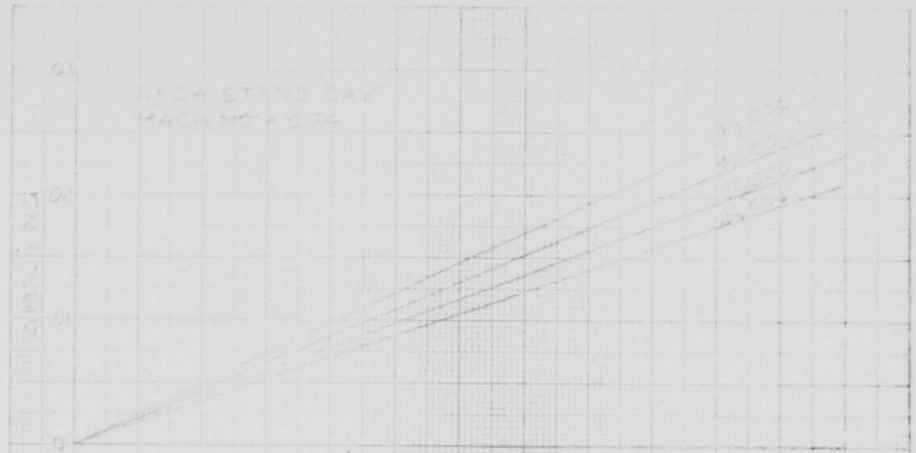
A-P-P-E-N-D-I-X

Figure	Title	PAGE
#1	Altitude error versus indicated airspeed error.	1
#2	G_1 constant versus indicated airspeed	1
#3	Mach number error versus indicated airspeed error . . .	2
#4	Mach number error versus true airspeed error.	2
#5	Free air temperature - Mach number - true airspeed plot	3
#6	Effect of recovery factor on temperature & true airspeed	4
#7	Proposed free air temperature indicator dial.	4

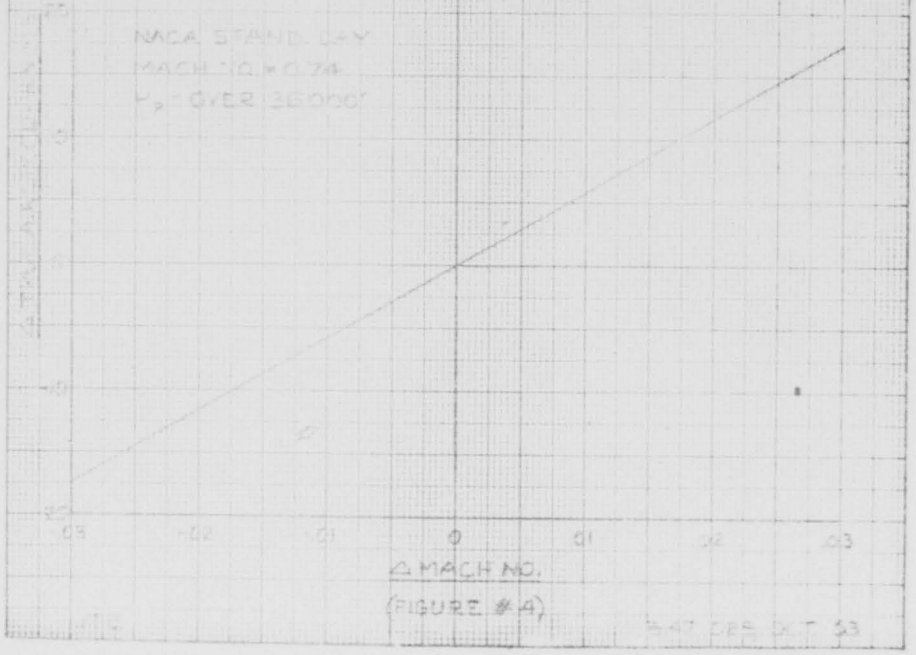


(FIGURE #5)

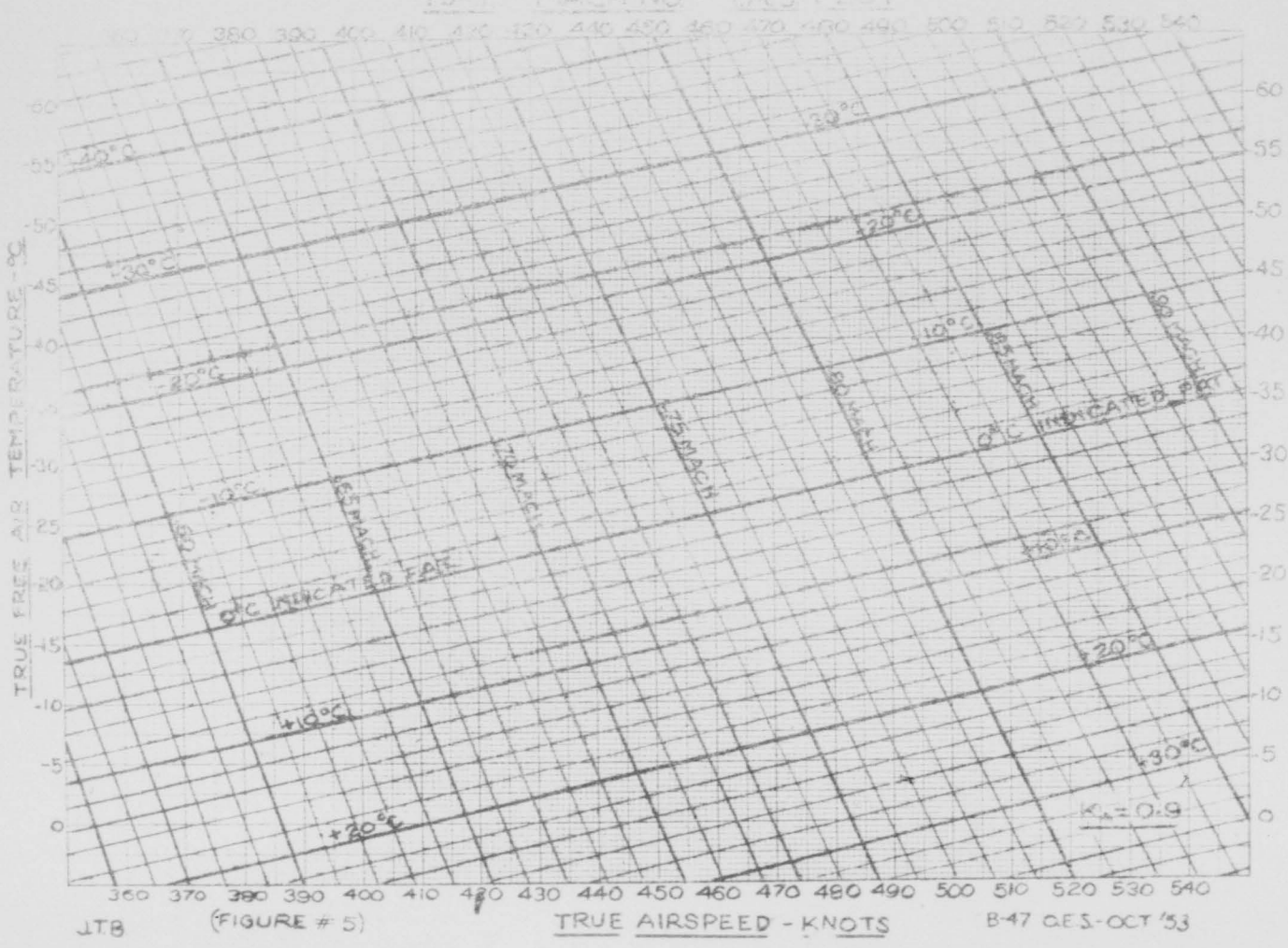
(FIGURE #6)



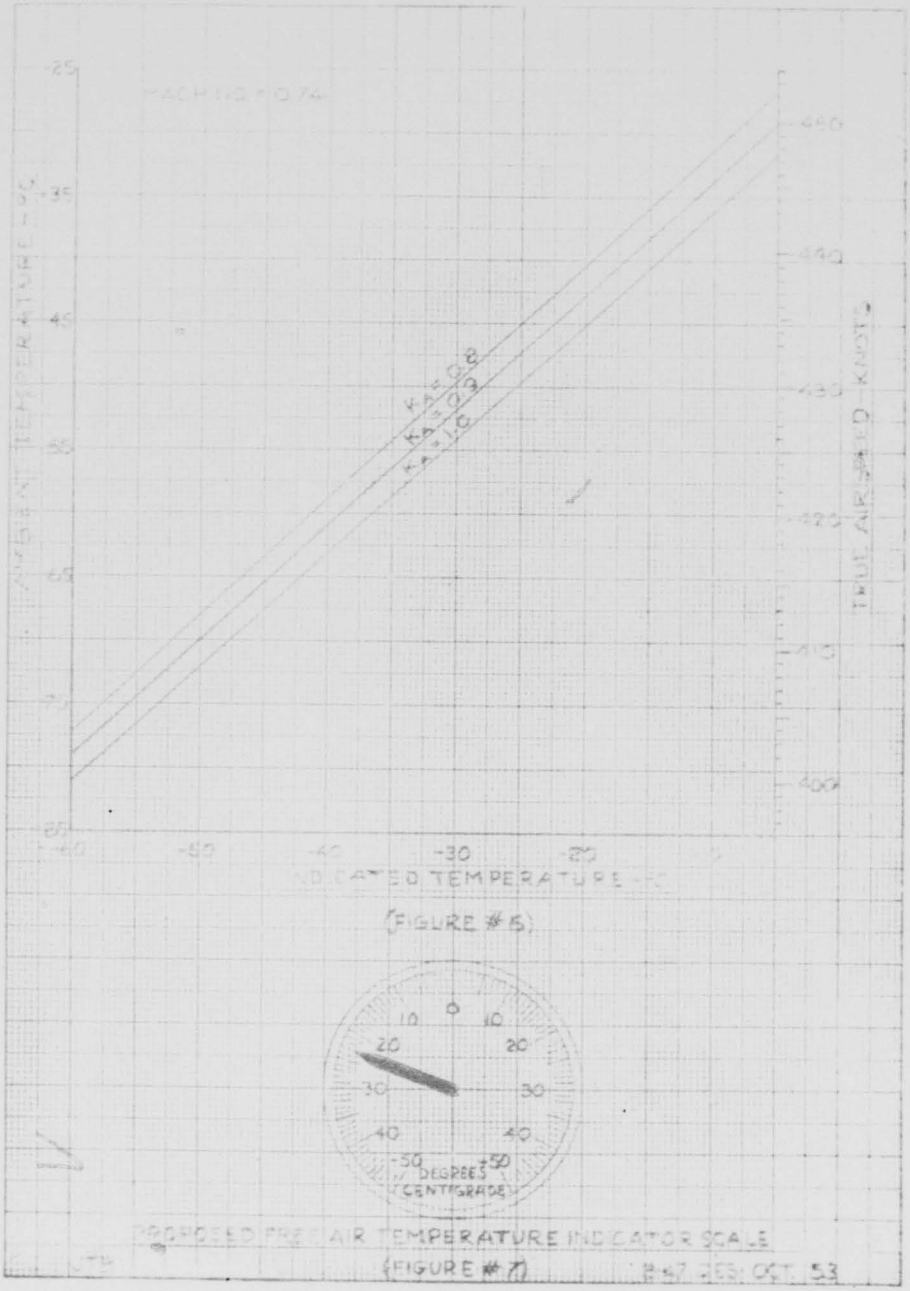
(FIGURE # 3)



(FIGURE # 4)



JTB (FIGURE # 5) B-47 QES-OCT '53



(FIGURE #5)

PROPOSED PRE-AIR TEMPERATURE INDICATOR SCALE

(FIGURE #7) R-57 DES: OCT. 53

EXHIBIT 8

HEADQUARTERS 809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDMAI 600.1 8 December 1953

SUBJECT: Repair and Reroof 71 Buildings, MacDill AFB, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In accordance with instructions contained in 1st Indorsement from your headquarters, file 2AFMIB 600.1 (3 Sep 53), dated 11 September 1953, Subj: "Major Repair and Minor Construction Program," there is submitted herewith MacDill Air Force Base Request No. 3-54 for repair and reroofing seventy-one (71) buildings.

2. The purpose of this project is to restore the roofs on seventy-one (71) buildings by removing and replacing approximately 1,726 squares of 90 pound mineral surafaced roll roofings, 731 squares of 19" selvage edge mineral surface roll roofing, and 504 squares of 3 ply built-up roofing, together with removal and replacement of deteriorated roof framing, sheathing, and wood trim and painting of all new, exposed wood and eaves, and gable rakes.

3. Buildings covered in this project have not been reroofed since 1947. As a result roofing materials have deteriorated under climatic conditions in this area to a point where complete replacement of roofing materials is urgently needed to preserve the structures and prevent excessive damage from leaking roofs. Deterioration has accelerated to such an extent within the past twelve (12) months that normal day-to-day maintenance and patching is completely inadequate and beyond the scope of installation engineer shop personnel.

4. It is recommended that this project be approved in the amount of $76,217.76 and that funds in the amount of $76,218.00 be allotted this headquarters to accomplish the work by contract.

5. This project has been classified as a Class "B" project. It has been tentatively selected for funding in the amount of $45,000.00, under list of Major Repair and Minor Construction Program, FY 1954, Line No. 88, Second Air Force Priority 6, SAC Priority No. 40, Fiscal Code 459.1.

MCDMAI 600.1 Subj: Repair and Reroof 71 Bldgs, MacDill AFB Fla

6. The original project was estimated on the basis of using single ply roofing. Following an extensive engineering survey, it was found that due to the pitch of roofs, it was necessary to design selvage edge and built-up roofs for several buildings. It was also determined that considerable roof sheathing, framing and trim had deteriorated and will require replacement and repainting of exposed roof rafters and trim.

7. It is recommended that this project, No. 3-54, be funded in the following manner:

a. In addition to the $45,000.00 already tentatively approved, utilize $14,500.00 from cancelled M&O FY 1954 MacDill Project 7-54 for replacement of existing direct burial cable, and $7,600.00 from cancelled M&O FY 1954 MacDill Project 11-54 for replacing 2.4/4 16 KV underground service to sewer lift pump. Cancellation of MacDill Project 11-54 has been requested under separate correspondence.

b. The balance of $9,118.00 would have to come from other sources.

8. As this proposed project has exceeded the $50,000.00 limitation and the scope of work as originally made on 2AF Form 95 has been changed, a new project card is attached hereto for continuance of action.

9. Certificate required by Headquarters USAF message AFOAI 37113, dated 9 March 1953, is also attached.

5 Incls
1. DA AGO Fm 5-25 (sext)
2. Certificate (sext)
3. 2AF Fm 95 (quad)
4. Tech Provs (quin)
5. Dwg No. 53-65 in 2 sheets (sext)

B. H. MERCHANT
Colonel, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

1795

EXHIBIT 8A

HEADQUARTERS 809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDMAI 600.1 19 December 1953

SUBJECT: Resealing Dispersal Taxiways and Hardstands, MacDill Air Force Base, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In accordance with instructions contained in 1st Indorsement from your headquarters, file 2AFMIB 600.1 (3 Sep 53), dated 11 September 1953, subj: Major Repair and Minor Construction Program, there is submitted herewith MacDill Air Force Base Request 20-54 for resealing and patching approximately 92,500 square yards of dispersal taxiways and repairing flexible paved 12-1/2 foot wide collars on 25 concrete hardstands, by scarifying, adding limerock, reshaping, recompacting, priming and resealing.

2. The existing dispersal taxiways were constructed in 1942 and resealed in 1948. The life expectancy of the1948 resealing has now been exceeded. The deterioration of the seal coat has proceeded to the point where indications of destructive water penetration through numerous cracks throughout the pavement is becoming increasingly evident. These cracks and damaged areas are increasing to the point where normal maintenance can no longer keep pace with the deterioration.

3. The work covered in the project is necessary to prevent the breaking down and eventual destruction of existing essential pavement.

4. It is requested that this project be approved in the amount of $31,800.20 and that funds in that amount be allotted this headquarters to accomplish the work by contract.

5. This project has been classified as a Class "B" project. It has been tentatively selected for funding under Line No. 18, Second Air Force Priority 13, SAC Priority No. 59, Fiscal Code 459.1, Major Repair and Minor Construction Program FY-1954.

MCDMAI 600.1 Subj: Resealing Dispersal Taxiways and Hardstands, MacDill AFB, Fla

6. Certificate required by Headquarters USAF Message AFOAI 37113, dated 9 March 1953, is attached.

B. H. MERCHANT
Colonel, USAF
Commander

4 Incls
1. DA AGO Fm 5-25 (sext)
2. Certificate (sext)
3. Tech Provs (quad)
4. Dwg 53-66 in 1 sheet (sext)

"A CERTIFIED TRUE COPY"

B. A. JOHNSON
2nd Lt., USAF

1797

EXHIBIT 8B

HEADQUARTERS 809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDMAI 600.1 19 December 1953

SUBJECT: Repairs to Railroad, MacDill AFB, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In accordance with instructions contained in 1st Indorsement, file 2AFMIB 600.1 (3 Sep 53), dated 11 September 1953, subj: "Major Repair and Minor Construction Program," there is submitted herewith MacDill Air Force Base Request 4-54 for repairs to approximately 578 lineal feet of railroad by replacement of eighty-five (85) pound worn rail with ninety (90) pound rail, the installation of four (4) sets of wheel stops, reworking of two (2) street crossings and reballasting where required.

2. The work covered in this project pertains to a section of the railroad on a curve where rail is subjected to abnormal wear. The railroad was constructed in 1941. Rail in this particular section was turned in 1948 and now is critically worn on both sides. Complete replacement is indicated.

3. Rail traffic at this station is now in excess of 1,000 cars per month. Major new construction in successive Public Works Programs has resulted in increased rail traffic to the extent that a new larger Diesel locomotive has recently been added to the rolling stock of the base.

4. Work contained in this project is necessary to provide safety to personnel, prevent damage to valuable Government property, and to bring the base railroad up to Air Force standards.

5. It is requested that this project be approved in the amount of $6,926.07, and that funds in the amount of $4,810.87 be allotted this headquarters to accomplish the work by contract.

6. This project has been classified as a Class "B" project. It has been tentatively selected for funding under Line No. 100, Second Air Force Priority 25, SAC Priority 120, Fiscal Code 459.1, Major Repair and Minor Construction Program FY 1954.

MCDMAI 600.1 Subj: Repairs to Railroad, MacDill AFB, Florida

7. Certificate required by Headquarters USAF message AFOAI 37113, dated 9 March 1953, is attached.

8. Requisitions, pertaining to centrally procured items to be furnished the contractor as Government furnished property, are also attached for continuance of action if this project is approved.

6 Incls
1. DA AGO Fm 5-25 (sext)
2. Certificate (sext)
3. Req No. AF 22-54-17 (Ditto)
4. Req No. 08-090-54-30-Engr (trip)
5. Tech Provs (quin)
6. Dwg No. 53-85 in 2 sheets (sext)

B. H. MERCHANT
Colonel, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1799

EXHBIT 8C

HEADQUARTERS 809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDMAI 600.1 19 December 1953

SUBJECT: Patching and Resurfacing of Streets, MacDill Air Force Base, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In accordance with instructions contained in 1st Indorsement from your headquarters, file 2AFMBI 600.1 (3 Sep 53), dated 11 September 1953, subj: "Major Repair and Minor Construction Program," there is submitted herewith MacDill Air Force Base Request 10-54 for patching and resurfacing of streets in the North Area and the Hospital Road from Hangar Loop to the Hospital Area.

2. The purpose of this project is to patch damaged areas in existing bituminous surface streets with a cold mix asphalt and accomplish resurfacing by application of a bituminous single surface treatment over the entire width of the streets. Project also provides for the reconstruction and regrassing of the shoulders on Hospital Road and the stabilizing and san sealing of indication portions of shoulders in the North Area.

3. The Hospital Road was constructed in 1941 and the streets of the North Area in 1943. During the economy years immediately following the close of World War II, proper and adequate maintenance was not possible due to drastic curtailment of personnel and funds. Accordingly, the streets and road have deteriorated to the point where normal maintenance will no longer maintain the facilities at acceptable Air Force standards.

4. Patching and complete resurfacing, together with rebuilding and stabilizing of earth shoulders, are urgently required to bring the streets up to Air Force standards and prevent further deterioration of essential pavement.

5. It is requested that this project be approved in the amount of $31,477.38 and that funds in that amount be allotted this headquarters to accomplish the work by contract.

MCDMAI 600.1 Subj: Patching and Resurfacing of Streets, MacDill AFB, Fla

6. This project has been classified as a Class "B" project. It has been tentatively selected for funding under Line 121, Second Air Force Priority 23, SAC Priority 111, Fiscal Code 459.1, Major Repair and Minor Construction Program FY 1954.

7. Certificate required by Headquarters USAF Message AFCAI 37113, dated 9 March 1953, is attached.

4 Incls
1. DA AGO Fm 5-25 (sext)
2. Certificate (sext)
3. Tech Provs (quin)
4. Dwg No. 53-83 in 3 sheets (sext)

B. H. MERCHANT
Colonel, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1801

EXHIBIT 80

HEADQUARTERS 809TH AIR BASE GROUP
MacDill Air Force Base, Florida

MCDMAI 600.1 19 December 1953

SUBJECT: Replacement of Deteriorated Pole Line Structures, MacDill AFB, Florida

TO: Commander
Second Air Force
Barksdale Air Force Base
Louisiana

1. In accordance with instructions contained in 1st Indorsement from your headquarters, file 2AFMIB 600.1 (3 Sep 53), dated 11 September 1953, Subject: "Major Repair and Minor Construction Program," there is submitted herewith MacDill Air Force Base Request 9-54 for replacement of deteriorated pole line structures in existing overhead station electrical distribution system.

2. The purpose of this project is to restore deteriorated pole line structures which are unsafe due to rotted poles and excessively deteriorated crossarms.

3. Accomplishment of the work is necessary to provide adequate physical safety to lineman at this station. It is essential in order to bring the existing distribution electric power lines up to the National Bureau of Standards Handbook H-43.

4. It is requested that this project be approved in the amount of $14,547.86 and that funds in that amount be allotted this headquarters to accomplish the work by contract.

5. This project has been classified as a "Class 'B' project." It has been tentatively selected for funding under Line No. 69, Second Air Force Priority 15, SAC Priority 61, Fiscal Code 459.1, Major Repair and Minor Construction Program FY-1954.

6. Certificate required by Headquarters USAF message AFOAI 37113, dated 9 March 1953, is attached.

4 Incls
1. DA AGO Fm 5-25 (sext)
2. Certificate (sext)
3. Tech Provs (quin)
4. Dwg 53-82 in 7 sheets (sext)

B. H. MERCHANT
Colonel, USAF
Commander

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

EXHIBIT 9

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

MCDMAI 600.1 11 December 1953

SUBJECT: GCA AN/CPN-4-MPN-1 Homestead AFB, Florida

TO: Commander
Strategic Air Command
Offutt Air Force Base
Omaha, Nebraska

1. Reference is made to message, copy attached, 2AFMIC 0618, dated 4 December 1953, subj: GCA AN/CPN-4-MPN-1 Homestead.

2. Information received from Homestead Air Force Base is to the effect that the proposed GCA site is a portion of theland to be purchased for construction of the new principal runway. The land in question is tied up in controversy at this time and the location of the proposed new runway could be changed, in which case the siting of the referrenced GCA would also be changed.

3. In view of the situation as it exists at this time, information requested cannot be compiled. If the GCA site is acquired with the basic land addition, information compiled for adjacent runway construction would provide practically all of the information; i.e., topographic survey, off-site profiles of road and power line connections, clearing requirements, soil surveys, etc., requested in the reference message.

4. This headquarters is unable to establish a firm date when the land purchase would be completed.

FOR THE COMMANDER:

C. A. WHITTLE
WOJG, USAF
Asst Adj

1 Incl
TT 2AFMIC 0618 dtd 4Dec53

cc: Comdr AF2

"A CERTIFIED TRUE COPY"
(Including Inclosure)
B. A. Johnson
B. A. JOHNSON
2nd Lt., USAF

JESBA B18
MM JESDL ZVD JESBA

MM JEDMH JESDL 222
DE JESBA 33
M Ø4173ØZ
AFM COMDRAF 2 BARKSDALE AFB LA
TO JESDL/COMDRADIV 6 MACDILL AFB FLA
INFO JEDMH/COMDRSAC OFFUTT AFB NEBR
2AFMIC Ø618. REF GCA, AN/CPN-4/MPN-1. HOMESTEAD. UR HQ WILL FURNISH HQ SAC, WITH INFO CY THIS HQ, THE FOLLOWING INFO PERTAINING TO NAVAID FAC IN HOMESTEAD FWP. A CY OF 1ST I&M SQ SITE CONCURRENCE LTR WITH REPRODUCIBLE CYS OF INCLS, ON SITE TOPOGRAPHIC SURVEYS AT ONE FT CONTOUR INTERVALS OFF SITE PROFILES OF ROAD AND POWER LINE CONNECTIONS, OFF SITE CLEARING REQUIREMENTS, ON SITE SOIL SURVEYS TO INCLUDE BEARING CAPACITY AND AUGER BORING PROFILE, PHOTO OF THE SITE AND REAL ESTATE REQUIREMENTS WITH ESTIMATED COSTS. REQ THE ABOVE INFO BE FURNISHED AT EPD.
Ø4/1839Z DEC JEBA

Incl 1

EXHIBIT 10

HEADQUARTERS 6TH AIR DIVISION
MacDill Air Force Base, Florida

DPE 220 9 December 1953

SUBJECT: Noncommissioned Officers Development Program

TO: Commander
809th Air Base Group
MacDill Air Force Base
Florida

1. Your attention is invited to the attached letter from Headquarters Second Air Force. In response, this headquarters listed the various projects and activities that have been instituted at this station to help restore our noncommissioned officers to their proper plane in the command echelon and advance a program designed to terminate in a 6th Air Division policy brochure.

2. The program, as reported to Headquarters Second Air Force, is as follows:

a. The formation of three committees:

(1) A committee composed of selected officers of the wings, air base group, and tenant units.

(2) A committee composed of selected noncommissioned officers of the wings, air base group, and tenant units.

(3) A committee composed of the Commanders, 6th Air Division, the wings, and the air base group; and commanders of tenant units as selected by the Commander, 6th AirDivision.

b. The appointment of a Program Coordinating Officer.

3. To implement this program you are requested to select three (3) officers and three (3) noncommissioned officers from your command as members of the first two committees shown above. These individuals should be selected primarily for their qualities of leadership and

their interest in this program. Consideration should be given to length of service so that the committees' thinking will be based on knowledge and experience obtained prior to and during World War II. It is recommended, but not required, that squadron commanders be selected for the officers committee; noncommissioned officers selected should comprise a cross section of your command functions. Your selections will be forwarded to the Executive Officer, 6th Air Division, not later than 15 December.

4. Information as to time and place of initial committee meeting will be furnished in the near future.

BY ORDER OF THE COMMANDER:

1 Incl
Cy Ltr 2 AF

FRANK R. BERTERO
Lt Colonel, USAF
Program Coordinating Officer

"A CERTIFIED TRUE COPY"

B. A. Johnson

B. A. JOHNSON
2nd Lt., USAF

1806

APPENDIX "B"

FOR PERIOD 1 - 31 December 1953

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PRD & PNPD	(F) AVG ASGD	(G) AVG PRD PRESENT
Hq 6th Air Div	OFF	10	18		12	17	12
	AMN	7	7		6	7	7
	CIV	3	3				
Hq 809th AB Gp	OFF	54	55	15	68	54	68
	AMN	215	274	11	224	272	224
	CIV	73	75				
809th Supply Sq	OFF	14	13		8	13	9
	AMN	385	446	4	378	443	345
	CIV	145	133				
809th Mtr Veh Sq	OFF	5	5		5	5	5
	AMN	202	296		270	292	262
	CIV	8	8				
809th AP Sq	OFF	12	10		10	10	5
	AMN	346	342	12	324	349	264
	CIV	1	1				
809th Instl Sq	OFF	8	6		8	6	8
	AMN	301	345		319	343	292
	CIV	178	175				
809th Fd Sv Sq	OFF	5	3		3	3	3
	AMN	234	430		384	440	388
809th Oprs Sq	OFF	37	29	16	38	27	35
	AMN	422	436	94	490	436	458
	CIV	25	22				
8th Crash Boat Flt	OFF	8	2		2	2	2
	AMN	100	105		96	100	94
TOTAL 809TH ABG	OFF	113	122	35	125	124	123
	AMN	2206	2674	51	2482	2662	2483
	CIV	430	416				
7th AF Band	OFF	1	0		0	0	0
	AMN	34	25		20	25	22
7th Flt Chamber Indoc Flt	OFF	1	1		1	1	1
	AMN	11	10		9	10	8
* Hq 305th Bm Wg	OFF	45	49		38	51	45
	AMN	106	111		95	111	101
	CIV	3	3				
* 364th Bm Sq	OFF	65	67		56	64	60
	AMN	102	166		145	165	149
* 365th Bm Sq	OFF	65	61		47	61	53
	AMN	102	166		141	167	154
* 366th Bm Sq	OFF	65	63		45	61	50
	AMN	102	166		139	168	139
* 305th A&E Maint Sq	OFF	13	15		14	13	13
	AMN	337	334		284	325	308
* 305th Field Maint Sq	OFF	7	8		7	7	7
	AMN	349	494		444	503	472
* 305th Periodic Maint Sq	OFF	5	6		6	6	6
	AMN	175	242		215	242	222
* 305th Air Ref Sq	OFF	85	95		83	91	88
	AMN	228	293		262	297	284
* 305th Med Gp	OFF	27	32		26	32	26
	AMN	98	95		85	97	99
* TOTAL 305TH BOMB WING	OFF	377	396		322	386	348
	AMN	1599	2067		1810	2075	1928
	CIV	3	3				

* Figures in columns F and G are for period 5 thru 31 Dec 53.

(A) ORGANIZATION		(B) AUTH	(C) ASGD	(D) ATCHD	(E) ASGD & ATCHD PRSNT & PRSNT	(F) AVG ASGD	(G) AVG PHY PRESENT
Hq 306th Bm Wg	OFF	45	50		43	48	41
	AMN	106	125		104	126	106
	CIV	3	3				
367th Bm Sq	OFF	65	56		42	57	48
	AMN	102	181		151	182	158
368th Bm Sq	OFF	65	55		40	56	43
	AMN	102	183		157	183	160
369th Bm Sq	OFF	65	54		44	53	45
	AMN	102	182		163	183	167
306th A&E	OFF	13	10		9	11	9
	AMN	337	320		276	321	270
	CIV	4	5				
306th Field	OFF	7	8		5	7	5
Maint Sq	AMN	349	441		385	443	399
	CIV	30	30				
306th Periodic	OFF	5	5		4	5	4
Maint Sq	AMN	175	241		217	242	214
306th Air Ref Sq	OFF	85	79		62	80	64
	AMN	228	289		245	292	255
306th Avn Sq	OFF	15	13		12	13	12
	AMN	33	37		33	38	31
306th Medical Gp	OFF	57	41	1	25	43	31
	AMN	144	157	6	153	158	249
	CIV	54	54				
TOTAL 306TH	OFF	422	371	1	286	373	302
BOMB WING	AMN	1678	2156	6	1884	2168	1909
	CIV	91	92				
TOTAL 307TH ARG	OFF	1	8		8	8	6
	AMN	4	8		8	8	8
SPECIAL MISSION UNITS							
Det "21" 3944th	OFF	4	3		3	3	3
Radar Scor Sq	AMN	30	30		24	30	26
3908th Strat	OFF	16	30		18	29	21
Eval Sq	AMN	47	41		37	38	35
	CIV	2	2				
TOTAL SAC ORGNS	OFF	975	949	36	785	940	818
	AMN	5616	7018	57	6280	7046	6228
	CIV	529	516				
Detachment 1,	OFF	12	11	1	9	11	9
26 Weather Sq	AMN	28	28		25	27	24
Hq 1928 ACGS Sq	OFF	13	7		6	7	7
	AMN	120	217	2	169	214	176
	CIV	4	4				
Det 3, 136th Comm	OFF	2	2		2	2	2
	AMN	47	57		41	56	42
C-97-2 Mobile	OFF	1	1		1	1	1
	AMN	21	24		19	24	21
E-47 Mobile	OFF	1	1	1	1	1	1
Tng Unit	AMN	17	19	12	15	19	17
7th OSI	CIV	7	6				
TOTAL NON-SAC	OFF	29	22	2	19	22	20
ORGANIZATIONS	AMN	233	345	14	269	340	280
	CIV	11	10				
TOTAL MACDILL	OFF	1004	971	40	804	962	838
AFB	AMN	5849	7363	71	6549	7386	6508
	CIV	540	526				
GRAND TOTALS		7393	8860	111	7353	8348	7346

STATISTICAL SUMMARY

PART II — NOV 53

MACDILL AIR FORCE BASE, FLORIDA

1810

ORGANIZATION	STRENGTH	PUNISHED A-15		COURTS-MARTIAL		A.W.O.L		MORNING REPORTS		MILITARY EXCUSE SUMMARY		TRAFFIC VIOLATIONS			AIR POLICE ARRESTS			V. D.		GROUND ACCIDENTS		
		NO.	RATE	NO.	RATE	NO. GOING	RATE	LATE	ERRORS	LATE	ERRORS	ON BASE MOVING	OFF BASE MOVING	COMBINED RATE	DRUNK	MISC	COMBINED RATE	NO.	RATE	NON DISABLING	DISABLING	DISABLING RATE
Hq. 6th AD	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
809th AB Gp.	2791	20	7.2	20	7.2	7	2.5	3	20	6	7	12	6	6.4	14	21	12.5	9	3.2	17	5	6.0
Hq. 809th AB Gp.	318	0	0	2	6.3	1	3.1	0	1	0	0	2	1	9.4	1	2	9.4	0	0	3	0	0
809th Sup. Sq.	429	6	14.0	2	4.7	1	2.3	0	5	0	6	3	1	9.3	2	3	11.7	0	0	2	0	0
809th Mtr.Veh.Sq.	304	3	9.9	1	3.3	0	0	0	3	0	1	1	2	9.9	2	6	26.3	1	3.3	3	0	0
809th A.P. Sq.	376	3	8.0	3	8.0	1	2.7	0	3	0	0	0	0	0	0	0	0	1	2.7	1	0	0
809th Instl.Sq.	344	2	5.9	2	5.9	0	0	1	2	0	0	1	0	2.9	2	3	14.5	1	2.9	1	0	0
809th Fd Svs.Sq.	466	4	8.6	8	17.2	4	8.6	2	2	3	0	3	2	10.7	4	6	21.5	6	12.9	6	5	35.8
809th Cpns.Sq.	456	2	4.4	2	4.4	0	0	0	2	3	0	1	0	2.2	2	1	6.6	0	0	1	0	0
8th Cr. Res. Flt.	98	0	0	0	0	0	0	0	2	0	0	1	0	10.2	1	0	10.2	0	0	0	0	0
305th Bm Wg.	2338	1	.4	2	.9	0	0	0	0	0	10	3	1	1.7	0	10	4.3	1	.4	11	0	0
Hq.305th Bm Wg.	166											2	1	18.1	0	4	24.1	0	0	0	0	0
364th Bm Sq.	212											0	0	0	0	2	9.4	0	0	1	0	0
365th Bm Sq.	216											0	0	0	0	0	0	0	0	0	0	0
366th Bm Sq.	221											0	0	0	0	0	0	0	0	1	0	0
305th A&E Sq.	349											0	0	0	0	1	2.9	0	0	0	0	0
305th FM Sq.	503											1	0	2.0	0	1	2.0	1	2.0	2	0	0
305th FM Sq.	223											0	0	0	0	0	0	0	0	1	0	0

ORGANIZATION	STRENGTH	PUNISHED A - 15		COURTS-MARTIAL		AWOL		MORNING REPORTS		MILITARY EXPENSE SUMMARY		TRAFFIC VIOLATIONS			AIR POLICE ARRESTS			V. D.		GROUND ACCIDENTS		
		NO.	RATE	NO.	RATE	NO. GOING	RATE	LATE	ERRORS	LATE	ERRORS	ON BASE MOVING	OFF BASE MOVING	COMBINED RATE	DRUNK	MISC	COMBINED RATE	NO.	RATE	NON-DISPLING	DISPLING	DISPLING RATE
305th AR Sq.	318											0	0	0	0	1	3.1	0	0	6	0	0
305th Med Gp	120							0	0			0	0	0	0	1	8.3	0	0	0	0	0
306th Bm Wg	2553	8	3.1	8	3.1	3	1.2	0	9	0	13	32	8	15.7	4	14	7.1	2	.8	11	5	6.5
Hq.306th BW	178	1	5.6	2	11.2	1	5.6	0	1	0	1	2	1	16.9	1	2	16.9	0	0	0	0	0
367th Bm Sq.	237	1	4.2	0	0	0	0	0	1	0	1	2	0	8.4	0	0	0	0	0	0	1	14.1
368th Bm Sq.	243	0	0	0	0	0	0	0	0	0	3	5	0	20.6	0	3	12.3	0	0	0	1	13.7
369th Bm Sq.	236	0	0	0	0	0	0	0	2	0	3	3	1	16.9	0	1	4.2	1	4.2	1	0	0
306th A&E Sq.	336	0	0	1	3.0	0	0	0	2	0	1	3	2	14.9	0	0	0	0	0	1	1	9.9
306th MM Sq.	452	2	4.4	0	0	1	2.2	0	0	0	0	6	3	19.9	1	3	8.8	1	2.2	2	2	14.7
306th TM Sq.	352	3	11.9	1	4.0	1	4.0	0	0	0	2	4	0	15.9	0	0	0	0	0	1	0	0
306th AR Sq.	362	1	2.7	3	8.3	0	0	0	1	0	2	5	1	16.6	1	3	11.0	0	0	4	0	0
306th Aviat. Sq.	50	0	0	0	0	0	0	0	1	0	0	1	0	20.0	0	0	0	0	0	0	0	0
306th Med Gp.	207	0	0	1	4.8	0	0	0	1	0	0	1	0	4.8	1	2	14.5	0	0	2	0	0
307th AR Gp.	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
307th Med Gp.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Det 21, 3944 FR	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
398th S.E.S.	58	0	0	0	0	0	0	0	1	0	0	1	0	17.2	0	0	0	0	0	0	0	0
7th Alt Flt.	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

ORGANIZATION	STRENGTH	PUNISHED A - 15		COURTS-MARTIAL		A.W.O.L.		MORNING REPORTS		MILITARY EXPENSE SUMMARY		TRAFFIC VIOLATIONS			AIR POLICE ARRESTS			V. D.		GROUND ACCIDENTS		
		NO.	RATE	NO.	RATE	NO. GOING	RATE	LATE	ERRORS	LATE	ERRORS	ON BASE MOVING	OFF BASE MOVING	COMBINED RATE	DRUNK	MISC.	COMBINED RATE	NO.	RATE	NON-DISABLING	DISABLING	DISABLING RATE
740 AF Band	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98 ARS	329	N/R	-	4	12.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SAC	8174	29	3.5	32	3.9	10	1.2	3	31	6	30	48	15	7.7	18	45	7.7	12	1.5	39	10	4.1
Wea.Det. 26-1	37	0	0	0	0	0	0	0	0	0	0	2	0	54.0	0	0	0	0	0	0	0	0
1928 AACS	212	0	0	0	0	0	0	0	0	0	0	2	2	18.9	0	2	9.4	0	0	0	0	0
Det 3, 136 Com.	55	0	0	0	0	0	0	0	0	0	0	2	0	36.3	0	0	0	0	0	1	0	0
C-97-2 MTD	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-47-5 MTD	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TENANTS	350	0	0	0	0	0	0	0	0	0	0	6	2	22.9	0	2	5.7	0	0	0	0	0
TOTAL MACDILL	8524	29	3.4	32	3.8	10	1.2	3	31	6	30	54	17	8.3	18	47	7.6	12	1.4	40	10	3.9

1. The 809th Air Police Squadron had one General Courts-Martial in November. The Venereal Disease figures are for the period 29 October thru 25 November. All other rates, except for the 98th ARS which is 1 thru 21 November, are computed on the calendar month basis. Ground Accident rates are based on the number of disabling injuries per 100,000 mandays assigned military personnel. All other rates are based on the number of cases per 1,000 of monthly average assigned personnel. The 305th BW information is on the Rear Echelon Detachment.
   SOURCES: Report of Punishment under Article 15, Base Legal Office, Air Provost Marshal, Budget Office, V.D. Control Office, Ground Safety Office, AF Forms: 183, 110A, 110D, Flying Safety Office.
2. Honors of the Month: A/2C Arnold H. Hickson Jr, Hq. Sq. 305th BW, Reports and Analysis Clerk of 305th Materiel Airman Hickson is congratulated for his high quality performance.
3. The 306th BW submitted 5 late reports for November, the 809th ABG submitted 4 late reports for the same period. This is fine improvement for the 809th ABG over 14 late reports in October. The 306th BW increased 3 over the 2 in October. These are RCS reports other than Morning Reports.

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RESTRICTED

OPERATIONS STATISTICAL SUMMARY
NOVEMBER 1953

ORGANIZATION	TYPE ACFT	NUMBER OF AIRCRAFT: AVERAGE NUMBER	NUMBER OF AIRCRAFT: ON HAND AT E.O.M.	NUMBER OF AIRCRAFT: TOTAL HOURS ON HAND	TYPE OF EXERCISES	NUMBER OF HOURS FLOWN: TOTAL	NUMBER OF HOURS FLOWN: Average Hours Flying Per Acft	NUMBER OF HOURS FLOWN: HOURS NIGHT FLYING	PERCENT OF TIME AIRCRAFT IN COMM UTILITY	PERCENT OF TIME ACFT ON HAND: IN COMM	PERCENT OF TIME ACFT ON HAND: ACCP	PERCENT OF TIME ACFT ON HAND: ACCM	PERCENT OF TIME ACFT ON HAND: ACC OTHER REASONS	PERCENT OF TIME PURPOSE OF FLIGHT: Familiarization	PERCENT OF TIME PURPOSE OF FLIGHT: OPERATIONAL	PERCENT OF TIME PURPOSE OF FLIGHT: ADMINISTRATIVE	PERCENT OF TIME PURPOSE OF FLIGHT: OTHER	ACCIDENTS	GALLONS OF FUEL ISSUED
305TH BOMB WING	B-47	2.1	2	1477	83	25	11.9	1	5.9	28.5	0	48.7	22.8	0	100	0	0	0	68731
	KC-97	.5	2	364	6	47	94.0	24	97.9	13.2	0	86.8	0	0	0	100	0	0	21278
	C-47	3.0	3	2160	85	202	67.3	50	13.6	68.9	6.7	0	24.4	6.9	0	84.2	8.9	0	17011
	T-33	8.8	8	6348	90	128	14.5	5	4.7	42.5	4.2	9.8	43.5	3.1	86.7	1.6	8.6	0	41052
306TH BOMB WING	B-47	46.8	46	33711	574	1523	32.5	369	6.0	75.6	3.8	11.9	8.7	0	95	0	5	0	2226642
	KC-97	20.0	20	14400	343	682	34.1	167	5.8	81.3	7.5	4.9	6.3	0	86.2	11.4	2.4	0	247550
	C-47	1.0	1	720	39	69	69.0	19	12.0	80	3.3	15.5	1.2	18.8	0	79.7	1.5	0	6849
	C-97	1.0	1	720	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
809TH AIR BASE GROUP	B-25	3.3	1	2354	37	72	21.8	11	9.7	31.7	17.3	12.3	38.7	15.3	0	69.4	15.3	0	7151
	C-45	4.0	4	2880	64	92	23.0	6	8.2	42.5	26.7	10.8	20	7.6	0	77.2	15.2	0	4062
98TH ARS	KC-97	16.9	18	8496	32	99	5.9	0	1.5	78	7.6	11.3	3.1	0	60	8	32	0	29095

RESTRICTED

STATISTICAL SUMMARY

PART II — DEC 53

MACDILL AIR FORCE BASE, FLORIDA

1815

STATISTICAL SUMMARY PART II
DECEMBER 1953

ORGANIZATION	Pers Svd	PUNISHED A-15 NO.	PUNISHED A-15 RATE	COURTS-MARTIAL NO.	COURTS-MARTIAL RATE	A W O L NO. GOING	A W O L RATE	MORNING REPORTS LATE	MORNING REPORTS ERRORS	MILITARY EXPENSE SUMMARY LATE	MILITARY EXPENSE SUMMARY ERRORS	TRAFFIC VIOLATIONS ON BASE MOVING	TRAFFIC VIOLATIONS OFF BASE MOVING	TRAFFIC VIOLATIONS COMBINED RATE	AIR POLICE ARRESTS DRUNK	AIR POLICE ARRESTS MISC	AIR POLICE ARRESTS COMBINED RATE	V. D. NO.	V. D. RATE	GROUND ACCIDENTS NON DISABLING	GROUND ACCIDENTS DISABLING	GROUND ACCIDENTS DISABLING RATE
Hq. 6th AD	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
809th AB Gp.	2832	25	8.8	23	8.1	7	2.5	0	26	1	9	11	4	5.3	7	16	8.1	11	3.9	10	3	3.4
Hq 809th AB Gp.	328	2	6.1	4	12.2	0	0	0	2	0	0	1	0	3.0	0	3	9.1	0	0	1	1	9.8
809th Sup Sq.	454	2	4.4	3	6.6	1	2.2	0	6	1	3	3	1	8.8	2	7	19.7	1	2.2	1	0	0
809th Mtr Veh Sq	306	2	6.5	5	16.3	1	3.3	0	1	0	3	2	1	9.8	0	1	3.3	1	3.3	4	1	10.5
809th A.P. Sq.	359	3	8.4	2	5.6	0	0	0	3	0	0	0	0	0	0	0	0	2	5.6	0	0	0
809th Instl.Sq.	349	8	22.9	1	2.9	1	2.9	0	1	0	1	3	1	11.5	1	0	2.9	4	11.5	1	0	0
809th Fd Svs Sq.	443	5	11.3	6	13.5	3	6.8	0	8	0	2	0	0	0	3	3	13.5	3	6.8	1	1	7.3
809th Cms Sq.	465	3	6.5	2	4.3	1	2.2	0	3	0	0	2	1	6.5	1	2	6.5	0	0	2	0	0
8th Cr. Res.	102	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
305th Bm Wg	2462	3	1.2	9	3.7	3	1.2	0	0	1	4	12	5	6.9	5	19	9.7	3	1.2	7	3	3.9
Hq. 305th BW	162	0	0	3	18.5	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
364th Bm Sq.	229	0	0	0	0	0	0	0	0	0	0	2	0	8.7	1	0	4.4	0	0	0	0	0
365th Bm Sq.	228	0	0	0	0	0	0	0	0	0	0	2	0	8.8	1	2	13.2	0	0	0	2	28.3
366th Bm Sq.	229	0	0	0	0	0	0	0	0	0	0	1	1	8.7	1	2	13.1	0	0	1	0	0
305th A&E Sq.	338	1	3.0	1	3.0	0	0	0	0	0	0	1	0	3.0	0	0	0	0	0	1	0	0
305th FM Sq.	510	0	0	1	2.0	3	5.9	0	0	0	2	0	3	5.9	0	9	17.6	3	5.9	2	0	0
305th PM Sq.	246	2	8.1	1	4.0	0	0	0	0	0	0	1	1	8.1	1	1	8.1	0	0	1	0	0

STATISTICAL SUMMARY PART II
DECEMBER 1953

ORGANIZATION	PRESENT	PUNISHED A-15 NO.	PUNISHED A-15 RATE	COURTS-MARTIAL NO.	COURTS-MARTIAL RATE	A W O L NO GOING	A W O L RATE	LATE REPORTS	ERRORS	MILITARY EXPENSE SUMMARY L/D	ERRORS	TRAFFIC VIOLATIONS ON BASE	TRAFFIC VIOLATIONS OFF BASE	TRAFFIC VIOLATIONS CONVICTIONS	TRAFFIC VIOLATIONS RATE	AIR POLICE ARRESTS DRUNK	AIR POLICE ARRESTS MISC.	AIR POLICE ARRESTS CONVICTED	AIR POLICE ARRESTS RATE	V.D. NO.	V.D. RATE	GROUND ACCIDENTS NOT DISABLING	GROUND ACCIDENTS DISABLING	GROUND ACCIDENTS DISABLING RATE
305th ARS	388	0	0	1	2.6	0	0	0	0	0	0	2	0	5.2	0	5	12.9	0	0	0	2	1	8.3
305th Med Gp.	129	0	0	2	15.5	0	0	0	0	1	0	3	0	23.3	1	0	7.8	0	0	0	0	0	0
306th Bm Wg	2541	14	5.5	3	1.2	2	.8	1	5	2	1	14	8	8.7	3	8	4.3	4	1.6	11	1	1.3	
Fg 306th BW	174	1	5.7	1	5.7	1	5.7	0	1	0	1	2	0	11.5	1	0	5.7	0	0	0	0	0	
367th Bm Sq.	239	3	12.6	1	4.2	0	0	0	0	0	0	2	1	12.6	1	0	4.2	0	0	1	0	0	
368th Bm Sq.	239	1	4.2	0	0	0	0	0	0	1	0	1	1	8.4	0	1	4.2	0	0	2	0	0	
369th Bm Sq.	236	0	0	0	0	0	0	0	0	0	0	0	1	4.2	0	0	0	0	0	2	0	0	
306th AAE Sq.	322	3	9.3	1	3.0	0	0	0	0	0	0	1	0	3.0	0	2	6.0	1	3.0	1	0	0	
306th FM Sq.	450	3	6.6	0	0	1	2.2	0	2	0	0	2	2	8.8	0	3	6.6	1	2.2	1	1	7.2	
306th FM Sq.	247	0	0	0	0	0	0	1	1	0	0	1	0	4.0	0	0	0	0	0	0	0		
306th AR Sq.	322	1	2.7	0	0	0	0	0	0	0	0	3	2	13.4	0	2	5.4	2	5.4	4	0	0	
306th Aviat. Sq.	51	0	0	0	0	0	0	0	1	0	0	0	1	19.6	0	0	0	0	0	0	0	0	
306th Med. Gp.	201	2	10.0	0	0	0	0	0	0	1	0	2	0	10.0	1	5.							
306th AB Gp.	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
307th Med Gp.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Det 21,3044 FR	33	0	0	1	30.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3908th S.F.S.	67	0	0	0	0	1	14.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7th Alt Flt	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

STATISTICAL SUMMARY PART II
DECEMBER 1953

ORGANIZATION	STRENGTH	PUNISHED A-15 NO.	PUNISHED A-15 RATE	COURTS-MARTIAL NO.	COURTS-MARTIAL RATE	A W O L NO. COMD	A W O L RATE	MORNING REPORTS LATE	MORNING REPORTS ERRORS	MILITARY EVENTS SUMMARY LATE	MILITARY EVENTS SUMMARY ERRORS	TRAFFIC VIOLATIONS ON BASE NOV	TRAFFIC VIOLATIONS OFF BASE NOV	TRAFFIC VIOLATIONS COMBINED RATE	AIR POLICE ARRESTS DRUNK	AIR POLICE ARRESTS MISC	AIR POLICE ARRESTS COMBINED RATE	V. D. NO.	V. D. RATE	GROUND ACCIDENTS NON DISABLING	GROUND ACCIDENTS DISABLING	GROUND ACCIDENTS DISABLING RATE
740th AF Band	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL SAC	7987	42	5.3	36	4.5	13	1.6	1	31	4	14	37	17	6.8	15	43	7.3	18	2.3	28	7	2.8
Wea.Det 26-1	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1926 AACS	221	0	0	2	9.0	0	0	0	0	0	0	0	0	0	0	1	4.5	0	0	0	0	0
36th Com. S. Sq.	50	0	0	1	17.2	0	0	0	0	0	0	2	0	34.5	0	1	17.2	0	0	0	0	0
C-97-2 MTD	25	0	0	0	0	0	0	0	0	0	0	1	0	40.0	0	0	0	0	0	0	0	0
B-47-5 MTD	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TENANTS	362	0	0	3	8.3	0	0	0	0	0	0	3	0	8.3	0	2	5.5	0	0	0	0	0
TOTAL MACDILL	8349	42	5.0	39	4.7	13	1.6	1	31	4	14	40	17	6.8	15	45	7.2	18	2.2	28	7	2.7

1. There were four General Courts-Martial in December: One each in 809 Mtr Veh Sq., 305 ABS, 306 Bm Sq., and 1926 AACS. The Venereal Disease figures are for the period 26 Nov 53 thru 30 Dec 53. All other rates are based on the calendar month. Ground Accident rates are based on the number of disabling injuries per 100,000 man days assigned military personnel. All other rates are based on the number of cases per 1000 of monthly average assigned military personnel.
2. SOURCES: Report of Punishment under Article 15, Base Legal Office, Air Provost Marshal, Budget Office, VD Control Office, Ground Safety Office, AF Forms: 183, 110A, 110D, and Flying Safety Office.
3. HONORS OF THE MONTH: S/SGT MARTIN M. MANGIN, AF 35966204, 306 Fld Maint Sq (Morning Report and Finance Clerk). Sgt Mangin has an outstanding record on Morning Reports with only two errors in the past six months.
4. LATE REPORTS: Both the 305 BW and 306 BW had perfect records in December. The 809 AB Gp submitted five (5) Late Reports and 6 AD submitted two (2) Late Reports during the same period.

OPERATIONS STATISTICAL SUMMARY
DECEMBER 1953

ORGANIZATION	TYPE ACFT	NUMBER OF AIRCRAFT: AVERAGE NUMBER	NUMBER OF AIRCRAFT: DUE ON HAND AT E.O.M.	NUMBER OF AIRCRAFT: TOTAL HOURS OF FLYING	NUMBER OF LANDINGS	NUMBER OF HOURS FLOWN: TOTAL	NUMBER OF HOURS FLOWN: AVE. HOURS FLYING PER ACFT.	NUMBER OF HOURS FLOWN: HOURS PER FLYING DAY	PERCENT OF TIME IN COMM. UTILITY	PERCENT OF TIME ACFT OF HAND: IN COMM.	ACFT OF HAND: ACCM	ACFT OF HAND: ACCM OTHER REASONS	PERCENT OF TIME PURPOSE OF FLIGHT: FAMILIARIZATION	PERCENT OF TIME PURPOSE OF FLIGHT: OPERATIONAL	PERCENT OF TIME PURPOSE OF FLIGHT: ANNUAL-TRAINING	PERCENT OF TIME PURPOSE OF FLIGHT: OTHER	ACCIDENTS	GALLONS OF FUEL ISSUED
305 BOMB WING	B-47	47	47	34968	524	1350	28.7	217	5.0	77.8	6.2	10.4	5.6	0	99.6	0	.4	0	1772744
	KC-97	21.4	20	15904	226	856	40	265	6.6	81.0	4.1	9.2	4.8	0	55.3	42.4	2.3	0	442292
	C-47	3	3	2232	21	72	24	19	7.9	40.9	44.1	5.4	9.6	15.3	0	81.9	2.8	0	19549
	T-33	7.3	7	5466	111	139	19	9	4.3	50.7	0	19.7	21.6	2.2	83.5	11.5	2.8	1	44371
306 BOMB WING	B-47	48.2	48	35865	422	1366	28.3	237	5.5	69.6	7.1	10.9	10.4	0	97.6	0	2.4	0	2667300
	KC-97	20	26	14880	268	485	24.3	118	4.1	79.2	5.0	7.6	7.3	0	93.0	4.3	2.7	0	213979
	C-47	1	1	744	30	79	79	15	13.7	77.4	0	3.2	19.4	3.8	0	94.9	1.3	0	7549
	C-97	1	1	744	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
809 AIR BASE GROUP	B-25	3.5	4	2639	78	138	39.4	37	7.8	66.4	9.1	5.4	19.1	20.3	0	67.4	12.3	0	19087
	C-45	4.6	5	3408	106	103	22.4	16	3.5	87.3	4.9	3.5	4.3	29.1	0	27.2	43.7	0	4146

MACDILL STATISTICAL SUMMARY - PART III
NOVEMBER 1952
Percentage Comparison of Non-Primary Duty Manhours
To Potential Manhours Assigned
(Military only - By Category)

ORGANIZATION	Stand-ing	Primary Duty	Non Primary Duty	A	B	C	D	E	F	H	I	J	K
Hq 809th Air Base Group	9	93.29	6.71	.12	.50	.45	.18	.47	.18	2.99	1.60	.13	.09
809th Supply Sq.	14	91.31	8.69	.004	1.06	.65	.11	.69	.23	1.39	4.13	.27	.15
809th Mtr Veh Sq.	13	92.08	7.92	0	.63	.94	.28	.14	.44	.66	3.93	0	.70
809th A.P. Sq.	8	93.93	6.07	0	0	0	0	0	0	0	4.93	.06	1.08
809th Installations Sq.	11	93.09	6.91	0	.03	.22	0	0	0	0	5.99	0	.67
809th Food Sv. Sq.	10	93.29	6.71	.08	.11	.29	.07	.09	.10	.72	2.81	1.37	1.07
809th Operations Sq.	4	95.97	4.03	0	.54	.06	.002	.03	0	.11	3.19	.09	.008
8th Crash Rescue Fl.	12	92.72	7.28	0	0	1.18	0	0	0	.31	5.79	0	0
809th Air Base Gp Avg.		93.27	6.73	.02	.36	.37	.07	.18	.11	.69	4.11	.25	.57
305th Medical Gp.	7	94.07	5.93	0	.04	2.64	0	.48	.48	0	2.29	0	0
306th Aviation Sq.	5	94.77	5.23	0	2.48	.16	.08	.26	.39	1.08	.78	0	0
306th Medical Gp.	6	94.51	5.49	0	.04	.69	0	.51	.63	0	3.62	0	0
Hq 306th Bm Wing	15	89.86	10.14	.22	.12	3.35	.75	1.58	.98	0	2.47	0	.67
TOTALS AVG		93.20	6.80	.06	.39	1.38	.23	.79	.70	.15	2.91	0	.19

MACDILL STATISTICAL SUMMARY - PART III

NOVEMBER 1953

Percentage Comparison of Non-Primary Duty Manhours
To Potential Manhours Assigned
(Military only - By Category)

ORGANIZATION	Standing	Primary Duty	Non Primary Duty	A	B	C	D	E	F	H	I	J	K
340th AW Band	3	97.11	2.89	2.89	0	0	0	0	0	0	0	0	0
3908th S.T.S.	1	98.79	1.21	0	0	0	0	0	0	0	1.21	0	0
307th Air Base Gp.	2	97.44	2.56	2.56	-	0	0	0	0	0	0	0	0
Misc. Avg.		98.04	1.96	1.30							.66	0	0
MacDill AFB Avg.		93.39	6.61	.05	.34	.53	.08	.25	.18	.69	3.86	.21	.51

Codes: (A) PX-Commissary
(B) Orderly Room
(C) Hospital
(D) Personal Business
(E) Pass-24 hours or less
(F) Pass-over 24 hours
(H) Other (Courts, Boards, etc.)
(I) Leave
(J) Duty
(K) AWOL Confinement

Source: S/C Production Record and Production Record Summary (RCS: SAC-U20)

Comments:

1. The MacDill AFB percentage of Non-Primary Duty Hours decreased from 7.26 in October to 6.61% in November.

2. The 809th AB Gp reported a Non-Primary Duty Hour percentage of 6.73 as compared to the 306th Bomb Wing (306th Avn. Sq., 306th Med. Sq., and Hq. 306th BW only) which reported 6.80. The October figures were 7.46 for the 809th AB Gp and 6.99% for the 306th BW.

3. The most significant percentage decreases in MacDill AFB Non-Primary Duty Hours occurred in Categories B - Orderly Room, H - Other (Courts, Boards, etc), and I - AWOL, Confinement. The chief increases were in Category C - Hospital and I - Leave.

MACDILL STATISTICAL SUMMARY - PART III

DECEMBER 1953

Percentage Comparison of Non-Primary Duty Manhours
To Potential Manhours Assigned
(Military only - By Category)

ORGANIZATION	Standing	Primary Duty	Non Primary Duty	A	B	C	D	E	F	H	I	J	K
Hq 809th Air Base Group	12	89.40	10.60	.14	.74	1.05	.35	.37	.75	2.87	4.06	.27	0
809th Supply Sq.	11	90.11	9.89	.01	1.06	.79	.01	.55	.48	1.28	4.47	.26	.98
809th Mtr Veh Sq.	8	92.53	7.47	0	.58	.85	.31	.19	.45	.69	3.54	0	.86
809th A.P. Sq.	7	92.87	7.13	0	0	0	0	0	0	0	6.27	0	.86
809th Installations Sq.	5	93.40	6.60	.02	.08	.43	.35	0	0	0	4.83	0	.88
809th Food Sv. Sq.	14	88.13	11.87	.05	.30	.15	.04	.34	0	.92	8.43	.25	1.39
809th Operations Sq.	9	92.20	7.80	0	.45	.12	.01	.26	.04	1.80	5.40	.02	0
8th Crash Rescue Fl.	4	93.68	6.32	0	.56	.36	0	0	0	0	5.40	0	0
809th Air Base Gp Avg.		91.54	8.46	.02	.43	.44	.14	.22	.20	.85	5.34	.10	.72
Hq 305th Bm Wing	10	91.89	8.11	0	.39	.61	0	2.24	0	.67	4.18	0	0
305th Medical Gp.	6	92.92	7.08	0	0	1.66	0	.33	.57	0	4.52	0	0
305th Bm Wing Avg.		92.55	7.45	0	.14	1.29	0	1.02	.36	.24	4.40	0	0
306th Aviation Sq.	16	84.55	15.45	0	2.18	.81	.34	2.43	2.09	.84	6.73	.03	0
306th Medical Gp.	3	94.82	5.28	0	0	.34	0	.52	.47	0	3.85	0	0
Hq 306th Bm Wing	13	89.34	10.66	.24	.13	1.68	.40	1.32	1.29	1.04	4.56	0	0
306th Bm Wing Avg.		91.87	8.13	.07	.33	.79	.16	1.00	.92	.41	4.44	.01	0

MACDILL STATISTICAL SUMMARY - PART III
DECEMBER 1953

Percentage Comparison of Non-Primary Duty Manhours
To Potential Manhours Assigned
(Military only - By Category)

ORGANIZATION	Stand-ing	Primary Duty	Non Primary Duty	A	B	C	D	E	F	H	I	J	K
740th AF Band	15	86.59	13.41	2.62	0	0	0	8.87	0	0	1.92	0	0
3908th S.E.S.	2	97.48	2.52	0	0	0	.07	.07	0	0	2.38	0	0
307th Air Base Gp.	1	97.95	2.05	1.71	0	.34	0	0	0	0	0	0	0
Total Misc. Avg.		93.30	6.70	1.06	0	.01	.04	3.46	0	0	2.13	0	0
MACDILL AFB AVG.		91.66	8.34	.05	.40	.51	.13	.41	.27	.76	5.14	.08	.59

Codes: (A) PX-Commissary
(B) Orderly Room
(C) Hospital
(D) Personal Business
(E) Pass-24 hours or less
(F) Pass-over 24 hours
(H) Other (Courts, Boards, etc.)
(I) Leave
(J) Pay
(K) AWOL
Confinement

Source: SAC Production Record and Production Record Summary (RCS: SAC-U20)

Comments:

1. The MacDill AFB percentage of Non-Primary Duty Hours increased from 6.61% in November to 8.34% in December.

2. The 809th AB Gp reported a Non-Primary Duty Hour percentage of 8.46 as compared to 7.45 for the 305th Bomb Wing (Hq 305th BW, 305th Med Gp only) and 8.13 for the 306th Bomb Wing (Hq 306th BW, 306th Med Gp, and 306th Avn Sq. only). The November figures were 6.73% for the 809th AB Gp and 6.80 for the 306th Bomb Wing.

3. The most significant percentage point increases in MacDill AFB Non-Primary Duty Hours occurred in Categories E (Pass-24 hours or less), H (Other- Courts, Boards, etc.) and I (Leave). The chief decrease was in Category J (Pay).

DOCUMENT TO ROLL INDEX

Frame Number	Classification Number	Date Period	Vol	Pt	Title	Security Classification	Remarks
4	K-Div-6-Hi	Jun/53			6th Air Division	U	
151		Jul/53				S	
545		Aug/53				S	
918		Sep/53				S	
1265		Oct/53				C	
1463		Nov/53				C	
1607	K-Div-6-Hi	Dec/53			6th Air Division	S	
1824	Index				Index		
	Some unreadable pages - Poor original						

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